

M.TECH DEGREE EXAMINATIONS: NOV/DEC 2010

Second Semester

TEXTILE TECHNOLOGY

TTX616: Energy Management in Textile Industry

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions:-

PART A (10 x 2 = 20 Marks)

1. Write the need for energy conservation
2. List a few Energy service companies in India
3. Give the spindle point energy consumption in a modern ring frame
4. What is meant by UKG?
5. Give the importance of energy audit
6. Name the different types of generator fuels
7. List the instruments used for energy monitoring
8. Name the non conventional energy sources for textile industry
9. Give the importance of energy economics
10. Give the sector wise future energy requirements for textile industry in India

PART B (5 x 16 = 80 Marks)

11. a) (i) Write on the concept of energy management (4)
(ii) Explain the global energy scenario with specific reference to India (12)
(OR)
b) (i) Give the component wise specific energy consumption in Textile Machines and Auxiliaries. (10)
(ii) Discuss cost of energy Vs sales value of textile product. (6)
12. a) Write in detail on electrical and thermal audit on spinning and weaving machinery. (OR)
b) Explain in detail on electrical and thermal audit in wet processing machines, humidification plants and boilers.
13. a) (i) Write on energy efficient equipment for various processing machines and auxiliaries. (8)
(ii) Discuss on energy economics with pay back period and Return on Investment. (8)
(OR)
b) Write in detail on energy monitoring instruments and measurement techniques.
14. a) Explain the application of solar energy in textile industry with different types of collectors. (OR)
b) Discuss on co generation and application of Wind energy and Bio- energy in textile industry.
15. a) Write in detail on environmental impact on energy and the importance of non conventional energy sources. (OR)
b) Discuss on Demand Side Management (DSM) and Role of Energy Service Companies (ESCO's) in India.