

LIST OF INNOVATIVE TECHNICAL PROJECTS COMPLETED AT UET, READY FOR COMMERCIALIZATION

1. Sugarcane Planter

Increases yield, with the help of mechanized farming, more area can be brought under cultivation to increase the production.

2. Low cost Sand Filters for purification of ponds' water at household level

Low cost household Sand Filter to meet the safe drinking water need of the community.

3. Watersoft (Water Management Software)

Water Soft is multi-functions software used for designing and cost estimation of different water management structures.

4. Dripsoft (Trickle Irrigation Design Software)

Dripsoft is a multifunction software used for designing of trickle irrigation system. It gives an efficient approach than manual designing of drip irrigation system.

5. Synthesis of Magnesium Sulphate from Indigenous Magnesite Ore

Magnesium Sulphate is a compound widely employed in various industries especially, in the field of medical and pharmaceutical products.

Process for the synthesis of Magnesium Sulphate from Magnesite Ore available in Abbottabad region of Pakistan.

6. Electronic Digital Engine Temperature Monitoring System (EDETMS)

In existing automobiles, there is no proper system that can monitor the actual temperature of engine in running condition which lead to ceasing of engines. With the help of this device, serious engine and transmission damage can be avoided, thereby saving money on the costly repair. The work is being patent with the relevant patent organization.

7. Ozone Generator

The project has produced a machine that provides efficacious, economical and durable device to people for purifying and sterilizing water from bacteria, moulds, organic material and other pollutant found in water. The project offers a cheaper solution than expensive options in the form of importing costly machines from China and other countries.

8. Animal driven electrical power generation design

9. Solar Air Heater

A 2 KW solar heating system has been designed fabricated and tested which can be utilized for heating of building, in winter particularly in hilly areas where there is no gas available.

10. Paraboloid Solar Cooker

11. Solar Oven

A Solar Oven designed and constructed which proved to be cost effective and environmental friendly.

12. GPS based Crop Estimation System

The project has an indirect impact on farmers as it has a direct link with agricultural planning. The farmers will benefit from the improvements that this technology will bring in the system.

13. Car Parking Indication and Slots Information System

The system has been developed to handle large shopping malls, stadiums and market places with huge parking areas that can adjust hundreds of cars at the same time.

Parking system can do the following tasks:

- Indicate the number of slots available in the care parking area.
- Indicate the number of filled and empty slots in the parking area.
- Display the message when the parking is full.
- Find the slots in the parking area that are empty and display others that are full.

14. Brain Tumor Detection using Image Processing

The MRI image of the patients is scanned and read in MATLAB. The noise is removed using various filters and their effect is shown both in spatial domain and image frequency domain. Finally the Tumor detected region is cropped from the segmented image.

15. Intelligent and Secure Transportation System based on Wireless Sensor Networks using RFID Tags and Reader.

Target Industry: Transportation

Benefits: Reduced traffic congestion, Elimination of police checkpoints and Autonomous checking of validity of vehicles / vehicle owner and corresponding traffic violations.

16. Mechanical Regenerative Braking System for a Bicycle.

17. Coal Briquette Machine.

18. Solar Dehydrator for Agricultural Products

19. Biogas Generation using Solar Energy

20. Fabrication of a Coal Fired Furnace

21. Automatic Fish Feeder

22. Expert System for the Selection Crushers and Grinders