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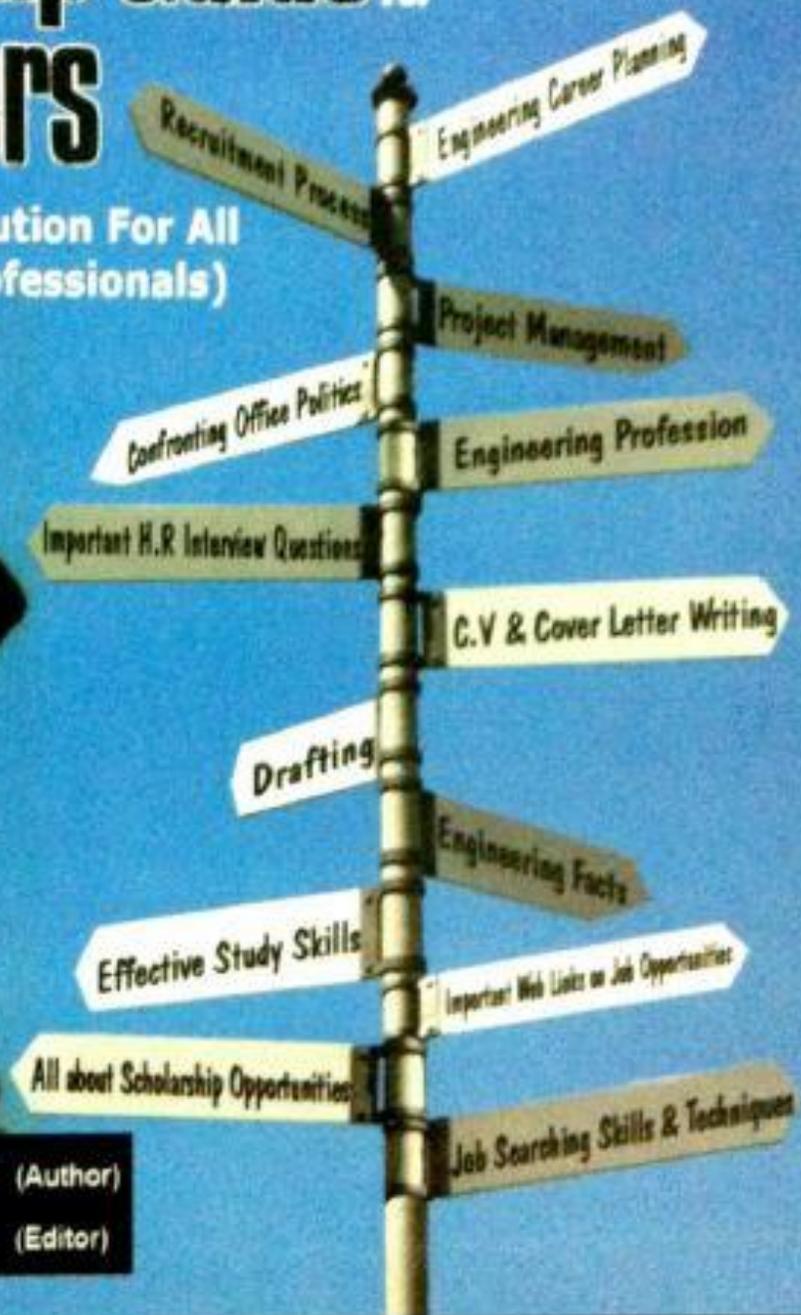
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# Career Roadmap Guide for Engineers

(A One Stop Solution For All  
Engineering Professionals)



Engr. Junaid Shaikh (Author)

Dr. B. S. Chowdhry (Editor)

# Career Road Map Guide For Engineers

AUTHOR  
**Engr. Junaid Shaikh**

EDITOR  
**Prof. Dr. B. S. Chowdhry**

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## ACKNOWLEDGEMENT

It is very well known that knowledge is power, but no one can acquire knowledge alone, it is imperative to seek some help from the books, internet sources &/or of the people who master the subject. In preparing this guide, some information from Internet resources which isn't copyrighted has been included in this guide and is duly acknowledged in the references.

This book was written in those days when author was searching for job. So it depicts his experiences, efforts, hardships, action plans and more particularly his personal opinion and suggestions for the same. He has made hard and fast efforts in penning down his ideas, suggestions, personal experiences and his overall knowledge in the field of Engineering.

Finally, it would be the highest glory & distinction to acknowledge and express gratitude to those who advised, helped & encouraged in coming up with this write-up effort. **The detailed acknowledgement in this regard is given at the end of the book.**

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## DEDICATION

**This work is dedicated to my father**

**"Dr. Abdul Hameed Shaikh"  
(Consultant ENT Surgeon, Nawabshah)**

## EDITOR NOTE

It is indeed a great pleasure to edit a book which has been long desired by every fresh graduate engineer and engineering professional. Career counseling has a long history within the field of professional counseling and plays important role in every society by guiding students, engineers to apply academic and employability skills. Employers have reported that the most important skills employees need more include technical skills, reading, writing and communication skills. A person's career is one of the most important life activities occupying nearly half of an adult life. When enjoyed, a career can bring satisfaction and happiness, contribute to higher self-esteem, and ultimately aid to a healthy life adjustment to the society and country. Author has made excellent efforts to provide educational and informational material related to engineering career based on his own knowledge and experience.

Pre-Engineering Students, Undergraduate Engineering Students, Freshly Graduating Engineers, Practicing Engineers, Computer Professionals and Information Technologist may find book valuable with a view to career prospects and getting better job opportunities in the field of engineering and let them fly their career by 360°. It is a well-established fact that change begins when you start trying.

**As Bill Gate has rightly said**

**"I am not in competition with anyone else but myself. My goal is to beat my last performance."**

Being editor, I welcome suggestions for improvement of subsequent printings and editions.

**Engr. Prof. Dr B.S Chowdhry  
(Izaz-e-Fazeelat)**

## FOREWORD

I congratulate Author **Engr. Junaid Shaikh** and Editor **Prof Dr. BS Chowdhry** for making such a right effort at the right time.

This book is aimed at guiding Engineers and professionals discover their own path of success. The tools, tricks and techniques mentioned in the book will indeed be helping fresh graduates in their upcoming job hunt and for working Engineering professionals, it will be providing guidance and a Roadmap for developing their own career plans.

This book shows you how to do the required work to get on the Roadmap that is right for you.

No one has the power to change your life and chart your own course of destiny that you do. If you are ready to make some changes and take charge of your life so that it is more aligned with your heart's calling and your deepest desires, then it is going to require some effort on your part.

**Prof. Dr. Yaqoob Sial**  
**(Nanyang Technological**  
**University, Singapore)**

## PREFACE

Writing a book requires time, ideas, knowledge, stamina and efforts indeed. All these elements when tactfully mixed and managed always resulting in an excellent write-up.

The Guide in your hand is a result of hard and fast efforts made to comprehensively cover the issues of all Engineering Professionals & particularly Fresh Engineering graduates.

This book is being launched in the market with good wishes and intentions that it would provide knowledge and exposure to every reader with regard to career prospects in the field of Engineering. Although, the book equally entertains all engineering professionals but more particularly it addresses the issues of a (n);

- ✓ **Pre-engineering student desirous to pursue career in Engineering.**
- ✓ **Undergraduate Engineering student while pursuing career in engineering.**
- ✓ **Fresh Engineering graduate desirous to pursue a bright employment career in the area of his expertise.**
- ✓ **Graduate Engineer with intentions to pursue a post graduation (MS, PhD) in the field of his interest.**
- ✓ **Working Professional engineer desirous to have a congenial work environment, successful job working and switching of job for excellent career prospects.**

In the current worsened job market situation and cut-throat era of competition, it is not merely your (engineer's) technical knowledge that leads you to employment but sometime there are certain other factors to consider such as your efforts, talent, versatile approach, strategies, passion and above all your smart work that lead you to success (employment).

Realizing above fact, I felt a desperate need to bring this book in the market that may greatly help Engineers acquire knowledge of contemporary affairs

and face day to day challenges occurring in the world of Engineering. Thus it was a high time to come up with a book that may prove to be a **ONE-STOP-SOLUTION** to all the problems and career related issues of Fresh Engineering graduates & Professionals.

Therefore with the launch of this book, I am quite optimistic regarding the achievement of purpose the book is written for. I also encourage fresh graduate engineers by saying that,

**"Don't be afraid & don't sell your skills short. You can do anything you put your mind to".**

I am taking this opportunity to thank all those who helped me in coming up with this book. Also I feel need to acknowledge the vast experience of **Prof. Dr. B. S. Chowdhry** for excellent editing of the book & **Engr: Fahim Aziz Umrani** including members of SAR-MUET group for their valuable suggestions and posts on Yahoo group.

In the end, it's my request to all the readers to dig out mistakes unintentionally done and give suggestions for further improvements. Reader's coordination in this regarded will be highly appreciated.

I wish you best of luck in your upcoming job endeavors.

**"Oh Engineers! You have control of your life -take that winning attitude & turn it into success"**

All the Success & Happy Reading!



Islamabad, Pakistan  
Junaid146@hotmail.com

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**JOB MARKET IN PAKISTAN**

Pakistan has always been struggling with its Job market situation and creates employment opportunities unlike the same. An uncertain situation of Law & Order in the country and varying Government policies have always adversely affected the employment market in the country.

Good career opportunities in general are scarce in Pakistan. Job opportunities particularly at recent times are quite limited. It is very difficult and challenging to get job in top notch public/private companies in Pakistan. Companies & organizations like **TELENOR, Ufone, Warid, Suparco, FFC, Parco, GSK, ICI, APL, SSGC, PTC, Shell, P&G, PSO, Habib, SECP, Fatima Fertilizer, UBL, Nestle, Siemens, SBP, Engro, Habib-Group, ENI, Colgate, NTDC, PPL, Unilever, EBM** and other leading organizations visit quite regularly or at least once a year in top notch institutions of Engineering and Business Administration in the country like **IBA, LUMS, CBM, Szabist, FAST, NUST, MUET, SSUET, NED, UET (Lahore), GIK** etc and take evaluations tests. Later on the short listed candidates are interviewed and the few talented and lucky ones get job. Not to mention, there are always few candidates who use back door entry through good Personal Relationships and other links with someone in the management of that company or politically influence the selection process to get in but by and large merit prevails in most of these companies. It's true that there are many talented individuals in Pakistan but not many opportunities exist for them in the country so many of them go abroad.

## FACTORS INFLUENCING JOB MARKET IN THE COUNTRY

**1) Energy Crises & Load Shedding** are set backing our country's economy, especially the industrial sector as it is the 2nd largest sector contributing towards Pakistan's economy and with regard to employability. But Due to electricity breakdown already established industry is deteriorating, resulting in the prevailing unemployment ratio. Due to lack of exploitation of indigenous resources of the country, basic needs like electricity, gas and petroleum products etc are available at high cost and there is a continuous increase in their prices, so a large no of industries have been closed and many are on the verge of closure. This uncertain situation of power crises in the country has reduced the plans of the future business & market expansion in the country and leaving an unfavorable impact on our Job market.

**2) Deteriorating Law and Order Situation** in various parts of the country forced the investors to pullback their investments. The news of bomb blasts and ever increasing threats of blasts in different cities kept the investors and business growth activities on the sideline. It affect as a serious stop mark on Pakistan's job market.

**3) Current Economic & Financial Crises** are also among the main reasons of unemployment in the whole world and ultimately in Pakistan. These crises originated from banking & business sector of the countries with largest market share including some European countries and have now become a global phenomenon.

**4) Budget Deficit:** Due to increasing budget deficit, not only PSDP sector suffers but also government finds it unable to start new projects on large scale or continue with the existing projects. So this results in laying off the contract employees in public sectors in Pakistan, which further gives rise to unemployment.

Budget deficit is due to the fact that our expenses are more than our national income. Other factors that contribute to budget deficit include poor system of tax collection and our imports being more than our exports which results in increased import bill and ultimately our economy suffers.

**5) Lack of Exploitation of Indigenous Resources:** Pakistan is blessed with large no of natural resources but due to lack of technological advancement, we are unable to fully exploit our indigenous resources of our country like **COAL, OIL & GAS**. Although Pakistan spends about **70%** of its foreign exchange in terms of buying oil from international market but if we eliminate need to import oil from foreign market by making efficient use of our indigenous resources for electricity generation, we can definitely reduce our import bill and boost our economy and ultimately get rid of unemployment in the country.

**For Example: THAR COAL PROJECT** is currently being considered the largest energy project based on coal. If its resources are exploited at full potential, it can not only solve perpetual issue of load shedding in the country but it will also create approx: 60,000 direct or indirect jobs for unemployed people of this country.

**6) Foreign Investment Unease:** The factors that has stopped foreign investment in the country is government's apathy in devising flexible policies & providing ease to foreign investors for setting up industrial units in Pakistan. For a country to encourage foreign investment, it must attract investor by offering flexible terms & contracts & by providing investment ease. Also gradually worsened country's image has stopped foreign investors to invest in Pakistan.

**7) Mismanagement of Foreign Aid:** Every year, country gets Billions of dollars with the intention to reduce unemployment, alleviate poverty & to promote education. But on the contrary, the aid is mismanaged, resulting in no progress. If it is properly channelized then huge number of jobs may be created.

### KEY FACTORS TO CONSIDER

Pakistan presents a paradoxical situation. The country was able to record about 5 percent annual growth rate over a fairly long period of three decades: between 1960-90, bringing down the incidence of poverty to 18 percent.

By most indicators, basic educational investments in Pakistan were low and growing less rapidly than on the average for low income countries. The reasons for Pakistan's low educational status are varied but one important factor is that Pakistan's educational system is highly fragmented and segmented. It has, therefore, created some intractable problems in the optimal utilization of human resources under the given labor market conditions.

Despite the positive movements on macroeconomic front, the unemployment situation in Pakistan has not yet improved. The economic achievements claimed to have been made during the last five years are certainly not visible. What we have seen are, in fact, mass unemployment, increased poverty, the ever-increasing cost of living and discriminatory policies designed to make the rich richer and the poor poorer. Although in the last several years Pakistan has shown high economic growth but the improvement in the employment front is by no means, satisfactory.

**There are some key factors which are discussed here to explain this phenomenon of higher incidence of unemployment co-existing with rapid growth rate in Pakistan.**

**First**, there is a serious mismatch between the jobs demanded by the emerging needs of the economy and the supply of skills and trained manpower in the country. While the economy is moving towards sophisticated sectors such as **Telecommunications, Information Technology, Oil and Gas,**

**Financial services, Business & engineering.** The universities and colleges are turning out hundreds of thousands of graduates in Business, Arts, Humanities, Languages, Social-Sciences, and Medical Studies & Engineering.

This mismatch has created waste and misallocation of resources on one hand and the shortages of essential skills required to keep the wheels of the economy moving.

It also shows that public sector and government is losing jobs or there is at least stagnation. Technical and vocational training has failed to keep pace with the emerging skill gaps that have further been widened by the migration of experienced technicians and professionals to the Middle East and elsewhere.

**Second**, there is a crisis of expectation among the families and the youth belonging to certain areas of the country which have enjoyed quota reservations in the government jobs for last several decades. As the economy is relying more on the private sector and the public sector enterprises are being privatized the opportunities for new jobs in the government ministries, attached departments, public sector corporations, state owned enterprises and nationalized commercial banks are fast disappearing. Those who used to get into the public sector on the basis of quota entitlements therefore feel themselves at a disadvantage in the job market. The security of the tenure, the perks and powers which they were expecting are no longer available and this has led to a lot of frustration among a section of the population. The private sector employers are highly competitive in their choice of recruitment and totally indifferent to the considerations of regional balances.

**Third**, higher total factor productivity in the economy and technological innovations are also reducing the demand for unskilled and semi-skilled labor force in almost all the sectors of the economy.

The inefficient utilization of factors of production that was a characteristic of public sector dominated economy has been minimized as a result of structural reforms in tariffs, taxation, financial markets and privatization. The demand for labor inputs per unit of output has consequently been reduced due to this compositional shift from the public to private sector employment. At the same time labor force participation rate is on an upward incline because of the entry of large number of females. High unemployment rates under these conditions of productivity and efficiency gains are therefore not surprising.

**Fourth**, factor mobility across the provincial boundaries is highly limited with the exception of Karachi which absorbs people from all parts of the country. Labor market segmentation based on ethnic and province of origin and domicile is quite pervasive and allows simultaneous existence of labor shortages in one part of the country with excess availability in other. The high costs of relocation for the job seekers and high search costs perceived by the employers further attenuate a state of disequilibrium in the nation wide labor market. The regional labor markets may be relatively more efficient but the same is not true for the national labor market.

**Fifth**, the archaic and outdated labor laws, levies and benefit payments imposed upon the formal sector of the economy create a wedge between the unit costs borne by the employer and the actual wage received by the employees. There is little incentive for the employer to hire people on permanent basis and invest in their training, skill up gradation and productivity enhancement. They have therefore developed a short sighted view of extracting as much value as possible by engaging part time or contractual employees. In a competitive environment, this behavior is not tenable over a long

period of time. The businesses have to close down or substitute capital for labor reducing the level of labor absorption in the economy.

The future agenda for productive employment generation and education are closely interlinked. Therefore, there is a desperate need to address following issues & to come up with their best possible solution.

- **As currently there are about 5 parallel Educational standards in practice at primary and secondary level and all these need to be replaced by a single Educational standard that must be at par with international standards & offered to all groups/classes of people.**
- **The issue of greater focus on technical, vocational and professional education.**
- **Expanding enrolment in higher education to at least 10 percent of the relevant age group.**
- **Improving access, quality and governance in primary and secondary education.**
- **Reforming Science & Engineering Education and making them relevant to the current market requirements.**
- **Restructuring labor laws and regulations that discourage employment in the formal sector.**

### **CORE SECTORS CONTRIBUTING JOB MARKET**

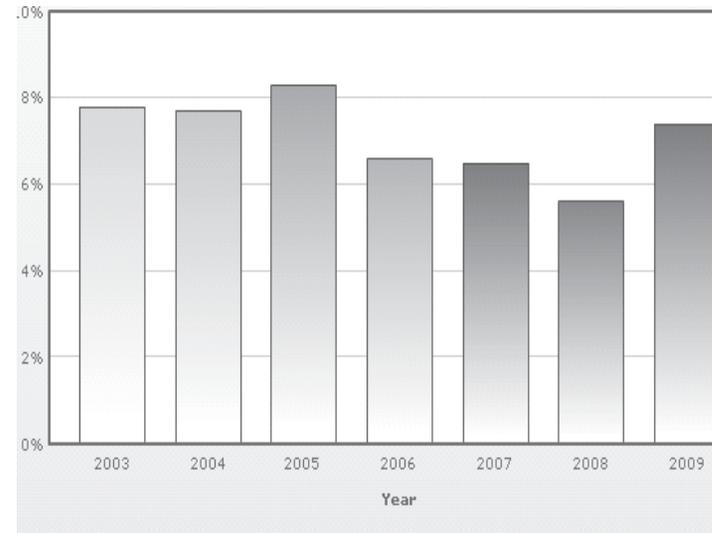
- Mobile phone, Wireless local loop and LDI companies.
- Public call offices.
- Broad-band & Internet and service providers.
- Cable services.
- Electronic media companies.
- Private and non-governmental educational institutions.
- Scientific research and development organizations.
- Private and philanthropic hospitals and clinics.
- Agriculture farm machinery sales and workshops.
- Automobiles service stations and show rooms.
- Automotive vendor industries.
- Fertilizer, pesticides, seeds and agrochemicals distributions.
- Dairy & milk processing packaging and marketing companies.
- Livestock, Fisheries, Fruits and vegetable industry.
- Feed mills.

- New private banks including Islamic banking and Microfinance institutions.
- Advertising, Marketing and Creative Services.
- Intercity and Intra city Coach, bus and transport services.
- CNG filling stations.
- Hotels and Restaurants.
- I.T solution providers and Internet related companies.
- Accountancy and Management Consultancy.
- Construction Services particularly plumbers, electricians, carpenter & masons.
- Telecommunication vendor companies.
- Private Airline Companies.
- Oil and gas exploration, drilling.

**JOBS GRADUALLY DISAPPEARING FROM THE SECTORS**

- Federal Government ministries and departments working under them.
- Provincial Government departments and agencies.
- Public Sector Corporations & organizations.
- Nationalized Commercial banking Sector.
- Public Sector Universities and Colleges.
- Print and Electronic media.
- PIA, Pakistan Steel, Pakistan Railways, Pakistan State Oil.
- Water and Power Development Authority & its subsidiaries.
- Provincial Government Owned enterprises and Corporation.

**UNEMPLOYMENT RATE IN PAKISTAN**



Year	Unemployment rate	Rank	Percent Change	Date of Information
2003	7.80 %	119		2002 est.
2004	7.70 %	122	-1.28 %	2003 est.
2005	8.30 %	75	7.79 %	2004 est.
2006	6.60 %	65	-20.48 %	2005 est.
2007	6.50 %	72	-1.52 %	2006 est.
2008	5.60 %	71	-13.85 %	2007 est.
2009	7.40 %	92	32.14 %	2008 est.

Source: CIA WORLD FACT BOOK - Unless otherwise noted, information in above table is accurate as of December, 2009.

## **SUGGESTIONS**

It is suggested that government should take measures in binding all big companies, mills, factories, firms, groups and such other institutions hiring human resource (technical, management based or any other) at any time whenever they need whether few or in bulk but they should recruit candidates on merit and then give them necessary hands-on training & exposure. Also during their training, a reasonable stipend and facilities should be offered to trainees to enable them to meet their daily expenses at minimum. After completion of the training, they may be posted as per organization's need.

This will ease the employment process for fresh engineers & other graduates. Also, the engineers who are already in service can avail such an opportunity if they find a pay higher than the one they are already drawing because of their being experienced.

## **CONCLUSION**

Finally it is concluded that solution of our problems including unemployment lies in proper economic & financial planning, bringing reforms & quality in existing education system & sincerely addressing issues like energy crises, law & order situation etc. Moreover, unless we don't feel need to implement studies of holy Quran & Sunnah, our problems will never come to an end.

So let's aim that we will play our role in progressive development of our country by working with heart & soul and implementing our knowledge and expertise in nation building.

Let's not become a Doctor, Lawyer, Businessman or an Engineer but a true Pakistani first with a sense of honesty and patriotism to serve the country we live in.

ENGINEERING PROFESSION

OUTLINES

1. WHY BE AN ENGINEER

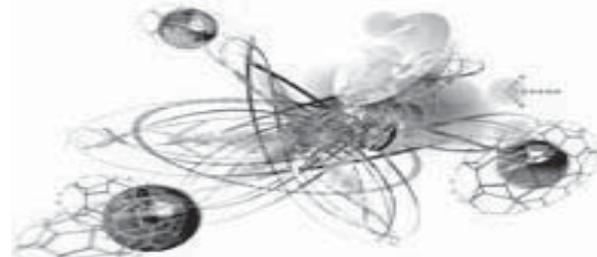
2. ANATOMY OF ENGINEERING PROFESSION

- Engineers Job Description
- Employment Facts For Engineers
- Educational Requirements For Engineers
- Other Requirements For Engineers
- How Do Engineers Advance
- Job Outlook For Engineers
- Nature Of Engineering Work
- Major Engineering Disciplines
- Work Environment For Engineers
- Education And Training
- Other Qualifications
- Certification And Advancement
- Overall Employment Change
- Overall Job Outlook
- Earnings

WHY BE AN ENGINEER

Engineers Will

- **Have the power to make a difference!** By becoming an engineer, you can help solve problems that are important to society. You could be controlling and preventing pollution, developing new medicines, creating advanced technologies, even exploring new worlds.
- **Have money and job security!** Engineers have significantly higher starting salaries than other graduates with bachelor's degrees in many other fields. A society always needs people like engineers, who solve problems and come up with new ways of thinking about and doing things.
- **Be working with other talented people!** Engineering is a team effort. As an engineer you may be working on projects with experts in many different fields and people from different backgrounds & regions.
- **Have variety of options!** Engineers work everywhere: in big and small cities, rural communities, even remote wilderness areas. Some work in business offices or classrooms, others in factories or research labs; some work outdoors or even in outer space. Some engineers go into medicine, law, business management, or policy. An engineering education will prepare you for many different careers.



## ANATOMY OF ENGINEERING PROFESSION

### 1) ENGINEERS JOB DESCRIPTION

Engineers research and develop solutions to technical problems by applying the theories and principles of science and mathematics. Engineers in particular have to perform following job duties.

#### ❖ ENGINEERS WHO WORK IN DESIGN AND DEVELOPMENT

- Design, plan and supervise the construction of buildings, highways and transit systems.
- Develop and implement improved ways to extract, process, and use raw materials.
- Develop new materials that both improve the performance of products and take advantage of advances in technology.
- Analyze the impact of the products they develop or the systems they design on the environment and on people using them.

#### ❖ ENGINEERS WHO WORK IN TESTING, PRODUCTION & MAINTENANCE

- Supervise production & maintenance operation in factories.
- Determine the causes of breakdowns.
- Test manufactured products to maintain quality.
- Estimate the time and cost to complete projects.

#### ❖ ENGINEERS WHO WORK IN TROUBLESHOOTING & AS SUPERVISORY

- Fault diagnosis & trouble shoot errors to ensure fast & optimum performance of the Network or system.
- Perform technical supervision of the routine operation & maintenance.

#### ❖ ENGINEERS WHO WORK IN RESEARCH & DEVELOPMENT

- Perform Research & Development in their area of expertise.
- Performing research on latest trends in existing technologies.
- Making Feasibilities for implementing latest technologies.

### 2) EMPLOYMENT FACTS FOR ENGINEERS

Engineers were offered thousands of jobs from 2004-07. The highest numbers of these jobs were in Telecom & Civil engineering those days, prior to economic & financial recession in the world and hence in Pakistan.

### 3) EDUCATIONAL REQUIREMENTS FOR ENGINEERS

To get an entry-level engineering job, one usually needs a bachelor's degree in engineering (B.E). Generally engineering students specialize in a particular branch of engineering but may eventually work in a related branch.

### 4) OTHER REQUIREMENTS FOR ENGINEERS

Engineers who offer their services directly to the public must be registered. These Engineers are called Registered Engineers (RE). To become a professional engineer, one must have a degree in engineering from any university or college that is recognized by the **HIGHER EDUCATION COMMISSION (HEC)** & accredited by **PAKISTAN ENGINEERING COUNCIL (PEC)**. Detailed procedure of Professional engineering registration process is discussed in this chapter.

### 5) HOW DO ENGINEERS ADVANCE

As entry level engineers gain experience and knowledge, they may work more independently, making decisions, developing designs, and solving problems. With further experience, engineers may become technical specialists or supervisors over a staff or team of engineers or technicians. Eventually, they may become engineering managers, or may move into other managerial positions.

### 6) JOB OUTLOOK FOR ENGINEERS

- ◆ Engineering employment is expected to grow about as fast as the average for all occupations over the next decade, but growth will vary by specialty.
- ◆ Mechanical & Electrical engineers should experience the fastest growth.
- ◆ Civil engineering will experience faster than average growth. So Civil engineers should expect to see the largest employment increase.
- ◆ Electrical, Electronics, Computer system, Chemical & Petroleum engineering are supposed to see similar growth as last year or as at present.
- ◆ Other branches especially Telecommunication seem to have either slower than average growth or a decline due to recent financial & economic recession which has brought about adverse effects for telecom industry in Pakistan.
- ◆ Environmental engineering is also getting enhancement in its scope.
- ◆ Thus Overall job opportunities in engineering sector are expected to be good & growing.

### 7) NATURE OF ENGINEERING WORK

Engineers apply the principles of science and mathematics to develop economical solutions to technical problems. Their work is the link

between scientific discoveries and the commercial applications that meet societal and consumer needs. Many engineers develop new products. During this process, they consider several factors.

**FOR EXAMPLE:** In developing a Industrial Control System or Plant, engineers precisely specify the functional requirements; design and test the plant's components; integrate the components to produce the final design; and evaluate the design's overall effectiveness, cost, reliability, and safety. This process in the same way applies to the development of many different products, such as Chemicals, Computers, Power Plants, Airplanes and toys.

In addition to design and development, many engineers work in testing, production, or maintenance. These engineers supervise production in factories, determine the causes of component failure, and test manufactured products to maintain quality. They also estimate the time and cost to complete projects. Supervisory engineers are responsible for major components or entire projects. Engineers use computers extensively to produce and analyze designs; to simulate and test how a machine, structure, or system operates; to generate specifications for parts; and to monitor product quality and control process efficiency. Nanotechnology, which involves the creation of high-performance materials and components by integrating atoms and molecules, is introducing entirely new principles to the design process.

## 8) MAJOR ENGINEERING DISCIPLINES

Every engineer specializes in a particular field of his interest. In general, there are more than 100 engineering disciplines but most of them fall in following **18**. The detail and scope of each discipline is mentioned below. Numerous other disciplines are recognized by professional societies, and each of the major branches of engineering has numerous subdivisions.

**For Example:** Civil engineering includes structural and transportation engineering, and materials engineering includes ceramic, metallurgical, and polymer engineering. Engineers also may specialize in one industry, such as Automobile industry, Oil & gas or Power sector etc or in one type of technology, such as semiconductor materials.

**The major branches of engineering include:**

- ♦ **ELECTRONICS**
  - ♦ **TELECOMMUNICATION**
  - ♦ **ELECTRICAL**
  - ♦ **COMPUTER SYSTEM / HARDWARE**
  - ♦ **MECHANICAL**
  - ♦ **CIVIL**
  - ♦ **AEROSPACE /AVIONICS**
  - ♦ **BIOMEDICAL**
  - ♦ **CHEMICAL**
  - ♦ **ENVIRONMENTAL**
  - ♦ **HEALTH & SAFETY**
  - ♦ **INDUSTRIAL**
  - ♦ **MATERIALS**
  - ♦ **MARINE**
  - ♦ **AGRICULTURAL**
  - ♦ **MINING & GEOLOGICAL**
  - ♦ **NUCLEAR**
  - ♦ **PETROLEUM**
- ♦ **ELECTRONIC AND TELECOMMUNICATION ENGINEERS** are responsible for a wide range of technologies, from portable music players to the global positioning system (GPS), which can continuously provide the location, for example, of a vehicle. Electronic engineers design, develop, test, and supervise the manufacture of electronic equipment such as broadcast and communications systems. Many electronic engineers also work in areas closely related to Computers & Telecommunication just because of vast & diverse scope of their discipline (Electronics). However, engineers whose work is related exclusively to computer hardware are considered computer hardware engineers & those who work in telecom industry are considered telecom engineers. Electronics engineers specialize in areas such as communications, signal processing, and instrumentation & control systems or have a specialty within one of these areas. For example: control systems or aviation electronics.

- ♦ **ELECTRICAL ENGINEERS** design, develop, test, and supervise the manufacture of electrical equipment. Some of this equipment includes electric motors; machinery controls, lighting and wiring in buildings (electrification); automobiles; aircraft; radar and navigation systems; and power generation, control, and transmission devices used by electric utilities.

Although the terms electrical and electronics engineering often are used interchangeably in industry & mostly professionals from both fields are offered same nature of job, as electrical engineers have traditionally focused on the generation and supply of power, whereas electronic engineers have worked on applications of electricity to automate & control systems or signal processing. Electrical engineers specialize in areas such as power systems engineering or electrical equipment manufacturing.

- ♦ **MECHANICAL ENGINEERS** research, design, develop, test and manufacture tools, engines, machines, and other mechanical devices. Mechanical engineering is one of the broadest engineering disciplines. Engineers in this discipline work on power-producing machines such as electric generators, internal combustion engines, and steam and gas turbines. They also work on power-using machines such as refrigeration and air-conditioning equipment, machine tools, material handling systems, elevators and escalators, industrial production equipment, and robots used in manufacturing. Mechanical engineers also design tools that other engineers need for their work. In addition, mechanical engineers work in manufacturing or agriculture production, maintenance, or other technical operations; many become supervisors or managers.
- ♦ **CIVIL ENGINEERS** design and supervise the construction of roads, buildings, airports, tunnels, dams, bridges, and water supply and sewage systems. They must consider many factors in the design process, from the construction costs and expected lifetime of a project to government regulations and potential environmental hazards such as earthquakes and hurricanes. Civil engineering, considered one of the oldest engineering disciplines, encompasses many specialties. The major ones are structural, water resources, construction, environmental, transportation, and geotechnical engineering. Many civil engineers hold supervisory or administrative positions, from supervisor of a construction site (S.D.O in case of public servant) to chief engineer or project director. Others may work in design, construction, research, and teaching.
- ♦ **COMPUTER SYSTEM / HARDWARE ENGINEERS** research, design, develop, test, and oversee the manufacture and installation of computer hardware. Hardware includes computer chips, circuit boards, computer systems, and related equipment such as keyboards, modems, and printers.

Computer software engineers are often simply called computer engineers who design and develop the software systems that control computers. The work of computer hardware engineers is very similar to that of electronic engineers in that they may design and test circuits and other electronic components, but computer hardware engineers do that work only as it relates to computers and computer-related equipment. The rapid advances in computer technology are largely a result of the research, development, and design efforts of these engineers.

- ♦ **CHEMICAL ENGINEERS** apply the principles of chemistry to solve problems involving the production or use of chemicals and biochemicals. They design equipment and processes for large-scale chemical manufacturing, plan and test methods of manufacturing products and treating byproducts, and supervise production. Chemical engineers also work in a variety of manufacturing industries other than chemical manufacturing, such as those producing energy, electronics, food, clothing, and paper. They also work in health care, biotechnology, and business services. Chemical engineers apply principles of physics, mathematics and mechanical and electrical engineering, as well as chemistry as a major subject. Some may specialize in a particular chemical process, such as oxidation or polymerization. Others specialize in a particular field, such as nano-materials, or in the development of specific products. They must be aware of all aspects of chemicals manufacturing and how the manufacturing process affects the environment and the safety of workers and consumers.
- ♦ **BIOMEDICAL ENGINEERS** develop devices and procedures that solve medical and health-related problems by combining their knowledge of biology and medicine with engineering principles and practices. Many do research, along with life scientists, chemists, and medical scientists, to develop and evaluate systems and products such as artificial organs, prostheses (artificial devices that replace missing body parts), instrumentation, medical information systems, and health management. Biomedical engineers may also design devices used in various medical procedures, imaging systems such as magnetic resonance imaging (MRI), and devices for automating insulin injections or controlling body functions. Most engineers in this specialty need to have a sound background in other engineering technologies, such as electrical or electronics engineering, in addition to specialized biomedical training. Some specialties within biomedical engineering include Biomaterials, Biomechanics, Medical Imaging, Bioinstrumentation, Rehabilitation engineering and Orthopedic engineering.

- ♦ **AEROSPACE ENGINEERS** design, develop, and test aircraft, spacecraft, and missiles and supervise the manufacture of these products. Those who work with aircraft are called aeronautical engineers. Aerospace engineers develop new technologies for use in aviation, defense systems, and space exploration, often specializing in areas such as structural design, guidance, navigation and control, instrumentation and communication, or production methods. They also may specialize in a particular type of aerospace product, such as commercial aircraft, military fighter jets, helicopters, spacecraft, or missiles and rockets, and may become experts in aerodynamics, thermodynamics, celestial mechanics, propulsion, acoustics, or guidance and control systems.
- ♦ **AGRICULTURAL ENGINEERS** apply knowledge of engineering technology and science to agriculture and the efficient use of biological resources. Because of this, they are also referred to as biological and agricultural engineers. They design agricultural machinery, equipment, sensors, processes, and structures, such as those used for crop storage. Some engineers specialize in areas such as machinery design; structures and environment engineering; and food and bioprocess engineering. They develop ways to conserve soil and water and to improve the processing of agricultural products. Agricultural engineers often work in research and development, production, sales, or management.
- ♦ **ENVIRONMENTAL ENGINEERS** plan & develop solutions to environmental problems using the principles of biology and chemistry. They are involved in water and air pollution control, recycling, waste disposal, and public health issues. Environmental engineers conduct hazardous-waste management studies in which they evaluate the significance of the hazard, advice on treatment and containment, and develop regulations to prevent mishaps. They design municipal water supply and industrial waste water treatment systems. They conduct research on the environmental impact of proposed construction projects, analyze scientific data, and perform quality-control checks. Environmental engineers are concerned with local and worldwide environmental issues. They study and attempt to minimize the effects of acid rain, global warming, automobile emissions, and ozone depletion. They may also be involved in the protection of wildlife. Many environmental engineers work as consultants, helping their clients to comply with regulations, to prevent environmental damage, and to clean up hazardous sites.
- ♦ **HEALTH AND SAFETY ENGINEERS AND INSPECTORS** prevent people and property from harm by applying knowledge of systems engineering and

- mechanical, chemical and human performance principles. Using this specialized knowledge, they identify and measure potential hazards, such as the risk of fires or the dangers involved in handling of toxic chemicals. They recommend appropriate loss prevention measures according to the probability of harm and potential damage. Health and safety engineers develop procedures and designs to reduce the risk of illness, injury, or damage. Some work in manufacturing industries to ensure the designs of new products do not create unnecessary hazards. They must be able to anticipate, recognize, and evaluate hazardous conditions, as well as develop hazard control methods.
- ♦ **INDUSTRIAL ENGINEERS** determine the most effective ways to use the basic factors of production such as people, machines, materials, information, and energy so as to make a product or provide a service. They are primarily concerned with increasing productivity through the management of people, methods of business organization, and technology. To maximize efficiency, industrial engineers carefully study the product requirements and design manufacturing and information systems to meet those requirements with the help of mathematical methods and models. They develop management control systems to aid in financial planning and cost analysis, and design production planning and control systems to coordinate activities and ensure product quality. They also design or improve systems for the physical distribution of goods and services and determine the most efficient plant locations. Industrial engineers develop wage and salary administration systems and job evaluation programs. Many industrial engineers move into management positions because the work is closely related to the work of managers.
  - ♦ **MARINE ENGINEERS AND NAVAL ARCHITECTS** are involved in the design, construction, and maintenance of ships, boats, and related equipment. They design and supervise the construction of everything from aircraft carriers to submarines, and from sailboats to tankers. Naval architects work on the basic design of ships, including hull form and stability. Marine engineers work on the propulsion, steering, and other systems of ships. Marine engineers and naval architects apply knowledge from a range of fields to the entire design and production process of all water vehicles. Other workers who operate or supervise the operation of marine machinery on ships and other vessels sometimes may be called marine engineers or, more frequently, ship engineers, but they do different work and are covered under water transportation occupations.

- ♦ **MATERIALS ENGINEERS** are involved in the development, processing, and testing of the materials used to create a range of products, from computer chips and aircraft wings to golf clubs and snow skis. They work with metals, ceramics, plastics, semiconductors, and composites to create new materials that meet certain mechanical, electrical, and chemical requirements. They also are involved in selecting materials for new applications. Materials engineers have developed the ability to create and then study materials at an atomic level, using advanced processes to replicate the characteristics of materials and their components with computers. Most materials engineers specialize in a particular material. For example, metallurgical engineers specialize in metals such as steel, and ceramic engineers develop ceramic materials and the processes for making them into useful products such as glassware or fiber optic communication lines.
- ♦ **MINING AND GEOLOGICAL ENGINEERS** find, extract and prepare coal, metals, and minerals for use by manufacturing industries and utilities. They design open-pit and underground mines, supervise the construction of mine shafts and tunnels in underground operations, and devise methods for transporting minerals to processing plants. Mining engineers are responsible for the safe, economical, and environmentally sound operation of mines. Some mining engineers work with geologists and metallurgical engineers to locate and appraise new ore deposits. Others develop new mining equipment or direct mineral-processing operations that separate minerals from the dirt, rock, and other materials with which they are mixed. Mining engineers frequently specialize in the mining of one mineral or metal, such as coal or gold. With increased emphasis on protecting the environment, many mining engineers work to solve problems related to land reclamation and water and air pollution. Mining safety engineers use their knowledge of mine design and practices to ensure the safety of workers and to comply with State safety regulations. They inspect walls and roof surfaces, monitor air quality, and examine mining equipment for compliance with safety practices.
- ♦ **NUCLEAR ENGINEERS** research and develop the processes, instruments, and systems used to derive benefits from nuclear energy and radiation. They design, develop, monitor, and operate nuclear plants to generate power. They may work on the nuclear fuel cycle i.e. the production, handling and use of nuclear fuel and the safe disposal of waste produced by the generation of nuclear energy or on the development of fusion energy. Some specialize in the development of nuclear power

- sources for naval vessels or spacecraft; others find industrial and medical uses for radioactive materials, as in equipment used to diagnose and treat medical problems.
- ♦ **PETROLEUM ENGINEERS** search the world for reservoirs containing oil or natural gas. Once these resources are discovered, petroleum engineers work with geologists and other specialists to understand the geologic formation and properties of the rock containing the reservoir, determine the drilling methods to be used, and monitor drilling and production operations. They design equipment and processes to achieve the maximum profitable recovery of oil and gas. Because only a small proportion of oil and gas in a reservoir flows out under natural forces, petroleum engineers develop and use various enhanced recovery methods. These include injecting water, chemicals, gases, or steam into an oil reservoir to force out more of the oil and doing computer-controlled drilling or fracturing to connect a larger area of a reservoir to a single well. Because even the best techniques in use today recover only a portion of the oil and gas in a reservoir, petroleum engineers research and develop technology and methods to increase recovery and lower the cost of drilling and production operations.

## 9) WORK ENVIRONMENT FOR ENGINEERS

Most engineers work in office buildings, laboratories, or industrial plants. Others may spend time outdoors at project or construction sites and oil and gas exploration and production sites, where they monitor or direct operations or solve onsite problems. Some engineers travel extensively to plants or worksites.

Many engineers work a standard of 6 days a week with 8 hours a day (9:00 AM to 5:00 PM) i.e. a total of 48 hours a week (40 hours incase of 2 holidays in a week). However, at times, deadlines or work load may bring extra pressure to a job, requiring engineers to work longer than 8 hours a day.

## 10) EDUCATION AND TRAINING

Engineers typically enter the occupation with a bachelor's degree in an engineering specialty, but some basic research positions may require a graduate degree. Engineers offering their services directly to the public must be registered. Continuing education to keep current with rapidly changing technology is also important for engineers.

A bachelor's degree in engineering is required for almost all entry-level engineering jobs. College graduates with a degree in a natural

science or mathematics occasionally may qualify for some engineering jobs, especially in specialties in high demand. Most engineering degrees are granted in electrical, electronics, mechanical, or civil engineering. However, engineers trained in one branch may work in related branches. For example, many aerospace engineers have training in mechanical engineering. This flexibility allows employers to meet staffing needs in new technologies and specialties in which engineers may be in short supply. It also allows engineers to shift to fields with better employment prospects or to those that more closely match their interests.

Most engineering programs involve a concentration of study in an engineering specialty, along with courses in both mathematics and the physical and life sciences. Many programs also include courses in general engineering. A design course, sometimes accompanied by a computer or laboratory experiment class or both, is part of the curriculum of most programs. General courses not directly related to engineering, such as those in the social sciences or humanities, are also often required.

In addition to the standard engineering degree, many colleges offer 4-year degree programs in engineering technology. These programs, which usually include various hands-on laboratory classes that focus on current issues in the application of engineering principles, prepare students for practical design and production work, rather than for jobs that require more theoretical and scientific knowledge. Graduates of 4-year technology programs may get jobs similar to those obtained by graduates with a bachelor's degree in engineering. Engineering technology graduates, however, are not qualified to register as professional engineers under the same terms as graduates with degrees in engineering. Some employers regard technology program graduates as having skills between those of a technician and an engineer.

Graduate training is essential for engineering faculty positions and many research and development programs, but is not required for the majority of entry-level engineering jobs. Many experienced engineers obtain master level degrees in engineering or business administration to learn new technology and broaden their education. Many high-level executives in government and industry began their careers as engineers.

In Pakistan, more than 25 programs at colleges and universities offer bachelor's degrees in engineering technology that are accredited by **PAKISTAN ENGINEERING COUNCIL (PEC)** [[www.pec.gov.pk](http://www.pec.gov.pk)]. PEC accreditation is based on a program's faculty, curriculum, and facilities; the achievement of the students of program; program improvements;

and institutional commitment to specific principles of quality and ethics. Although most institutions offer programs in the major branches of engineering, only a few offer programs in the smaller specialties. Also, programs of the same title may vary in content. For example, some programs emphasize industrial practices, preparing students for a job in industry, whereas others are more theoretical and are designed to prepare students for graduate work. Therefore, students should investigate curriculums and check accreditations carefully before selecting a university.

Admissions requirements for undergraduate engineering include a solid background in mathematics (algebra, geometry, trigonometry, and calculus) and science (Chemistry and physics), with courses in English, Pakistan studies & Islamiyat. Bachelor's degree programs in engineering typically are designed for 4 years, but many students find that it takes 4 years & few months to complete their studies.

#### 11) OTHER QUALIFICATIONS

Engineers should be creative, inquisitive, analytical, and detail oriented. They should be able to work as part of a team and to communicate well, both orally and in writing. Communication abilities are becoming increasingly important as engineers frequently interact with specialists in a wide range of fields outside engineering.

#### 12) CERTIFICATION AND ADVANCEMENT

Beginning engineering graduates usually work under the supervision of experienced engineers and, in large companies, also may receive formal classroom or seminar-type training. As new engineers gain knowledge and experience, they are assigned more difficult projects with greater independence to develop designs, solve problems, and make decisions. Engineers may advance to become technical specialists or to supervise a staff or team of engineers and technicians. Some may eventually become engineering managers or enter other managerial positions or sales. In sales, an engineering background enables them to discuss a product's technical aspects and assist in product planning, installation and use.

Numerous professional certifications for engineers exist and may be beneficial for advancement to senior technical or managerial positions. Many certification programs are offered by the public & private sector professional organizations & institutions in Pakistan. A fresh engineering graduate should immediately apply to become a Registered Engineer (R.E) with PEC [[www.pec.gov.pk](http://www.pec.gov.pk)].

**13) EMPLOYMENT FACTS FOR ENGINEERS**

In past five years, the highest no of jobs were in engineering. Engineers held thousands of jobs in their respective disciplines.

More than 45 percent of engineering jobs were found in manufacturing & production industries including Textile sector and over 30% jobs were in the professional, scientific research and technical services, primarily in architectural, engineering, planning and related services including Oil & Gas sector. Many engineers also worked in the construction, telecommunications and wholesale trade industries.

Federal, Provincial and Local governments employed more than 15 percent of engineers from 2005-2009. About half of these were in the Federal Government, mainly in the Ministries of Water & Power, Defense, Food & Agriculture, Communication, Interior, Railway, and Petroleum & Natural resources and departments working under them.

Most engineers in provincial and local government agencies worked in highway and public works departments.

**14) OVERALL EMPLOYMENT CHANGE**

Overall engineering employment is expected to grow over the next decade, about as fast as the average for all occupations. Engineers have traditionally been concentrated in slower growing or declining manufacturing industries, in which they will continue to be needed to design, build, test, and improve manufactured products. However, increasing employment of engineers in faster growing service industries should generate most of the employment growth.

Competitive pressures and advancing technology will force companies to improve and update product designs and to optimize their manufacturing processes. Employers will rely on engineers to increase productivity and expand output of goods and services. New technologies continue to improve the design process, enabling engineers to produce and analyze various product designs much more rapidly than in the past. Unlike in some other occupations, however, technological advances are not expected to substantially limit employment opportunities in engineering because engineers will continue to develop new products and processes that increase productivity.

Off shoring &/or outsourcing of engineering work will likely dampen domestic

employment growth to some degree. The rise of the Internet has made it relatively easy for part of the engineering work previously done by engineers in this country to be done by engineers in other countries, a factor that will tend to hold down employment growth. Even so, there will always be a need for onsite engineers to interact with other employees and clients.

**15) OVERALL JOB OUTLOOK**

Forgetting for a moment about present worse scenario of job market in Pakistan, overall job opportunities in engineering sector are hoped and expected to be good because the number of engineering graduates are supposed to be in rough balance with the number of job openings from period of 2010-16. In addition to openings from job growth, many openings will be created by the need to replace current engineers who retire, die, transfer to management, sales, or other occupations; or leave engineering for other reasons. Moreover, Job outlook also varies by engineering specialty.

Many engineers work on long-term research and development projects or in other activities that continue even during economic slowdowns. In industries such as electronics and aerospace, however, large cutbacks in defense expenditures and in government funding for research and development have resulted in significant layoffs of engineers in the near past. The trend toward contracting for engineering work with engineering services firms, both domestic and foreign, has also made engineers more vulnerable to layoffs during periods of lower demand.

It is important for engineers, as it is for workers in other technical and scientific occupations, to continue their education throughout their careers because much of their value to their employer depends on their knowledge of the latest technology. Engineers in high technology areas, such as biotechnology or communication & information technology, may find that technical knowledge becomes outdated rapidly. By keeping current in their field, engineers are able to deliver the best solutions and greatest value to their employers. Engineers who have not kept current in their field may find themselves at a disadvantage when seeking promotions or during layoffs.

**16) EARNINGS**

Earnings for engineers vary significantly by specialty, industry, education, experience and technical expertise. Continuing education is critical for engineers as technology evolves. As a group, engineers earn some of the highest average starting salaries among those holding bachelor's degrees.

## CHAPTER 3

### PROFESSIONAL ENGINEER

#### OUTLINES

- 1) WHAT IS A PROFESSIONAL ENGINEER?
- 2) LEGAL REQUIREMENTS FOR ENGINEERING PRACTICE.
- 3) WHAT ARE THE REQUIREMENTS TO BE REGISTERED AS A R.E (REGISTERED ENGINEER) / P.E (PROFESSIONAL ENGINEER) WITH PEC & ITS CONTINUOUS RENEWAL?
- 4) FREQUENTLY ASKED QUESTIONS (FAQS).
- 5) WHY BECOME A PROFESSIONAL ENGINEER?
- 6) SHOULD YOU BECOME AN ENGINEER (QUIZ)

#### 1) WHAT IS A PROFESSIONAL ENGINEER?

A professional engineer (P.E) is a person who is licensed to perform engineering practices (in his/her area of expertise) within a particular territory after meeting all the requirements of engineering degree in terms of his/her formal qualification (16 years of education), required experience and registration with concerned government or professional institution/organization mandated for the same.

To practice in multiple countries, the P.E. must be registered with respective engineering body in each country in which he or she wishes to practice (say with **PAKISTAN ENGINEERING COUNCIL (PEC)** in Pakistan).

#### 2) LEGAL REQUIREMENTS FOR ENGINEERING PRACTICES

- Every country has certain registration Laws Governing the Practice of Engineering.
- Most of the countries prohibit engineering practice by persons who are not registered as such with their respective Professional Engineering Bodies/Institutions from:
  - Advertising, using a business card, or otherwise indicating that they are engineers.
  - Practicing, offering to practice or by any implication holding them out as qualified to practice as an engineer.

#### 3) WHAT ARE THE REQUIREMENTS TO BE REGISTERED AS A R.E (REGISTERED ENGINEER) / P.E (PROFESSIONAL ENGINEER) WITH PEC & ITS CONTINUOUS RENEWAL?

##### General Criteria

- An accredited Engineering qualification (degree) by **Pakistan Engineering Council (PEC)** awarded by a **HIGHER EDUCATION COMMISSION (HEC)** recognized public/private Sector University in Pakistan or abroad.
- Passed all the formal examinations of concerned degree awarding institution.
- Formal (16 years) education in any engineering program/discipline (duly accredited by PEC).

**NOTE:**

In order to maintain minimum standards of competence, practical knowledge and skills of freshly Registered Engineer, PEC has made following changes in awarding registration as "Registered Engineer" and "Professional Engineer"

**CRITERIA FOR BECOMING "REGISTERED ENGINEER"**

- (a) For newly registered engineer, first year after engineering graduation shall be a grace period and CPD (Continued Professional Development) will be applicable from second year onwards.
- (b) A Registered Engineer shall have to earn nine credit points in first three years cycle, twelve credit points in next three years cycle and five credit points per year thereafter for renewal of registration under the PEC Act.
- (c) Additional credit points accumulated during any one year may be carried over to subsequent years for renewal of certificate of registration under the Act. Credit points earning and accumulation will be based on following categories

**Categories of CPD (Continued Professional Development) and Its Accumulation**

- (1) The CPD programmes include additional qualifications, professional skills, relevant management and communication skills acquired through additional training and experience. These aspects are grouped into the following four different categories of training, namely:-
  - Formal education: Acquiring knowledge through accredited engineering programmes.
  - Work-based learning: It includes on-job learning that takes place because of the workplace requirements on projects like construction, operation, supervision at site, development of computer programmes or software package, etc.
  - Developmental activities: It includes attendance of structured educational or developmental meetings over a period of time like conferences, workshops, seminars and refresher courses from Council's approved bodies and
  - Individual activities: Publications of technical articles in reputed refereed

journals, part time lecturing in an approved technical institution, evaluation of dissertation at post-graduate level as external examiner and other participatory activities in the Council's recognized technical associations or institutions.

**CRITERIA FOR BECOMING "PROFESSIONAL ENGINEER"**

- (a) When a Registered Engineer has attained a minimum of five years of initial registration and practical experience in relevant field of engineering from a recognized engineering organization or institution or service and has earned atleast seventeen credit points, he shall become eligible to apply for EPE.

**EPE (Engineering Practice Examination)** is an examination administered under the Council based on professional knowledge of an engineering discipline. For assessment of engineering competence, knowledge and skills of an applicant engineer, the Committee shall hold an examination which may be arranged and conducted through local or foreign services hired or availed for the purpose. The EPE is optional for a registered engineer but is an essential part of assessment for the title of professional engineer.

- (b) A Registered Engineer may qualify for registration as "Professional Engineer" after qualifying EPE.
- (c) Existing Professional Engineers are required to obtain three credit points per year for renewal of registration, with effect from July 2010.
- (d) Professional Engineers already registered with the Council are not required to appear in EPE.
- (e) Engineers registered as Registered Engineer after 2005 are required to show five year experience for appearing in EPE which shall be held in 2010 and onwards, with requisite credit points of the years after its applicability.
- (f) An Engineer registered as Professional Engineer by the Engineers Mobility Forum (EMF) shall on application be recognized by Council as professional engineer.

**EMF(Engineers Mobility Forum)** is a multi-national agreement between engineering organizations (Washington Accord, FEANI etc.) in the member

jurisdictions which creates the framework for the establishment of an international standard of competence for professional engineering.

**AIMS AND OBJECTIVES OF CPD AND EPE**

- (a) Application of theoretical knowledge to practical situations and to evolve innovative solutions to real life problems.
- (b) Application of concepts and ingredients of management to professional works including relevant legal and financial aspects.
- (c) Acquisition and application of necessary communication skills.
- (d) Knowledge of latest developments in various fields of engineering including information technology for specific and cross disciplinary application and
- (e) Adherence to professional ethics and acquisition of a broader understanding of obligations of engineers to society.

**FREQUENTLY ASKED QUESTIONS (FAQS)**

**1. What is an "accredited" degree?**

**ANS** All recognized engineering institutes or universities that award an engineering degree are required to get all their programs (disciplines) accredited by Pakistan Engineering Council (PEC). So an Engineer graduating from such accredited program is said to have an accredited qualification and is eligible for PEC registration as Registered Engineer (R.E) or Professional Engineer (P.E).

**2. What is simple registration with PEC?**

**ANS** An Engineer who after fulfilling all the testimonial requirements of PAKISTAN ENGINEERING COUNCIL (PEC) is said to have acquired registration with PEC as R.E and can write himself/herself as a Registered Engineer (PEC Registered).

**3. What is professional registration with PEC?**

**ANS** An Engineer who after fulfilling all the testimonial requirements of PAKISTAN ENGINEERING COUNCIL (PEC) & has at least five years or more working experience in practicing engineering work is to be registered as Professional Engineer (P.E) and then can write himself/herself as a Professional Engineer (PEC Registered) till the year 2010. With effect from 2011 Engineering Practice Examination (EPE) will also be required to be passed for becoming P.E. and Continuous Professional Development (CPD) points for lifelong learning will be necessary for all engineers.

**4. After qualifying and meeting all the criteria of a professional engineer, is one considered as a Professional Engineer (P.E) in his or her field of Engineering?**

**ANS** Yes in that case one who is registered with PEC as a Professional Engineer without any other designation, unless acquired otherwise. However, one can practice only in his/her respective field of expertise gained by education or by training & experience.

### WHY BECOME A P.E / R.E ENGINEER

**There are really more than 10 reasons but most of them fall in following categories.**

- A LEGAL NECESSITY
- IMPROVED EMPLOYMENT SECURITY
- OPPORTUNITIES FOR ADVANCEMENT
- PERSONAL SATISFACTION

#### ❖ A LEGAL NECESSITY

- ♦ If you ever want or need to become a consulting engineer, you must be registered as a P.E.

#### ❖ IMPROVED EMPLOYMENT SECURITY

- ♦ Restructuring, downsizing and outsourcing are real! A P.E. registration may make the difference in finding new employment or less risk of being fired from the job.
- ♦ Industry and utility exemptions are eliminated in some jurisdictions.
- ♦ Continuing education is required for a professional engineer in some countries by law (also in Pakistan with effect from July 10, 2010) or in some countries for the sake of enhancing engineering knowledge & practice.

#### ❖ OPPORTUNITIES FOR ADVANCEMENT

- ♦ Many companies (very few in Pakistan) encourage their employees (Engineers) for being registered Engineer and some companies even pay a bonus for it. The Engineering colleges, universities and other organizations require by law a PEC registration for its engineering faculty or for holding the titles for all engineering jobs.
- ♦ In all renowned private sector industries, utility companies, and for government positions (BPS 17 & above), only a R.E. or P.E. is required for specified jobs or levels.
- ♦ Within an engineering profession being practiced in a (an) national/international environment, professional engineering registration will be required to work locally or in any other countries.

#### ❖ PERSONAL SATISFACTION

- ♦ Having a Professional engineering registration is the mark of being a professional. Ethical standards, continuing education, and professional competency are expected from such an Engineer. P.E. after your name indicates that you have met the required standards and can be acclaimed as a respected engineering professional.

**"Engineers will be involved in making  
all the wonders of future a reality"**

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### Should You Become an Engineer? (QUIZ)

This quiz will help you find out if you have the personal characteristics you need to have a career as an engineer.

**Answer following easy questions, pen down your options on a separate paper and then compare those options with possibility table given at the end.**

#### QUESTIONS

**1) Do you like using scientific principles and methods to solve problems?**

- a) No
- b) Sometime
- c) Yes.

**2) Do you find yourself quick & master in dealing with digits, numbers & figures?**

- a) I can even hardly think of dealing with them.
- b) It's like a child's play to me.
- c) Although I can manage but it takes time dealing with.

**3) Are you good at putting together seemingly unrelated facts to form conclusions?**

- a) Yes.
- b) No.

**4) Are you always very accurate?**

- a) Yes, almost.
- b) Some time but not always
- c) Accuracy doesn't matter to me.

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### 5) Do you enjoy conceptualizing things & facts in your studies?

- a) I really enjoy conceptualizing anything.
- b) I feel ease at memorizing them "as such".
- c) I can't memorize anything.
- d) Either b) or c)

**6) Do you think you have problem solving skills & can come up with a cost effective solution to any of your problems?**

- a) No at all. I have to seek help in this matter.
- b) Yes I always enjoy solving problems myself.
- c) Sometimes but not always.

**7) When making decisions, how much independence do you need?**

- a) I usually want to make my own decisions, but I'm willing to compromise.
- b) I want to make my own decisions without anyone's interference.
- c) I don't like making my own decisions.

**8) Do you like your work to be structured or do you prefer to make things up as you go through your day?**

- a) I think structured work is boring.
- b) I like my work to be structured.
- c) Either way is fine with me.

**9) Are you comfortable using email?**

- a) Yes.
- b) I don't like communicating by email.

**10) Do you find yourself good at managing things with technical approach?**

- a) Usually.
- b) Always.
- c) No at all.

**11) Which book would you like to study in your leisure hours?**

- a) A Management book.
- b) A science book.
- c) A general knowledge quiz booklet.
- d) A Story Book.

**12) What makes you feel pleasure doing?**

- a) Writing an article on marketing strategies.
- b) Designing, drawing & sketching something.
- c) Doing nothing (Sitting idle)

**POSSIBILITY TABLE**

S.NO	COMBINATION OF OPTIONS	POSSIBLE RESULTS
1)	1) c    2) b    3) a 4) a    5) a    6) b 7) a    8) b    9) a 10) b    11) b    12) b	It looks like you would be satisfied & enjoy a career as an engineer. As per your answers, pursuing career in the field of Engineering would be the best choice for you.
2)	1) b    2) c    3) a 4) b    5) a    6) b 7) b    8) b    9) a 10) a    11) a    12) a	The test doesn't recommend you to become engineer. Based on your answers, it is doubtful you would enjoy your career as an engineer. Perhaps pursuing Career in Business & Management would be a suitable choice for you.
3)	1) a    2) a    3) b 4) c    5) d    6) a 7) c    8) a    9) b 10) c    11) d    12) c	It doesn't seem like becoming engineer is the best career choice for you. According to your answers, you would not be satisfied working in this field or the field doesn't suits your interests. If you still want to give this field a consideration, you will have to do more study, research & enhancing your technical learning in it.

**CAREER PLANNING MADE EASY**

**OUTLINES**

1. CAREER PLANNING
  - Career Planning Defined
2. CAREER PLANNING AT ACADEMIC LEVEL
  - National Need
  - Consequences of Improper Career Planning
3. CAREER PLANNING AT PROFESSIONAL LEVEL
4. CAREER PLANNING DEVELOPMENT
  - How does career planning development help
5. PREPARE AHEAD OF TIME
6. MAKING YOUR DREAMS COME TRUE
7. LIFE'S PRACTICALITIES
8. NETWORKING
  - Education
  - Recruiters
9. SEVEN-DAYS CAREER ACTION PLAN
10. KEEP CAREER ADVANCEMENT PORTFOLIO UP TO DATE
  - A Professional Portfolio
11. HOW TO KEEP UP SPIRIT
12. GET MOTIVATED WITH A NEW CAREER LIFE AND TRANSITION
  - Transition In Careers
  - Prepare Yourself To Face A Career Transition
13. RIGHT CAREER TRANSITION
14. CAREER PLANNING TEST
15. STARTING A CAREER IN MANAGEMENT
16. USEFUL TIPS FOR CAREER CHANGE

**CAREER PLANNING**

Choosing a career is the most crucial decision of anyone's life as it determines how one will spend his life, what he will be known as, what his lifestyle will be like, how much one will earn and will be doing what. Career planning is the main route which leads a person to the right path of success and honor to secure his future.

**Career Planning Defined**

Career planning is a lifelong process, which includes choosing an occupation, getting a job, growing in a job, possibly changing careers, and eventually retiring. This chapter will focus on career choice and the process one goes through in selecting an occupation. This may happen once in our lifetimes, but it is more likely to happen several times as we first define and then redefine ourselves and our goals.

### CAREER PLANNING AT ACADEMIC LEVEL

The most difficult part of life with respect to career planning comes when a student has to decide about the subjects/group at A-level/ HSC/FSC Level & then after completing college, one again has to plan a career about pursuing a degree at university level

At both stages, a number of questions comes to one's mind, and merely finds some one professional who could guide him properly. Usually one has queries in his mind like

- Which field suits him best?
- What type of jobs he has to do in a particular profession?
- What is the scope of any field or discipline?
- In which field and institution the admission can be sought?
- Which institution/university is better and why?
- What sorts of reserve seats are available?
- What is the course duration, admission process, cost structure and how to cut it short?
- Is there any organization that guide and helps throughout the process?

#### National Need

Higher Education plays a vitally important role in increasing the prosperity of a country. In today's world, no nation can make advances without engaging a large number of its human capital in research and development. The success of a country in future can be determined by number of students enrolled in its institutions of higher learning at present.

In Pakistan, percentage of school going children is alarmingly very low and this number keeps on decreasing as we move on to the higher classes. Only 26% of students make their way to the higher education. So, 74% of the students drop out due to many reasons. Lack of timely guidance is a major reason in this regard. In addition to this, out of those who pursue their higher learning, a large number of students make wrong choices. **Due to lack of guidance and information,**

- 250, 000+ students are suffering annually.
- About 41, 000 appear in entry test of medical colleges and only 5,000 of them get admission.
- Approximately 70,000+ appear in entry test of engineering institutions and only 7,200 get admission (in PEC accredited programs).
- 150,000+ students of other groups are confused to choose any discipline.

### Consequences of Improper Career Planning

- Wastage of time and money.
- Frustration Unemployment.
- Addiction to drugs.
- Indulgence in criminal activities.
- Paucity of determination to the work.

### CAREER PLANNING AT PROFESSIONAL LEVEL

Career planning at this level means learning about the job market and also where you will fit into it. Career planning helps you to gauge your strengths and skills and what kind of a job would be suitable for you. An employment manager would decide on whether you conduct yourself in a positive and professional manner and whether you should be hired for the job or not. Your employment also depends on your resume and how you present yourself during the interview.

By knowing about the job market you will get to know what sort of work is popular and easy to get in the present day. Career planning will help you to search for a job and assist you in your search. You could even try to get a good position in the beginning based on your qualifications and skills.

### **CAREER PLANNING DEVELOPMENT**

Often youngsters opt to work as soon as they finish university regardless of whether they have undergone any specialty training or not. Though this may be the right choice for some for others it may not be so.

#### **How does career planning development help**

Most of the people spend the major part of their adult lives working for a living and because of this it is important that you are doing something that you enjoy and not something that you are forced to do. This is where career planning development comes in useful and can help you in finding the right choice of profession for you. The choice of career starts when you are in high school and have to decide the subjects that will help you in your future profession. This is also a period when you can see whether you really like the subjects and would like to continue with them.

Many students do some kind of part time job during this period but it may not be the kind of job that they would like to carry on with later. Anyway this will give them an insight into what kind of profession they would like to take up in the future. It is your first job that teaches you discipline and the norms of office work. It is also an opportunity to learn new skills and office procedures. Your employer will give you the first letter of recommendation and mention all your strong points. You also learn how to relate to others in the office and to have a proper schedule and be punctual.

### **PREPARE AHEAD OF TIME**

You don't want to get to the point where you have been given notice and have absolutely no idea where to start looking for a job or even what jobs you qualify for. Always know what your skills are and how those skills apply to the present marketplace. This can take a review of your skills, yearly. This should be easy enough as that is normally done in your yearly review, with your supervisor. Keep a copy of all of your achievements and skills at home at all times. If you are asked to leave a company, you may have little time to take anything with you. So, act as a faithful employee, but keep records at home always. Don't leave them in your desk at work. You won't be able to retrieve them if you leave suddenly.

Many companies ask you to specify your career goals and then evaluate how you did at year end. This is a great strategy to help you plan on how to increase your on-the-job skills. You should take advantage to express any areas that you think will also make you more marketable outside the company and that can also benefit your own company. Always show how your further training can increase the company's bottom line. If it happens to increase your marketability, that's not something you need to draw attention to, but it can be invaluable during a layoff.

### **MAKING YOUR DREAMS COME TRUE**

Besides a layoff, there are signals within us that tell us we've either been at a job too long or the winds of change aren't in our favor. Learn how to start reading the elements of change to decide when you have to take notice and be proactive. You can look on this as an adventure to rediscovering the passion and ambition in your life. If you know how to successfully switch from one job to another, you can have the freedom to create a life of happiness instead of a life of drudgery. It will help to build your confidence and give you more life satisfaction.

You will come face-to-face with the statistics that prove some avenues are surefire ways to increase your income and help you remold your career. You won't be one of the ones who are floundering, unable to decide which way to go for fear of losing a job you don't like anyways.

You will have a plan, something the majority of people don't have when they are switching careers or trying to make a dream come true.

Learn how to overcome your own mindset and reach for a future that excites you. This means learning what motivates you and what you enjoy. There is ample evidence that most people have more than three careers in one lifetime. They can be as varied as turning from a medical doctor to a TV anchor or joining beauraucracy (becoming CSS officer) and anything in between. You can re-invent yourself as long as you have the commitment to follow your dreams while placing your feet squarely on the ground, one foot in front of the other.

### **LIFE'S PRACTICALITIES**

Some of the problems that people face when changing a career are practical issues:

- **How will you finance an extended period of time without a job?**
- **How will you get an education? Who will pay for it?**
- **How will you manage your time and your family responsibilities?**
- **Where can you make business contacts?**

These are all crucial life issues that have to be recognized and dealt with in order to succeed. Very few people succeed in a complete vacuum. There are other people who can become allies and those who can create obstacles in your drive to change your career. You can even sabotage yourself and not realize it until many years of what could have been fruitful work have gone by.

This book will give you practical answers to life's practical questions. While having a dream is a noble endeavor the actual execution of it requires a very firm grasp on day-to-day issues. You will find advice on how to manage your time, how to get your employer to pay for your career advancement, and how to network.

**"A strong & positive Attitude creates more miracles than any other thing because, Life is 10% how you make it & 90% how you take it"**

## NETWORKING

So many people have heard the importance of networking, but few actually practice it to make an impact on their careers. When you are faced with a job loss or a desired career change, networking is one of the most important strategies to understand and implement.

You can start to make targeted visits to locations where professionals meet and network. You can, in some cases, even do it in time, if you are still employed.

If you are not employed, networking can become very difficult. You may feel isolated from your colleagues and the industry. You may feel embarrassed to show up without a title. You can get a lot of networking done at networking groups for the unemployed, but let's face it; everyone there is typically not working. You want to be able to go to places where you can meet other people who are able to get your foot in the door to a company or position that you have targeted in your plan.

Some people would prefer to hire someone who can help motivate and guide them in their career pursuit.

### Education

You may find out that in order to fulfill your dreams, you will have to get continuing education. There are so many teaching institutions that the choices available make it difficult to decide on where to attend. You can choose by price, but that might not give you the credentials that you need to make the career change. You don't want to graduate only to find that you owe lots of money in student debt and have made no inroads in your efforts to fulfill your dreams.

### Recruiters

If you are employed and looking to change companies, you know the dangers of posting your resume online where a supervisor might find it. You also know how that can negatively impact your career and make you a prime candidate for a layoff. So, there are instances when you don't want to do the job search through public means. Hiring a recruiter can be a very thoughtful way of bringing confidentiality to your search and giving you more time to make sure you are meeting the other goals in your plan.

## SEVEN-DAYS CAREER ACTION PLAN

It takes a lot of hard work, research & strategic plans to make your career dreams come true. But did you ever imagine what you would do if you suddenly get laid off?

Would you be able to implement the seven-day career plan effectively? Obviously, it takes more than seven days to prepare, but once you are forced to go up to bat, that's when you can be glad you had some idea of how to hit a homerun, instead of striking out.

### Day One

Let's assume that day one is the day that you are actually walking out of your previous employer's company into your new life. It doesn't matter if that change came about because you planned it that way. The moment you realize that you are about to head out the door of your old company is the day the clock starts ticking on your seven-day plan.

You get to home and now you know what to do. You take out your career plan with the two choices for careers you had entertained in the past, and you make a decision to either go for one of these or stick with the work you currently do. You will have a clear idea of which of your skills are marketable, if you kept your career plan in shape, and which need to be upgraded.

### Day Two

Since you were aware that many people face the prospects of having two or three career paths in their lifetime, you are not caught completely off-guard. You might have a side business that can be expanded already in place. You might have a part-time job that has been offering you some needed training skills. The only things that can derail your plans now are finances, so you start to see if you're in good shape.

### Day Three

Having gotten your finances and plan in place, now you want to start to network immediately. Continue to attend the professional organizations you joined. Be sure to carry cards with a contact number that they can reach you. You need to come clean to anyone that you are in the market for a job

or looking to switch into a new career. Now is the time to get returns on any favors you may have made during the time leading up to your layoff.

You will be calling to make appointments with all of the local agencies and recruiters that you investigated earlier. You should have a clear idea of who to call and how to network at this point. If not, the chances of you making a successful career change in seven days are practically zero.

You should be sending out resumes and cover letters to employers that are looking for your skills. One of the first places that might be hiring is your previous company's competitor. If you want to stay in the same type of position, it doesn't hurt to know who they are and contact them when you are laid off. Just make sure you did not sign any non-compete agreements or you won't be able to be hired.

#### **Day Four**

After you have made your phone calls and set up appointments to meet with people you know face-to-face, then you should investigate the online resources. If you haven't posted your hiring information online, now is the time to do so. As long as you are not currently employed, the Internet can be a wonderful marketing tool for someone looking for a job.

Now if you are not looking for a job, but seeking to expand a business concept, then you will be working towards expanding your customer base and seeking out new business. You will want to use all the resources at your disposal, both online and offline. Look at what has made you money in the past and just do more of the same to increase your income, for now. You can get more creative after the financial crisis is over.

#### **Day Five**

As you continue to network and establish a bigger circle of contacts, you will start receiving feedback on your chances at employment. The feedback can be very subtle, so you have to be on your toes to not miss it. If after calling various people, no one wants to return your calls, then you know you have a problem. It could be you've suffered a loss of reputation, your skills aren't marketable, or everyone is in the market for a job and you are one of many contacting that person. Don't take it personally. If you have established some good contacts throughout your years of association with other professionals, you will eventually get a response from someone who can

help. Remember that it is often a matter of timing and luck as to whether an opportunity comes your way or not. Use that feedback to modify your goals, your presentation, and your public image.

#### **Day Six**

When you happen to network and seek openings anywhere, remember to keep your skills up-to-date and your professional image as polished as possible. If means that you take work on a volunteer basis to get you more skills, then that is something that can keep you busy and your spirits up too. Just always seek to make sure that any free work you do is done with the intention of helping your career goals in the future. Don't succumb to using your free time for work that isn't going to contribute to your goals in the end. You have to be somewhat single-minded on placing your feet firmly on a path that is not only satisfying to you personally, but that also can be lucrative.

Take advantage of any free seminars or job placement services offered to people who are unemployed. Spend your time seeking out professionals in the area you are targeting so that you can network with them. Don't just focus on making them your stepping-stone to employment, also show your interest in the career path they are in. This is far more attractive than a person who appears desperate to get a job.

#### **Day Seven**

If you've followed all the steps outlined, you will be getting closer to your target day-by-day. It may take seven days, it may take 30 days. It can even take years, if continuing education is involved. The key is to be able to weather a downturn in finances by having several options available to you. This makes you less desperate to take the first offer that comes along and gives you time to make a career change that is meaningful and lasting.

**The process can be reviewed every week and re-established, using the same formula.**

### **KEEP CAREER ADVANCEMENT PORTFOLIO UP TO DATE**

It does not matter what sort of a job you are doing or what your qualifications are, it is useful to keep all the information on hand in your career advancement portfolio at all times so that you can change your job at any given moment. All your educational documents and proof of your prior experience should all be readily available in case you find it necessary to prove these points at some time or the other.

This is especially so if you have a home computer and have all the information online. You could forward it all to any prospective job sites while searching for a new job. Documents of all sorts like awards, recommendations, certificates, internship certificates or any other things that speak well of you could be documented online. You can also maintain hard copies of all these documents and bind them neatly in a folder which you can submit when required. These will come in very handy if you have to suddenly go for a job interview.

### **A PROFESSIONAL PORTFOLIO**

It is beneficial to have a professional portfolio on hand always. This serves the important purpose of giving the person some clarity on their direction of work and what they would want to do in the future. This is a useful tool to have for interviews as it gives the management an idea of what your skills and talents are and what position you will fit into. This thing really helps the interviewers to place the candidate in a suitable position.

#### **What should your career advancement portfolio contain?**

Some of the essential documents that you should put into the portfolio are:

- Educational certificates from matriculation to the last degree
- Academic awards
- An updated resume
- Work experience certificates
- Certificates of any voluntary work done
- Career goals or missions

- Letter of recommendation and references from previous employers
- Achievement awards &
- Transcripts

Ensure that anything pertaining to your past experience that will help in your present search for a job is documented. Have the documents and certificates bound neatly with everything in order. The resume should be in just one page so that the interviewer can get all the details at a glance. You should have your name and contact details mentioned clearly and lastly do not give any of the papers in a crumpled or wrinkled state.

### HOW TO KEEP UP SPIRIT

Having a sudden shift in your job environment can be very traumatic, even when planned or foreseen. No one likes to be the person picked to get booted out of a company. You can't let the experience embitter you because it will make you clearly unemployable in the future. Instead, focus on the positive time spent building your skills and always try to exit gracefully. Ask if you can get references and tell them that you enjoyed your time with the company and you are sad to see it end.

There will be feelings of loss at some point. You might miss your colleagues, or at the very least, your paycheck. If you are older, you might start to think that people are discriminating against you because of your age. You might even feel betrayed, if the layoff was done in such a manner as to make you feel discarded instead of let go. These feelings can be overwhelming when you have no plan in place and see no future in sight. That is why it is very important to be as proactive as you can in today's market for your own well-being and peace of mind.

You can't make a successful career change when you don't even believe in yourself to start with. While you have to pay some attention to the things that have gone wrong, don't forget to focus on what is going right for you. This can also help you to keep your confidence and your optimism when things go wrong. Always look for something in each day that you can say you've achieved and feel good about, even if it is calling one person who is happy to hear from you.

With every new path there can be fear and trepidation. Those same emotions can be turned into a sense of exploration and excitement. Try to look on this change in your life as a new lease on life. You can do that, if you learn how to plan for the future and how to stay grounded in the present. You can remain positive knowing that your plan will eventually bear fruit, even if the going gets rougher or it takes a bit more time than you had planned. The fact is that just putting one foot in front of the other in a directed effort will eventually lead you straight to your goal.

### GET MOTIVATED WITH A NEW CAREER LIFE AND TRANSITION

As a fresh graduate you should be prepared mentally for the career that you are going to opt for, and this can be done by counseling with your teachers, seniors and guidance from your parents. They will have a general idea of where your talents and skills lie and will help you to pursue your career as a professional or continue your postgraduate studies in the field that suits you. However, very often it is not quite clear what the person wants to do, and suddenly at a later age they realize that what they have chosen to do is really not their vocation and go in for a career transition. This is something that you should keep in mind.

#### Transition in careers

It is not unusual anymore to want to change your career at a later date. There could be many reasons for this transition and not just one's choice of a different kind of job. Sometimes this could be forced on individuals because of down sizing in companies, technological reasons, economical reasons (as the case now a day) or even reasons of health. Maybe you cannot cope with the work because of health reasons or the work has become boring and you want to do something different for a change, or there is no job satisfaction and you want to try your hand at something more interesting. Whatever the reason maybe you are in the middle of a transition.

Once you come to realize that there has to be a transition it makes it a lot easier for you. If you get to know the right steps to follow to make this transition smoothly, you will have no problem going into a new environment and doing well in it from the beginning. It is better to opt for a change instead of staying on in a place where you are stagnating and where you may not like the colleagues or the management and also find the job gives you no satisfaction.

### **Prepare yourself to face a career transition**

You should be prepared for a transition in your career at any time. For this you must first make a list of your qualifications, your skills and talents and what are the job options that you have with all this knowledge. Once you have listed the possibilities of the things that you can do, you can start looking for jobs in these areas. This time you can choose a job that makes most use of your skills and talents and where you know you will not stagnate.

You could get your colleagues and friends to assist you in listing your skills and talents and what it is they like about you. Alongside these points you can jot down your own ideas and then begin your search for a job where all these good points will hold you in good stead.

### **RIGHT CAREER TRANSITION**

Once you find that there is no job satisfaction and need a change then it is better to do so as you will not be happy doing a job that you do not enjoy. You should ensure that the new job is something that you are happy doing and that will give you more satisfaction than the previous one. Do not just opt for a change without doing some research on the new job and then find that it is not suitable for you.

Another choice would be to change your job description but remain in the same field so you already have an idea of how things work here. This kind of a change would make it easier for you to handle as you have prior working knowledge in this industry. Once you have good information on the working structure in any field you will be able to adjust to a new job description much faster and with more ease.

The easiest way for a job transition is to change the organization but remain in the same job description. Here you would have the added advantage of the experience you have gained from your previous job and because of this may be able to start at a higher grade and a better salary. All you would have to learn is the culture of the new company and fall in line with it.

For Example: If you are working as a technical manager in an organization, performing supervision of routine operation & maintenance & managing technical records and have been doing this for many years and now that you are switched into a completely new organization with the same position & nature of work, yet you will have to gain some technical knowledge about that particular organization to improve your performance. The basic skills of management would be something you already have so you just have to become familiar with the new organization.

### CAREER PLANNING TEST

A career planning test can be very purposeful. It can help a person realize his planning abilities, maturity in decision-making and basic career management. The career planning tests can aid you to find your aptitude level and your abilities. It can clarify all the queries in you. A career planning is not a magic weapon but an eye-opening tool which can point out to you the best possible options for consideration.

The career planning tests are done either on paper or in a computer. Students, in general, write a lot of such tests to locate themselves in the career-radar. Elementary school students are generally not advised to take these tests because of their mental maturity.

Career planning tests which deal with work values, ethics and lifestyle values are also taken up by students to explore the different types of jobs. Answers to these career planning tests never have right or wrong answers. It is a tool which measures your responses in variety of areas such as creativity, altruism, technicality, economic rewards, physical activity and social relationships.

Career planning tests can also involve questions based on what you like or dislike. Such tests explore interest inventories. These tests can fail sometimes, especially when students who really don't have a clue about few of the activities listed.

Another way of career planning tests involves aptitude and achievement test. It can help you in a large way as it not only helps you realize your inherent skills but also to develop new skills. Educational institutions normally use this tool for its students. Even armed forces in Pakistan, employers and licensing agencies have started to use these tests to recruit people.

Career planning tests are conducted for both youth and adults. Career maturity testing might give a clue to the person about his ability to take up career management.

### STARTING A CAREER IN MANAGEMENT

Did you ever do a job that made you wish, you were rather without a job than work here?

When you felt you should be the boss than getting bossed over by your senior. If your feelings are all the above then you are the best bet for a management career. The perfect candidate for such a job should have certain special qualities that make them apt for the job. You are required to have certain special abilities to succeed in a career like management. The more you improve your skills the better manager you will be and much better chance of making more money. You are required to do certain things to get this job so you need to concentrate if you feel this career is for you. In the process you can learn if this is the chosen career for you or not.

**The main quality that will make you successful in management career is excellent leadership abilities.**

Did you ever do a group project when in university and took over as the group leader? Are you good at delegation ensuring that everybody did their part? If your answer to these questions is yes then you will be the perfect fit for a career in management. If you have motivating skills it is an added quality. A good manager will not only encourage the subordinates to do a good job but at the same time get them interested in what they are doing so that they naturally do a better job of it by putting in extra efforts than if they were compelled to do the same. This will prove that you are a good manager and you are a perfect fit into management.

There are many people in management career who have no leadership skills & become misfit in such a career. Such people have a tough time managing people. They just can not motivate their subordinates. Instead, they are likely to do exactly the opposite i.e. to demotivate them. If you are good at managing people then you should get into management so that there are lesser bad managers. Also it is very essential to love your job, so subordinates will continue where they are working if they have good leader as their boss. For this reason managers are the backbone of the company.

### USEFUL TIPS FOR CAREER CHANGE

Our career, that is, the time we have spent in any particular field, is not often something we desire to remain in for years at a time. Sometimes, we just want out. Questions begin to rise in your mind about the possibility of enjoying another field or another style of career. These are noble questions, as a career is designed not to be a lifestyle of service, but to be a reflection of who you are and what you desire. It mirrors your life. This is why career transitions must be handled with care and wisdom. In fact, there are those who have dedicated their lives in order to assist others in their career transitions. Since change is never easy. During this process, however, there are a few simple steps you might want to follow.

Having said that, there are a few things you should know about any career. With the many activities you engage while in your career, you acquire skills and abilities, job titles and positions. This is what labels your career in the eyes of other employers. This is why it is always important to consider your career in two dimensions, that is, through the dimension of title and the dimension of responsibilities. By dividing it up into these two parts, you are then able to better sell your skills to other companies, giving them a more concrete knowledge of what you are capable of bringing to the table when hired. This also provides yet another interesting question:

**Is the desired transition in the field itself, is just in the title/responsibility?**

Ask yourself this question and answer it honestly. Remember, your career is your mirror, so be careful and forever cautious when considering a career transition.

In the end, there are only two methods of transitioning your career. You have the changing field but not the job, you have the changing job but staying in the same field, but the most popular method of transition is changing everything, both job and field.

This is a very common thing for people to consider doing in order to change

their pace or to advance their careers. Of course, if you are skilled in things that you are not utilizing in your current field, it may not be a bad idea to expand and use your gifts on the side, if not for a complete career transition.

**"Each Success only buys an  
admission ticket to a more difficult problem"**

HOW TO MAKE EFFECTIVE STUDIES

OUTLINES

1. EFFECTIVE STUDY SKILLS

- How To Study And Making The Most Of Your Time
- The Value Of A Schedule
- A Schedule Saves Time
- Making Every Hour Count
- When To Study
- Studying For Lecture Courses
- Making And Revising A Schedule

2. PROCESS OF STUDY

- How To Use Your Time
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- Getting The Main Idea
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- Reviewing the Topic
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  - Preparing An Outline And Writing The Paper

## EFFECTIVE TUDY SKILLS

### How to Study and Make the Most of Your Time

No two people study the same way, and there is little doubt that what works for one person may not work for another. However, there are some general techniques that seem to produce good results. No one would argue that every subject that you have to take is going to be so interesting that studying it is not work but pleasure. We can only wish.

Everyone is different, and for some students, studying and being motivated to learn comes naturally. Your success in college & university is dependent on your ability to study effectively and efficiently. The results of poor study skills are wasted time, frustration, and low or failing grades. It's your life, your time, and your future.

This chapter is meant to help you develop effective study skills. It is not a magic formula for success in preparing for tests, or written or oral assignments. Studying any material requires work! However, by using the techniques described here, and by applying yourself, you can gain a valuable edge in understanding material, preparing for tests, and, ultimately, learning. This article contains some of the best and most effective techniques of successful students (students who typically have high grades in high school, college & university regardless of the courses they take. So read on, think about what you read, and prepare to become a successful student.

### Effective study skills are more than understanding

Effective study skills must be practiced in order for you to improve. It is not enough to simply "think about" studying; you have to actually do it, and in the process use information from what you do to get better. This is the central idea of this page. All that follows depends on this single concept. There is a saying that goes like this:

**"Practice doesn't make perfect; perfect practice makes perfect."**

If you want to be an achiever, take this saying to heart.

### The value of a schedule:

Before you even begin to think about the process of studying, you must develop a schedule. If you don't have a schedule or plan for studying,

you will not have any way of allocating your valuable time when the unexpected comes up. A good, well thought out schedule can be a lifesaver. It's up to you to learn how to develop a schedule that meets your needs, revise it if necessary and most important, follow it.

### A schedule saves time:

All schedules should be made with the idea that they can be revised. A good schedule keeps you from wandering off course. A good schedule, if properly managed, assigns time where time is needed.

### Making every hour count:

A schedule should take into account every class, laboratory, lecture, social event, and other work in which you engage. You must focus on the other "free time" available and how you will use it. Make a weekly schedule and block off the 24 hour day in one hour increments. Indicate times for classes, labs, lectures, social, and work time. Also block off a period for sleeping each day. What is left over, plan time for study. This gives you a rough road map of the time available. Of course, you can revise your schedule as circumstances warrant.

### When to study:

The problem of when to study is critical. A good rule of thumb is that studying should be carried out only when you are rested, alert, and have planned for it. Last minute studying just before a class is usually a waste of time.

### Studying for lecture courses:

If your study period is before the lecture class, be sure you have read all the assignments and made notes on what you don't understand. If the study period is after the lecture class, review the notes you took during class while the information in your mind is still fresh.

### Making and revising a schedule:

Don't be afraid to revise your schedule. Schedules are really plans for how you intend to use your time. If your schedule doesn't work, revise it. You must understand that your schedule is to help you develop good study habits. Once you have developed them, schedule building becomes easier.

## PROCESS OF STUDY

### How to use your time:

Time is the most valuable resource a student has. It is also one of the most wasted of resources. The schedule you develop should guide you in how to allocate the available time in the most productive manner. Sticking to your schedule can be tough. Don't dribble away valuable time. Avoiding study is the easiest thing in the world. It's up to you to follow the schedule you prepared. A good deal of your success in high school or college depends on this simple truth.

### Where to study:

You can study anywhere. Obviously, some places are better than others. Libraries, study lounges or private rooms are the best. Above all, the place you choose to study should not be distracting.

Distractions can build up, and the first thing you know, you're out of time and out of luck. Make choosing a good physical environment a part of your study habits.

## STRATEGIES

### Thinking skills:

Everybody has thinking skills, but few use them effectively. Effective thinking skills cannot be studied, but must be built up over a period of time. Good thinkers see possibilities where others see only dead-ends. If you're not a good thinker, start now by developing habits that make you ask yourself questions as you read. Talk to other students who you feel are good thinkers. Ask them what it is they do when they think critically or creatively. Often times, you can pick up valuable insights to help you become a better thinker.

### The SQ3R method

The SQ3R method has been a proven way to sharpen study skills. SQ3R stands for Survey, Question, Read, Recite, and Review. Take a moment now and write SQ3R down. It is a good slogan to commit to memory to carry out an effective study strategy.

**Survey:** Get the best overall picture of what you're going to study before you study it in detail. It's like looking at a road map before going on a trip. If you don't know the territory, studying a map is the best way to begin.

**Question:** Ask questions for learning. The important things to learn are usually answers to questions. Questions should lead to emphasis on the what, why, how, when, who and where of study content. Ask yourself questions as you read or study. As you answer them, you will help to make sense of the material and remember it more easily because the process will make an impression on you. Those things that make impressions are more meaningful, and therefore more easily remembered. Don't be afraid to write your questions in the margins of textbooks, on lecture notes, or wherever it makes sense.

**Read:** Reading is not running your eyes over a textbook. When you read, read actively. Read to answer questions you have asked yourself or questions that instructor or author has asked. Also, when you read, be sure to read everything, including tables, graphs and illustrations. Often times tables, graphs and illustrations can convey an idea more powerfully than written text.

**Recite:** When you recite, you stop reading periodically to recall what you have read. Try to recall main headings, important ideas of concepts presented in bold, and what graphs charts or illustrations indicate. Try to develop an overall concept of what you have read in your own words and thoughts. Try to connect things you have just read to things you already know. When you do this periodically, the chances are you will remember much more and be able to recall material for papers, essays and objective tests.

**Review:**

A review is a survey of what you have covered. It is a review of what you are supposed to accomplish, not what you are going to do. Re-reading is an important part of the review process. Re-read with the idea that you are measuring what you have gained from the process. During review, it's a good time to go over notes you have taken to help clarify points you may have missed or don't understand. The best time to review is when you have just finished studying something. Don't wait until just before an examination to begin the review process. Before an examination, do a final review. If you manage your time, the final review can be thought of as a "fine-tuning" of your knowledge of the material. Thousands of high school and college students have followed the **SQ3R** steps to achieve higher grades with less stress.

## READING

A primary means by which you acquire information is through reading. In university you're expected to do much more reading than in high school or college. Don't assume just because you've "read" the assignments that is the end of it. You must learn to read with a purpose. In studying, you may read the same assignment three or four times, each time with a different purpose. You must know before you begin reading what your purpose is, and read accordingly.

**Getting the Main Idea:**

Getting the main idea in reading is central to effective studying. You must learn what the author's central idea is, and understand it in your own way. Every paragraph contains a main idea. Main ideas are perfect for outlining textbooks. Make it a habit to find the main idea in each paragraph you read.

**Extracting Important Details:**

Extracting important details means that you locate in your reading the basis for main ideas. There is usually one important detail associated with every main idea. The more important details you can identify, the easier it will be to review for examinations because you have made a link between an idea and information that supports it. The more links you can make between details and ideas, as well as ideas themselves, the more powerful will be the efforts of your study.

**Don't Read Aloud to Yourself:**

Generally, reading aloud to yourself does not help you study more effectively. If you move your lips while you read, you're not reading efficiently. If you read aloud or move your lips while you're reading, you are reading slowly, so stop moving your lips. Try putting a finger over your lips. Your finger will remind you not to move your lips. Make an effort to read faster and retain more. After a while, you'll be surprised how little effort it will take.

**Taking Notes:**

Like reading, note-taking is a skill which must be learned and refined. Almost invariably, note taking, or the lack of it, is a constant deficiency in the study

methods of many college and university students. Learning the ingredients of good note taking is rather easy; applying them to your own situation depends on how serious you are in becoming a successful student.

**Where to Keep Notes:**

You must learn to keep notes logically and legibly. Remember, if you can't read your own writing a few days after taking notes, they are of little use. By all accounts, the best place to keep notes is in a loose-leaf notebook. Use dividers to separate the different classes you take. Make it a habit of using your notebook to record all your notes. If you're caught without your notebook and need to take notes, always have a supply of loose-leaf paper with you. Insert your note papers into the notebook as soon as you can. Be sure to buy a good notebook, as it will get a lot of wear and tear.

**Outlining Textbooks:**

First of all, don't underline. Use a highlighter. Experience has shown that text passages highlighted are more easily remembered than the same passages underlined. In outlining a text, don't just read along and highlight what seem to important words. That technique rarely works. The act of outlining works much better.

**Taking Lecture Notes:**

Taking accurate and concise lecture notes is essential. Develop the habit of taking notes using appropriate methods described earlier in the SQ3R technique. For example, when you listen to a lecture, formulate questions as you listen. Your main job in taking lecture notes is to be a good listener. To be a good listener, you must learn to focus and concentrate on the main points of the lecture. Get them down, and then later reorganize them in your own words. Once you have done this, you have set the stage for successful reviewing and revising.

**Reviewing and Revising:**

As you prepare for examinations, tests, or other assessments, you should spend time reviewing and revising your lecture notes. Begin the process by reviewing your notes right after a lecture. If you wait too long, you

may discover that the notes just don't make sense. Don't hesitate to revise your notes based on the review process.

**Research Notes:**

Any form of note-taking that requires compilation of information by categories, rather than in narrative form is best done using index cards. You can sort, edit and arrange index cards to suit your particular study needs. The most important point in using cards is to indicate the correct reference or topic at the top of the card. Use the cards for study, review, to help organize information for papers, reports, or projects. An even better idea, if you have a personal computer, is to organize your categorical information in a database. Once you set it up, finding, updating & adding new information is quite easy. If you have a printer, you can print out your notes.

### TEST STRESS

It is perfectly natural to feel stressful when preparing for any exam or a recruitment test prior to taking that test. In fact, a little anxiety can jump start your studying and keep you motivated. However, too much stress can interfere your studying. You may have difficulty learning, remembering & conceptualizing what you need to know for the job test. Furthermore, too much stress may affect your performance during the test. You may have difficulty demonstrating what you know during the test/examination.

#### KNOW, IF YOU HAVE TEST STRESS

You probably have test stress if you answer is **YES** to half or more of the following factors:

- ✓ You have a hard time getting started studying for a test.
- ✓ When preparing for a test, you find many things that distract you.
- ✓ You expect to do poorly on a test no matter how much or how hard you have studied.
- ✓ When taking a test, you experience physical discomfort such as sweaty palms, an upset stomach, a headache, difficulty breathing, and tension in your muscles.
- ✓ When taking a test, you find it difficult to understand the directions and questions.
- ✓ When taking a test, you have difficulty organizing your thoughts.
- ✓ When taking a test, you often "draw a blank."
- ✓ When taking a test, you find your mind wandering to other things.
- ✓ You usually score lower in a test than you do in assignments and papers.
- ✓ While you are taking a test, you are unable to recall during the test, the information you remember.

### REDUCING TEST STRESS

Here are some things you can do before, during, and after a test to reduce your test stress.

- ◆ Use good study techniques to gain cognitive mastery of the material that will be covered for the test. This mastery will help you approach the test with confidence rather than have excessive anxiety.
- ◆ Maintain a positive attitude as you study. Think about doing well, not failing. Think of the test as an opportunity to show how much you have learned.
- ◆ Go for the test well rested and well fed. Get enough sleep the night before the test. Eat a light and nutritious meal before the test. Stay away from junk foods.
- ◆ Stay relaxed during the test. Taking slow, deep breaths can help.
- ◆ Focus on positive self-statements such as "You can do this."
- ◆ Devise a strategy for taking tests. Don't panic even if you find the test difficult. Stay with your plan.
- ◆ Don't worry about other students finishing the test before you do. Take the time that you need to do at your best.
- ◆ Once you finish the test and hand it in, forget about it temporarily. There is nothing more you can do until the test result is displayed to you & you have an interview call. In a meantime, turn your attention and effort to upcoming tests & interviews.
- ◆ When the test result is displayed to you & proves different from what you were expecting, analyze it to see how you could have done better. Learn from your mistakes and from what you did well. Apply this knowledge when you take the next recruitment

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## TEST TAKING STRATEGIES

### Objective Examinations

#### Surveying:

Survey any objective examination to find out what types of questions are being asked. Surveying helps you to know what to expect.

#### Knowing the Ground Rules:

Always read directions. Indicate your answers exactly the way the directions state. Make sure your answers are clear. Determine what the scoring rules for the test are and follow them to your advantage. For example, if wrong answers are penalized, don't guess unless you can reduce the choices to two.

#### Answering Easy Questions First:

Answering easy (to you) questions first is the best strategy. If you stumble over difficult questions for too long a time, you may not be able to complete the exam.

#### Picking out Key Words:

Objective examination questions usually contain one or more key words. A key word or groups of words are those on which the truth or falsity of a statement hinges. Learn to spot the key words in the statement that define the meaning. If a statement contains two clauses, one of which is false, the whole statement is false. Usually, two-statement true-false questions are either true or both false.

#### Reading Multiple-Choice Questions:

Multiple choice questions are essentially true-false questions arranged in groups. Usually, only one alternative is correct. Your job is to pick the alternative that is more nearly true than the others. Read multiple-choice questions the same way as for true-false. Eliminate obvious false choices.

#### Reading Other Types of Questions:

The methods used to answer true-false and multiple choice questions apply to

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match questions as well. Always scan the entire list of alternatives before matching any. As in other types of questions, try to identify key words in each list and test them. Completion questions require you to provide a word or phrase. When you encounter completion questions, choose your words carefully. If you don't know the answer, give it your best guess, as often times such responses get at least partial credit.

#### Essay Examinations:

Planning your time in answering essay questions is more important than in objective type tests. The general rule is not to get carried away on one or two questions to the extent that you cannot answer those other questions in the time allowed. Read through the entire examination first. Get a feel for the questions you are expected to answer. If the exam allows you to choose from a number of questions, be sure to number your answers exactly to match the questions.

When you follow directions for an essay exam, pay attention to the key words the instructor has included. Such words as "list," "describe," "compare and contrast," and "outline" have special meaning. Don't "write around" the question but answer it directly. If a question asks you to list something, don't write a narrative about it. Answering essay questions directly is always the best policy.

After scanning the list of questions to be answered, choose the ones you know most about. A good idea is to prepare an outline of your answers. The outline will help you remember important ideas and facts to be included in your response.

Good handwriting is an absolute essential. If your cursive writing is very hard to read, try printing instead. Most instructors value clear handwriting. Grammar, punctuation, and spelling also count. Well-written grammatically correct answers almost always receive higher grades than poorly written grammatically incorrect answers, even though the answers themselves are the same.

### **MANAGING TOUGH TIME OF EXAMINATION**

Ultimately that tough time of the semester/year again comes when lecture notes/class work is organized thoroughly or as the common practice in universities to get them photocopied from the most efficient classmate. Time tables is scheduled and torn up on daily basis. Suddenly, it seems 24 hours in a day are just to less to get everything done in time. Yes, this is only the onset of the hysteria which overtakes almost every student in the wake of final examinations. This is mostly exercised by university students.

Interestingly, even the most organized students have also to face this hysteria. The reason can vary from student to student. Mostly, it is the thought of the results which make every student nervous. So what should be done about it? Obviously some thing like studying with concentration and arranging photocopies of class work, notes, teaching plans and solving previous papers etc.

However, there are some things which can be managed, even at eleventh hour. It is called "studies management". Research reveals that there is an optimum level of hours for which constructive study (Learning + Revising) is manageable. This means you will only be able to study effectively and retain what you have for a certain number of hours everyday. Exactly how many hours? That varies from person to person. If you try and study for more than your optimum no of hours, there is a very good chance that you will be wasting your time, it's because you won't be able to put in your mind whatever you have studied more than your capability.

Managing studies also includes extent of your command at different subjects-what are the subjects which you find yourself good at, which are the subjects that need more attention and time and what is your daily schedule etc. Once you have figured out the answers, you can sit down and make a list of tasks to perform. In this way you can efficiently manage a realistic time table.

Although, it is extremely difficult on one time table, not to mention that every

time table has to have a lot of flexibility for sudden events, such as the arrival of guests etc. But once you have everything down on the paper in front of you, your goals will seem much more achievable than if you only have a vague idea in your mind.

The ideal scenario would be to study and study only for your optimum level of time. Make sure you keep with yourself no other task to perform at that time. Switch off your mobile phone, if it is distracting you. If you give yourself a break then half an hour is more than enough. Listen to music or play computer game and then get back to work. Once you observe that you have reached your optimum, stop. Tell yourself you will not learn or revise anything.

Now when we talk about solving assignments, making presentations or solving past papers, such tasks are assigned in groups. For group assignments or presentations, divide the task fairly and equally. There is no need for you to be the Good Samaritan and take up all the work, simple because you know other won't do it (As I use to do it and had to suffer a lot because of extreme work load, especially in my final year project). Each group must be assigned a task and the most efficient one must compile the work of the entire members to finalize the project or assignment.

In the end, it comes down to time management, along with the attitude you have towards your exams. If you are one of those whom exam results just don't mean anything then you can slack by all means. But if you are serious about your grades and ultimately your career then it's a high time to get down to work, without succumbing to exam hysteria.

## WRITING THEMES AND REPORTS

### Reviewing the Topic:

Students usually have some freedom to choose the subject of themes or reports. When you make this choice, be sure that the topic is acceptable to the teacher, and is as interesting to you as possible. Another consideration is that of availability of resource material. Your task is made much easier when there is a good amount of reference and resource material available.

### Using Correct Punctuation and Grammar:

As in writing essays questions, good grammar and punctuation are a must. Most students use word processors to write papers. Be sure to use the spell checker that almost all word processors have built in. Many word processors also have some sort of grammar checker. Learn to use a grammar checker, as it can point out serious flaws in your writing and help you become a better writer. Most grammar checkers explain the grammar rules that apply to the suggested corrections to your writing.

### Gathering Materials before you write:

Before you begin writing, assemble the materials you will need. Use index cards, notes, bibliographies, summaries, reports and reviews as part of your preparation process. Using index cards for references is an excellent way to organize your materials. Computer database programs can also help you classify and organize reference materials.

### Preparing an Outline and Writing the Paper:

Once you have your topic, have gathered and organized your materials, it is time to outline your paper. Put your outline on paper. Don't make the mistake of trying to keep everything in your head. Make your outline in the form of main headings or ideas with sub-headings fleshing out the flow of the paper. Using the outline as a guide begin writing, begin by asking yourself what the paper is going to say and what conclusions you want to reach. Doing this ahead of time will help keep you focused and prevent you from straying from the purpose of the paper. Making up the outline as you go along always results

in a less than satisfactory product. Writing is important and is a key to success in college, universities and in many professions. Become a good writer by writing, revising, and reviewing your work. Don't be afraid to ask other students to critique your work. Try to write in your own natural style, be aware that most good writers go through many revisions, and be prepared to do the same. Writing and test-taking are the end results of developing good study skills. There is no magic formula for success. If you follow the suggestions in this chapter, apply them and think about them, you'll have taken a giant step toward becoming a successful student.

**"Success is 20% skills and 80% strategy. You might know how to read, but more importantly, what is your plan to read"**

## CHAPTER 6

### DRAFTING

### OUTLINES

1. HOW TO WRITE EMAILS/APPLICATIONS/LETTERS
2. INTERNSHIP OPPORTUNITIES
  - Sample Application For Internship (6)
  - Sample Thank You Letter For Internship
3. APPLICATION FOR PERSONAL INTERVIEW
4. SAMPLE EMAIL REQUESTING INFORMATION FOR HIGHER STUDIES
5. SAMPLE EMAIL REQUESTING HELP IN MINI / FINAL YEAR PROJECT
6. MEMO WRITING
  - Sample Memo Writing
7. REFERENCE FORM (GENERIC) FOR ADMISSION TO GRADUATE STUDIES
8. REFERENCE LETTERS
  - Academic Reference for a Student
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  - Character Reference Letter
  - Reference Letter From Professor/Teacher for Scholarship/Training/Course
9. LETTERS OF RECOMMENDATION
  - Letter Of Recommendation (Scholarship)
  - Recommendation Letter (Management Job)
  - Recommendation Letter (Engineering Job)
  - Letter Of Recommendation (MBA Program)
  - "Thank You" Letter To Your Recommender

10. LETTER OF INTRODUCTION
11. PERSONAL THANK YOU LETTER
12. THANK YOU LETTER (JOB INTERVIEW)
13. EMPLOYMENT/JOB REJECTION LETTER (2)
14. JOB ACCEPTING LETTER
15. LETTER OF RESIGNATION
  - Sample Resignation Letter (8)
  - Sample Resignation Letter Through Email
16. HOW TO WRITE A COVER LETTER
  - Sample Covering Letter (Generic)
  - Sample Covering Letter (Job Specific) (2)
  - Sample Covering Letter (Experienced Professional)
  - Sample Covering Letter (Experienced Business/Engineering Professional) (3)
17. HOW TO WRITE STATEMENT OF PURPOSE (Sop)
  - What is SOP?
  - SAMPLES STATEMENT OF PURPOSE (Sop)
    - STATEMENT OF PURPOSE (For Masters in Analysis, Design)
    - STATEMENT OF PURPOSE (For PhD in Civil/Environmental )
    - STATEMENT OF PURPOSE (For Masters in Chemical /Mechanical)
    - STATEMENT OF PURPOSE (For Masters in Electrical/Electronic)
    - STATEMENT OF PURPOSE (For Masters in Mechanical/Industrial)
    - STATEMENT OF PURPOSE (For Ph.D. in Environmental Sciences)
    - STATEMENT OF PURPOSE (For Masters in Computer/Electronic)
    - STATEMENT OF PURPOSE (For Masters in Telecommunication)
    - STATEMENT OF PURPOSE (For Masters in Electronic/Telecom)
    - STATEMENT OF PURPOSE (For Masters in Electronic/Telecom)
    - STATEMENT OF PURPOSE (For Masters in Management/Business)
    - STATEMENT OF PURPOSE (GENERIC, for Masters Program)
    - STATEMENT OF PURPOSE (For PhD in Software)

### HOW TO WRITE EMAILS / APPLICATIONS / LETTERS

Many of us find it difficult to write emails because we often have to use English which is not our first English. We specially feel embarrassed when we have to maintain a business communication via emails or letters e.g., while applying for jobs, requesting information for higher studies or for any business proposal etc, and the lack of appropriate English language skills comes in our way. The purpose of this communication is to help those who are not very good at English language.

Writing good emails does not necessarily demand you to be Shakespeare or an English language expert. With very little effort and basic skills of English language, you can yet write very descent emails & letters. For that you just have to keep following **Do's** and **Don'ts** in your mind.

- Keep your sentences short.
- Always read your email before sending & letter before posting.
- Do not forget to write appropriate Subject.
- Never use all Capital letters, it is considered rude.
- Don't forget to use words like "Thank you" and "Please".

Use sample **Emails / Letters / Applications** given in this chapter & edit them according to your way by replacing the words given in **bold** letters. You can also use any other language but only for your personal communication as it is not advisable for Business & professional emails.

### INTERNSHIP OPPORTUNITIES

In Pakistan Internship opportunities are either not entertained or particularly are quite limited. As there is no trend set to offer internships by all the companies so very few companies support internship programs. Good interns bring fresh ideas, perspective and energy and create goodwill and are well worth the effort.

Usually internship is offered to either fresh graduates or to students pursuing a graduate degree. This program is designed in such a way that it ensures maximum learning in chosen career area and provides an insight into any company, work and people. Interns receive valuable on-the-job training, opportunities to learn, working on challenging projects and assignments.

Internship at any prestigious organization is based on a project report/assignment submission or an interview to the supervisor &/or HR department at the end of internship experience. Performance of Internees is assessed and evaluated in this way. In addition, interns are paired with a mentor for further guidance.

**Given here are few sample letters for seeking Internships in any organization.**

---

1) **SAMPLE APPLICATION FOR INTERNSHIP**

**Name**

**Company**

**Address**

**SUBJECT: REQUEST FOR INTERNSHIP OPPORTUNITY**

Dear Sir,

I am interested in applying for the "**NAME OF PARTICULAR INTERNSHIP PROGRAM**" that was listed through the "**NAME OF SOURCE AT YOUR UNIVERSITY INFORMING YOU ABOUT IT**".

I have had a great deal of "**MENTION PARTICULAR EXPERIENCE**" in "**MENTION AREAS YOU GAINED EXPERIENCE IN**", both indoors and in the field. In "**MENTION YOUR FIELD/AREA OF EXPERTIES HERE**", I have involved in continuous research & deep learning process.

I am seeking to complement this outdoor experience with a research internship in order to acquire the background necessary for a future career in scientific research & development.

I believe that I would be an asset to your program. This internship would provide me with the ideal opportunity to assist at your organization and to expand my research skills.

I will call next week to see if you agree that my qualifications seem to be a match for the position. If so, I hope to schedule an interview at a mutually convenient time. I look forward to speaking with you. Thank you for your consideration.

Sincerely,

**Your Name**  
**Name of University**  
**cell no: 000000000000**

---

2) **SAMPLE APPLICATION FOR INTERNSHIP**

To

**Name**

**Company**

**Address**

**SUBJECT: REQUEST FOR 2 MONTHS INTERNSHIP**

Respected Sir,

I, the undersigned am a "**MENTION YEAR HERE**" Engineering student of "**MENTION UNIVERSITY NAME HERE**" and I am desirous to serve as an internee in your prestigious organization in Summer vacation for 8 weeks so that I may get acquaintance with the atmosphere of your organization and to enhance my managerial and technical skills in the field of "**MENTION OFFERED FIELD HERE**".

I would be obliged if you could consider my CV and bestow me with the privilege. Hoping for a favorable response.

Yours Faithfully,

**Signature**

**Your Name**  
**Name of University**  
**cell no: 000000000000**

=====

3) **SAMPLE APPLICATION FOR INTERNSHIP**

To

**Name**

**Company**

**City**

**SUBJECT: APPLICATION FOR INTERNSHIP**

Respected Sir,

I am a student of "**UNIVERSITY NAME**" doing "**NAME OF COURSE**". I am currently in "**MENTION ACADEMIC YEAR**" with a **CGPA** of "**C**". I am keen interested at doing an internship in your company during my summer vacations. So kindly provide me an opportunity to polish my skills under your guidance & cooperation. I would really appreciate your efforts and be highly honoured.

Thanking you,

**Signature**

**Your Name**  
**Name of University**  
cell no: 000000000000  
=====

4) **SAMPLE APPLICATION FOR INTERNSHIP**

To,

**Name**

**Company**

**City**

**SUBJECT: APPLICATION FOR INTERNSHIP**

Dear Sir,

With due respect it is stated that i am doing my "**NAME OF COURSE**" from "**NAME OF UNIVERSITY**".I want to have a privilege of doing an internship at your organization.

I, therefore look forward to you to offer me an **INTERNSHIP** so that I may gain practical exposure in my field. Please give me a chance to improve my skills. I ensure you that I will deliver you to the best of my skills for the betterment of the organization.

Waiting for a good response.

Yours faithfully

**Signature**

**Your Name**  
**Name of University**  
cell no: 000000000000  
=====

5) **SAMPLE APPLICATION FOR INTERNSHIP**

To,

**Name**

**Company**

**City**

**SUBJECT: APPLICATION FOR AN UNPAID INTERNSHIP**

Respected Sir,

Most respectfully it is stated that I am keen interested to do internship in your organization for two months without any stipend. I have passed 2nd year engineering in "**MENTION YOUR DISCIPLINE**" while the 3rd year is in progress. So, please give me an opportunity to excel my career under your guidance.

I ensure you that I will do my best for the betterment of the organization. I shall be very thankful to your being so kind in this regard. Hoping for the best feed back.

Yours Faithfully

**Your Name**

**Name of University**  
**cell no: 000000000000**

=====

6) **SAMPLE APPLICATION FOR INTERNSHIP THROUGH EMAIL**

Hello Mr/Ms. **name of person to be addressed**, (If you don't know to whom it should be addressed you can just use plain Hello)

I would like to apply for the post of **title of post**. Please find attached my CV/Resume. Hope to hear soon from you.

Warm  
Regards,

**Signature**

**Your Name**  
**Name of University**  
**cell no: 000000000000**

=====

7) **SAMPLE THANK YOU LETTER FOR INTERNSHIP**

**Date**  
**Name**  
**Title**  
**Organization**  
**Address**

Dear Sir,

I want to acknowledge my thanks to you for giving me the opportunity to serve as internee at your organization/Office. I have gained valuable insight into the **mention your area of learning in that organization** over the past six months.

Because you gave me the opportunity to work on a variety of projects, I got an opportunity to observe routine operation & maintenance at different sub section of your organization. Moreover I also gained basic supervisory & clerical skills. You and your staffs were extremely welcoming and helpful, and offered me excellent career advices.

This internship has definitely increased my interest in pursuing a career in **mention area of your learning in that organization**. I would love to stay in touch, and perhaps speak to you regarding steps I should take in the future to pursue a career in said field. Once again, thank you for a terrific six months.

**Sincerely,**  
**Your Signature**  
**Your Typed Name**  
 =====

**APPLICATION FOR PERSONAL INTERVIEW**

**SAMPLE**

**Date**  
**Name**  
**Title**  
**Organization**  
**Address**

**SUBJECT      REQUEST FOR PERSONAL INTERVIEW**

Dear Sir,

I, the student of **name of field of study** at **name of institution** in **name of city**, am doing a research work on **name of your research topic**. In this connection, I am required to conduct a personal interview. You are therefore requested to spare few minutes in the next week. The information provided by you will be used for academic purpose only. Your coordination in this regard will be highly appreciated.

Thanking you

**Yours truly,**  
  
**Your Name**  
**Your Email**  
**Your Mobile No**  
**Your Address**  
 =====

**1) SAMPLE EMAIL REQUESTING INFORMATION FOR HIGHER STUDIES**

Hello Mr/Ms. **XYZ**,

I am interested for Master's/PhD program in your university/College. I would appreciate if you can help me with the application process. If possible kindly send me the prospectus and application forms at following address **your postal address**.

Thanking in anticipation.

Regards,

**YOUR NAME**

**CONTACT DETAILS**

**2) SAMPLE EMAIL REQUESTING HELP IN MINI/FINAL YEAR PROJECT**

Hello,

I am final year or **mention your year here** student of **mention name of your department** and interested to do a project on **mention name of your desired project/thesis** (If you are open minded than don't mention any specific area). Please suggest & guide me with any project proposal.

Thanking in anticipation.

Regards,

**YOUR NAME**

**CONTACT DETAILS**

**MEMO WRITING**

**MEMO:**"Memo" word has derived from "Memorandum" means "Announcement".

**SAMPLE MEMO WRITING**

**To:** All the EDOs of District

**From:** District Coordination Officer (DCO)

**Dated:** x-y-2010

**SUBJECT: ARRIVAL OF PRESIDENT OF PAKISTAN**

District Coordination Officer (DCO) Mr. "X" is pleased to announce that the President of Pakistan Mr. "Y" is coming to District for a short visit to check the status of educational setup & development projects in the city. All the concerned must strictly follow the given conditions:

- Mr. "Y" will arrive here in city at "A" Auditorium Hall on **dated** at 9 am sharp.
- All the E.D.Os must ensure their presence in this event to give briefing of their respective departments.
- All the participants need to be well dressed and well groomed.
- All participants must bring their Identities to get the entrance card due to security reasons.
- No extra person allowed.
- Mr. President will give the scholarships to deserving students so education department needs to shortlist the talented students as soon as possible and do register them.
- President will stay here only for an hour but all members have to come 2 hours before to get ready for the welcome of President and also due to security reasons.
- All Members have to work hard and well prepared to make this event a memorable one.

Consequently, all members must avail the opportunity to deliver their opinion in front of the President. All participants must explain the problems of their respective departments to the president and request for their immediate solution.

**Recommendations:** All participants are supposed to strictly abide by above conditions and must be punctual by timings.

**GRADUATE STUDIES**

1. To the Applicant: complete this before sending it to the referee Dated: \_\_\_\_\_  
 Family Name: \_\_\_\_\_ Given Name: \_\_\_\_\_ has  
 applied to the Department / School of \_\_\_\_\_ to study for a  Masters  
 Ph.D. Degree in the specialization of \_\_\_\_\_.

2. To the Referee: After completing, put this reference form in the envelope provided and return it directly to the applicant. To ensure confidentiality, please sign the back of the envelope across the seal.

- (a) How long you know the applicant and in what capacity?
- (b) Would you recommend this applicant for admission to a graduate program at your university?  
 Without reservation  With some reservation (please specify)  No (please explain)
- (c) Does academic record fairly reflect the ability of applicant?  Yes  No (if no please give details)
- (d) Please indicate with a ✓ rating of the applicant in terms of the attributes below:

Please identify the group with which you are comparing the applicant: \_\_\_\_\_

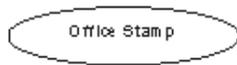
Qualities	Excellent	Very Good	Good	Fair	Remarks
Academic Ability					
Analytical Ability					
Originality					
Judgment					
Industriousness					
Research Potential					
English Proficiency					

(e) In comparison with other students at the applicant's level indicate where you would place the applicant. Among the top 5  10  20  30  40

(f) Please add any further comments on the reverse side indicating if there are any factors which might prevent the application from successful graduate study or to support the applicant's ability and promise for graduate study.

**Please Print:**

Name of Referee \_\_\_\_\_ Signature of Referee \_\_\_\_\_  
 Title/ Position \_\_\_\_\_ Date \_\_\_\_\_  
 Department \_\_\_\_\_ Telephone/ Cell# \_\_\_\_\_  
 Instruction \_\_\_\_\_ E-mail \_\_\_\_\_



1) **REFERENCE LETTERS**

**ACADEMIC REFERENCE FOR A STUDENT**

**SAMPLE**

Dear Ms/Mr. "X"

I am writing this reference at the request of Ms/Mr. "Z" who is applying for the recently announced Scholarship Program at your University.

I have known "Z" for two years in my capacity as an "ASSISTANT PROFESSOR" at "Q" college/ university of engineering & technology. "Z" took subjects like "P" and "O" from me and earned superior grades in those classes. Based on "Z" grades, attendance, & class participation, I'd rate "Z" academic performance in my class as superior.

In conclusion, I would highly recommend "Z" for this scholarship program. If his/her performance in my class is any indication of how he/she will succeed, "Z" will be a positive addition to the program. If you should need any additional information you can feel free to contact me at 123-456789 or by email at email@email.com anytime.

Sincerely,

(NAME OF REFERRER)

(ASSISTANT PROFESSOR,"C" COLLEGE/UNIVERSITY)

---

## 2) REFERENCE LETTER BY A PROFESSOR FOR A LECTURER

### SAMPLE

Dear Ms/Mr. "X"

I highly recommend MS/Mr. "Z" as a candidate for a postgraduate program. I have worked with "Z" in my position as Professor/Director, **Name of university/college e.g. "U"**.

While as lecturer at "U" university/College, "Z" was employed in various positions including teaching 3rd year classes of "E" engineering & working as visiting faculty member at "I" institute, He/She accomplished all these tasks with great initiative and with a very positive attitude.

"Z" has a special talent working with the students who need more guidance and support in terms of accomplishing mini/final year projects & making internship reports.

His/her ability to connect with his/her students and his/her talent at teaching simple concepts, as well as more advanced topics, are both truly superior. He/She has excellent written and verbal communication skills, is extremely organized, reliable, and advanced computer knowledge.

"Z" would be a tremendous asset to your program and I recommend his/her to you without reservation. If you have any further questions with regard to his/her background or qualifications, please do not hesitate to contact me.

**(NAME OF PROFESSOR)**

**(NAME OF UNIVERSITY/COLLEGE)**

---

## 3) PERSONAL/PROFESSIONAL REFERENCE LETTER

The following is a sample personal/professional reference letter for a friend or for a colleague.

### SAMPLE

I am writing to recommend Mr. "Z" for the position **mention name of the post for which reference letter to be issued**. I have been knowing "Z" since last 5 years and he/she is a highly qualified candidate for the said position. He/She has relevant work experience for the post he is applying for in your company

I think "Z" is a perfect match for this job. Moreover he/she will prove himself/herself to be a tremendous asset for your organization

I highly recommend him/her to you without reservation. If you have any questions, please do not hesitate to contact me.

**NAME OF PROFESSIONAL REFERRER / FRIEND**

**(NAME OF ORGANIZATION & DESIGNATION)**

**4) CHARACTER REFERENCE LETTER FOR JOB BY AN ACQUAINTANCE OR PROFESSIONAL**

**SAMPLE**

**TO WHOM IT MAY CONCERN**

I have known Mr. /Ms "Z" in a variety of capacities for many years. He/she has been my partner in a small business where he/she is responsible for writing and editing articles and website content & external correspondence.

"Z" is organized, efficient, extremely competent, and has an excellent rapport with people of all ages. His/her communication skills, both written and verbal, are excellent.

In summary, I highly recommend "Z" for any position or endeavor that he/she may seek to pursue. He/she will be a valuable asset for any organization.

If you have any questions, please do not hesitate to contact me.

Sincerely,

**(NAME OF ACQUAINTANCE / PROFESSIONAL)**

**(NAME OF ORGANIZATION)**

**5) CHARACTER REFERENCE LETTER**

**SAMPLE**

**TO WHOM IT MAY CONCERN**

I have had the pleasure of knowing Mr./Ms. "Z" for eight years. During the years of our acquaintance, I have known "Z" in many capacities. He/she has been very sincere & helping hand to everyone.

"Z" has also been involved with a variety of tasks at my personal business. He/She is good at doing multiple tasks. His/her experiences with me have included working on inventories, our newsletter, mailing list, web designing, technical writing & making feasibilities as well as customer interface.

"Z" is an intelligent, capable, and personable young man/woman. He/she is always quick on his/her feet, with sensible reactions in all the circumstances I've seen him/her in. I feel confident in saying that he/she is capable of handling any situation with thoughtfulness and maturity.

Sincerely,

**(NAME OF REFERRER)**

**(NAME OF ORGANIZATION)**

---

**6) REFERENCE LETTER FROM A PROFESSOR/TEACHER FOR SCHOLARSHIP/TRAINING/COURSE**

**SAMPLE**

Dear Mr. /Ms. "Y"

I am writing this reference at the request of Mr. /Ms "Z" who is applying for "**NAME OF TRAINING / COURSE / SCHOLARSHIP PROGRAM**" at "**NAME OF UNIVERSITY/ORGANIZATION**".

I have known "Z" for two years in my capacity as a **PROFESSOR** at **NAME OF HIS UNIVERSITY.**"Z" took **ENTER NAME(S) OF SUBJECT(S) HE/SHE TAUGHT YOU** from me and earned superior grades in those classes. Based on his/her grades, attendance and class participation, I'd rate his/her academic performance in my class as superior.

He/she has a number of strengths to offer an employer. He/she is always interested in supporting others. For example, this year he worked & helped in making mini projects for junior batches, besides he/She was helpful to me in organizing a technical seminar on "**NAME OF ANY SEMINAR**".

In conclusion, I would highly recommend Mr. /Ms. "Z". If his/her performance in my class is any indication of how he/she'd perform in your position, "Z" will be a positive addition to your organization. If you ever need any additional information you can feel free to contact me at **123-456789** or by email at **email@email.com** anytime.

Sincerely,

**(NAME OF PROFESSOR)**  
**(NAME OF UNIVERSITY)**

---

**LETTERS OF RECOMMENDATION**

**1) LETTER OF RECOMMENDATION (SCHOLARSHIP)**

**SAMPLE**

**TO WHOM IT MAY CONCERN**

As the Dean/professor of "**U**" College/university, I have had the pleasure of knowing "**Z**" for the last four years. He/she has been a tremendous student and an asset to our university. I would like to take this opportunity to recommend "**Z**" for the recently announced post graduation program at your university.

I feel confident that he/she will continue to succeed in his/her studies. "**Z**" is a dedicated student and thus far his/her grades have been exemplary. In class, he/she has proven to be a take-charge person who is able to successfully develop plans and implement them.

"**Z**" has also assisted us in our admissions office. He/she has successfully demonstrated leadership ability by counseling new and prospective students. His/her advice has been a great help to these students, many of whom have taken time to share their comments with me regarding his/her pleasant and encouraging attitude.

It is for these reasons that I offer high recommendations for "**Z**" without reservation. His/her drive and abilities will truly be an asset to your establishment. If you have any questions regarding this recommendation, please do not hesitate to contact me.

Sincerely,

**(NAME OF DEAN/PROFESSOR)**  
**(NAME OF UNIVERSITY/COLLEGE)**

---

2) **RECOMMENDATION LETTER (MANAGEMENT JOB)**

**SAMPLE**

**TO WHOM IT MAY CONCERN**

This letter is my personal recommendation for "Z". Until just recently, I have been Z's immediate supervisor for several years. I found him/her to be consistently pleasant, tackling all assignments & projects with dedication and a smile.

Besides being a joy to work with, "Z" is a take-charge person who is able to present creative ideas and communicate the benefits. He/she has successfully developed several marketing plans for our company that have resulted in increased revenue. During his/her tenure, we saw an increase in profits that exceeded 5 million rupees. The new revenue was a direct result of the plans implemented by "Z".

Though he/she was an asset to our marketing efforts, "Z" was also extraordinarily helpful in other areas of the company. In addition to writing effective training modules for sales representatives, "Z" assumed a leadership role in sales meetings, inspiring and motivating other employees.

I highly recommend "Z" for employment. He/she is a team player and would make a great asset to any organization.

Sincerely,

**(NAME OF PREVIOUS EMPLOYER)**

**(NAME OF COMPANY)**

---

3) **RECOMMENDATION LETTER (ENGINEERING JOB)**

**SAMPLE**

**TO WHOM IT MAY CONCERN**

I would like to take an opportunity to offer a formal recommendation for "Z". As a "**MANAGING DIRECTOR**" "**NAME OF ORGANIZATION**", I have known "Z" for approximately two years and feel that he/she is a deserving candidate for the post of "**SENIOR GENERAL MANAGER (ENGINEERING)**" as recently announced by you.

"Z" joined our organization as a **JUNIOR ENGINEER**. Demonstrating an incredible initiative and a strong dedication & technical approach, he/she moved up the ranks quickly. After only six months, he/she was promoted to "**SENIOR TEAM LEADER**". The board noticed how successful he/she was in his/her new position and quickly offered him/her another promotion, making him/her part of the executive management team.

"Z" leads by example and many people here find his/her enthusiasm and dedication both inspiring and motivating. As part of the executive management team, "Z" has worked hard to build authentic relationships with the employees. His/her efforts have created a happier and more productive team.

I believe "Z" exhibits all the qualities that are essential to a **ENGINEERING MANAGER** and business thinker. I highly recommend Mr. /Ms. "Z" for the said post & hope that you will carefully consider & peruse his application.

Sincerely,

**(NAME OF PREVIOUS EMPLOYER)**

**(NAME OF ORGANIZATION)**

---

4) **LETTER OF RECOMMENDATION (MBA PROGRAM)**

Here is the letter of recommendation from current employer for admission in MBA program.

**SAMPLE**

**TO WHOM IT MAY CONCERN**

This letter is to serve as my formal recommendation for "Z". He/she has been working as junior officer under me for several years. He has been interested in obtaining an MBA degree for some time now and I feel that he would be an excellent candidate for your esteemed program.

During his time here, "Z" has consistently demonstrated a strong work ethic and a dedication to success. His/her efforts have produced high quality results time and time again. Last year, "Z" developed and successfully implemented a plan to streamline our production department. The plan was a major undertaking, requiring a great deal of thought and effort on Z's behalf.

Though "Z" is working under me, he/she is also in an unofficial leadership role. Many of his co-workers & even seniors seek his advice and support. "Z" is always there for them and is quite comfortable in the role. I feel his/her budding leadership abilities will become even more effective in a business school setting.

For these reasons, I highly recommend "Z" as a candidate for your MBA program. If you have any questions regarding "Z" or this recommendation, please contact me.

Sincerely,

**(NAME OF YOUR CURRENT EMPLOYER)**

**(NAME OF ORGANIZATION)**

---

5) **"THANK YOU" LETTER TO YOUR RECOMMENDER**

**SAMPLE**

Dear Mr. /Dr. "X",

Thank you for taking the time to write on my behalf as I apply to **NAME OF SCHOLARSHIP/ ANY PROGRAM YOU HAD APPLIED**. I know that recommendation letters take a great deal of time, energy, and effort, and I appreciate your support throughout this process. I will keep you updated about my progress in applying to this program. Thank you for sharing in the process and writing on my behalf.

Sincerely,

**(YOUR NAME)**

**(CURRENT STATUS/DESIGNATION)**

---

**LETTER OF INTRODUCTION**

A letter of introduction is used to write to a connection to refer a candidate for employment or to request career assistance. In many cases, the letter can be sent via email, because that's the quickest & easiest way to connect or sometime by post.

Another type of letter of introduction is used to write to someone introducing yourself and asking them to refer you to a job opportunity or requesting assistance with a job search.

**The type of letter given below is typically sent to someone you know well.**

**SAMPLE**

Dear **(NAME OF FRIEND)**,

I'm writing to introduce you to **(INTRODUCER TO WRITE YOUR NAME HERE)**. I know **(YOUR NAME)** through the **(SOURCE BY WHICH YOUR INTRODUCER KNOWS YOU)**, where, as you know, I am the **(DESIGNATION OF YOUR INTRODUCER)**. **(YOUR NAME)** and I worked together on **(NAME OF PROJECTS YOU WORKED WITH YOUR INTRODUCER)** (if any).

**(YOUR NAME)** is about to relocate to your city & would appreciate any recommendations you could offer him/her for conducting a job search for an engineering/management position and any help you can provide with the logistics of relocating to your city.

I've attached his/her resume for your review and you can contact him/her at **email@email.com** or **0123-456789**. Thank you in advance for any assistance you can provide.

Sincerely,

**(SIGNATURE OF YOUR INTRODUCER & HIS NAME)**

---

**PERSONAL THANK YOU LETTER**

It is important to take the time to thank everyone who helps with your career or job search. Here is a general thank you letter you can send (via email or by post) to the people who have helped you.

If you are sending an email letter, there is no need to include your return address or your contact's address. List your contact information in your signature.

**SAMPLE**

To

**NAME**

**TITLE**

**ORGANIZATION**

**ADDRESS**

Dear **First Name, (or Mr. /Ms. Last Name if you don't know them well)**

Thank you for all the assistance you have provided me during my job search.

I appreciate the information and advice you have given, as well as the connections you have shared with me. Your expertise and help have been invaluable during this process.

Again, thank you so much. I sincerely appreciate your generosity.

Best Regards,

**YOUR NAME**

**YOUR ADDRESS**

**YOUR PHONE NUMBER**

**YOUR EMAIL**

**DATE**

---

**THANK YOU LETTER (JOB INTERVIEW)**

Writing a thank you letter or email after an employment interview is a must. In fact, some employers think less of those interviewees who fail to follow-up promptly.

**SAMPLE**

**Name**

**Title**

**Organization**

**City Address**

Dear Mr. /Ms. **Name of Interviewer**

It was very enjoyable to speak with you about the **NAME OF POST YOU WERE INTERVIEWED FOR** at **NAME OF ORGANIZATION YOU WERE INTERVIEWED AT**. The job, as you presented it, seems to be a very good match for my skills and interests. The creative approach to skills that you described confirmed my desire to work with you.

In addition to my enthusiasm, I will bring to the position strong writing skills, assertiveness and the ability to encourage others to work cooperatively with the department. My artistic background will help me to work with artists on staff and provide me with an understanding of the visual aspects of our work. I understand your need for administrative support. My detail orientation and organizational skills will help to free you to deal with larger issues. I neglected to mention during my interview that I had worked for two summers as a **NAME OF POST & EXPERIENCE THAT RELATED THIS JOB**. This experience helped me to develop my secretarial and clerical skills.

I appreciate the time you took to interview me. I am very interested in working for you and look forward to hearing from you about this position.

Sincerely,

**Your Signature**

**Your Typed Name**

---

**1) EMPLOYMENT/JOB REJECTION LETTER**

Use this sample employment rejection letter to let an employer know that you are not accepting a job offer.

**SAMPLE**

**Date**

**Name**

**Title**

**Organization**

**Address**

Dear Sir,

Thank you very much for offering me the position of **Job Title** with **Company Name**. It was a very difficult decision to make, but, I have decided to accept another job offer.

I sincerely appreciate you taking the time to interview me and to share information on the opportunity and your company.

Again, thank you for your consideration and for the job offer.

Sincerely,

**Your Name**

**Your Address**

**Your Email & contact no**

=====

2) **EMPLOYMENT/JOB REJECTION LETTER**

**SAMPLE**

- Date**
- Name**
- Title**
- Organization**
- Address**

Dear **Name of Employer offering you Job**:

Thank you very much for offering me the opportunity to work at **Name of Organization You Were Offered Job At**. Unfortunately, I will not be accepting the position as it does not fit the path I am taking to achieve my career goals.

Once again, I'd like to express my gratitude for the offer and my regrets that it didn't work out. You have my best wishes in finding someone suitable for the position.

Sincerely,

**Your Name**

**Signature**

**Your Address**

**Your Phone Number**

**Your Email**

=====

**JOB ACCEPTANCE LETTER**

Even if you have accepted a job over the phone, it's a good idea to write a job acceptance letter to confirm the details of employment and to formally accept the job offer.

**SAMPLE**

- Date**
- Name**
- Title**
- Organization**
- Address**

Dear Mr. **Name of Employer offering you job**,

As we discussed on the phone, I am very pleased to accept the position of **mention name of post being offered to you by the employer**. Thank you for the opportunity. I am eager to make a positive contribution to the company and to work with everyone on the place/location of work.

As we discussed, my starting salary will be enter salary mentioned in the offer letter or as negotiated previously and health, life insurance and other benefits will be provided.

I look forward to starting employment on mention date of joining. If there is any additional information or paperwork you need prior to then, please let me know.

Again, thank you.

**YourSignature**

**Your Name**

**Contact Details**

=====

---

## LETTER OF RESIGNATION

How you write a resignation letter is important, because it usually isn't easy to resign and stay on good terms with the company you are leaving. Although it is difficult to resign diplomatically and tactfully but a well-written resignation letter can help ensure that your resignation goes smoothly.

### Why Write a Resignation Letter

A resignation letter can help you maintain positive relationship with your old employer, while paving the way for you to move on. You never know when you might need that previous employer to give you a reference, so it makes sense to take the time to write polished and professional resignation letters. Your resignation letter also provides official notice to your employer that you're leaving.

Use given below resignation letter samples to formally inform your employer that you are submitting your resignation. These samples of resignation letter are brief and to the point. There is no need to give the employer any more information than they need to know, which is the fact that you are resigning and when you are leaving.

---

## 1) SAMPLE RESIGNATION LETTER

**Date**

**Name**

**Title**

**Organization**

**Address**

Dear Mr. /Ms **Name of Employer:**

Please accept this letter as formal notification that I am leaving my position with **mention name of company you want to leave on mention date here.**

Thank you for the opportunities you have provided me during my time with the company. If I can be of any assistance during this transition, please let me know.

Sincerely,

**Your Name**

**Signature**

**Your Address**

**Your Phone Number**

**Your Email**

=====

2) **SAMPLE LETTER OF RESIGNATION**

**Date**

**Name**

**Title**

**Organization**

**Address**

Dear Mr. /Ms **Name of Employer:**

I would like to inform you that I am resigning from my position as **mention name of post** for the **mention name of organization you were previously working**. My last day with the organization will be **mention date here**.

Thank you for the professional and personal development you have assisted me with over the last **mention no of years you served there**. I consider just about everyone I have met here to be friends of mine now, and I will miss you all. However, during my working at your organization, my career has taken a different direction and I feel is time to move onto new opportunities and challenges.

Please keep in touch. I can be reached via email at **email@email.com**.

Sincerely,

**Your Name**

**Signature**

**Your Address**

**Your Phone Number**

**Your Email**

=====

3) **SAMPLE RESIGNATION LETTER**

This resignation letter is an example for an employee who is leaving immediately.

**SAMPLE**

**Date**

**Name**

**Title**

**Organization**

**Address**

Dear Mr. /Ms **Name of Employer:**

Please accept this letter as my formal resignation from **mention name of organization** as **mention name of post**.

While my contract requires me to work until **mention date here**, I would be obliged if I could cease work immediately. I will assume this is satisfactory unless otherwise noted.

Please let me know if I can be of assistance during the transition.

Respectfully yours,

**Your Name**

**Signature**

**Your Address**

**Your Phone Number**

**Your Email**

=====

4) **SAMPLE RESIGNATION LETTER**

Resignation letter example thanking the company for providing opportunities & facilities.

**SAMPLE**

**Date**

**Name**

**Title**

**Organization**

**Address**

Dear Mr. /Ms **Name of Employer**:

This letter is to confirm my resignation as the **mention name of post previously held** at **mention name of company**.

I have accepted a position as **mention new post offered** at a **mention name of new company** in **city name**. I am looking forward to my new position and the challenges that await me.

My last day of work will be **mention last day & date of working**, which provides plenty of time for me to finish ongoing projects and to turn over my position to my replacement.

My experiences at **mention name of organization resigning from** have been very rewarding. I appreciate having had the opportunity to work for such a fine company, and I wish you and the company continued success.

Sincerely,

**Your Name**

**Signature**

**Address**

**Contact Number**

**Your Email**

5) **SAMPLE LETTER OF RESIGNATION**

Given below is an Example for Resignation letter thanking the company for the opportunities they provided and offering to train a new person who is going to replace your position.

**SAMPLE**

**Date**

**Name**

**Title**

**Organization**

**Address**

Dear Mr. /Ms **Name of Employer**:

I would like to inform you that I am resigning from my position as **mention name of previously held post here**, effective **mention date & day**.

Thank you for the opportunities for professional and personal development that you have provided me during the last ten years.

I have enjoyed working at **mention name of organization resigning from** and appreciate the support provided me during my tenure with the company. I enjoyed working with you and wish you well in your future endeavors.

I will gladly help to train the person who will take over my position.

Sincerely,

**Your Name**

**Signature**

**Your Address & contact number**

**Your Email**

6) **SAMPLE RESIGNATION LETTER**

Use this resignation letter sample to formally inform your employer that you are submitting your resignation.

**SAMPLE**

- Date**
- Name**
- Title**
- Organization**
- Address**

Dear Mr. /Ms **Name of Employer**:

I would like to inform you that I am resigning from my position as **mention name of post** for the **mention name of organization you are resigning from**, effective **enter date of leaving**.

Thank you for the support and the opportunities that you have provided me during the last two years. I have enjoyed my tenure with the company.

If I can be of any assistance during this transition, please let me know. I would be glad to help however I can.

Sincerely,

**Your Name**

**Signature**

**Your Address**

**Your Phone Number**

**Your Email**

=====

7) **SAMPLE RESIGNATION LETTER**

Use this resignation letter example when you want to thank your employer and provide a reason for your resignation.

**SAMPLE**

- Date**
- Name**
- Title**
- Organization**
- Address**

Dear Mr. /Ms **Name of Employer**:

The purpose of this letter is to announce my resignation from **mention Company Name**, effective two weeks from **mention date**.

This was not an easy decision to make, on my part. The past 10 years have been very rewarding. I've enjoyed working for you and managing a very successful team dedicated to a quality manufactured product delivered on time.

I have accepted a position as **mention name of new post offered to you**, at **mention name of company** in **mention city name**. This opportunity gives me the chance to grow professionally and I while working there will be only a few miles away from my home.

I wish you and the company all the best. I do hope our paths cross again in the future.

Sincerely,

**Your Name**

**Signature**

**Your Address**

**Your Phone Number**

8) **SAMPLE RESIGNATION LETTER**

Use this resignation letter example to ask to resign without giving 1 month notice or with short notice.

**SAMPLE**

**Name**

**Title**

**Organization**

**Address**

Dear Mr. /Ms **Name of Employer:**

Please accept this letter as formal notification that I am resigning from my position with **mention name of post** from **mention name of company previously working in**. I understand that 1 month or at least two weeks notice is standard. However, if at all possible, I would appreciate you releasing me from employment with the company as soon as possible.

I would be glad to provide any assistance I can during this transition.

Thank you for the opportunities for professional and personal development that you have provided me during the last five years. I have enjoyed working for the company and appreciate the support provided me during my tenure with the company.

I'm looking forward to hearing from you regarding the end date of my employment.

Sincerely,

**Your Name**

**Signature**

**Your Address**

**Your Phone Number**

=====

**SAMPLE RESIGNATION THROUGH EMAIL**

It's always better to resign in person, and then follow up with a formal resignation letter for your employment file. However, if circumstances are such that you need to send a resignation email, use this email letter of resignation sample to notify your employer that you are leaving.

**SAMPLE**

**Date**

**Name**

**Title**

**Organization**

**Address**

**Email Subject Line:RESIGNATION**

Dear Mr. /Ms **Name of Employer:**

Please accept this message as notification that I am leaving my position with **mention name of organization resigning from** effective **enter date of leaving**.

I appreciate the opportunities I have been given at **name of organization currently resigning from** and your professional guidance and support. I wish you and the company success in the future.

If I can be of assistance during this transition, please let me know.

Sincerely,

**Your Name**

**Your Contact Address**

=====

---

## HOW TO WRITE A COVER LETTER

What does it take for your resume and cover letter to make an impact when the employer has received hundreds of resumes for the position you have applied for?

Employers do manage to reduce the pool of cover letters and resumes to a manageable number. How they do it can give you some insight in to how to write cover letters that will make the cut. If your cover letter and resume aren't perfect they most likely will end up in the reject pile. And perfect means perfect - there should not be any typos or grammatical errors.

Employers typically won't even consider a candidate that they cannot see is qualified at first glance. That first glance at your cover letter is your one opportunity to make a good impression and make it to the next round.

It's certainly easier to write generic or blanket cover letters than it is to write a cover letter specifically targeted to each position you apply for. However, if you don't invest the time in writing cover letters you're probably not going to get the interview, regardless of your qualifications. Also make sure that your cover letter explains how your skills relate to the criteria listed in the job posting.

**If you are not sure what to write, use the cover letter samples given here.**

---

## SAMPLE COVERING LETTER (GENERIC)

**Date**

**Name**

**Title**

**Organization**

**Address**

**City**

Dear Sir

In response to your advertisement in the **mention name of newspaper publishing advertisement** for **mention name of advertised post**, please consider the following:

I welcome the opportunity to visit with you about this position. My resume has been added with this cover letter, as per your instructions. I may be reached at the number above. Thanks again for your consideration.

Sincerely,

**Your Signature**

**Your Name**

**Your Address**

**Your City**

**Your Phone Number**

**Your Email**

=====

1) **SAMPLE COVERING LETTER (JOB SPECIFIC)**

Dear Hiring Manager,

I read your job posting on **mention name of source disclosing job position** for **mention name of post advertised** with interest.

In my position as a **mention name of post you are already enjoying which is related to this job** for **mention name of company you are currently working**, I **mention nature of your current job, your achievements & contribution to the organization you are currently working in.**

Attached here is my detailed Resume. If I can provide you with any further information on my background and qualifications, please let me know.

I look forward to hearing from you. Thank you for your consideration.

Sincerely,

**Your Signature**

**Your Name**

**Your Address**

**Your City**

**Your Phone Number**

**Your Email**

=====

2) **SAMPLE COVERING LETTER (JOB SPECIFIC)**

**Date**

**Name**

**Title**

**Organization**

**Address**

**City**

Dear Sir

I am interested in the **mention name of post advertised by the employer** advertised in **mention name of newspaper/source** dated **mention date of advertisement here.**

My resume is enclosed along with necessary documents for your review. Given my related experience and excellent capabilities I would appreciate your consideration for this job opening. My skills are an ideal match for this position.

I appreciate your taking the time to review my credentials and experience. Again, thank you for your consideration.

Sincerely,

**Your Signature**

**Your Name**

**Your Address**

**Your City**

**Your Phone Number**

**Your Email**

=====

**SAMPLE COVERING LETTER  
(EXPERIENCED PROFESSIONAL)**

**Date**

**Contact Name**

**Title**

**Company**

**Address**

Dear Sir,

As a (n) **mention area of your expertise [1]** professional with high-level **mention area of experience in the [1]** industry, I learned that the best way to achieve success was to motivate the resources I had with well-defined objectives and empowerment. A belief based on integrity, quality, and service, along with a positive attitude, an aptitude for strategic thought and planning, and the ability to adapt quickly to new ideas and situations allows me to achieve consistent and significant successes in multiple industries.

My personality profile says:

- A confident, driving individual who reacts quickly to change.
- A self-starter with a strong sense of urgency who responds positively to challenge and pressure.
- A fast learner who is a practical and ingenious problem solver.
- A fluent and articulate communicator, flexible and responsive. A self directed, goal oriented doer.

Best Regards,  
**Your Name**  
**Your Address**  
**Your Phone Number**  
**Your Email Address**

**1) SAMPLE COVERING LETTER  
(EXPERIENCED BUSINESS/ENGINEERING PROFESSIONAL)**

**Name**

**Title**

**Company Name & Address**

Dear Sir

I am applying for the **mention name of post advertised** posted on **mention name of newspaper or source**. At your convenience, I'd appreciate the opportunity to discuss the position and my candidacy with you. You can find my resume attached with this letter.

I am looking to bring my well-hone **(technical/managerial)**, presentational and interpersonal communication skills internally to succeed in an **industrial or business environment**. My pertinent experience and skills for the posted position include:

- **Mention here your experience (if any) relevant to this job.**
- Degree/bachelor in **mention your field of study** (e.g. business or engineering) with major/specialization in **mention your major subject or area** (e.g. Accounting or Electronics) from mention name of university.
- Relevant computer skills **(e.g. DBMS, MS-OFFICE, HTML, INTERNET & NETWORKING etc.)**.
- Good listener with Solid work ethic, desire to excel & able to meet deadlines. Enjoy a fast-paced environment.

I'd love to find out more about the position you're looking to fill, and I would welcome the opportunity to tell you how my skills and ideas can benefit **mention name of organization advertising job announcement**. I can be reached at **0123-456789** or **email@email.com**.

Thanks for your consideration; I look forward to hearing from you soon!

Sincerely,

**Your Name**

**Address**

**Phone Number**

**Your Email Address**

2) **SAMPLE COVERING LETTER**  
**(EXPERIENCED BUSSINESS/ENGINEERING PROFESSIONAL)**

**Date**  
**Name**  
**Title**  
**Company**  
**Address**

Dear Sir,

I'm writing to express my interest in the **mention name of post applying for** listed on **mention source or website**. I have experience of **mention your over all previous experience**. While much of my experience has been in the **mention your major experience in particular industry or sector**, I understand the core issues of the **mention name of the particular industry/sector you are applying for** and my **mention (if any) your previous experience relating to this industry** experience will be an asset to your organization.

My responsibilities included the **mention in detail major responsibilities** of your previous job relating to this job.

Experience has taught me how to build strong relationships with all departments at an organization. I have the ability to work within a team as well as cross-team. I can work with **engineers or managers** to resolve technical issues and implement technical enhancements work with the development department to implement design and functional enhancements, and monitor site statistics and **supervise major operations & address issues**.

Sincerely,

**Your Name**  
**(Your Details)**

3) **SAMPLE COVERING LETTER**  
**(EXPERIENCED BUSSINESS/ENGINEERING PROFESSIONAL)**

**Date**  
**Name**  
**Title**  
**Company**  
**Address**

Dear Sir,

Please accept this letter as an expression of interest in the position of **mention position advertised by employer**.

I have enclosed a copy of my resume for your review. I am familiar with the requirements for success in the **Engineering or Business** profession and believe. I possess the right combination of **mention your major relevant skill no 1** and **mention your major relevant skill no 2** skills.

My current position has provided the opportunity to work in a high-pressure, team environment, where it is essential to be able to work closely with my colleagues in order to meet project deadlines.

Thank you for your time and consideration. I would welcome the opportunity to personally discuss with you my potential contributions to your company. I look forward to your reply.

Sincerely,

**Your Name**  
**Address**  
**Cell Phone Number**  
**Email**

---

## HOW TO WRITE STATEMENT OF PURPOSE (SOP)

### What is SOP?

The Statement of Purpose is the single most important part of your application that will tell the admissions committee who you are, what has influenced your career path so far, your professional interests and where you plan to go.

A **statement of purpose**, or **personal statement**, is a brief and focused essay about one's career or research goals, and is frequently required for applicants applying to various scholarship programs at engineering universities & colleges. A statement of purpose (SoP) is a concise essay about one's career goals, identified means to achieve them and accomplishments so far towards those goals. It is a required document when applying for admission to most professional programs in any university. Often, SoP is used as a yardstick to assess the capabilities of a prospective student in terms of critical thinking, analytical abilities, interests, aims and aspirations. It is a good way for an applicant to communicate with the admissions committee. Most admissions committees look for a short, crisp and ideologically clear SoP.

It is also known as **Personal Essay**. Other universities sometimes call it a "**Letter of Intent**", "**Letter of Intention**", "**Statement of Intent**", "**Statement of Intention**", "**Statement of Interest**", "**Goals Statement**", "**Personal Narrative**" or "**Application Essay**". The name can be just a name but often it influences content and length of the essay. Every university has its own regulations, but most of the time it will be 1-2 pages.

### Remember that your Personal Statement should've the following objectives:

- Show your interest in the subject. Rather than saying that you find electronics interesting, it is more convincing to demonstrate your interest by talking about any projects you may have done and what you learnt from them. If you have taken the initiative to do things on your own, now is the time to talk about them.

- Show that you have thought carefully about further studies, know what you are getting into, and have the confidence to go through with it. Have the admissions committee like you! Avoid sounding opinionated, conceited, pedantic or patronizing. Read your essay carefully, and have others read it to find and correct this.
- Demonstrate a rounded personality. Include a short paragraph near the end on what you like to do outside of your professional life. Keep the essay focused. Each sentence you use should strengthen the admissions committee's resolve to admit you. So while you may have done several interesting things in life, avoid falling into the trap of mentioning each of them. Your essay should have depth, not breadth. The resume is where you should list your achievements. Remember that you have very little space to convey who you are, so make every sentence count.
- Pitfalls your essay must avoid : It is a repetition of the resume or other information available from the application form, It could have been written by just about anybody; your individuality does not come through, It is not a honest account in response to the essay question (why you want to study what you do, what you have learned from an event/person in your life and so on) It has embarrassing, highly personal and emotional content that should be avoided unless it makes a unique, creative point. An account of how you overcame difficult family circumstances, illness, or a handicap, would be a valid point to include in your essay. However, avoid emotional language.

---

### SAMPLE STATEMENT OF PURPOSE (SOP)

**Disclaimer & Terms of Use:**

These statements of purpose (personal statements) which are included here in this book are actual essays that were authored by different applicants when they applied for scholarship in European universities. These essays haven't been altered but what is changed is author's identity, name of university & other personal information. It is not claimed that these essays are by any means perfect, they have been chosen to be added because they contain certain elements that applicants should look out for.

All the readers/users going through these statements of purpose should exercise common sense and discretion while using these essays. Please remember that these essays are meant to enable you to write better and they're certainly not intended to be short-cuts to application-essay.

---

### 1) STATEMENT OF PURPOSE (For Masters in Analysis, Design & Management of Information Systems/Information Technology related field)

I am generally characterized by my associates friends, teachers and colleagues as very dependable, punctual and efficient. I get along well with people from many walks of life. I am a creative and resourceful person who aspires towards acquiring an ever higher level of knowledge in order to continue to better myself both personally and professionally. My principal inspiration has been our prophet Mohammed (Peace be upon him) who said that we should seek knowledge from the cradle to the grave.

One of the reasons I am especially looking forward to studying at **enter name of university you are going to seek admission [1]** is because it is the university that is best known for promoting cultural diversity among students and faculty. I have come to know that it is located in a very interesting city that will provide me with many opportunities both personally and professionally. I have always enjoyed traveling, discovering new cultures and making friends who have taught me to more fully appreciate cultural diversity. I will bring excellent communication skills in the areas most relevant to Information Systems to your program and look forward to extensive and profitable interchanges with colleagues and instructors.

Another reason that I have chosen **[1]** is its balanced approach between management and development, especially as applied to the field of information systems. Your program represents the opportunity to probe such a broad variety of critically important aspects of IT development within international and governmental organizations. At **[1]**, I will gain comprehensive practical knowledge that will enable me to return to my country on the cutting edge of IT developments. I am convinced that **[1]'s** focus on research-led teaching will help me to remain at the forefront of theory and practice in my field. Being accepted to your program is the central, most critical factor for my professional success and for my ability to make profound contributions to the advancement of IT development in my beloved country.

My mission in life is to participate in carrying on this tradition of excellence in IT, especially in the academic context. I keenly await the challenges that I will face in my quest to distinguish myself as a Masters student at [1], thereby preparing myself for doctoral studies and future leadership roles in Pakistan.

I am applying to the [1] because I want to obtain a Master Degree in the field of Analysis, Design and Management of Information Systems and I want very much to attend the very best university in the **enter name of country where your [1] is located**. I am convinced that I can reach my fullest potential at [1] and fulfill my dream of making a significant contribution to the ongoing technological development of my country, Pakistan.

I was born and raised in Pakistan, a wonderful country that has given me everything that I need to be happy and comfortable in life. Living in peace, safety and freedom with broad access to free education and health services; this has instilled in me a dream to serve others out of an enormous sense of gratitude. I am convinced that acquiring the highest quality of education possible at [1] will best prepare me to become as creative and productive as possible, best able to make important contributions to my country and the world.

After graduating with honors from **enter the name of university you are currently studying in [2]** in Pakistan, I enrolled as an Information Technology major at [2] University. I chose to focus on network technologies because my brain now functions like the Internet. Everything depends on the Internet; no one can live without it since it connects us to the world. This is what makes my career so extremely exciting. Throughout my time at [2] University, I have been active in volunteer projects and extra curricular activities.

And as a result of my perseverance and profound dedication to my studies, I will soon be graduating with excellent grades, receiving my **enter name of degree/course you are currently pursuing**, in year **enter year of graduation** I have become a deeply passionate learner and increasingly

determined to see my education through to the Ph.D. Degree. A Masters Degree at [2] is the best cornerstone upon which to build a solid future and prepare me for a doctoral program.

I have acquired a broad base of experience in IT systems. Currently, I am completing a professional IT internship at **enter name of organization**. This has been an exciting experience, providing me with hands-on experience in dealing with numerous, complex issues surrounding the development of Voice over Internet Protocol (VOIP). After completing my Master's Degree at [1], I envision myself returning to work for this same company, or a similar high profile company operating in Pakistan. I look forward with keen anticipation to applying the knowledge that I will acquire at [1] to systems design, analysis and management.

2) **STATEMENT OF PURPOSE**  
**(For PhD in Civil/Environment Engineering or any field relating to it)**

I am writing this Statement in support of my application to enter the doctoral program in Civil and Environmental Engineering at the University of **enter name of intended university [1]** in **enter name of country**. I have a great passion for waste-water management and my long term goal is to teach in this area because I am convinced that this would be the most effective way for me to contribute to the preservation of our water bodies. I completed my MSc degree in Environmental Engineering and Project Management at **enter name of university you got your Master degree from [2]** in the **enter name of country**. I have a great passion for research and I look forward to participating in future comparative studies that involve America & Europe. In addition to my Masters, I hold an honorary B.E. in Civil Engineering from the **enter name of the university you graduated from** in Pakistan.

I am especially interested in doing graduate work in the area of nutrient removal in waste-water and waste-water treatment plant modeling. I have **enter your experience in years** in the management of engineering projects and have already spent many years being involved in engineering related research. I have been a team leader for a number of pilot projects and have already done some research concerning water bodies and wastewater management.

At **[2]** University, I investigated the reliability of one of the locally located waste-water treatment plant models. I have closely followed how regulating authorities have focused their attention on the removal of biodegradable organics and suspended solids from wastewater and have rejoiced in the increasing environmental awareness and concern of the general public in recent times for protecting our water bodies. And I am honored to be able to serve my fellowman, and indeed the planet, by helping authorities to meet increasingly stringent requirements concerning discharge. More recently, this trend has resulted in the removal of some nutrients from waste-water, particularly nitrogen and phosphorus, and I have a special interest in this

area. I look forward to being involved in pilot plant development and expansion. I am especially excited by the fact that computer simulation software is now available for the modeling of wastewater treatment plants designed to remove biological nutrients.

I see my sojourn to the First World as a learning experience that will hopefully prepare me to one day become deeply involved in wastewater management at home, in Pakistan. I am concerned with the communication aspect of environmental preservation, working to heighten awareness among Pakistani educators of the critical importance of protecting our water supplies. A great barrier to Pakistan's management of waste is the attitude of the people. Most are ignorant of the consequences of their indiscriminate disposal of waste. Research into waste-water management in Pakistan is needed in many areas, for example, in public administration, as well as in civil engineering. I look forward to contributing to consciousness raising efforts concerning the relationship between water supply and human disease.

Finally, I would like to express my keen desire to serve as a research assistant in your department. And I want to thank you for consideration of my application.

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3) **STATEMENT OF PURPOSE**  
**(For Masters in Chemical /Automobile/Mechanical Engineering)**

My interest in Chemical Engineering dates from my early childhood. I remember struggling to understand the mechanical and chemical function of the automobile. Since then my life has been characterized by a constant quest to better understand the constituents of fuel and the conversion processes of energy.

I want very much to become a student in the Department of Chemical Engineering at **enter the name of your intended university [1]** because of the high quality and direction of the Chemical Engineering Department. I am most impressed by the program's strength in the fields of fluid mechanics and transport phenomena along with research efforts taking place in fundamental, computational, and experimental studies of turbulent flows, especially high-speed and high temperature multiphase flow phenomena. I look forward to developing state-of-the-art research skill in thermo-fluid science and safety; reaction engineering, catalysis, and surface science; biochemical engineering; polymers; fluid mechanics and transport. I am currently finishing my B.E. in **chemical/mechanical** at **enter name of university your are currently in** and fulfilling their requirements is providing me with what I see as an excellent foundation for graduate study-steering me where I need to go through mastery of calculus series, statistics, and physics with calculus.

I have also gained professional experience by working as a research associate at **enter name of organization/company**, as a math tutor at the **enter name of university** learning center, and an assistant at **enter name of computer center**. All of these experiences have combined to prepare me for graduate study on intellectual and professional levels.

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I am especially interested in fuel, plastics, and the synthesis of nano-materials such as carbon nano-tubes. My experience with bacteria has sparked my interest in this area. Some of the research opportunities that I am interested in are in the area of engineering of integrated Microsystems with some combination of chemical, mechanical, magnetic, electrical, and/or optical functionalities. I would also love to participate in research in the fields of Nano-technology and bio-technology. As a Chemical Engineer, I would like to work towards the development of new methods of fuel consumption and alternative sources of fuel. I strive to become a mentor and role model for the rest of the young members of my family and [1] can help me achieve this dream. I want to thank you for considering my application.

4) **STATEMENT OF PURPOSE**  
**(For Masters in Electrical/Electronic Engineering)**

I would especially like to pursue a Ph.D. degree in electrical engineering in the Department of Electrical Engineering at enter name of your intended university [1] because of the innovative research being undertaken by faculty members, which is closely related to my background and long term career interest. I am very much looking forward to conducting research on the theory, design, and fabrication of new and advanced electronic devices.

I had completed my B.E. degree in Electrical Engineering from the enter name of university you graduated from with month & year of passing. I have been very devoted to the study of digital system fundamentals, transmission lines and wave propagation, analog circuits, signals and systems, electromagnetism, applied communications systems, and semiconductor device physics.

I have been employed since last mention experience from the date of your joining with mention name of organization/company you are currently working in mention name of city, country. I have been involved with testing and troubleshooting various analog circuit boards and setting up and testing equipment and procedures to test circuits for high power motor systems. I also work in transformer design and troubleshooting. I also had the privilege of working for the "X" Company through an internship with the company from enter duration. I customized software using "C-language" to allow for remote FPGA/PLD programming via embedded device, implemented a GUI tool for interfacing to embedded device and developed web interface with CGI for remote FPGA/PLD programming via embedded device. I am experienced in PHP, C/C++, JAVA, MATLAB, Quaterus Tools, Cadence, Mentor Graphics, and ADS. I am also experienced in electronic testing equipment, soldering, and network analyzers.

I am a Member of the IEEE Student Chapter and I am an experienced tutor in Physics and Math. I am also the recipient of the "Y" Scholarship. As a result of my Pakistani ethnicity and language skill, I look forward to contributing to the diversity of the post graduation experience that I will attend and, over the long term, helping to stimulate ties between Pakistani and American initiatives in Electrical Engineering.

My long term goal is to do research in academia or private industry. I would especially like to contribute to advancements in micro-electronic devices. I am most impressed by the dramatic reductions in cost and increases in computing power that have been attained over the last two decades and I look forward to being a part of this rapidly advancing field, especially downscaling transistors, investigating new materials like compound semiconductors, and microlithography.

Last but not least, I want to thank you for considering my application.

**5) STATEMENT OF PURPOSE****(For Masters in Mechanical/Manufacturing/Industrial Engineering)**

I am a young man from Pakistan who wants very much to study towards the M.S. Degree in Mechanical Engineering at **enter name of intended university**. Last year, I completed my undergraduate degree in with a special focus on the area of Production. I especially look forward to doing graduate work in the area of Manufacturing Engineering, Mechanical Engineering and Operational Research.

I am a very dedicated student and my long term goals include studying towards a Ph.D. degree after finishing my M.S. In the future, I especially look forward to studying **enter your area of interest** since I have a special fascination with this area.

I have diverse interests and am very dedicated to the idea of giving something back to society. This is why I am an active member of the National Social Service and have participated in a Blood Donation Camp and also worked on a tree plantation, in addition to other community services. During my undergraduate studies, I was a member of the Production Engineering Student Association and in this capacity I organized various paper presentations, computer games, and seminars. This experience was especially helpful for learning how to work with a team and I think that these experiences will be helpful for graduate school and working with a diverse group of people from all over the world.

I am currently working for **enter name of organization you are currently working** as a Trainee Engineer. This is Pakistan's largest Industrial manufacturing Unit.

Prior to applying for this program at your university, I am enjoying one year experience in diesel manufacturing and I think that this will also be helpful for graduate school. I struggled to develop my leadership and teamwork skills throughout my college days and was pleased to serve as a class representative throughout all my years in college. Now, working with one of the biggest manufacturing companies in Pakistan, I am learning the art of negotiation, and how to efficiently manage people. I feel that the greatest contribution that I would be able to make to society in the future would be to distinguish myself in the area of Operations Research.

**6) STATEMENT OF PURPOSE****(For Ph.D. in Environmental Science/Construction Management)**

I am a young Pakistani who has been building everything that I can get my hands on ever since I was a child. Even my social life is made up mostly of people with related interests. I never get tired of talking about construction, and the exploding possibilities in science and technology that make construction in our new millennium an ever greater challenge as well as a delight.

This is why **enter name of intended university [1]** is my first choice for graduate study, because these areas of greatest interest to me are all emphasized by your program; thus, I think **[1]** University is the perfect match.

I am a profound lover of nature, an environmentalist who believes in caring for the environment and especially sustainable development. I am deeply concerned with environmental issues, My passion for building led me to work towards a Master of Science in Construction Management at **enter name of university you are currently doing your Masters from**. I will complete my Masters in **enter month & year of passing** and would then very much like to begin studying in your program.

Your program is my first choice because of your integration of construction management with management of the environment.

I look forward to dedicating the rest of my life to Green environment. Sustainable construction is the center of my world and what I generally think about even in my free time.

Attaining a doctoral degree in your program will hopefully enable me to play a central role in this revolution-always struggling to preserve our environment at the same time that we foster increasing development for the economy overall. I love my country very much and I look forward to doing something for my people by working to educate the construction industry as a whole concerning the importance of green initiatives and safeguards. I look forward to working on the cutting edge of the employment of new construction technology in accordance with the implementation of environmental protection mechanisms. The policies that are developed over the next decade or so will have a profound

impact on our ability to preserve the environment. The mistakes that will be made or the failure to find the courage as a society to adopt bold and very costly measures so as to protect our environment and literally lay the foundation for our future will determine to what extent our

children and grandchildren will be able to continue to develop and be competitive in a global economy.

For me the personal, the professional, and the political are all intertwined and I am also very much engrossed in how the political process is playing out in my country and the very real opportunities that exist for adopting bold measures in coming years to protect our environment. To the best of my ability and with the help of the marvelous education that I hope to receive in your program, I will struggle for the rest of my life to make all of Pakistani cities Green Cities. It is time for Pakistanis to begin taking very seriously the need to search for and adopt alternative building solutions that are both economically viable and environmental friendly-it can be done-so we do not jeopardize the future of children to enjoy this planet as we have.

I feel strongly that I am an excellent candidate for your program as a result of both my education and professional experience. I gained **enter years of experience** in one of the leading construction companies in Pakistan and I am the owner of a company specializing in environmental safety. I obtained a full educational scholarship from **enter name of organization which offered you scholarship** in Pakistan and I have also had the privilege of attending numerous exhibitions. I am a member of various professional organizations and very dedicated to hard work so as to reach my goals, for my family, my country, and most importantly the natural environment of coming generations.

7)

**STATEMENT OF PURPOSE****(For Masters in Computer/Electronic Engineering)**

I remember the day as if it were yesterday. During my second year of pre-engineering, I was attempting to transmit a group of characters comprising my name from one computer to another. I connected the computers using RS-232 cable, wrote the necessary programs and executed them. I typed my name on one terminal and rushed to the other to see the results. "Wow, this is magic!" I exclaimed as I read my name on the screen. While I realized intuitively that a complex version of this elementary network could achieve much, at the time I had no real idea what. Now, four years later, I know that Networking makes possible a plethora of applications, from video-conferencing over the Internet to linking banks through private networks. It still seems like magic. Or rather, a grand adventure - one that I most certainly want to be part of.

My interest in applied science dates back to my school days. During high school, I was fascinated with electronic gadgets. Soon thereafter, designing and building basic circuits started as a hobby. Along the way, however, I realized that the problem-solving aspect of making electronic gadgets was what I enjoyed the most. Engineering was a natural career choice after this.

During my undergraduate studies at Electronics department of **enter name of university you graduated from**, subjects like Microprocessors, C-Programming, Computer Networks interested me the most. I was awestruck by the potential of Intel 8086 microprocessor, more so by the manner in which it's faster and more powerful cousins revolutionized the working of computers in a decade. I was now determined to focus on microprocessors during my Final Year project.

I elected to do the project at **enter name of organization [1]** as it has an outstanding infrastructure setup and a stimulating, world-class research environment. This enabled me to work with some of the best minds dedicated to engineering research in my country. I gained a lot from this association - in particular, an idea of how rewarding and meaningful a career in research could be. The more tangible benefits have been a deeper insight into architecture and working of microprocessors and thorough C-programming skills. Sometimes I spent more than ten hours a day at

[1], reading manuals and troubleshooting circuits and debugging code. I am glad to say the effort paid off in the end. My project guide deemed the results of my project to be most valuable. The interface card that I designed was later taken by [1]. This project was the highlight of my academic career. Most importantly, I left [1] with the decision to study advanced computing.

During my first job at **enter name of organization you started your career from [2]**, I developed a real-time monitoring system for the Molding Line in Foundry. Success on this project gave me the confidence to provide software solutions to real-life problems. I liked the job, software development at [2], was a support function. Working there helped me hone my programming skills on real-life problems. I also discovered leadership skills in myself, and frequently assisted colleagues who had little or no background in computers. As an outcome of this, the company asked me to take occasional seminars on Operating Systems and C-Programming for my colleagues. I had been appointed Team Leader within a year.

While my present job has helped me develop a thorough insight into project handling, the industry environment that I am currently in cannot support my desire for research. I possess industry-hardened skills in Computers, but I must build on these to achieve my goal of undertaking cutting-edge research in advanced computing, with specific reference to Computer Networks. I therefore believe that I must return to the academic world for further growth.

I wish to earn an MS degree in **Computer/Electronics engineering**. I intend to follow this up with a Ph.D., and later, a career in research and teaching. I have spoken to my professors, seniors and colleagues about my choice of University, and have applied to **enter name of intended university [3]** because it is reputable for its research facilities and computing resources. The department web site revealed a very strong faculty involved in extensive research in the area of Computer Networks. This has strengthened my resolve to study at [3].

I bring along a strong grasp of fundamentals in Electronics and Computers, an aptitude for teaching and team work, a zest for challenges and an enthusiastic desire to learn all I can. I would like to take with me, in addition to knowledge of Computer Networks, a network of strong and lasting relationships with my teachers and fellow-students. I hope that my background & qualifications are found suitable for MS in **Computer/Electronic engineering at [3]**.

## 8) STATEMENT OF PURPOSE (For Masters in Telecom/Communication Engineering)

My decision to pursue graduate study in the **enter name of county where your intended university is located** is underscored by my desire to be a part of the graduate program at your university. As it offers the flexibility needed for such a vast and rapidly changing field. The research facilities and the faculty at the university are par excellent.

Communications is an industry that has changed our lives. In a very short period it has changed the way we have looked at things since centuries. It is one industry that is going to shape our future for centuries to come. Hence my desire to do masters in electrical engineering with communications as my major.

My interest in electronics blossomed during my high school years. It was the time when technology had begun to make an impact on the lives of people in Pakistan. Hence engineering with electronics as my major was the first choice for my undergraduate studies. Right since the beginning of my undergraduate study, electronics is a subject that has fascinated me with its power of applications. The subjects that I have studied include Linear Electronics, Digital Electronics. These laid the foundation for my courses in Electronic Communication & Systems at a later stage. My undergraduate studies already focus on the communications aspect of electronics. A master degree in electrical engineering with communications as major field is the next logical step.

Since past **enter no of months**, I have been working as a project trainee at **enter name of organization**. I am working on the design and development of a **enter name of project**. This short stint has given me invaluable practical experience. It has given me the confidence to pursue a master degree and also kindled a desire to do research.

During the course of my work, I have come across several scientists. Most of them work in different areas of communications. Interactions with them have made me realize the vastness and the scope of communications. My discussions with them convinced me that specializing in communications will suit me very well.

The subject of research which interests me very much is spread spectrum

communication systems. Coding theory and combinations is another research subject which arouses my curiosity. The subject Communication Theory which I am studying at present introduces these topics in theory. I am eager to find out more about the applications of coding theory to spread spectrum communication systems.

In addition I have been a student member of the IEEE (Institute of Electrical and Electronics Engineers) since last **enter no of years**. Through its workshops/seminars and publications, it has exposed me to a lot of emerging technologies in the field of communications.

It is a strong belief in my family that the American education system has the best to offer in the whole world. If I can get an opportunity to be a part of that intellectually stimulating environment, I am sure my talents will be put to optimal use.

Pakistan is a developing country with an enormous potential in the information technology business. To serve the needs of this developing industry and more important its vast population, communications is going to become of utmost importance. Thus conditions here are very conducive to supplement my aspirations when I return after completing my graduate studies.

9) **STATEMENT OF PURPOSE**  
**(For Masters in Electronic/Telecom Engineering)**

Inspired by the nature from my early childhood, I have always been curious to explore the various things related the "wonderful" creations of the nature. I used to make an antenna with a spoon, connecting it with wires and hanging it on the top at the roof so that I could watch TV.

Although we had an antenna but I was curious to make my own antenna. Such activities were noticed by my parents also and they used to say that I'll be a scientist in future. I find myself in the midst of a world that has been revolutionized by the proliferation of information and communication technologies. This made me choose Engineering, Telecommunication Engineering in particular.

My main objective behind choosing Telecommunication is to update myself with the advancements in this innovative field and to make the people of the world meet on a single forum of Telecommunication. I find myself as a good leader and a dynamic personality who would turn out to be the one solving people's problems and making their life easier.

My goal in terms of field has always been in learning, exploring and mastering new ways of communication. At University, I was introduced to the world of Telecommunications in a technical way and I began to develop interest more and more in this field.

I believe practice is better than theory, so I engaged myself in a number of projects. If you impart the knowledge to others, you'll have a better insight and can have a good command on it. Hence, I became a part of a student's organization of our University. The basic purpose of this organization is to solve the academic problems of the enrolled students. I was made the head of the Learning Assistance Committee of the Telecommunication department. The

objective of the committee is to instruct students in their free timings. I took classes of junior batches and delivered academic lectures. Watching and observing the problems faced by female students in the university I also realized the need of a committee which would help female students. I'm working for the establishment of such a committee called the Committee for Women Affair (CWA). I am also fulfilling the responsibilities as a sub-editor in an e-newsletter of our campus called "FEECE (Faculty of Electrical, Electronics and Computer Engineering) E-newsletter".

I wish to serve my country and my people. I wish to provide my services in a number of research areas including Next Generation Networks, imparting intelligence to cellular systems and long distance wireless communication.

10)

**STATEMENT OF PURPOSE**  
**(For Masters in Electronic/Telecom Engineering)**

The field of telecommunication had always been of my personal interest. I want to serve the world in telecom sector, as this field is growing everyday, I also want to contribute to make it touch new heights and introduce new technologies and features for the man kind.

As everyone likes to get higher education so am I. When I looked at this scholarship, it seemed a life time opportunity to me because I always wanted to specialize in my field (i-e Telecommunication), I was already doing graduation but to get higher education from one of the top universities in world had been my dream which can be accomplished if I get this chance.

I have been improving myself in my whole life. As I have been a Cadet, the life in Cadet College made me perfect. It taught me every thing; I learned how to live & how to study. That is why, today with the grace of God, I m at very good position in my university.

After my graduation, I want to do Masters and Ph.D. I want to continue research work so that I can work on new technologies so as to serve mankind. Because I think this is the real life, to live for others, so I want to dedicate my life for growth of Telecom sector.

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**11) STATEMENT OF PURPOSE**  
**(For Masters in Management/Business Studies)**

I feel great pleasure and honored applying for the **enter name of scholarship program**.

My name is **enter your name here**. I am First Class MBA in Management Information Systems with 3.75/4.0 CGPA from **enter name of university**, Pakistan passed in the year 2010. My whole education is comprised of 16 Years in which last 06 years the medium of instruction has remained English. Apart from this I have so many diplomas, short courses and trainings in the field of Computer, IT and Management.

Currently, I am working as **enter name of Post"** at **enter name of organization** since last four years. My post is of mid executive level and I am the incharge of **enter name of department/section**.

Apart from this I am also responsible for general management & administration of the department. My detailed profile is mentioned in CV.

Since my field of expertise is Management Information System which surrounds the human informatics. Now Policy making in perspective human centered informatics with integration of my management experience could be mixed up by generating an innovative idea. I think this is the most important and crucial field which is the need of time as well as my own interest which will cherish myself as well as my career in the international environment by upgrading my qualification and skills. I am sure that this program would be invaluable in helping me to achieve my objectives

As a committed and well equipped with the research interests full of zeal and spirit, I am sure that your sympathetic consideration will cherish my future. Anxiously waiting for kind and positive response.

**Truly yours,**

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**12) STATEMENT OF PURPOSE (GENERIC)**  
**(For Masters Program)**

Study abroad can be an enriching and eye-opening adventure, where learning extends to the world beyond the classroom walls. There is no substitute for living and studying in a foreign country if you want to gain in-depth knowledge of another culture's customs, people, and language. In addition, you will find that living and studying or working in another country can develop important transnational competencies that can be of interest to future employers.

Students who return from a study abroad program often see it as an experience which matured them personally and intellectually. They praise being exposed to new ways of thinking and living, which encourages growth and independence. For many students, going abroad to study is the first time they have really been away from 'home,' from familiar surroundings of the friends and family. This is seldom an easy experience, but it is universally praised as worthwhile, often even life-transforming. After immersing themselves in a new culture, mastering the challenges of learning in a new and different academic environment, and experiencing the many highs and lows of being a 'foreigner,' students typically return home with increased self-confidence and justifiable pride in what they have achieved.

Study abroad can broaden student's intellectual horizons and deepen their knowledge and understanding of international, political, and economic issues. When a student will return from their sojourn abroad with a more informed and accurate perspective on world affairs, so I will also have first-hand knowledge of how another culture approaches the tasks and challenges of everyday life, a sense of how 'global' the international culture has become, and an appreciation of the importance of international cooperation.

I will probably also gain a broader understanding of, and appreciation for, the European, its way of life, and its role in international affairs. Through your professors, the other students in your program, and people you meet, you'll learn how others view the European study and its world role. If you live

in a country where English is not the native language, or is spoken only by some, you will learn the practical importance of learning another language and using it.

But study abroad does more than promoting academic enrichment and personal growth. It also can enhance your employment prospects, especially in the fields of business, international affairs, and government service. Employers increasingly seek graduates who have studied abroad. They know that students who have successfully completed a study abroad program are likely to possess international knowledge and often second-language skills. Such students are also likely to have other transnational competencies that graduate and professional schools and employer's value just as highly: cross-cultural communication skills, analytical skills, an understanding and familiarity with local customs and cultural contexts, flexibility, resilience, and the ability to adapt to new circumstances and deal constructively with differences.

13)

**STATEMENT OF PURPOSE  
(For PhD in Software engineering)**

Time and effort if put together definitely lead to success.

Still remember those days when I was working on my final year project. I didn't realize how those days drifted off so quickly, but finally I arrived at the solution. Those comprehensive efforts were aptly rewarded when my project was implemented successfully.

This experience in developing such a project infused into my mind the love for computer over other fields, and inspired me to delve into the field of software engineering.

My interest in software engineering dates back to my school days. During high school, I was fascinated with complex Mathematical problems. Soon thereafter, solving and designing analytical problems started as a hobby. Along the way, however, I realized that the problem solving aspect of Analytical problems was what I enjoyed the most. Software Engineering was a natural career choice after this. During my graduation studies at the Software Engineering department of my University, subjects like Object Oriented Programming, C-Programming, Software Design Architecture, Software Testing and Quality assurance and Computer Networks interested me the most.

I got enrolled for my M.E in **INFORMATION TECHNOLOGY** from **enter name of university here**, one of the best Engineering universities of Pakistan; I worked on several projects which I could have the chance to work on them during my graduation. My skills were improved day by day and I noticed a huge impact of the degree on me.

I worked on Master's thesis titled as **enter name of Thesis/Research title**. The main objective of this thesis was to ensure how we can improve the quality of Software requirement specification for the Design and Development phase of high end Software applications.

Now, I wish to enroll to a PhD program & later on a career in research and development. I have spoken to my professors, seniors and colleagues about my choice of University, and have applied to **enter name of university [1] (if you have previously applied)** because it is reputable for its research facilities and computing resources.

The Website of **[1]** University revealed a very strong faculty involved in extensive research in the area of Social Networks. This has strengthened me to study at this prestigious university. I bring along a strong grasp of fundamentals in Social networks and Software Engineering, an aptitude for team work, a zest for challenges and an enthusiastic desire to learn all I can. I would like to take with me, in addition to knowledge of Virtualization, a network of strong and lasting relationships with my teachers and fellow-students. I hope that my background and qualifications are found suitable for PhD's program in your university.

**"You see, in life, lots of people know what to do, but few people actually do what they know. Knowing is not enough! You must take action"**

## CHAPTER 7

### MAKING A C.V

#### OUTLINES

1. C.V DEFINITION
2. DIFFERENCE BETWEEN CV & RESUME
3. TYPES OF RESUMES
4. DO'S AND DON'TS OF CV WRITING
5. IMPORTANCE OF RESUME OBJECTIVE
  - Sample "Resume Objective" Statements
    - (For Engineering Professionals) (3)
    - (For Business/Management Professionals) (4)
6. SAMPLE C.V FORMAT (3)

#### C.V DEFINITION

**Definition:** A curriculum vitae (C.V) is a written description of your professional work experience, educational background, and skills & achievements. It is more detailed than a Resume.

#### DIFFERENCE BETWEEN CV & RESUME

The primary differences between a Resume and Curriculum Vitae (C.V) are the length, what is included and what each is used for.

A **RESUME** is a one or two page summary of your skills, experience and education. It is brief and concise - no more than a page or two.

A **CURRICULUM VITAE(C.V)** is a longer (at least two page) and more detailed synopsis. A Curriculum Vitae includes a summary of your educational and academic backgrounds as well as teaching and research experience (if any), publications, presentations, awards & honors, affiliations and other mandatory details. A Curriculum Vitae (C.V) is used primarily when applying for academic, education, scientific or research positions. It is also applicable when applying for fellowships or grants.

#### TYPES OF RESUMES

There are several basic types of resumes used to apply for job openings. Depending on your personal circumstances, you can choose from a chronological, functional, combination, or a targeted resume.

- **CHRONOLOGICAL RESUME:** A chronological resume starts by listing your work history, with the most recent position listed first. Your jobs are listed in reverse chronological order with your current or most recent job first. Employers typically prefer this type of resume because it's easy to see what

jobs you have held and when you have worked at them. This type of resume works well for job seekers with a strong, solid work history.

- **FUNCTIONAL RESUME:** A functional resume focuses on your skills and experience rather than on your chronological work history. It is used most often by people who are changing careers or who have gaps in their employment history.
- **COMBINATION RESUME:** A combination resume lists your skills and experience first. Your employment history is listed next. With this type of resume you can highlight the skills you have that are relevant to the job you are applying for, and also provide the chronological work history that employers prefer.
- **TARGETED RESUME:** A targeted resume is a resume that is customized so that it specifically highlights the experience and skills you have that are relevant to the job you are applying for. It definitely takes more work to write a targeted resume than to just click to apply with your existing resume. However, it's well worth the effort, especially when applying for jobs that are a perfect match for your qualifications and experience.
- **MINI RESUME:** A mini resume contains a brief summary of your career highlights qualifications. It can be used for networking purposes or shared upon request from a prospective employer or reference writer who may want an overview of your accomplishments, rather than a full length resume.

## DO'S AND DON'TS OF CV WRITING

Your CV is not a job description; it is a sales catalogue for your services. The optimum kind of CV is one that offers best set of services to the "recruiters" and offer solutions to the employer's needs. Thus, job seekers need to keep industry "requirements" upfront when writing their CV.

In this period of competition, every day, the recruitment manager of a company faces a stack of job applications for each advertised post. Usually he/she will make 3 piles out of the heap of CVs: "yes", "no", and "maybe" he'll go to the latter pile if the former one fails to deliver an applicant suitable for the job. So your first mission is to make sure that your job application secures a position on the top of the "yes" interview-pile. You can get the necessary and astounding results by composing a well written C.V. This is your introduction and chief communication with the employer. It is your C.V which decides whether you are going to be deemed fit for the job or not.

**Below are a few Do's and Don'ts which should be rigorously kept under consideration while composing a professional CV.**

### CV DO's:

**Comprehensive CV:** Take two to three days to compose your CV. The biggest mistake most candidates make is to throw away a great chance by rushing to an average one. Regard your CV and application letter as an important project in progress and give it a polish every couple of months thus developing and improving it even further. You never know when you will be approached by a company and asked for it. Be unambiguous while stating the facts. Your CV should be comprehensive and up-to-date so as to render the employer incapable of coming up with any questions in it while analyzing it.

**Summary:** Begin your CV with an appealing career/executive summary. This will be a synopsis of the whole document for the employer's ease. A summary becomes very important for professionals with multiple years of experience as it provides a bird-eye view of your background and skill-sets in one single area. Hence it is a section that must be paid extra attention to.

Put important skills at the beginning: Elucidate your aptitude, competence and expertise as soon as possible in your CV. This will make it more impressive and

the employer will not have to scan the whole document. It will also enrich him with the information he requires in order to make an interview appointment with you.

**Using bullets:** Using bullets makes a CV more concise and easier to scan. So instead of opting for paragraphs, summarize it in the form of bullets.

**Updated info:** Always state your updated info at the start of your CV, i.e., your contact details including name, address, home and mobile phone numbers and email address. It is imperative to be accessible at all times and under all conditions.

**Adjust the CV according to the role:** If you have a job description, it is advisable to regulate your CV so that it readily highlights the aspects of your experience relevant to the job which you are applying for. CVs formulated with a specific role in mind are always more successful than those written for any generic position. This is particularly true of graduate applications.

**Use Headings:** Write comprehensible headings while entering your information in your CV. Clear headings help in scanning the required data at a glance.

**Avoid erroneous Information:** Use accurate, concise and slang-free details while composing your professional CV. Including flawed information will only call for trouble when you are asked questions in order to verify what you have written in your CV.

**Keep it simple:** Keep it simple linguistically and apparently when it comes to producing the ideal "curriculum vitae".

**Detailed paragraphs:** For experienced professionals, job responsibilities should be detailed, explained in paragraphs if required instead of bullets, but easy to read. The more easy the language the more are the chances for an interview call.

**Mention dates:** Cite dates consistently while referring to qualifications and experience. Always start with the most recent credentials and work backwards.

**CV length:** CV should not be longer than

- 1-2 pages if you are just starting your career.
- 2-3 pages if you are seeking mid-management positions &
- 3-4 pages if you are seeking senior management positions.

**Spell check:** This is made possible by reading someone's CV over and over again. Typos usually turn off employers. Ask a friend to read over your CV and cover letter for the rectification of spelling and grammar mistakes or use a spell check. Spelling mistakes portray you as careless and unfocused. A CV full of mistakes will end up directly in the trash can. Use present tense for current jobs, keep it consistent and keep the same tense throughout your CV.

**Availability:** Include your availability (e.g., "immediately available" or "4 weeks' notice"). This will help the employer to make up his mind about whether he can/cannot wait for you as a prospective candidate.

**Correct font size:** Use a font size that is large enough to read, 11 or 12 is advisable. No fancy fonts, so keep it simple. Best is to use Times New Roman, Verdana or Arial font styles while composing a CV.

**Make your desired job discernible:** Make it clear on a covering letter or email which job you are applying for. This will be to your benefit as the employer will be able to judge in a glance whether you are a suitable recruitment for the available job or not.

**Technical Skills:** The most effective way to demonstrate technical skills is to provide a breakdown of the projects you've worked on. Remember that a project should comprise of the following pieces of information:

- Title
- Timelines
- Number of staff involved
- Technology you used
- Your role
- What you actually did

**Sell yourself properly:** Remember that a CV is a very important selling tool. It is a way of persuading a consumer to buy a product, means a company to decide that your skills are worth paying for. You should think about the skills and experience that would appeal to an employer rather than including everything you have done. The "kitchen sink" approach can mean that your relevant skills are lost in your CV and are not sold enough.

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**C.V DON'Ts:**

**Don't paste your photograph:** Do not put your photograph on your CV. You want the employer to consider you on the basis of your skill-set in spite of your physical appearance, as a start.

**Don't use flowery fonts and writing style:** Refrain from using flowery language, fancy fonts and bright colored paper. Your CV should look mature and professional. Let the content do the talking. Do not use the word "I" repeatedly.

**Don't be humorous:** Create a professional email address, preferably with your own name e.g. "name@hotmail.com". Don't use a humorous or inappropriate email address such as "lover\_boy@hotmail.com". This may make a recruiter smile but won't fetch you an interview.

**Don't use slangs & abbreviations:** It is advised not to use slangs or abbreviations in your CV. This creates a careless impact on the recruiter. Remember that your CV may be read by the HR manager who will be in need of seriously dedicated employees in his team. So, to make a good first impression through your CV, compose it very carefully.

**Don't quote irrelevant facts:** Don't include irrelevant facts in your CV which have no connection with your career achievements. A potential employer always looks for a candidate who is trained, qualified and skilled in his area of expertise.

**Don't lie:** Do explain the time gaps in your CV when inquired. If you have spent 2 months looking for a new job, this is fine, inform the employer about it. If you have taken a career break or gone for traveling - say so! Do not try to hide or fabricate it with lies. The HR people are professionals and are experts in getting the truth out of you.

**Don't be Repetitive:** Avoid repetition while writing your CV even if it is in the form of bullets, as it will use up the important space which can encompass your other achievements. Also when written once, repeating the same text will not give a good impression on your CV.

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**Don't post/fax CV:** Post or fax CV's only when absolutely necessary or if you are asked to do so. Email is now the accepted standard everywhere. So you better get attuned to the current standards of the professional world.

**Do not exaggerate your experience:** Exaggerating your experience will create problems for you in interviews & later on. So be practical and careful while writing a CV.

**References:** Include references when it is required by the company. You should simply state that: "References are available on request".

### IMPORTANCE OF RESUME OBJECTIVE

When writing a resume, some people choose to state an objective on their resume, rather than including it in the body of their cover letter.

Stating an objective can convince employers that you know what you want to do and are familiar with the field. Stating your objective on your resume is optional, but a better option for fresh graduates.

#### Customize Your Resume Objective

If you include an objective on your resume, it's important to customize the resume objective to match the position you are applying for. The more specific you are, the better chance you have of being considered for the job you are interested in.

Here are some generic "**Resume Objective**" samples (for technical & management based resumes) which you can edit by replacing the words given in **bold letters** & use according to your way.

### SAMPLE "RESUME OBJECTIVE" STATEMENTS

#### 1) For Engineering Professionals

- ❖ Desirous to obtain a position in **mention name of industry/sector/area (e.g. Automation, Power, Telecom, Instrumentation, control, Aviation, Planning, Transportation, Public health engineering, Manufacturing, Petrochemical, Research & development, Production & Industrial Management)** where I can maximize my organizational & technological exposure, based on result oriented approach.
- ❖ To secure a position in a well established engineering based organization offering a congenial working environment that will lead to a lasting relationship in the field of **mention name of industry/sector/area (e.g. Automation, Power, Telecom, Instrumentation, control, Aviation, Planning, Transportation, Public health engineering,**

**Manufacturing, Petrochemical, Research & development, Production & Industrial Management).**

- ❖ To pursue a career in **mention name of industry/sector/area (e.g. Automation, Power, Telecom, Instrumentation, control, Aviation, Planning, Transportation, Public health engineering, Manufacturing, Petrochemical, Research & development, Production & Industrial Management )** that will enable me to use my strong organizational & technical skills, educational background, and ability to work well with people to have career advanced growth.

#### 2) For Business/Management Professionals

- ❖ Customer service management where my experience can be utilized to improve customer satisfaction.
- ❖ Create integrated strategies to develop and expand existing customer sales, brand/product evolution, and media endorsement.
- ❖ To pursue a career in management based position where I can effectively utilize my expertise in human relations, project management, and staff recruitment and retention.
- ❖ To acquire a position in marketing that utilizes my writing skills and enables me to make a positive contribution to the organization.

"The path to success is to take massive determined" "action"

Enter Your Address Here      Phone 0000-1234567  
E-Mail Email@Email.Com

**SAMPLE CV FORMAT 1**

**PERSONAL INFORMATION**

- Marital status:
- Nationality:
- Age:
- Place of Birth:

**OBJECTIVE**

Enter your Objective here.

**EDUCATION**

- [FROM-UPTO] [Institution/University Name] [Degree/Major]
- [FROM-UPTO] [Institution/University Name] [Degree/Major]
- [FROM-UPTO] [Institution/University Name] [Degree/Major]

**COMPUTER & TECHNICAL SKILLS**

- Enter Your Computer skills here including Internet & Ms-office.
- Enter your computer/ programming language & technical skills

**AWARDS RECEIVED**

- [Enter Details of positions, award or achievement]
- [Enter Details of positions, award or achievement]

**LANGUAGES**

- [Enter your Linguistics skills here in order of proficiency]

**VOLUNTEER EXPERIENCE**

- [Enter volunteer experience if you have any]

**PROFESSIONAL MEMBERSHIPS**

- [Enter your membership with any of professional institution]
- [Enter your membership with any of professional institution]

**REFERENCES**

References to be furnished on request.

Your Postal Address here

Your mobile & phone no here

email@email.com

**SAMPLE C.V FORMAT 2**

**OBJECTIVE**

Enter your objective here.

- **0000-2010    Name of Organization      City**  
**Name of Post**

Enter your Responsibilities & Achievements here.  
Enter your Responsibilities & Achievements here.  
Enter your Responsibilities & Achievements here.

**EXPERIENCE**

- **0000-2010    Name of Organization      City**  
**Name of Post**

Enter your Responsibilities & Achievements here.  
Enter your Responsibilities & Achievements here.  
Enter your Responsibilities & Achievements here.

**EDUCATION**

- from-up to    Name of University      City**

Name of Qualification/Degree

- from-up to    Name of University      City**

Name of Qualification/Degree

- from-up to    Name of University      City**

Name of Qualification/Degree

**SKILLS & INTERESTS**

- Enter Your Extra curricular activities, skills & interests here.

**CERTIFICATIONS & MEMBERSHIPS**

- Enter your certifications & membership here.
- Enter your certifications & membership here.



INTERVIEW PROCESS MADE EASY

OUTLINES

1. TIPS FOR MAKING A GREAT IMPRESSION IN AN INTERVIEW
2. 50 COMMON INTERVIEW QUESTIONS & ANSWERS

**TIPS FOR MAKING A GREAT IMPRESSION IN AN INTERVIEW**

Interviews can be nerve-racking; especially since the advent of the behavioral interview-where employers added a whole new level of question to help determine not only your skill-set, experience, and goals, but to better understand your personality and how you handle situations. **So, here are top 10 tips on how to face that interview:**

**1) Do Your Homework:**

Before you ever set foot through the door, you should learn as much as you can about the company you're applying with. Usually, the company's website is a great place to gain that information, but don't be afraid to ask for company brochures and literature. Asking questions about the company and wanting to learn more shows the employer that you're not just interested in the position, but in the company itself.

**2) Be Prepared:**

Know the name of the person you're interviewing with and use it. Take extra copies of you resume and a list of references. In the days before the interview, sit down and write down questions you would like to ask. Think through your experience and be ready to answer questions and offer in-depth information. Often the interviewer is not only looking for how you meet the skill-set, but assessing your behavioral patterns as well, so be prepared to provide detailed and specific responses.

**3) Dress Appropriately:**

The interview dress code rule of thumb is this: Always dress slightly better than the corporate dress code and the position you're applying for dictates. So, if your job requires jeans and t-shirt, interview in pressed trousers and a nice shirt. You want to look clean, pressed, well-groomed, and smartly dressed. This doesn't mean it has to be expensive, but it does mean it needs to be clean and of decent quality. And pay attention to the shoes; a great suit loses its power if the shoes are worn and scuffed.

**4) Be In Time:**

This doesn't mean show up for your 9AM at 9AM; it means, show up at 8:45. If unsure of the location, scout it beforehand. If unsure of the traffic situation, leave extra early. If you end up arriving too soon, don't wait in the lobby, wait in your car or find a quiet place to sit and review your notes.

**5) Keep A Happy Medium:**

Don't ramble. Questions like, "Tell me about yourself" aren't an opening for you to talk about your childhood. Keep your responses on focus; discuss only that which is relevant to the job and company you're applying for. At the same time, make sure you say enough. Be succinct, but don't be too short with information. Talking too little is as bad as talking too much.

**6) Stay True To The Message:**

Your message, in this instance, is "Here is what I have done and what I can do for you in a way that delivers a strong return in your investment in hiring me." This doesn't mean open season to talk about how you are the end-all and be-all to save the company from itself; no one likes a braggart. What it does mean is that you focus on your strengths, experience, and goals, and how they fit with the position and company.

**7) Avoid Talking Money Or Benefits:**

These discussions are best left for after the job has been offered. Focusing too much on them gives the impression that money and perks are all that you're interested in. Worse, by discussing salary at this phase, you just give the employer the ammunition they need to screen you out.

**8) Be Careful Talking About Your Previous Employer:**

While some may think that criticizing their past employers shows them as go-getters keen to move ahead; in truth, all it does is paint you as a malcontent. So stick to the old adage: "If you can't say something positive, don't say anything at all."

**9) Smile and Stay Calm:**

Yes, you're going to be nervous; you know it and they know it. It is how you

handle being nervous that will count. Be aware of your body language; sit up straight and don't fidget. Smile when you talk. Look confident, make eye contact, and speak clearly and succinctly. Don't rush your words and don't interrupt the interviewer.

**10) Assume that For Everyone You Meet, It's Interview No 1:**

When the interviewer says, "I'd like you to meet my boss" assume that the boss has never seen your credentials. Everything you say and do whilst in that environment is part of the interview; so stay on your toes and act the part.

Since Interviewing is a learned skill, so if you are new to the job-seeking world then by taking these 10 tips to heart, you are well on your way to ensuring that the next interview you're appearing for, you'll make a great impression.

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## 50 COMMON INTERVIEW QUESTIONS & ANSWERS

Below given are commonly asked interview questions & their best possible answers have also been given to help confront an interview. These questions must be kept in mind while appearing in any interview.

### 1) Tell me about yourself?

ANS: The most often asked question in interviews. You need to have a short statement prepared in your mind. Be careful that it does not sound rehearsed. Limit it to work-related items unless instructed otherwise. Talk about things you have done and jobs you have held that relate to the position you are interviewing for. Start with the item farthest back and work up to the present.

### 2) Why did you leave your last job?

ANS: Stay positive regardless of the circumstances. Never refer to a major problem with management and never speak ill of supervisors, co-workers or the organization. If you do, you will be the one looking bad. Keep smiling and talk about leaving for a positive reason such as an opportunity, a chance to do something special or other forward-looking reasons.

### 3) What experience do you have in this field?

ANS: Speak about specifics that relate to the position you are applying for. If you don't have specific experience, get as close as you can.

### 4) Do you consider yourself successful?

ANS: You should always answer yes and briefly explain why. A good explanation is that you have set goals, and you have met some and are on track to achieve others.

### 5) What do co-workers say about you?

ANS: Be prepared with a quote or two from co-workers. Either a specific statement or a paraphrase will work.

### 6) What do you know about this organization?

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ANS: This question is one reason to do some research on the organization before the interview. Find out where they have been and where they are going. What are the current issues and who are the major players?

### 7) What have you done to improve your knowledge in the last year?

ANS: Try to include improvement activities that relate to the job. A wide variety of activities can be mentioned as positive self-improvement. Have some good ones handy to mention.

### 8) Are you applying for other jobs?

ANS: Be honest but do not spend a lot of time in this area. Keep the focus on this job and what you can do for this organization. Anything else is a distraction.

### 9) Why do you want to work for this organization?

ANS: This may take some thought and certainly should be based on the research you have done on the organization. Sincerity is extremely important here and will easily be sensed. Relate it to your long term career goals.

### 10) Do you know anyone who works for us?

ANS: Be aware of the policy on relatives working for the organization. This can affect your answer even though they asked about friends not relatives. Be careful to mention a friend only if they are well thought of.

### 11) What is your Expected Salary?

ANS: A loaded question. A nasty little game that you will probably lose if you answer first. So, do not answer it. Instead, say something like, that's a tough question. Can you tell me the range for this position? In most cases, the interviewer, taken off guard, will tell you. If not, say that it can depend on the details of the job. Then give a wide range.

### 12) Are you a team player?

ANS: You are, off course, a team player. Be sure to have examples ready. Specifics that show you often perform for the good of the team rather than for yourself are good evidence of your team attitude. Do not brag, just say it in a matter-of-fact tone. This is a key point.

### 13) How long would you expect to work for us if hired?

ANS: Specifics here are not good. Something like this should work: I'd like it to be a long time. Or As long as we both feel I'm doing a good job.

**14) Have you ever had to fire anyone?**

ANS: How did you feel about that? This is serious. Do not make light of it or in any way seem like you like to fire people. At the same time, you will do it when it is the right thing to do. When it comes to the organization versus the individual who has created a harmful situation, you will protect the organization. Remember firing is not the same as layoff or reduction in force.

**15) What is your philosophy towards work?**

ANS: The interviewer is not looking for a long or flowery dissertation here. Do you have strong feelings that the job gets done? Yes. That's the type of answer that works best here. So answer Short and positive, showing a benefit to the organization.

**16) If you had enough money to retire right now, would you?**

ANS: Answer yes if you would. But since you need to work, this is the type of work you prefer. Do not say yes if you do not mean it.

**17) Have you ever been asked to leave a position?**

ANS: If you have not, say no. If you have, be honest, brief and avoid saying negative things about the people or organization involved.

**18) Explain how would you be an asset to this organization?**

ANS: You should be anxious for this question. It gives you a chance to highlight your best points as they relate to the position being discussed. Give a little advance thought to this relationship. .

**19) Why should we hire you?**

ANS: Point out how your assets meet what the organization needs. Don't mention any other candidates to make a comparison.

**20) Tell me about a suggestion you have made?**

ANS: Have a good one ready. Be sure and use a suggestion that was accepted and was then considered successful. One related to the type of

work applied for is a real plus.

**21) What irritates you about co-workers?**

ANS: This is a trap question. Think real hard but fail to come up with anything that irritates you. A short statement that you seem to get along with folks is great.

**22) What is your greatest strength?**

ANS: Numerous answers are good, just stay positive. A few good examples: Your ability to prioritize, Your problem-solving skills, Your ability to work under pressure, Your ability to focus on projects, Your professional expertise, Your leadership skills, Your positive attitude

**23) Tell me about your dream job?**

ANS: Stay away from a specific job. You cannot win. If you say the job you are contending for is it, you strain credibility. If you say another job is it, you plant the suspicion that you will be dissatisfied with this position if hired. The best is to stay generic and say something like: A job where I love the work, like the people, can contribute and can't wait to get to work.

**24) Why do you think you would do well at this job?**

ANS: Give several reasons and include skills, experience and interest.

**25) What are you looking for in a job?**

ANS: See answer # 23

**26) What kind of person would you refuse to work with?**

ANS: Do not be trivial. It would take disloyalty to the organization, violence or lawbreaking to get you to object... Minor objections will label you as a whiner.

**27) What is more important to you: the money or the work?**

ANS: Money is always important, but the work is the most important. There is no better answer.

**28) Tell me about a problem you had with a supervisor?**

ANS: Biggest trap of all. This is a test to see if you will speak ill of your boss. If you fall for it and tell about a problem with a former boss, you may well

below the interview right there. Stay positive and develop a poor memory about any trouble with a supervisor.

**29) What would your previous employer say your strongest point is?**

ANS: There are numerous good possibilities: Loyalty, Energy, Positive attitude, Leadership, Team player, Expertise, Initiative, Patience, Hard work, Creativity & Problem solver

**30) What has disappointed you about a job?**

ANS: Don't get trivial or negative. Safe areas are few but can include: Not enough of a challenge. You were laid off in a reduction Company did not win a contract, which would have given you more responsibility.

**31) Tell me about your ability to work under pressure.**

ANS: You may say that you thrive under certain types of pressure. Give an example that relates to the type of position applied for.

**32) Do your skills match this job or another job more closely?**

ANS: Probably this one. Do not give fuel to the suspicion that you may want another job more than this one.

**33) What motivates you to do your best on the job?**

ANS: This is a personal trait that only you can say, but good examples are: Challenge, Achievement & Recognition.

**34) Are you willing to work overtime? Nights / Weekends?**

ANS: This is up to you. Be totally honest.

**35) How would you know you were successful on this job?**

ANS: Several ways are good measures: You set high standards for yourself and meet them. Your outcomes are a success. Your boss tell you that you are successful

**36) Would you be willing to relocate if required?**

ANS: You should be clear on this with your family prior to the interview if you think there is a chance it may come up. Do not say yes just to get the job if the real answer is no. This can create a lot of problems later on in your career. Be honest at this point and save yourself future grief.

**37) Are you willing to put the interests of the organization ahead of your own?**

ANS: This is a straight loyalty and dedication question. Do not worry about the deep ethical and philosophical implications. Just say yes.

**38) Describe your management style?**

ANS: Try to avoid labels. Some of the more common labels, like progressive, salesman or consensus, can have several meanings or descriptions depending on which management expert you listen to. The situational style is safe, because it says you will manage according to the situation, instead of one size fits all.

**39) What have you learned from mistakes on the job?**

ANS: Here you have to come up with something or you strain credibility. Make it small, well intentioned mistake with a positive lesson learned. An example would be working too far ahead of colleagues on a project and thus throwing coordination off.

**40) Do you have any blind spots?**

ANS: Trick question. If you know about blind spots, they are no longer blind spots. Do not reveal any personal areas of concern here. Let them do their own discovery on your bad points. Do not hand it to them.

**41) If you were hiring a person for this job, what'd you look for?**

ANS: Be careful to mention traits that are needed and that you have.

**42) Do you think you are overqualified for this position?**

ANS: Regardless of your qualifications, state that you are very well qualified for the position.

**43) How do you propose to compensate for your lack of experience?**

ANS: First, if you have experience that the interviewer does not know about, bring that up: Then, point out (if true) that you are a hard working quick learner.

**44) What qualities do you look for in a boss?**

ANS: Be generic and positive. Safe qualities are knowledgeable, a sense of

humor, fair, loyal to subordinates and holder of high standards. All bosses think they have these traits.

**45) Tell me about a time when you helped resolve a dispute?**

ANS: Pick a specific incident. Concentrate on your problem solving technique and not the dispute you settled.

**46) What position do you prefer on a team working on a project?**

ANS: Be honest. If you are comfortable in different roles, point that out.

**47) Describe your work ethic?**

ANS: Emphasize benefits to the organization. Things like, determination to get the job done and work hard but enjoy your work are good.

**48) What has been your biggest professional disappointment?**

ANS: Be sure that you refer to something that was beyond your control. Show acceptance and no negative feelings.

**49) Tell me about the most fun you have had on the job.**

ANS: Talk about having fun by accomplishing something for the organization.

**50) Do you have any questions for me?**

ANS: Always have some questions prepared. Questions prepared where you will be an asset to the organization are good. How soon will I be able to be productive? And what type of projects will I be able to assist on Are examples.

Finally I Hope you will be successful in the interview you are going to face in coming days.

**Wishing You Best of Luck in Your Job Endeavor**

**"Success in life is the result of good judgment. Good judgment is usually the result of experience. Experience is usually the result of bad judgment"**

CONFRONTING OFFICE POLITICS

OUTLINES

1. HOW TO DEAL WITH OFFICE POLITICS

- Reasons Behind Office Politics
- Surviving Office Politics

2. MAKING GOOD IMPRESSION AT WORK

3. TIME MANAGEMENT

- Time Management Tips

HOW TO DEAL WITH OFFICE POLITICS



Like it or not, office politics exists almost everywhere and there is no way you can run from it. Office politics can be found at all ranks, from the entry level positions to the managerial posts and it is better to deal with it rather than trying to avoid it. In some organizations, office politics is just harmless gossiping, while in others it is a blood sport often leading to biased promotions and unfair job terminations. While your performance in the work place is essential for success, there is no doubt that office politics have a significant effect on your career success. Some employees enjoy office politics and actively participate to gain advantages and often hinder other employees' success, but most of the people prefer to avoid it altogether. No doubt, office politics is so worse & a bad practice which better be avoided at all costs, however this is easier said than done.

**REASONS BEHIND OFFICE POLITICS**

While there is no specific reason why people engage in nasty office politics, the basic motivation is the advantages that most people get to reap by playing well at office politics. These motives are to:

- Gain power or leverage over others.
- Get promotion that you do not quite deserve.
- Gain competitive edge over your coworkers.
- Avail other unethical benefits such as gifts, bonuses, and reducing workload by dumping it on others.

## SURVIVING OFFICE POLITICS

It is almost impossible to avoid office politics and most of the time people get involved without ever knowing what they are getting into. Since getting involved is not a viable option, you have to learn a few tricks so that you can survive office politics without getting too involved. **Here are some fool proof tricks that can not only help you in surviving office politics, but also be effective in advancing your career the right way.**

**Stay positive:** Try to remain positive and calm under all situations. This way your boss will identify you as a dependable person and it will reduce the chance of your falling into the gossiping category. While dealing with office politics is to do best to help others. If you sincerely help someone, you neutralize the feelings of animosity that anyone might have towards you and establishes your position as a team player.

**Build relationships:** It is very important to have healthy relationship with your coworkers as it takes both time and effort. If you have good relationship with your colleagues, they will be aware that you are honest and sincere with them so they will be comfortable when you mingle with them. This will make you more likeable at the workplace and reduce the chances of you being the target of office politics.

**Avoid gossip:** It is very easy to get caught up in gossip at workplace, which can be fatal for your career. Gossiping is not only a huge waste of time, it can also lead to problems in the workplace. Every word you say can spread through the office like a jungle fire, often with creative additions from every person who narrates what you said. Sooner or later your comments are bound to reach the person whom you were originally talking about. This will result in alienating a coworker and often creating an enemy at work.

**Work hard:** You should keep in mind that your work will speak for itself, so while the others are busy bragging about them and showing off their work, make sure that you are putting in actual effort in your work. However, keep in mind that being invisible is also not an option. So, work hard and make your efforts known, but refrain from blowing your own horn too much.

**Communicate well:** The way you speak and talk to your coworkers goes a long way as far as office politics is concerned. You have to learn to compliment rather than criticize bluntly. If you have a constructive comment you need to give, make sure that you start the conversation with a compliment. Start by saying what you considered was outstanding about it, then state what in your opinion can be improved. There is hardly any room to be offended when the conversation starts with a compliment and it improves your relationship with the coworkers.

**Remain neutral:** If you want to steer clear of office politics, the most effective is 'to stay clear of the do not align yourself with any group'. Often when a newcomer with exceptional skills joins the company, he is the target of discrimination and office politics. He is excluded from social circles, rumors related to him are spread and gossiping becomes the most common tool to be used against him. You should never join hands to persecute a co-worker or a newcomer. One of the most destructive, uncivilized and unethical behaviors on the job is the refusal to accept a new employee. This kind of behavior never goes unnoticed by the managers and if they start investigating, it is quite possible that the very initiator of such actions might point a finger at you. If you are unable to defend yourself in such a situation, you might end up losing your job, so it is always better to remain neutral and steer clear of such politics.

**Give credit:** The worst thing you can ever do to a colleague is to take credit for a job that he made possible. You should always give credit where it is due by acknowledging any work done by your colleague in public. This creates a bridge of trust between you and your colleagues and sends the message that you are not interested in office politics loud and clear.

**Speak wisely:** Never join your colleagues in berating or badmouthing your superior or the organization you work for as your opinion might be presented to the boss as the only voice of opposition, as is often the case in office politics. Your vicious colleagues might be waiting for a chance to ruin your impression in front of your boss and by speaking ill or by only assenting with a person who is criticizing the boss; you might give him the ultimate chance to ruin your career. No matter how badly you want to speak against a superior, never do it in your office. If you have to vent your feelings, find a

friend or a family member to share what you have to say. This will help you in keeping your peace while at work.

**Keep your eyes and ears open:** Never believe what you hear without verification. In a workplace every kind of gossip is circulated and most of it is untrue. Basing your professional decision purely on hearsay can be fatal for your career.

**Stay in your boss's good books:** You should always try to maintain a good relationship with your boss, regardless of what kind of a person he is. Getting in arguments and opposing the boss can do you a lot of harm. If you have a cordial relationship with your boss, then there is a high chance that if you are ever in a hot spot owing to vicious office politics, you boss will definitely look out for you.

**"If you envy successful people, you create a negative force of attraction that repels you from ever doing the things that you need to do to be successful. If you admire successful people, you create a positive force field of attraction that draws you toward becoming more and more like the kinds of people that you want to be like"**

### **MAKING GOOD IMPRESSION AT WORK**

It is very important that you make a good impression at work. If you make a good impression on your boss, he or she is more likely to give you more responsibility which can lead you to promotions, privileges and raises.

**Here are some basic career success related rules that everyone should know to have a bright career and successful job working.**

- Keep track of what you do.
- Be comfortable around senior managers.
- Never bring your boss a problem without some solution.
- Late sittings don't mean anything; results count, not effort.
- Write down innovative & good ideas; as they get lost, like good pens.
- Always arrive at work 15 minutes before your boss.
- Your ability to complete projects in a timely manner or even before deadline will help you make a good impression on your boss.
- Help other people network for jobs. You never know when your turn will come.
- Don't take days off sick, unless you are.
- Make a good impression at work by wearing the right clothes. Dress the right way for the **"role you are playing."** If you aspire to be a leader at work, dress accordingly.
- Assume that no one can/will keep your secret.
- Know when you do work at your best. Morning, night, under pressure, relaxed etc. Schedule and prioritize your work accordingly.
- Treat everyone who works in the organization with respect and dignity, whether it is the cleaner/peon or the managing director/chairman. Don't ever be patronizing.
- Never appear stressed in front of a client, a customer or your boss. Take a

deep breath and ask yourself in the course of human events, how important is this?

- Avoid inappropriate conversations & issues that do not make good impression at workplace like discussions on politics, religion, & health problems and other personal issues.
- If you get the entrepreneurial urge, visit someone who has his own business. It may cure you.
- Acknowledging someone else's contribution will repay you in double.
- Career planning is an oxymoron (contradictory term). The most exciting opportunities tend to be unplanned.
- Always choose to do what you'll remember ten years from now.
- The size of your office is not as important as the size of your paycheck.
- Understand what finished work looks like and deliver your work only when it is finished.
- The person who spends all of his or her time is not hard-working; he or she is boring.
- Know or improve as much as you can, writing effective business letters including thank-you notes as well as proposals.
- Never confuse a memo with reality. Most memos from the top are political fantasy.
- Eliminate guilt. Don't fiddle (falsify) expenses, taxes or benefits and don't cheat colleagues.
- Re-organizations mean that someone will lose his or her job. Get on the committee that will make the recommendations.
- Job security does not exist now a day.
- Always have an answer to the question, "**What would I do if I lost my job tomorrow?**"
- Attend company meetings, parties & get-togethers.

- Represent your employer at business meetings & parties. Making a good impression on other attendees will in turn help you make a good impression on your boss. Dress appropriately, network on your employer's behalf, and bring back information.
- Avoid working at weekends. Work longer during the week if you have to.
- Sometimes you'll be on a winning streak and everything will click. In that situation, take maximum advantage. When the opposite is true, hold steady and wait it out.
- Never in your life say, "**It's not my job.**"
- Be loyal to your career, your interests and yourself.
- Understand the skills and abilities that set you apart.
- Use them whenever you have an opportunity.
- People remember the end of the project. As it is said in boxing, "**Always finish stronger than you start.**"

## TIME MANAGEMENT

Do you often feel like you have more things to do than you have time to do them? Time management skills are especially important for those people, who often find themselves performing many different jobs during the course of a single day. Time management helps you get more organized, productive & stay cool and collected.

**Here are tips to help you improve your time management skills both at work and at home.**

**1) Realize that time management is a myth.**

No matter how organized we are, there are only 24 hours in a day. Time doesn't change. What can change is how we can actually manage ourselves & time and what we do with that time.

**2) Keep Prioritized "to do" Lists:** List tasks you must complete in order of priority (most important to least important). Cross off items as you complete them.

**3) Get Organized:** It's much easier to accomplish tasks if your work area is organized.

**4) Stop Procrastinating:** Procrastinating (to postpone actions) can ruin your career if it results in completing projects late or not at all.

**5) Find out where you're wasting time:** Many of us are prey to time-wasters that steal time we could be using much more productively. Do you spend too much time 'Net surfing, chatting, reading emails, or making unnecessary personal calls? Tracking daily activities will explain you how to track your activities so you can form an accurate picture of what you actually do, the first step to effective time management.

**6) Set time management goals:** Remember, the focus of time management is actually changing your behaviors, not changing time. A good place to start is by eliminating your personal time-wasters. For Example: Set a goal that for one week, you're not going to take unnecessary phone calls while you're working.

**7) Learn to delegate and/or outsource:** No matter how efficient you are at work, there's no need for you to be a one-person show. For effective time management, you need to let other people carry some of the work load.

**8) Establish routines & stick to them as much as possible:** While crises to arise, you'll be much more productive if you can follow routines most of the time.

**9) Get in the habit of setting time limits for tasks:** For instance, reading and answering email can consume your whole day if you let it happen. Instead, set a limit of one or two hours a day for this task and stick to it.

**10) Don't waste time waiting:** From client meetings to doctor's appointments, it's impossible to avoid waiting for someone or something. But you don't need to just sit there and twiddle your thumbs. Always take something to do with you, such as a book you need to read, or just a blank pad of paper that you can use to plan your next strategy. Technology makes it easy to work wherever you are; your Laptop/communicator/PDA and/or cell phone with GPRS activated will help you stay connected & busy working.

**11) Get Enough Sleep:** Although it's tempting to work long hours, in the end you're actually less efficient when you're tired.

**A poster showing a Fish caught on a hook with the caption:  
"Even a Fish would have stayed out of trouble if it had kept its  
mouth shut"**

**PROJECT MANAGEMENT**

**OUTLINES**

**1. INTRODUCTION TO PROJECT MANAGEMENT**

- What Is Project Management?
- Why Project Management?
- Who Uses Project Management?

● **Typical Project Phases**

**2. BASIC PRINCIPLES OF PROJECT MANAGEMENT**

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**3. PROJECT SCOPE**

- **Scope, Visions And Goals**

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- **Balancing Priorities**
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**5. PROJECT PLANNING**

- **Purpose Of A Project Plan**
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- **Principles Of Scheduling**
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**6. PROJECT EXECUTION**

- **Staying On Track**
- **The Myth Of Completion**
- **Managing People**
  - **Negotiation**
  - **Elements Of Negotiation**
  - **Building A Team**

**INTRODUCTION TO PROJECT MANAGEMENT**

**What is Project Management?**

Project management is a combination of techniques, procedures, people, and systems focused on the successful completion of a specific project. It is basically the process of planning, organizing, monitoring, controlling and managing resources to achieve predetermined objectives of scope, quality, time and cost, to the equal satisfaction of those involved.

**Why Project Management?**

Many projects fail or run short of budget & time because of being poorly managed.

**Who uses project management?**

Today project management techniques are used in every area of society, from government agencies to non-profits, and from engineering companies to service industries.

Any project, from a single one-person project to a multi-billion rupees venture can equally benefit from project management.

**TYPICAL PROJECT PHASES**

There are many methodologies for running projects. Typically they consist of the following high-level phases:

- **Define the project**
- **Plan the project**
- **Get approval to proceed**
- **Implement the project plan**
- **Evaluate the project**

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## BASIC PRINCIPLES OF PROJECT MANAGEMENT

### AXIOMS FOR SUCCESS

To help you get started with a new project, here are 10 axioms that you should keep in mind as you pursue your project management goals.

#### 1) Know your goal

It may sound obvious, but if you don't have an end-point in mind you'll never get there. You should be able to clearly state the goal of your project in a single sentence. If you can't, your chance of achieving it is slim.

#### 2) Know your team

Your team is the most important resource you have available and their enthusiastic contribution will make or break your project. Look after them and make sure the team operates as a unit and not as a collection of individuals. Communications are vital. Invest time in promoting trust and ensuring that everyone knows what they have to contribute to the bigger picture. Dish out reward as well as criticism, provide superior working conditions and lead by example.

#### 3) Know your stakeholders

Spend time with your stakeholders. Stakeholders either contribute expert knowledge offer their political or commercial endorsement which will be essential to success. Shake hands and grease the wheels of the bureaucratic machine as necessary so that your project has the smoothest ride possible.

#### 4) Spend time on planning and design

A traditional mistake is to leap before you are ready. When you're under pressure to deliver, the temptation is to 'get the ball rolling'. The ball is big and heavy and it's very difficult to change its direction once it gets moving. So spend some time deciding exactly how you're going to solve your problem in the most efficient and elegant way.

#### 5) Promise low and deliver high

Try and deliver happy surprises and not unpleasant ones. By promising low

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(understating your goals) and delivering high (delivering more than you promised) you can:

- Build confidence in yourself, the project and the team.
- Buy yourself contingency in the event that something goes wrong.
- Generate a positive and receptive atmosphere.

**Consider:** If everything goes right you will finish early everyone will be happy; if something goes wrong you might still finish in time; if things goes really bad, you might still not deliver what you anticipated but it will still be better than if you over-promised.

#### 6) Iterate! Increment! Evolve!

Most problems worth solving are too big to swallow in one lump. Any serious project will require some kind of decomposition of the problem in order to solve it. You must pay close attention to how each piece fits the overall solution. Without a systematic approach you end up with a hundred different solutions instead of one big one.

#### 7) Stay on track

You have an end goal in mind. You need to work methodically towards the goal and provide leadership (make decisions). This applies whether you're a senior project manager with a team of 20 or you're a lone computer operator. Learn to use tools like schedules and budgets to stay on track. Consistency is what separates professionals from amateurs.

#### 8) Manage change

We are living in a changing world. As your project progresses, the temptation to deviate from the plan will become irresistible. Stakeholders will come up with new and 'interesting' ideas, your team will bolt down all kinds of rat holes and your original goal will have all the permanence of a snowflake in quicksand. Scope creep or drift is a major source of project failure and you need to manage or control changes if you want to succeed.

This doesn't imply that there should be single, immutable plan which is written down and all other ideas must be stifled. You need to build a flexible approach that absorbs changes as they arise. It's a happy medium you're striving for. If you are too flexible, your project will meander like a horse without a rider and if you are too rigid your project will shatter like a pane of glass.

### 9) Test Early, Test Often

Projects involve creative disciplines burdened with assumptions and mistakes. Sure you can do a lot of valuable work to prevent mistakes being introduced, but to err is human and some of errors will make it into your finished product. Testing is the best way to find and eliminate errors.

### 10) Keep an open mind!

Be flexible! The desired outcome is the delivery of the finished project to a customer who is satisfied with the result. Any means necessary can be used to achieve this and every rule listed above can be broken in the right circumstances, for the right reasons.

- Don't get locked into an Ideology if the circumstances dictate otherwise.
- Don't get blinded by methodology.
- Follow your head.

Focus on delivering the project and use all the tools and people available to you. Keep an eye on the schedule and adjust your expectations and your plan to suit the conditions. Deliver the finished product, promote its use, celebrate your success and then move on to the next project.

### SCOPE TRIANGLE

The '**Scope Triangle**' or the '**Quality Triangle**', this shows the trade-offs inherent in any project.

The triangle illustrates the relationship between three primary forces in a project. Time is the available time to deliver the project, cost represents the amount of money or resources available and quality represents the "**fit-to-purpose**" that the project must achieve to be a success.

The normal situation is that one of these factors is fixed and the other two will



vary in inverse proportion to each other.

**For example** "Time" is often fixed and the "Quality" of the end product will depend on the "Cost" or resources available. Similarly if you are working to a fixed level of "Quality" then the "Cost" of the project will largely be dependent upon the "Time" available (if you have longer you can do it with fewer people).

A phenomenon known as "**scope creep**" can be linked to the triangle too. Scope creep is the almost unstoppable tendency a project has to accumulate new functionality. Some scope creep is inevitable since, early on your project will be poorly defined and will need to evolve. A large amount of scope creep however can be disastrous.

When the scope starts to creep, new functionality must be added to cover the increased scope. This is represented by the quality arm of the triangle, representing the ability of the product to fulfill users' requirements.

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**More requirements fulfilled = A better quality product.**

**In this situation you have three and only three options:**

**Add time:** Delay the project to give you more time to add the functionality.

**Add cost:** Recruit, hire or acquire more people to do the extra work.

**Cut quality:** Trade off some non-essential requirements for the new requirements.

If the art of management lies in making decisions, then the art of project management lies in making decisions quickly! When faced with scope creep you cannot ignore it. You need to tackle it in one of the ways described above and the sooner the better. Delaying raises the risk of your project failing.

A poor project manager will see the scope triangle as a strait-jacket by which their project is irrevocably constrained. A better project manager will make better use of one or more of the axes and will shift the emphasis in the project to one of the other axes. The best project managers will juggle all three like hot potatoes and will make decisions every day which effectively trade-off time vs quality vs resources.

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**PROJECT SCOPE**

**SCOPE, VISIONS AND GOALS**

**Scope** is a general term to describe everything that your project encompasses, everything that must be achieved for the project to be complete. This would encompass your vision, your goals and your requirements and would be embodied in documents such as a "project proposal" and at a lower level "commercial specifications" and "technical specifications".

The word **Vision** produces shudders in technical and non-technical people the world over. And rightly so, for a vision is normally a collection of meaningless catch phrases and marketing dribble intended to dupe people into thinking that businesses are there for polite and altruistic reasons.

**This is not the kind of vision meant here.**

When talking about "**vision**" it simply means that you need a single encapsulated idea which defines the aim of your project. Why are you doing the project in the first place? A project is a standalone task (or set of tasks) that has an intended outcome. You work on your project, complete it and then move on to the next.

If you can't state the aim of your project in a single sentence, then it's not a project. Maybe it's an occupation, an idea for a business or possibly a way of life but it's not a project. It might even be a program, a set of projects that need to be divided into single 'efforts'. A project is a defined task with a finite life with a fixed end point and that end is defined by your 'vision'.

Without a single linking goal all the dependent steps of project planning become difficult. That single vision may be broken up in sub-goals but it provides the link that holds all of the disparate parts of the project together into a single enterprise. It gives your team and stakeholders a sense of purpose and defines the success of your project.

**Goals** are slightly lower-level and more specific than the vision. Goals should directly support the overall vision of the project but refine its definition. Typically goals are set out by customers or by a business and define how the success of the project will be achieved. While the vision encompasses the whole project, goals may refer only to the objectives of a particular segment of the project.

### **UNDERSTANDING & MANAGING PROJECT POLITICS**

Managing project politics is an essential task for the project manager and team members. It also falls to the project management to help others navigate the political waters. Key to managing the politics is keeping people informed. The bigger the project, the more time it will take to communicate with interested parties.

### **BALANCING PRIORITIES**

A project will consist of a set of priorities. These priorities can be classified in to what must be achieved, what should be achieved if possible, and what would follow from the previous choices. The thing that is not so obvious sometimes is that the priorities of various stakeholders will vary and they will vary over time. It is the project manager's job to manage the inevitable conflict that arises from this situation.

### **PROJECT FEASIBILITY**

The feasibility of the project should be assessed before the project proceeds. Consider whether the project is technically feasible, has organizational support, and has the financial backing to be completed. A business case can help with the feasibility analysis and should at a minimum include a cost/benefit analysis. For some large projects, the feasibility study could be a project in itself. The end result is a clear reason to proceed with a project or to shelve it.

### **DEFINING PROJECT DELIVERABLES**

Deliverables are always tangible and measurable. They are the things that external project stakeholders are going to receive when the project is complete or at the completion of each phase in the project. These deliverables can be equipment, completion of a report, installation of new hardware, etc.

Before implementation work on a project can begin, it is necessary to define project tasks. Regardless of the process used, the idea is to break large projects in to many smaller components. These smaller components should be small enough such that accurate estimates and costs can be determined. Anything bigger and there's a good change the item can be broken down further. However, the ordering shouldn't be determined at this point.

Good estimates are necessary for the success of a project. They can help with obtaining approval to start or continue a project. They're also useful for setting priorities based on expected ROI (Return on investment). There is no **"one-size-fits-all"** approach to estimates. A lot will depend on where the make up of the project team and the project itself. Exploratory projects are going to be much harder to estimate than a project that has been done several times before. The most important thing is to try and provide estimates as the act of doing can help with everyone's understanding of the requirements.

**Some other things to keep in mind include:**

- Do not accept poor quality estimates. Try to get the person who will actually do the work also provide the estimate.
- Provide enough time to come up with estimates i.e. give people enough time to think.
- Don't haggle over estimates.
- Provide estimates using a range, but avoid the temptation to arbitrarily pad estimates. If clients detect this tactic, it will result in ill-will.
- If an estimate seems particularly fuzzy, consider breaking the task down further so that its components are easier to understand.
- Make it clear that estimates will be noted and compared to when the project completes. This is part of the ongoing project management improvement process.
- A well-informed team will provide better estimates.
- Don't forget to take into account different skill levels of different team members. Junior team members will likely be slower than senior team members.

Once the project tasks have been identified and the time required for each estimated, it is necessary to create a schedule and determine the sequence of events. The key to sequencing is looking at all the tasks and figuring out dependencies. Those that are dependent on others will need to be done in

sequence. When a task has no dependencies it can be worked on in parallel assuming there are sufficient resources.

Once the sequence has been figured out, the critical path, the longest sequence of time through a network of tasks, will become apparent. This path will then form the basis of the project schedule since, by definition, the project can't be completed in less time than what the critical path requires. By laying out the tasks end-to-end on a timeline, you will, in effect, create a Gantt chart (A Gantt chart is a useful tool for planning and scheduling projects. It is a graphical representation of the duration of individual tasks against the progression of time.) In large projects, there may be too many tasks to plot so they should be grouped together to ease the work.

It is part of the project manager's job to try and find the best fit between a task and a resource. The better the match, the more likely the estimate will turn out to be accurate. In an ideal world, resources are available whenever you want them. In reality, resources are often coming from a shared pool. This is one of the first things that can impact a schedule right.

Once work has begun, it is important to review the resource issue regularly. You want to detect as soon as possible. You want to determine if there are problems so that you can request more resources or, in some rare cases, release resources because there isn't as much work as expected. There are many tools that can be used to level resources, but don't aim for perfection. Instead, aim for good enough and focus on getting the project done.

## PROJECT PLANNING

### PURPOSE OF A PROJECT PLAN

The purpose of a project plan is to maintain control of a project. As a complicated process, a project always threatens to exceed the limit of your control. Some people are better than others at controlling complex problems, but all of us reach our limits at some stage. To maintain control you need help in the form of tools and your best tool is your plan.

#### The project plan controls the project by:

- Breaking a complex process down into a number of simpler components.
- Providing visibility for obscure or ambiguous tasks in the project.
- Providing a single point of reference for everyone.
- Enforcing scrutiny of the sequence and nature of events.
- Providing a baseline against which execution of the project can be compared.
- Anticipating likely events and providing pre-planned means of avoiding them.

A project plan must be as accurate, complete and as specific as possible. How accurate, complete and specific of course depends upon how much time and resources you have.

### THE FINE ART OF SCHEDULING

If it were a science then every project would've been timely delivered!

Sadly this is not the case. Over-runs are so common that most people have no faith in project deadlines. In truth, the art of scheduling is based on experience and the more experience you have, the more accurate your schedule will be. However, you can still produce a good schedule by following some simple rules.

### Principles of Scheduling

- Rule #1** - Don't commit to something you can't deliver.
- Rule #2** - Eliminate uncertainty wherever you can.
- Rule #3** - Build in plenty of contingency to cope with variation.
- Rule #4** - Pick the right level of granularity.
- Rule #5** - Schedule for the unexpected.

### PROJECT RISKS

Risk management should start as early as possible. The goal is to identify and record the major issues that may affect the project including uncertainties and assumptions. As the project progresses, the list of risks should be reviewed to ensure it remains comprehensive. Some items will disappear while others will need to be added.

The project objectives are a critical reference for the project. They act as the definition of success for the project manager and the goals for the people involved in the project. The objectives therefore should contain the project goal statement and a list of project deliverables.

A face-to-face meeting with stakeholders is a good way to build the objectives document. During this meeting, the project manager should ensure that everyone's view is being heard and that everyone is participating. After the meeting, craft the objectives document and distribute for sign-off.

## PROJECT EXECUTION

### STAYING ON TRACK

The single biggest problem for a project during the execution phase of the project is staying on track. Despite all the best planning, having the best team and anticipating all the possible pitfalls projects have a knack of developing unforeseen problems.

#### The Myth of Completion

There is a common falsehood about tasks which is promoted by project tools such as Microsoft Project. The myth is that tasks can be partially complete, i.e. a task can be 10% or 20% done.

If a task is thought of as a goal then the lie becomes obvious either you have achieved your goal or you have not. It's a black-and-white, binary proposition. If your goal is a vague and imprecise statement of intent, like "write some instructional documentation", then it is complete the moment you start. As soon as you put pen to paper you have "written some instructional documentation".

On the other hand if the task is well defined and has a measurable deliverable then the goal is not achieved until it is delivered. For example: "complete a user guide and a technical manual". This task definition is much more useful because it has a clear measure of success. The only time the task is complete is when the documents are written, have been reviewed and edited and are ready for publication. You are finished when there are no more changes to be made.

The danger in believing that tasks can be partially completed is that it gives you a false sense of security. Because 50% of a task can be such a hard thing to define, people will tell you they have completed 50% of the task when they are 50% of the way through the time allocated to it. It might be the case that 90% of the task remains but they will insist that since there is 50% of the time left there must be only half of the work left, too.

This misconception is particularly entertained by those people who believe that time is elastic. That is that you can cram any amount of work into a particular length of time, it just depends on how hard you work.

## MANAGING PEOPLE

It is not often recognized that a project manager must be a people manager as well. Often project managers come from a particular technical stream and they find themselves elevated to a leadership position without any formalized management training. Their first project may confront them with their first test in team leadership. Most project managers therefore excel at the technical aspects of project management such as scheduling, design and testing. Many, however, are weak or uncomfortable with the core management disciplines which deal with 'soft skills'. This section will give an overview of some important people skills for the project manager.

### Negotiation

Negotiation can be a tricky business for technical people, we tend to see the world as a black-and white environment. 'Techies' often believe that there is a right and wrong way to solve a problem, or that one technology or solution is the 'best' available. This is part of their drive for perfection but in truth there are many ways to solve a problem and each technology or solution has its strength and weaknesses.

#### **Negotiation is a process of achieving consensus while avoiding conflict.**

Central to this is the understanding that the best solution to a problem is one which attracts the consensus of all those involved. A unilateral (binary) solution is by definition not the best solution since it alienates or disappoints someone. Finding the best solution will involve compromises and the project manager will be the fulcrum around which the discussions between different parties revolve.

Most people view discussions as a zero-sum-game. That is, in order to "win" or succeed, someone must "lose".

**For example** a salesman might believe that he will "win" if he can convince someone to buy a product at a high price. This is a zero-sum attitude, the salesman has "won" and the customer has "lost". A customer on the other hand might not care about the price and might be willing to pay if the product has the right features. If the salesman can work out what the customer wants

he might be able to sell him the right product. Further if a particular product doesn't have those features, the salesman might be able to drop the price or offer other incentives that will convince the customer to buy. If he achieves this then they both win.

**This is the art of negotiation.**

Problems can be broken down into a number of elements which, when handled separately, produce trade-offs by which you can achieve a "win-win" solution. This is a solution where both parties walk away happy. This avoids the dichotomy (contrast b/w two things) of a binary, yes-no problem and the situation where both parties hold equally strong views, resulting in conflict.

**Elements of Negotiation**

- Understanding
- Empathy
- Trust
- Contribution
- Consensus

**Building a Team**

One of the most important facets of project management is "**team building**". Refer to some more subtle people management skills below.

- Trust - Be Open and Honest
- Equality - Be fair and even handed
- Loyalty - Protect your team
- Learn to delegate

**"Once you have mastered time, you will understand how true it is that most people overestimate what they accomplish in a year - and underestimate what they can achieve in a decade"**

**RECRUITMENT PROCESS**

**OUTLINES**

**1. UNDERSTANDING THE RECRUITMENT PROCESS**

- **Methods Of Recruitment**

**2. JOB SEARCHING STRATEGIES**

**3. WAYS TO IMPRESS RECRUITERS**

**4. ROLE OF ONLINE RECRUITMENT AGENCIES (ORAs) IN JOB HUNT**

**UNDERSTANDING THE RECRUITMENT PROCESS**

The Internet is a powerful tool for job search. However, it is important that job seekers should have a good knowledge of the recruitment and selection processes. Understanding how employers hire will help in planning a successful job search strategy. There are many methods of recruitment. Each of these methods requires a different approach and processes.

**METHODS OF RECRUITMENT**

- ◆ Advertised Positions. (Newspapers & Media)
- ◆ Internet Job Search through Recruitment Websites.
- ◆ Employment / Recruitment Agencies. (Advertised Positions)
- ◆ Registering With a Recruitment / Employment Agency.
- ◆ Registering With a Job Search Firm.
- ◆ Temporary Recruitment Agencies. (White Collar Jobs)
- ◆ Labour Hire Companies. (Blue Collar Jobs)
- ◆ Company Websites.
- ◆ Specialised Employment Websites.
- ◆ Internal Recruitment.
- ◆ Employee Referral.
- ◆ Group Recruitment.
- ◆ Networking. (Using Personal Relationships)
- ◆ Companies Coming at Universities for hiring fresh graduates.

As you can see, there are many ways in which job seekers can look for work. Most will require job seekers to use a specific process which is the main topic of this section.

Whatever recruitment method is used the resume, job application letter and research are still the most important tools you need to look for work.

### **JOB SEARCHING STRATEGIES**

You will need to develop advanced job search skills to effectively prepare and implement a job search strategy.

The main strategies are to:-

- **Prepare a resume.**
- **Contact employers using several job search strategies.**
- **Attend job fairs and seminars and follow up.**

Most importantly, remember, your resume is a marketing document. Unless it is not competitive you are wasting your time, no matter what method you choose to look for work.

Your resume and the way you apply for work are absolutely vital to winning a job of your choice. Whether you are currently unemployed, changing jobs or seeking promotion, you need to be up to date in the latest job search and recruitment methods. People who are within employment often lack the latest letter writing skills, for instance. Some people have not had to look for work in many years and use outdated job applications.

### **WAYS TO IMPRESS RECRUITERS**

Job seeking can be a demanding, confusing and frustrating task. Especially for those who have been out of the job market for some time. Confidence, networking and a quality resume are the key ingredients to being on a recruiter's radar.

#### **Some worth implementing ways to impress recruiters are:**

- \* Know the type of recruiter you are going to work with.
- \* Most recruiters spend a large portion of their day networking. Be sure to increase the number of networking events you attend and contact your network to find out who they know.
- \* Search for a recruiter in your field. There are many recruiters out there, limit your search to specialized recruiters because chances are they have a strong network and are often looking for an individual who really knows his/her industry.
- \* Be sure to give recruiters the names of people you know who might be interested in pursuing a new job.
- \* Be sure you have a succinct & achievement based resume in hand. There is nothing a recruiter hates more than filtering bad resumes.

## ROLE OF ONLINE RECRUITMENT AGENCIES (ORAs) IN JOB HUNT

While hunting for a job, **ONLINE RECRUITMENT AGENCIES (ORAs)** can be very useful. ORAs can be a priceless basis of knowledge & solution to your unemployment. At ORA which can be online as well as onsite, give information on employment leads, organize job fairs & workshops on career management, offer resume services and also guide you on topics related to career.

They can guide you in getting you internships, part time & full time jobs. Large organizations often use the services of ORAs for their new recruitments. Certain ORAs cater to jobs at county and state level.

An ORA can assist one in finding employment in profit as well as non profit organizations (e.g. NGOs). These agencies either offer careers in a specific vocation like finance, accounts, business management & engineering or offer variety of careers. ORAs deal with job opportunities in direct areas. Those who are looking for job opportunities inside their own state or abroad, ORAs are the right ones to approach. Once you register with such a web based agencies, members are allowed to float their resumes for public view. Isn't this a great opportunity for employers as they can choose from these resumes for potential candidates.

Along with other services, ORAs also offer career tests and news about the most recent career openings in a particular industry. Those who are on look out for job opportunities must keep themselves abreast with the latest information. Articles on latest market information can not only give latest information about the job market but also give indication of coming trends.

Certain ORAs allow members to keep a blog thus allowing interaction with the other site users. Members can get firsthand information about search methods yielding the best results for handling an interview.

Those who are on the look out for job opportunities will find success if they subscribe to well equipped online recruitment agency by directly visiting their website. Only on searching for the classified ads in the local newspaper there is likelihood of missing out good opportunities that would be help in getting the right job with the right organization.

If you are seriously looking out for a good job then your search should also be serious. For this you may have to join an ORA that presents an impressive package to get you the right job with the right organization.

### FOR EXAMPLE

**ROZEE PK ([www.rozee.pk](http://www.rozee.pk))** is one of the best online Recruitment agencies (ORAs). Its highly sophisticated web based network bridges the gap between employer & jobseeker by providing jobseeker the flexibility of submitting his/her resume to its online database & letting employers choose from all the submitted applications & contact directly or through their network to the candidates that fulfill their criteria. ROZEE PK web based network also sends job alerts (which are in line with qualification & experience) to its subscribers directly at his/her email address.

**"You can't control what happens to you, but you can control your attitude towards what happens to you and in that, you will be mastering change rather than allowing it to master you"**

**EMPLOYMENT OPPORTUNITIES IN PAKISTAN**

**OUTLINES**

**1. IDENTIFYING CAREER & EMPLOYMENT OPPORTUNITIES**

- **Employment Market Research Action Plan**
- **Key Factors To Consider**

**2. NATIONAL INTERNSHIP PROGRAM (NIP)**

**3. IMPORTANT WEB ADDRESS IN PAKISTAN**

**4. GOVERNMENT PORTALS**

**IDENTIFYING CAREER & EMPLOYMENT OPPORTUNITIES**

**This section is intended to provide you extremely useful information on identifying potential employment/career areas & sources of vacancies in your target industry, & material to assist you to make a career choice by;**

- Taking control of your career by researching industries & companies that have employment opportunities in your skill area.
- Using this same research to decide on which skills you need to learn.
- Gaining an insight into the market to identify potential employers / jobs.
- Assist yourself to develop an action plan to provide a framework for your career development or job search.

**EMPLOYMENT MARKET RESEARCH ACTION PLAN TO IDENTIFY JOB/CAREER OPPORTUNITIES**

- Be proactive and in control leads to a higher level of confidence.
- Control the job search process by targeting your job search efforts, making your job search easier and more manageable.
- Save you money and time by minimising overall job search time and reducing time spent unemployed.
- You can find career or job opportunities in areas where there is less competition, increasing chances of being hired.
- Increasing knowledge of your technology related industry leads to better interview performance.
- See what employer's want so you can address their needs more effectively to possibly gain an interview.

**By following aforementioned plan, you have completed your employment market research. Your approach, no matter what process you use to find career and job opportunities, will be far more effective.**

### KEY FACTORS TO CONSIDER

Following key factors must be kept in mind prior to conducting employment market research.

Don't get bogged down in research

- Don't overdo the research at the expense of applying the knowledge.
- Know when to stop and make sure your reading is relevant.
- Decide how much time are you going to invest in your job search?
- Set goals with timeframes.
- Write them down.

#### Get organised

Keep comprehensive records.

#### Conducting research is not for everyone

There are many people who will not want to do research because it is not the way their brain works. They can work better without structure. If you are one of these people don't worry. Do not stress yourself out by this method, just take what you need or want.

Just a word of warning

Before you start looking for career or employment opportunities, you might want to do a skill analysis. Prepare a précis of your unique skills, interests and values or take a test to re-affirm your career goals.

### NATIONAL INTERNSHIP PROGRAM (NIP)

#### The Program

The National Internship Program is designed for the benefit of young unemployed postgraduates and graduates all over the country, who have completed sixteen years of education from recognized universities or degree awarding institutions including external candidates. The scheme is intended to provide financial relief to fresh graduates and also to keep them engaged and interested in acquiring additional knowledge and real work life experiences, thereby facilitating their employability in the country. The programme will also be of a great advantage to the government organizations having shortage of officials in various cadres.

#### Main Features of the Programme

The interns will have to work on various assignments in the Ministries/Divisions/Departments/Corporations/Autonomous Bodies/ of the Federal Government and Provincial/District Governments conveniently located near to their hometown.

The placement with various government organizations will be based upon the academic qualifications of the interns and matching the broader academic disciplines with broader functional categorization of jobs within the government.

The interns will be required to join the Programme on full time basis and follow prescribed rules and regulations of the concerned organizations including observance of office working time and confidentiality requirements etc.

#### Duration

The internship duration will be one year. The interns will however, be at liberty to leave the programme at any stage on 15 days advance notice. However, such interns will neither be entitled for internship completion certificate nor will they have any right to receive monthly stipend for the remaining period.

**Stipend**

The interns will be entitled to a monthly stipend of Rs 10,000 (all inclusive) during the course of internship. The internship is however, in no way an offer of employment on a formal job.

**Selection Criteria**

The Programme is designed for Fresh Pakistani unemployed postgraduates and graduates in all fields of studies who have completed sixteen years of formal education from HEC recognized Universities & Degree Awarding Institutions including external candidates;

- The applicants must be 25 years or less of age by first March of every year.
- Must have not availed the internship under NIP before.

**Application and Selection/Placement Mechanism**

Interested eligible candidates are invited to submit their applications "on-line" against the advertisement published in the newspapers. The application forms are available on website **www.nip.gov.pk** of NIP office of the Ministry of Youth Affairs.

Every effort will be made during the selection process to assign interns the most convenient locations to minimize the likelihood of accommodation, relocation or logistics issues. However, Government will be fully competent to place any intern in any organization or geographical location as deemed appropriate in the best interests of the scheme and such decision would not be challenged in any forum whatsoever.

**SOURCE:** **www.nip.gov.pk**

**IMPORTANT WEB ADDRESSES IN PAKISTAN****FINAL YEAR PROJECT WEBSITES**

<http://www.skitronics.co.in/>  
<http://www.electranix.net/>  
<http://www.electronicsonline.com/Projects.shtml>  
<http://www.mycollegeproject.com/>  
<http://www.projectguidance.com/>  
<http://www.engineeringproject.org/>  
<http://www.sparkfun.com/commerce/tutorials.php>  
<http://www.juliantrubin.com/fairprojects/electronics/telecommunications.html>  
<http://www.electronic-circuitsdiagrams.com>  
<http://www.electronics-lab.com/projects/index.html>  
<http://www.projecttopics.info/>  
<http://www.electro-tech-online.com/>  
<http://electros.in/innovative-electronics-project-ideas>  
<http://www.electronicproject.org/>  
<http://www.electronics-lab.com/articles/motors.html>  
<http://instruct1.cit.cornell.edu/courses/ee476/FinalProjects/>  
<http://www.worldcolleges.info/College/Engineering-Notes/electronic-engineering.php>

**ONLINE JOB RECRUITMENT & HIRING AGENCIES**

<http://www.rozee.pk>  
<http://www.rozeeinpk.com/> ROZEE GROUP  
<http://www.jobz.pk/> JOBS IN PAKISTAN  
<http://www.gethired.pk/> JOBS IN PAKISTAN  
<http://www.pakvacancy.com> JOBS IN PAKISTAN  
[www.careermidway.com](http://www.careermidway.com) LIMITLESS CAREER OPPORTUNITIES  
[www.pakjobs4u.com](http://www.pakjobs4u.com) JOBS IN PAKISTAN  
[www.lineowork.com](http://www.lineowork.com) JOBS IN PAKISTAN

**MISCELLANEOUS**

<a href="http://www.kesc.com.pk/">http://www.kesc.com.pk/</a>	KARACHI ELECTRIC SUPPLY CORPORATION
<a href="http://www.kpt.gov.pk">http://www.kpt.gov.pk</a>	KARACHI PORT TRUST
<a href="http://www.pim.com.pk">http://www.pim.com.pk</a>	PAKISTAN INSTITUTE OF MANAGEMENT
<a href="http://www.psf.gov.pk/">http://www.psf.gov.pk/</a>	PAKISTAN SCIENCE FOUNDATION
<a href="http://www.rca.gov.pk/">http://www.rca.gov.pk/</a>	REGIONAL COOPERATIVE AGREEMENT
<a href="http://www.suparco.gov.pk/">http://www.suparco.gov.pk/</a>	SUPARCO OFFICIAL WEBSITE
<a href="http://www.descon.com.pk/">www.descon.com.pk/</a>	DESCON ENGINEERING
<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>	SECURITIES & EXCHANGE COMMISSION OF PAK
<a href="http://www.iin.com.pk/Jobs.aspx">www.iin.com.pk/Jobs.aspx</a>	INDUSTRIAL INFORMATION NETWORK
<a href="http://www.ecp.gov.pk/job/job.htm">www.ecp.gov.pk/job/job.htm</a>	ELECTION COMMISSION OF PAKISTAN
<a href="http://www.krl.com.pk">www.krl.com.pk</a>	DR. A.Q. KHAN RESEARCH LABORATORIES
<a href="http://www.cplc.com.pk/">http://www.cplc.com.pk/</a>	CITY POLICE LIASON COMMITTEE:
<a href="http://www.itcnasia.com/">http://www.itcnasia.com/</a>	IT COMMERCE NETWORK EXHIBITION
<a href="http://www.karachiairport.com/">http://www.karachiairport.com/</a>	JINNAH TERMINAL KARACHI AIRPORT
<a href="http://www.dawoodhercules.com/">http://www.dawoodhercules.com/</a>	DAWOOD HERCULES CHEMICALS LIMITED
<a href="http://www.fcl.com.pk/">http://www.fcl.com.pk/</a>	FUTEHALLY CHEMICALS PVT LTD, KARACHI
<a href="http://www.pearl.com.pk/">http://www.pearl.com.pk/</a>	PEARL PHARMACEUTICALS
<a href="http://www.epoxy.com.pk/">http://www.epoxy.com.pk/</a>	EPOXY INDUSTRIES (PVT) LIMITED
<a href="http://www.ffc.com.pk/">http://www.ffc.com.pk/</a>	FUJI FERTILIZERS COMPANY LIMITED
<a href="http://www.kehkashan.com/">http://www.kehkashan.com/</a>	KEHKASHAN GROUP
<a href="http://www.macter.com/">http://www.macter.com/</a>	MACTER INTL, (PVT) LTD, KARACHI
<a href="http://www.sahar.com.pk/">http://www.sahar.com.pk/</a>	SAHAR INDUSTRIES, WAZIRABAD, PAKISTAN
<a href="http://www.sitara.com.pk/">http://www.sitara.com.pk/</a>	SITARA CHEMICAL INDUSTRIES, FAISALABAD
<a href="http://www.nipa-khi.edu.pk/">http://www.nipa-khi.edu.pk/</a>	NATIONAL INSTITUTE OF PUBLIC ADMIN:

**ONLINE JOB PORTALS (GOVERNMENT)**

<a href="http://www.paperpk.com">www.paperpk.com</a>	DAILY UPDATED NEWSPAPER SITE
<a href="http://www.e-government.gov.pk">www.e-government.gov.pk</a>	ELECTRONIC GOVERNMENT DIRECTORATE
<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>	GOVT OF PAKISTAN OFFICIAL WEBSITE

<a href="http://www.hec.gov.pk">www.hec.gov.pk</a>	HIGHER EDUCATION COMMISSION
<a href="http://www.pof.gov.pk">www.pof.gov.pk</a>	PAKISTAN ORDNANCE FACTORY
<a href="http://www.sbp.org.pk/careers/index.asp">www.sbp.org.pk/careers/index.asp</a>	STATE BANK OF PAKISTAN
<a href="http://www.jobs.gov.pk">www.jobs.gov.pk</a>	TELECOM JOBS IN PUBLIC SECTOR
<a href="http://www.induction8402.com.pk">www.induction8402.com.pk</a>	SUPARCO RECRUITMENT WEBSITE
<a href="http://www.oec.gov.pk/english/oecpage.php">www.oec.gov.pk/english/oecpage.php</a>	OVERSEAS EMPLOYMENT CORPORATION
<a href="http://www.fpssc.gov.pk/">www.fpssc.gov.pk/</a>	FEDERAL PUBLIC SERVICE COMMISSION
<a href="http://www.spssc.gov.pk/">www.spssc.gov.pk/</a>	SINDH PUBLIC SERVICE COMMISSION
<a href="http://www.establishment.gov.pk">www.establishment.gov.pk</a>	ESTABLISHMENT OFFICIAL WEBSITE
<a href="http://www.ntc.net.pk">www.ntc.net.pk</a>	NATIONAL TELECOM CORPORATION

**MINISTRY OF INFORMATION & BROADCASTING**

<a href="http://www.pak.gov.pk/">http://www.pak.gov.pk/</a>	MINISTRY OF INFO: & BROADCASTING
<a href="http://www.ptvworldnews.com.pk/">http://www.ptvworldnews.com.pk/</a>	PAKISTAN TELEVISION CORPORATION
<a href="http://www.ptv.com.pk/">http://www.ptv.com.pk/</a>	PAKISTAN TELEVISION CORPORATION
<a href="http://www.radio.gov.pk/">http://www.radio.gov.pk/</a>	PAKISTAN BROADCASTING CORPORATION
<a href="http://www.irs.org.pk/">http://www.irs.org.pk/</a>	INSTITUTE OF REGIONAL STUDIES
<a href="http://www.app.com.pk/">http://www.app.com.pk/</a>	ASSOCIATED PRESS OF PAKISTAN

**MINISTRY OF CULTURAL & HERITAGE**

<a href="http://www.heritage.gov.pk/">http://www.heritage.gov.pk/</a>	NATIONAL FUND FOR CULTURAL HERITAGE
<a href="http://www.tourism.gov.pk/">http://www.tourism.gov.pk/</a>	PAK TOURISM DEVELOPMENT CORPORATION
<a href="http://www.ptl.com.pk/">http://www.ptl.com.pk/</a>	PAKISTAN TOURS (PVT.) LTD
<a href="http://www.ecotourism.org.pk/">http://www.ecotourism.org.pk/</a>	ECOTOURISM SOCIETY PAKISTAN

**MINISTRY OF ENVIRONMENT**

<a href="http://www.environment.gov.pk/">http://www.environment.gov.pk/</a>	MINISTRY OF ENVIRONMENT
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**MINISTRY OF COMMERCE**

<a href="http://www.epb.gov.pk/">http://www.epb.gov.pk/</a>	EXPORT PROMOTION BUREAU
<a href="http://www.paktrade.org">http://www.paktrade.org</a>	PAKISTAN TRADE OFFICE
<a href="http://www.ntc.gov.pk/">http://www.ntc.gov.pk/</a>	NATIONAL TARIFF COMMISSION
<a href="http://www.karachichamber.com">www.karachichamber.com</a>	KHI CHAMBER OF COMMERCE & INDUSTRY

**MINISTRY OF DEFENCE**

<a href="http://www.pakarmy.gov.pk/">http://www.pakarmy.gov.pk/</a>	PAKISTAN ARMY
<a href="http://www.pakistanairforce.gov.pk/">http://www.pakistanairforce.gov.pk/</a>	PAKISTAN AIR FORCE
<a href="http://www.paknavy.gov.pk">www.paknavy.gov.pk</a>	PAKISTAN NAVY
<a href="http://www.kr1.com.pk/">http://www.kr1.com.pk/</a>	DR. A.Q. KHAN RESEARCH LABORATORIES
<a href="http://www.piads.com.pk/">http://www.piads.com.pk/</a>	PAK INSTITUTE FOR AIR DEFENCE STUDIES
<a href="http://www.pafmuseum.com.pk/">http://www.pafmuseum.com.pk/</a>	PAKISTAN AIR FORCE MUSEUM
<a href="http://www.caa.gov.pk/">http://www.caa.gov.pk/</a>	CIVIL AVIATION AUTHORITY
<a href="http://www.met.gov.pk/">http://www.met.gov.pk/</a>	PAKISTAN METEOROLOGICAL DEPARTMENT

**MINISTRY OF EDUCATION**

<a href="http://www.moe.gov.pk/">http://www.moe.gov.pk/</a>	MINISTRY OF EDUCATION
<a href="http://www.paknatcom.gov.pk/">http://www.paknatcom.gov.pk/</a>	PAK NATIONAL COMMISSION FOR UNESCO
<a href="http://www.nla.gov.pk/">http://www.nla.gov.pk/</a>	NATIONAL LANGUAGE AUTHORITY

**MINISTRY OF PETROLEUM AND NATURAL RESOURCES**

<a href="http://www.mpr.gov.pk/">http://www.mpr.gov.pk/</a>	MINISTRY OF PETROLEUM & NATURAL RESOURCES
<a href="http://www.gsp.gov.pk/">http://www.gsp.gov.pk/</a>	GEOLOGICAL SURVEY OF PAKISTAN
<a href="http://www.psocl.com/">http://www.psocl.com/</a>	PAKISTAN STATE OIL COMPANY LTD
<a href="http://www.ogdcl.gov.pk/">http://www.ogdcl.gov.pk/</a>	OIL & GAS DEVELOPMENT COMPANY LIMITED
<a href="http://www.ogra.gov.pk/">http://www.ogra.gov.pk/</a>	OIL & GAS REGULATORY AUTHORITY

**MINISTRY OF FINANCE & ECONOMIC AFFAIRS**

<a href="http://www.finance.gov.pk/">http://www.finance.gov.pk/</a>	MINISTRY OF FINANCE & ECONOMIC AFFAIRS
<a href="http://www.fbr.gov.pk/">http://www.fbr.gov.pk/</a>	FEDERAL BOARD OF REVENUE
<a href="http://www.pakboi.gov.pk">www.pakboi.gov.pk</a>	BOARD OF INVESTMENT
<a href="http://www.privatisation.gov.pk/">http://www.privatisation.gov.pk/</a>	PRIVATIZATION COMMISSION OF PAKISTAN
<a href="http://www.savings.gov.pk/">http://www.savings.gov.pk/</a>	NATIONAL SAVINGS ORGANIZATION
<a href="http://www.ndfc.org/">http://www.ndfc.org/</a>	NATIONAL DEVELOPMENT FINANCE CORPORATION

**MINISTRY OF COMMUNICATION**

<a href="http://www.pakpost.gov.pk/">http://www.pakpost.gov.pk/</a>	PAKISTAN POST OFFICE
<a href="http://www.pakrail.com/">http://www.pakrail.com/</a>	PAKISTAN RAILWAYS
<a href="http://www.nha.gov.pk/">http://www.nha.gov.pk/</a>	NATIONAL HIGHWAY AUTHORITY

**MINISTRY OF FOOD, AGRICULTURE & LIVESTOCK**

<a href="http://www.parc.gov.pk/">http://www.parc.gov.pk/</a>	PAK AGRICULTURAL RESEARCH COUNCIL
<a href="http://www.amis.gov.pk/">http://www.amis.gov.pk/</a>	AGRICULTURE MARKET INFORMATION SERVICE
<a href="http://www.ccrl.org.pk/">http://www.ccrl.org.pk/</a>	CENTRAL COTTON RESEARCH INSTITUTE

**MINISTRY OF LABOUR, MANPOWER & OVERSEAS PAKISTANIS**

<a href="http://www.labour.gov.pk/">http://www.labour.gov.pk/</a>	MINISTRY OF LABOUR & MANPOWER
<a href="http://www.oec.gov.pk/">http://www.oec.gov.pk/</a>	OVERSEAS EMPLOYMENT CORPORATION
<a href="http://www.opf.gov.pk/">http://www.opf.gov.pk/</a>	OVERSEAS PAKISTANI FOUNDATION
<a href="http://www.tokten.org.pk/http://www.balochistan.gov.pk">http://www.tokten.org.pk/http://www.balochistan.gov.pk</a>	NATIONAL TALENT POOL DIRECTORATE OF MANPOWER TRAINING

**MINISTRY OF SCIENCE & TECHNOLOGY**

<a href="http://www.most.gov.pk/">http://www.most.gov.pk/</a>	MINISTRY OF SCIENCE & TECHNOLOGY
<a href="http://www.pseb.org/">http://www.pseb.org/</a>	PAKISTAN SOFTWARE EXPORT BOARD
<a href="http://www.itcommission.gov.pk">http://www.itcommission.gov.pk</a>	INFORMATION TECHNOLOGY COMMISSION
<a href="http://www.itcomm.gov.pk/">http://www.itcomm.gov.pk/</a>	I.T COMMISSION OF PAK

**MINISTRY OF INDUSTRIES & PRODUCTION**

<a href="http://www.sec.gov.pk/">http://www.sec.gov.pk/</a>	STATE ENGINEERING CORPORATION
<a href="http://www.epza.com.pk/">http://www.epza.com.pk/</a>	EXPORT PROCESSING ZONES AUTHORITY PAK

**POLICE**

<a href="http://www.idpol.gov.pk/">http://www.idpol.gov.pk/</a>	ISLAMABAD POLICE (RESCUE 15)
<a href="http://www.idbp.com.pk/">http://www.idbp.com.pk/</a>	I D B P BRANCHES ALL OVER THE PAK
<a href="http://www.sindhpolice.gov.pk/">http://www.sindhpolice.gov.pk/</a>	SINDH POLICE
<a href="http://www.punjabpolice.gov.pk/">http://www.punjabpolice.gov.pk/</a>	PUNJAB POLICE

**OTHER IMPORTANT SITES**

<a href="http://www.nrb.gov.pk/">http://www.nrb.gov.pk/</a>	NATIONAL RECONSTRUCTION BUREAU
<a href="http://www.sports.gov.pk/">http://www.sports.gov.pk/</a>	PAKISTAN SPORTS BOARD
<a href="http://www.pcb.gov.pk/">http://www.pcb.gov.pk/</a>	PAKISTAN COMPUTER BUREAU
<a href="http://www.hmc.com.pk">http://www.hmc.com.pk</a>	HEAVY MECHANICAL COMPLEX (PVT.) LTD.
<a href="http://www.nadra.gov.pk">http://www.nadra.gov.pk</a>	NATIONAL DATABASE & REGISTRATION AUTHORITY

**TELECOMMUNICATION RELATED**

<a href="http://www.ptcl.com.pk/">http://www.ptcl.com.pk/</a>	PAKISTAN TELECOM COMPANY LIMITED
<a href="http://www.pta.gov.pk/">http://www.pta.gov.pk/</a>	PAKISTAN TELECOMMUNICATION AUTHORITY
<a href="http://www.fab.gov.pk/">http://www.fab.gov.pk/</a>	FREQUENCY ALLOCATION BOARD OF PAKISTAN
<a href="http://www.brain.net.pk/faxaway">http://www.brain.net.pk/faxaway</a>	BRAIN NET
<a href="http://www.freephone.com.pk/">http://www.freephone.com.pk/</a>	FREE PC TO PC PHONE SERVICES
<a href="http://www.instaphone.com.pk/">http://www.instaphone.com.pk/</a>	INSTA PHONE
<a href="http://www.paktel.com/">http://www.paktel.com/</a>	PAKTEL MOBILE SERVICE
<a href="http://www.tele.com.pk/">http://www.tele.com.pk/</a>	TELE-LINK INTERNATIONAL, INTERNET SITE
<a href="http://www.sparcom.net.pk/">http://www.sparcom.net.pk/</a>	THE FASTEST INTERNET SERVICE
<a href="http://www.mobilinkgsm.co/">http://www.mobilinkgsm.co/</a>	MOBILINK GSM
<a href="http://www.pktech.com/">http://www.pktech.com/</a>	TELEPHONE SYSTEMS FOR EVERY BUSINESS
<a href="http://www.ufone.com/">http://www.ufone.com/</a>	UFONE
<a href="http://www.telenor.com.pk">http://www.telenor.com.pk</a>	TELENOR PAKISTAN
<a href="http://www.nrtc.com.pk">www.nrtc.com.pk</a>	NATIONAL RADIO TELECOM CORPORATION
<a href="http://www.ntc.net.pk">www.ntc.net.pk</a>	NATIONAL TELECOM CORPORATION

**GOVERNMENT PORTALS**

<b>Telephone Industries of Pakistan</b> <a href="http://www.tip.org.pk/haripur/">www.tip.org.pk/haripur/</a>	<b>Internet association of Pakistan</b> <a href="http://www.iap.org.pk/">www.iap.org.pk/</a>
<b>Telecom Foundation of Pakistan</b> <a href="http://www.telecomfoundation.com">www.telecomfoundation.com</a>	<b>Pakistan software export board</b> <a href="http://www.pseb.org.pk">www.pseb.org.pk</a>
<b>The internet society of Pakistan</b> <a href="http://www.isop.org">www.isop.org</a>	<b>Competition Commission of Pakistan</b> <a href="http://www.cc.gov.pk/">www.cc.gov.pk/</a>
<b>Sui southern gas company limited</b> <a href="http://www.ssgc.com.pk">www.ssgc.com.pk</a>	<b>Karachi Electric Supply Company</b> <a href="http://www.kesc.com.pk/">www.kesc.com.pk/</a>
<b>Sui northern gas pipeline limited</b> <a href="http://www.sngpl.com.pk/">www.sngpl.com.pk/</a>	<b>Trading Corporation of Pakistan</b> <a href="http://www.tcp.org.pk/">www.tcp.org.pk/</a>
<b>Private power and Infrastructureboard</b> <a href="http://www.ppib.gov.pk/">www.ppib.gov.pk/</a>	<b>Pakistan Steel Mill</b> <a href="http://www.psm.gov.pk/">www.psm.gov.pk/</a>
<b>National Electric Power Regulatory Authority</b> <a href="http://www.nepra.gov.pk">www.nepra.gov.pk</a>	<b>State Life Corporation of Pakistan</b> <a href="http://www.statelife.gov.pk/">www.statelife.gov.pk/</a>
<b>Pakistan Nuclear Regulatory Authority</b> <a href="http://www.pnra.gov.pk">www.pnra.gov.pk</a>	<b>Pakistan Council for Science and Technology (PCST)</b> <a href="http://www.pcst.org.pk/">http://www.pcst.org.pk/</a>
<b>Pakistan Electronic Media Regulatory Authority</b> <a href="http://www.pemra.gov.pk">www.pemra.gov.pk</a>	<b>National Engineering Services of Pakistan</b> <a href="http://www.nespak.gov.pk/">www.nespak.gov.pk/</a>
<b>Pakistan software houses association</b> <a href="http://www.pasha.org.pk/">www.pasha.org.pk/</a>	<b>Pakistan Machine Tool Factory</b> <a href="http://www.pmtf.gov.pk/">www.pmtf.gov.pk/</a>
<b>National Institute of Electronics</b> <a href="http://www.nie.gov.pk">www.nie.gov.pk</a>	<b>Pakistan Atomic Energy Commission</b> <a href="http://www.paec.gov.pk/">www.paec.gov.pk/</a>
<b>Pakistan Electric Power Company</b> <a href="http://www.pepco.gov.pk">www.pepco.gov.pk</a>	<b>Pakistan computer bureau</b> <a href="http://www.pcb.gov.pk">www.pcb.gov.pk</a>
<b>Pakistan Council of Scientific and Industrial Research</b> <a href="http://www.pcsir.gov.pk/">www.pcsir.gov.pk/</a>	<b>Water &amp; Power Development Authority</b> <a href="http://www.wapda.gov.pk">www.wapda.gov.pk</a>



SCHOLARSHIP OPPORTUNITIES

OUTLINES

1. WHAT IS SCHOLARSHIP?
2. SCHOLARSHIP BASIC FACTS
3. WHO IS ELIGIBLE TO GET SCHOLARSHIP?
4. SCHOLARSHIP FOR HIGHER STUDIES
5. SCHOLARSHIP ADVANTAGES
6. HOW TO AVAIL SCHOLARSHIP
7. TIPS FOR GETTING SCHOLARSHIP
8. CONCLUSION
9. IMPORTANT SCHOLARSHIP WEBLINKS

**WHAT IS SCHOLARSHIP?**

A scholarship is a financial award that is given to students by colleges, universities, or other organizations. The goal of a scholarship is to enhance the education of the student. There are a wide variety of scholarships available, and each scholarship will require applicants to meet a variety of different requirements.

**SCHOLARSHIP BASIC FACTS**

In most cases, the requirements for a scholarship will be based on the donor who is providing the scholarship. It should also be noted that scholarships may fall under different categories. These categories are need based, merit based, general and ethnicity based.

**1) Need based scholarships:** As the name suggests these are those scholarships that are awarded to students who need them. These scholarships may cover the entire costs of a student's education, or they may cover only a portion of it. The goal of a need based scholarship is to help students from low income families get a quality education. However, need based scholarships are different from financial aid. Even students who come from low income families will be expected to meet a certain level of academic success, and after they've been awarded the scholarship, they will be required to maintain a certain GPA.

**2) Ethnicity based scholarships** are those which emphasize students based on race. Even after the selection of students has been made based on ethnicity, additional factors will be taken into consideration to determine their eligibility.

**3) General scholarships** are those which do not fall under any of the categories listed above.

One example of a general scholarship is a scholarship that is given by a large corporation to the children of their employees (**e.g. Scholarship given by FAUJI FERTILIZER COMPANY (FFC)**). In addition to this, many corporations have taken the step of creating a scholarship that requires students to work for them for a certain period of time once they've been awarded the scholarship. Other organizations that are known for offering bond scholarships include various branches of the military, or government agencies. (**e.g. PAKISTAN ATOMIC ENERGY COMMISSION(PAEC)**)

There are a number of key advantages to getting scholarships, and the biggest is cost. In a day and age where the cost of education continues to increase, so many students are looking for alternatives to students loans.

A scholarship is a great way to get a free education, without having to worry about paying back loans after graduation. To get a scholarship, there are a number of different avenues a student could take. Students can find national scholarships in their country of residence by searching for them. National scholarships are easier to maintain because there is a smaller number of people who are eligible to receive them.

Many established public & private sector universities and colleges in Pakistan are given funds from a number of organizations & government and they use this money to establish scholarships. One thing that most scholarships have in common is that students are expected to be highly gifted. This is true regardless of the type of scholarship the student is getting. While getting a scholarship can be challenging, the rewards are worth it.

Scholarships have always had a certain amount of prestige, and potential employers favor applicants who have obtained them. In addition to this, scholarships can help students avoid the debt that is commonly associated with student loans. Scholarships are a great way to finance your education, and they are quite prestigious to gain and use.

#### **WHO IS ELIGIBLE TO GET SCHOLARSHIP?**

While the eligibility for a scholarship will vary from one program to another, there are some general requirements that all students will be expected to meet. Most scholarship programs will require students to maintain a minimum grade point average. While there are some scholarship programs that may allow students to maintain a minimum of a 2.5, this is somewhat rare and 3.0 or higher is the general rule.

Any student who wants to get certain scholarships in the Pakistan will be expected to be a Pakistani citizen. In addition to this, many scholarships require students to have formal sixteen years of education from HEC recognized university when they are awarded the scholarship.

Some scholarships are gender based, and applicants may be expected to be a certain gender before they are allowed to apply.

Part time students are typically those who are working while they are part of particular scholarship program. While it is possible to obtain your degree in this manner, it will take longer, and students who work while being part of academic scholarship program may not perform as well in their studies. Many scholarships require you to be a full time student so that you can focus on your studies and maintain a high GPA. In addition to this, some scholarships will require you to avoid getting competing scholarships. While this type of scholarship is rare, it is one that you may run across when you are doing research on the topic. It is also important for students to maintain a clean record. Some scholarships will block students who have been convicted for a felony or other forms of criminal behavior.

While some scholarships want students with a clean record, others will only require you to have a clean record within a certain time span.

Some scholarship programs will require students to not be in default for student aid programs. This means that if you have any student loans, you should make sure your payments are being made in a timely manner, and that you are not in default.

Because many graduate students take the local GRE (**by National Testing Service**) prior to availing any postgraduate scholarship, as some scholarship programs will require students to have made a minimum score of 50 or more in GAT test conducted by NTS. The GAT is a standardized test whose score is taken into consideration prior to awarding scholarships. Many scholarships will also expect students to graduate in the top 10 or 20 of their class/batch in their respective university. When you apply for a scholarship, it is important for you to realize their requirements before and after you obtain it.

**In much of above section, the requirements you will need to have "before" you apply for the scholarship are discussed.**

Once you get the scholarship, you may be required to maintain a good grade point average (GPA). If you do not continue to meet the requirements after you've been given the scholarship, you will lose it. Some scholarships will also require students to complete a given number of credit hours within a certain time period. As you progress through the program, the scholarship may demand that you get more credits as you get closer to completion. It should be noted that most of the requirements listed on this page are general requirements. You will have to run across individual scholarships

that have requirements which will differ, but most will use the guidelines listed here. No matter what the guidelines of the scholarship, it is important for you to make sure you meet them.

### **SCHOLARSHIP FOR HIGHER STUDIES**

Students who are interested in higher studies will be pleased to learn that there is a large amount of money available in the form of scholarships. In higher education, there are a number of important aspects to the scholarships that students are given. In addition to giving students the ability to gain knowledge, a scholarship for higher education also sets up the potential that they can extend this knowledge.

In addition to this, students must be taught the importance of using the information they gain while they're using a scholarship program.

Another important aspect for scholarships of higher studies is the ability of connections to be made across a large number of disciplines. Scholarships for higher education also deal a lot with the discovery of new knowledge. It is these aspects of scholarships that make them so important in our world of today. When an institution of higher education emphasizes these factors in their scholarships, the program becomes rich and broad. Most importantly, the information can be applied in a number of different ways. The first step in obtaining a scholarship of higher education is to know where to find them.

Many of the students who run into difficulty while applying for scholarship give up at the first signs of failure. Students who want to successfully obtain a scholarship must make their goals clear. They have to stay focused and they must prepare themselves by searching in a number of different areas.

Scholarship programs are very selective in the students they choose, so it is important for you to make sure you find scholarships that you can qualify for. Many of the scholarships you run across will not be applicable to you for one reason or another. Perhaps the reason that you have no minimum experience required to avail that scholarship. Many scholarships require you to pursue your education in a specific field such as Wireless Communication. One important tool for successfully getting a scholarship is to look at which fields have the most scholarships available. Once you find your desired field that offers a number of scholarships, this will greatly increase your chances of being successful.

The earlier you plan for a scholarship, the better the chances that you will obtain it. Many people make the mistake of waiting until the last minute, when they're weeks or months away from attending university. The process of getting a scholarship should be done year before you begin attending university. You should do a great deal of research to find all the available scholarships that match your needs, and you should be ready to apply for them. The acquisition of scholarships is a very competitive process. Well known scholarships may have thousands or tens of thousands of people applying for them.

By doing your research, and applying for the scholarship early, you can become very successful. You will have a larger selection to choose from, and you will have a time advantage on those who wait too long. Getting a scholarship requires you to have good timing and research skills. Even if you fail to get the scholarship you want, giving up is easy. Persistence is what will mean the difference between success and failure.

The difficulties of getting a scholarship are worth it once you obtain it. It allows you to avoid relying on things such as student loans, money you will have to pay back after your course completion.

There are a number of scholarship programs available for higher studies, and you will need to research them thoroughly. Your best source of information is none other than the internet. However, even on the Internet, it is important to get you information from a number of different sources. This will allow you to make sure the information is highly accurate. Another place where you find scholarship information is your university & Colleges and also scholarships are announced through newspapers as well.

### **SCHOLARSHIP ADVANTAGES**

There are a number of powerful advantages to getting scholarships. If you are able to get a scholarship that covers your tuition, books and primary living expenses, you can focus on completing your degree without having to take out loans or get a job to pay for your classes. However, scholarships are not easy to get. Unlike student loans, scholarships are not heavily advertised. Getting a good scholarship can be challenging, and even frustrating. However, the rewards of getting the scholarship are worth the challenges. In this section, I am going to highlight some of the key advantages of getting scholarships. The first advantage of getting a scholarship is cost.

It isn't much of a secret that the cost of education has continued to rise in the last 10 years. This has made it harder for students from low income families attend college, and some have even went as far as to say that this has caused a larger wealth gap in society, since those who are educated have a tendency to get better paying jobs. While most colleges and universities are quick to talk students into taking out loans to pay for their education, few of them will mention scholarships, unless students are shrewd enough to ask about them. There are a number of reasons why you will want to get a scholarship rather than a student loan.

Studies have shown that it takes the typical student 5 years to pay off their student loans once they've graduated from college with a bachelors, masters, or doctorate. This will generally be Millions of PKR that will need to be paid back. Over the long term, this is money that will be pulled out of the students' pocket. With scholarships, the student doesn't have to pay back anything. Once they graduate, start their careers, and begin earning money, they can keep the money they earn without having to repay it. Another powerful advantage of scholarships is their prestige. Because most scholarships require students to maintain good grades in order to keep them, it takes a great deal of responsibility to use them effectively.

Once a student graduates or postgraduates from any university with a scholarship, potential employers will be very impressed with they read the resumes of these students. The reason for this is because the students showed responsibility and discipline by being able to get the loan. An applicant who obtained their education via scholarship is highly respected in the eyes of most potential employers. Scholarships are not easy to get, and this is why they are so valuable. In contrast, student loans are much easier to get, but they will be much more costly over the long term. Scholarships are powerful financial tools that students must utilize if they wish to graduate without owing a great deal of money.

### HOW TO AVAIL SCHOLARSHIP

While scholarships can be very valuable, they are not easy to get. To find a good scholarship, there are a number of things you would want to do. It is important for students to file for financial forms as soon as possible. Students will also want to contact the financial aid office of the university they're interested in to find out if they offer scholarships.

Don't expect scholarship opportunities to come to you. They are like hidden treasure, and you will have to dig if you want to find them. The government of Pakistan has reserved big deal of budget for higher education, but many students end up owing thousands in student loans because they simply don't take the time to look for scholarships.

There are scholarships available for science graduates, minorities and sometime province wise. It is very important for you to find a scholarship that matches your skills and interest. If you have an aptitude for mathematics, science or engineering, it makes sense to look for a scholarship that is offered for these subjects. If you are good at art or literature, it makes sense to look for scholarships offered under these categories. It should also be noted that many scholarships are rigid in their eligibility requirements. Students must meet a number of guidelines to receive it. The very nature of scholarship requires you to do research. Hours of research may have to be spent looking for the right scholarship, but it can give you a number of key advantages once you get it.

The newspaper is a great source to begin looking for scholarships, but perhaps the best place to find scholarship is the Internet. The Internet has made the process of finding scholarships easier, since students can simply go to websites that are related to the subject and read the information on the page. If you are part of a religious or political organization, there are many sources for scholarships, and if you are an employee of a corporation, many of them also have their own scholarship programs. Private scholarships are the hardest to find, and they will rarely be advertised. It is these scholarships that you will have to dig for.

One of the most important rules of finding scholarships is to never rely on a single source for information. A wide variety of organizations offer scholarships and some of them include the federal government, public & private teaching

institutions and corporations. When you limit yourself to one source of information, you reduce the chances that you will successfully find a scholarship that can allow you to further your education. While most scholarships require you to maintain a certain GPA, not all of them require you to have a 4.0 grade point average. The most important factor in obtaining a good scholarship is determination.

It is easy to give up when you are unable to find a good scholarship, or when you've been rejected from obtaining one. Your success will be dependent on how well you do your research. There are a large number of organizations that offer scholarships to students, but in most cases, these scholarships will not be well publicized. Your goal is to search through all the information available to find the scholarships that have been hidden. The first step in getting a scholarship is to start doing your research early.

When you look for scholarships, don't limit yourself in the research sources you use. It is important to use multitude of sources for your research. Getting a scholarship will not only allow you to finish your education without taking on a lot of debt, but it will also allow you to gain a high level of prestige.

#### TIPS FOR GETTING SCHOLARSHIP

There are a number of important tips you will want to follow when you apply for scholarships. It has been said that scholarships can be hard to get, and there is a lot of truth to this. However, following the right tips and procedures will greatly tip the odds of success in your favor. The tips I am going to mention in this section are specifically geared towards students who are undergraduates.

The first tip in successfully obtaining a scholarship is to know where to look for them.

It has been said that there are thousands of scholarships available on the websites. Even though most students will not be able to qualify for all of them, having a large number of scholarships available at your finger tips will give you more options than someone who only has a handful of scholarships. Even if you do find a large number of scholarships that you can apply for, you

won't necessarily have the time to apply for the entire selection. This is why it is important to perform a scholarship search that is well defined. One of the best sources of information for scholarships on the Internet is called the scholarship search engine which facilitates you in your scholarship search.

These Internet searches are free, and instead of simply providing the user with a list of programs, they will be sorted by subjects. This is important, because people are able to filter out programs that they can't qualify for, saving them a great deal of time. Now that you understand the importance of searching for scholarships properly, you will now want to learn how to choose scholarships. It is important for you to be selective in the type of scholarships you choose. The reason for this is because you probably don't have a lot of time on your hands, and you don't want to waste time filling out applications for scholarships that are not suited to your needs.

When you are in the process of choosing scholarships, there are two things you need to consider. The first thing you should consider is whom the scholarship is looking to select. If you are not the type of person that the scholarship is geared towards, then it is a waste of time to go through the applications process. You want to choose a scholarship in which you are the most ideal person to receive it. Remember, you will be competing against other people when you apply for a scholarship, and if they are the most ideal people for the reward, they will be given the scholarship instead of you.

When I use the term "ideal" candidate, I'm referring to the demographic and educational information that must fall under the guidelines of the scholarship.

**For example**, if the scholarship is specifically geared towards students who are studying electronics engineering, then it doesn't make much sense for a software engineering major to apply for it. If you do, the chances of your getting the scholarship will be low, and you would have wasted time. Another issue that you should consider is what you plan on doing with the money once you're awarded with it. Again, the things you do with the money must be in compliance with the scholarship program. For example, if you are expected to use the money in a way that benefits the humanity, this is exactly what you must do.

It is critical that you never put false information on your scholarship

application. This is illegal, and if you are awarded the scholarship, and they find out that your information was fabricated, you could be a great deal of trouble. It is also important for you to consider whether or not the scholarship is worth the research time. As you research scholarships, you will find that many of them require you to perform a number of different tasks before you can apply.

Prestigious scholarships will almost always require you to go through a number of steps before you can be considered, but scholarships that don't have a great deal of prestige should not require so many steps. If you find yourself dealing with a scholarship like this, it might be better to simply look somewhere else. Once you've found a scholarship that you're interested in, you will next want to begin getting the applications.

## CONCLUSION

In short, it's worth saying that there are a multitude of scholarships available out there on internet so you simply need to just take the time and patience to look for them. There are scholarships available whether you have good grades or not. Although the higher your grade point average, the better your chances. There are also scholarships available for a variety of family income ranges, so don't let your personal income stand in the way of applying for scholarships.

**The major purpose of this section is that if you dream to pursue a graduate/postgraduate Scholarship and you don't think you can afford without some aid, take some time and initiative to search for free scholarship programs. Here are some very important scholarship web-links for Pakistani nationals. It is strongly suggested that you subscribe for scholarship alerts from any of the scholarship database websites given here that offer scholarship alerts through email to its subscriber.**

**"Your biggest opportunity probably lies under your own feet, in your current job, industry, education, experience or interests"**

### **IMPORTANT SCHOLARSHIP WEBLINKS**

#### **1) ONE STOP SITES FOR LATEST SCHOLARSHIP ANNOUNCEMENT (LOCAL & INTERNATIONAL) FOR PAKISTANI NATIONALS**

- <http://www.pakistanscholarships.com/>
- [www.hec.gov.pk](http://www.hec.gov.pk)
- <http://pkstudents.com/>
- <http://www.forumpakistan.com/taleem-f35.html>

#### **2) BRITISH COUNCIL SCHOLARSHIPS FOR PAKISTANI STUDENTS**

<http://www.britishcouncil.org/pakistan-education-scholarships-bc-chev.htm>

#### **3) USA FULBRIGHT SCHOLARSHIPS FOR PAKISTANI STUDENTS**

<http://www.usefpakistan.org/>

#### **4) AUSTRALIAN DEVELOPMENT SCHOLARSHIPS, MASTERS-LEVEL SANDWICH (SPLIT) PHD & POST-DOCTORAL.**

<http://www.usaid.gov.au/scholar/>

#### **5) JAPANESE SCHOLARSHIP**

[www.jica.go.jp/english/scholarship/](http://www.jica.go.jp/english/scholarship/)

#### **6) WORLD BANK SCHOLARSHIPS**

<http://wbi.worldbank.org/wbi/approaches/scholarships>

#### **7) GERMAN ACADEMIC EXCHANGE SERVICE (DAAD), A PUBLICLY FUNDED INDEPENDENT ORGANIZATION)**

[www.daad.org](http://www.daad.org)

#### **8) ERASMUS MUNDUS - SCHOLARSHIPS AND ACADEMIC COOPERATION**

[http://ec.europa.eu/education/external-relation-programmes/doc72\\_en.htm](http://ec.europa.eu/education/external-relation-programmes/doc72_en.htm)

#### **9) LARGE NO OF SCHOLARSHIP OPPORTUNITIES WORLD-WIDE**

- <http://scholarship-positions.com>
- <http://www.scholarships.com>
- <http://www.scholarshipopportunities.net/>

## CHAPTER 14

### IMPORTANT FACTS & FIGURES ON PAKISTAN

#### OUTLINES

#### 1) IMPORTANT FACTS & FIGURES ON PAKISTAN

S:NO	CATEGORY	FIGURE/VALUE	RANK (worldwide)
<b><u>1)ENERGY</u></b>			
1)	COAL PRODUCTION	4,871,000 ton	[21st of 65]
2)	COAL CONSUMPTION	4,600,000	[28th of 41]
3)	ELECTRIC POWER CONSUMPTION (KWH)	64,630,000,000 kWh	[33rd of 132]
4)	ELECTRICITY CONSUMPTION	68,400,000,000 kWh	[29th of 210]
5)	ELECTRICITY PRODUCTION	93,260,000,000 kWh	[26th of 210]
6)	ELECTRICITY PRODUCTION BY FOSSIL FUEL	68.8%	[120th of 223]
7)	ELECTRICITY PRODUCTION BY NUCLEAR	3%	[30th of 223]
8)	NATURAL GAS CONSUMPTION	30,800,000,000 m <sup>3</sup>	[25th of 206]
9)	NATURAL GAS RESERVES	695,600,000,000 ft <sup>3</sup>	[22nd of 72]
10)	NUCLEAR ELECTRICITY GENERATION	1.8 terawatt hours	[29th of 29]
11)	NUCLEAR ENERGY CONSUMPTION	1.7 terawatt-hours	[29th of 28]
12)	NUCLEAR REACTORS OPERABLE	02	[22nd of 29]
13)	OIL CONSUMPTION	345,000 bbl/day	[18th of 212]
14)	OIL EXPORTS	28,060 bbl/day	[74th of 184]
15)	OIL PRODUCTION	68,670 bbl/day	[57th of 212]

16)	OIL IMPORTS (NET)	312,000 barrels per day	[14th of 21]
17)	OIL RESERVES	341,800,000 barrels	[53rd of 97]
<b>2) INTERNET</b>			
1)	Broadband subscribers	45,600 Approx:	[61st of 117]
2)	Country code	.pk	
3)	Hosts	197,264	[58th of 228]
4)	International Internet bandwidth (Mbps)	800 Mbps	[59th of 167]
5)	Internet Service Providers	30	[38th of 229]
6)	ISP	30	[23rd of 162]
7)	Live journal users	162	[91st of 226]
8)	Secure Internet servers	69	[70th of 183]
9)	TLD	.pk	
10)	Users	17,500,000	[15th of 190]
<b>3) EDUCATION</b>			
1)	Average years of schooling of adults	3.9	[75th of 100]
2)	Children out of school (primary)	6,303,212	[1st of 126]
3)	Duration of compulsory education	5 years	[169th of 171]
4)	Years of education (Primary level)	5	[143rd of 181]
5)	Years of education (Secondary level)	7	[38th of 181]
6)	Education enrolment by level (Tertiary)	401,056	[41st of 150]
7)	Education spending (% of GDP)	1.8-2%	[127th of 132]
8)	Education spending (% of total government expenditure)	7.8%	[93rd of 96]
9)	Education primary completion rate	63	[100th of 148]
10)	Female enrolment share (Primary level)	35.9%	[176th of 176]

11)	Female enrolment share (Secondary level)	39.5%	[153rd of 170]
12)	Geographical aptitude results	69.666	[99th of 191]
13)	Illiteracy rates by sex, aged 15+	54.3%	[13th of 138]
<b>LITERACY DEFINITION</b> (Age 15 and over can read and write)			
14)	Literacy (Male)	63%	[5th of 156]
15)	Literacy (Total population)	49.9%	[5th of 160]
16)	Primary school girls out of school	55%	[16th of 99]
17)	Public spending on education (total % of govt expenditure)	10.94 %	[40th of 103]
18)	Pupil-teacher ratio (primary)	38.34	[28th of 159]
19)	Women to men parity index, as ratio of literacy rates, aged 15-24	0.69	[8th of 138]
<b>4) GEOGRAPHY</b>			
1)	Area (Land)	796,096 sq km	[36th of 238]
2)	Area (Total)	803,940 sq km	[41st of 250]
3)	Capital city with population	Islamabad – 955,629	---
4)	<b>CLIMATE</b> Mostly hot, dry desert; temperate in northwest; arctic in north		
5)	Forested Land	3.1%	[175th of 193]
6)	Geographic coordinates	30 00 N, 70 00 E	
7)	<b>LAND BOUNDARIES (Border countries)</b> Afghanistan 2,430 km, China 523 km, India 2,912 km, Iran 909 km		
8)	Land use (Arable land)	24.44%	[38th of 258]
9)	Largest city with population	Karachi 18 Million Approx.	[8th of 174]
10)	<b>LOCATION</b> Southern Asia, bordering the Arabian Sea, between India on the east and Iran and Afghanistan on the west and China in the north		

11)	<b><u>MAP REFERENCES</u></b> (Asia)		
12)	<b><u>NATURAL HAZARDS</u></b> Frequent earthquakes, occasionally severe especially in north and west; flooding along the Indus after heavy rains (July and August)		
13)	<b><u>NATURAL RESOURCES</u></b> Land, extensive natural gas reserves, limited petroleum, poor quality coal, iron ore, copper, salt, limestone		
14)	Population density	177.37 people per square km	[60th of 256]
15)	Population density (people per square km)	202.07 people/m <sup>2</sup>	[44th of 204]
16)	Precipitation	218 mm	[86th of 95]
17)	Surface area ( sq. km)	796,100 km <sup>2</sup>	[35th of 206]
18)	tallest Mountain	K2	-----
<b><u>5) TRANSPORTATION</u></b>			
1)	Air transport (passengers carried)	5,364,134	[43rd of 164]
2)	Aircraft departures	52,600	[40th of 155]
3)	Airports	146	[42nd of 247]
4)	Container port traffic	1,390,827 TEU	[37th of 63]
5)	Driving side of the road (Left or right)	Right side	
6)	Heliports	18	[10th of 99]
7)	Highways (Paved)	109,396 km	[10th of 113]
8)	Highways (Total)	254,410 km	[10th of 118]
9)	Motor vehicles	8 motor vehicles/100 people	[112th of 134]
10)	<b><u>PIPELINES</u></b> Gas 10,398 km; Oil 2,076 km		

11	<b>PORTS AND HARBORS</b> Karachi, Port Muhammad bin Qasim		
12)	<b>PORTS AND TERMINALS</b> Karachi, Port Muhammad Bin Qasim		
13)	Railways (Total)	8,163 km	[24th of 220]
14)	Roads, goods transported (million ton-km)	90,268 million ton-km	[10th of 52]
15)	Roads, passengers carried (million passenger-km)	209,959 million passenger-km	[5th of 33]
16)	Roads, total network (km)	258,340 km	[10th of 172]
17)	Roadways (Paved)	162,879 km	[11th of 81]
18)	Roadways (Total)	259,758 km	[10th of 85]
19)	Vehicle abundance	1.58 per square km	[95th of 141]
20)	Waterways	0 km	[106th of 165]
<b>6) LANGUAGES</b>			
<b>ENGLISH STATUS</b> Official language. Mainly second speaking language in Pakistan.			
1)	English-speaking population (As an additional language)	17,000,000	[5th of 59]
2)	English-speaking population (Total)	17,000,000	[8th of 99]
3)	<b>LANGUAGES (All)</b> Punjabi 48%, Sindhi 12%, Siraiki (a Punjabi variant) 10%, Pashtu 8%, Urdu (official) 8%, Balochi 3%, Hindko 2%, Brahui 1%, English (official; lingua franca of Pakistani elite and most government ministries), Burushaski and other 8%		
<b>7) MORTALITY RATE</b>			
1)	Death rate (per 1,000 people)	6.84 per 1,000 people	[117th of 195]
2)	Rate, adult, female (per 1,000 female adults)	152.44 per 1,000 female adults	[72nd of 185]
3)	Rate, adult, male	180.43 per 1,000	[104th of 185]

	(per 1,000 male adults)	male adults	
4)	Rate, infant (per 1,000 live births)	79 per 1,000 live births	[34th of 187]
5)	Rate, under-5 (per 1,000)	99 per 1,000	[44th of 187]
<b>8) ENVIRONMENT</b>			
1)	Adjusted savings: net forest depletion (% of GNI)	0.44 % of GNI	[32nd of 57]
2)	Areas under protection	83	[50th of 146]
3)	Carbon efficiency	1.14 CO2 emissions/\$ GDP	[71st of 141]
4)	CO2 Emissions	105,983	[33rd of 178]
5)	<b>CURRENT ISSUES</b> Water pollution from raw sewage, Industrial wastes, and Agricultural runoff; Limited natural fresh water resources; Most of the population does not have access to potable water; Deforestation; Soil erosion; desertification; Global Warming.		
6)	Ecological footprint	1.09	[106th of 141]
7)	Endangered species protection	78.3%	[55th of 141]
8)	Forest area (% of land area)	2.47 % of land area	[177th of 195]
9)	Forest area (square km)	19,020 km <sup>2</sup>	[109th of 195]
10)	Known mammal species	188	[49th of 145]
11)	NOx emissions per populated area	0.25 thousand metric tons/squ	[68th of 141]
12)	Pollution (Carbon dioxide 1999)	26,984	[34th of 199]
13)	Protected area	4.8	[80th of 147]
14)	SO2 emissions per populated area	300 thousand metric tons/square	[89th of 141]

15)	Threatened species	45	[41st of 158]
16)	Threatened species (Mammal)	13	[60th of 160]
17)	Water (Availability)	0.23 thousand cubic meters	[127th of 141]
18)	Water pollution, wood industry (% of total BOD emissions)	0.32 %	[93rd of 114]
19)	Wildness	2.51%	[76th of 141]
<b>9)RELIGION</b>			
1)	Buddhism (% of Buddhists)	0.1 %	[56th of 63]
2)	Buddhism (Buddhist total)	162,420	[30th of 63]
3)	Catholic (Diocesan priests)	140	[84th of 143]
4)	Catholic (Permanent Deacons)	2	[58th of 90]
5)	Catholic (Total Priests)	264	[82nd of 149]
6)	Catholics	1,251,000	[70th of 140]
7)	Catholics as percentage	0.79	[118th of 150]
8)	Islam (Number of Muslim)	160,829,450	[2nd of 67]
9)	Islam (Percentage Muslim)	96.35%	[18th of 168]
10)	Islam (Population)	156,491,617	[2nd of 165]
11)	Islam (Sunni)	127,668,738	[2nd of 67]
12)	Jehovahs (Witnesses)	1,032	[125th of 178]
13)	Muslim	97 %	[17th of 66]
14)	Protestantism, by country (Protestants)	1,400,000	[47th of 167]
15)	Protestantism, by country	0.86 %	[134th of 163]

	(% Protestant)		
16)	<b>RELIGIONS</b> Muslim 95% (Sunni 75%, Shia 20%), other (includes Christian and Hindu) 5%		
17)	<b>RELIGIONS (All)</b> Muslim 97% (Sunni 77%, Shi'a 20%), Christian, Hindu, and other 3%		
18)	Religions (Muslim)	97 %	[9th of 100]
19)	Roman Catholicism, by country (% Catholic)	0.79 %	[136th of 170]
20)	Seventh-day Adventist Membership	9,168	[81st of 232]

**SOURCES:**

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- **<http://www.nationmaster.com>**

**"Take control of your consistent emotions and begin to consciously and deliberately reshape your daily experience of life"**

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- Engr. AMIR KHAN PATHAN (Assistant Manager, Aerodynamics Suparco)
- Engr. TOUFIQUE AHMED SOOMRO (Lecturer QUEST College, Larkana)
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- Engr. HUSSAIN AHMED BURIRO (Lecturer ISRA University, Hyderabad)
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## About the Author



**Engr. Junaid Shaikh** is currently working as Assistant Director at Higher Education Commission (HEC), Islamabad. He did his B.E (Electronics) from Mehran University, Jamshoro in year 2008 with flying colors. He secured 2nd position (MSc, Pre-Engineering) in Nawabshah in year 2004. Moreover, he has been recipient of top-ten merit scholarship reward during his university tenure. He has qualified many Competitive Exams/Recruitment Tests/Commissioned Exams and interviews for the posts in Grade 17 or equivalent in organizations like HEC, NADRA, SUPARCO, STATE-LIFE, HSM, MTC, PAF, SCS, PCSIR etc and got job offers from many of them but he joined HEC. He has participated in many technical & general Seminars/Conferences and received trainings in various fields of Engineering, particularly in his own field and enjoys multiple industry exposure. The Author wishes to contribute practically and bring revamping in the field of Engineering and Academia, so he has been deeply involved in doing Social & Academic related activities for many years. He has another book under completion process namely "**RECRUITMENT TEST MADE EASY**", which is a dedicated book for Electrical/Electronics/Telecom/Computer Engineers.

## About the Editor



**Professor Dr BS Chowdhry** did his B.E (Electronic Engineering) securing **FIRST** position from Mehran University of Engineering & Technology(MUET), Jamshoro-Pakistan in 1983. He was appointed as a **Lecturer** at MUET. The same year he was awarded **Merit Scholarship** by MOST, Pakistan to do PhD from England. He completed his PhD in 1990 from Electronics and Computer Science Department, University of Southampton, England. He returned to Pakistan to fulfill his obligation to serve *Alma mater* - the MUET. He has been serving as a Chairman Electronics Department since past 17 years and during his chairmanship he also established two new departments viz-a-viz Telecommunication and Biomedical Engineering.

He also completed one year Postdoctoral Fellowship Sponsored by HEC from one of the world's best Institution, the School of Electronics and Computer Science, University of Southampton, UK. He has the honour of becoming one of the editors of the book "**Wireless Networks, Information Processing and Systems**", CCIS 20, published by Springer Verlag, Germany. During his Postdoctoral Fellowship, he was also honoured by World Federation of Engineering Organization (WFEO), France as a **Member of Committee on Information Technology (CIC)**. In addition he became a **Member of Editorial Board**, World Academy of Science, Engineering and Technology. More than a dozen of his IT Related articles have been published in National Dailies including DAWN/ Magazines to Create Technology Awareness. **He is one of the few ICT professionals in Pakistan who holds the Senior Membership of IEEE Inc. USA, senior membership ACM USA, and Fellowship IEP.** He is the main author/coauthor of a dozen books: "PC - Anatomy", "The First Practical Book on Electronics Workshop", "Telemedicine", "C/C++ for Electronic & Telecommunication Engineer", "The Art of Learning C & MS Access", "CompuPedia" and "Info-Tech Insider". He has Produced 3 PhDs (reportedly 1st one in Electronics/IT in Pakistan) and supervised more than 50 Masters level Projects/Thesis in the area of ICT. His list of research publication crosses to over 60 in national and international journals, IEEE and ACM proceedings. Also, he has Chaired Technical Session in USA, UK, China, UAE, Italy, Sweden, Finland, Switzerland, Pakistan, Denmark and Belgium. He is recipient of **HEC University Best Teacher Award 2001** and **National Cultural Award-2002** in recognition of achievements in the field of Engineering Profession and Presidential Academic Distinction Award (**Izaz-e-Fazeelat**) in 2009. Recently he received Erasmus Mundus Staff Exchange Visit Fellowship Award "Mobility for Life" which entitled him for attending conferences on Networked learning and Problem Based Learning and working with Human Centered Informatics and e-Learning laboratory at Alborg University.

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