



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 2E6BA

B.Tech VI Semester Regular Examinations, June 2022

ELECTRICAL ENERGY CONSERVATION AND AUDITING (EEE)

Maximum Marks: 70

Date: 22.06.2022 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

- 1 Differentiate between commercial and non-commercial energy. (10x2M=20 Marks)
- 2 Define energy security.
- 3 Define power factor.
- 4 What are the various power factor improvement methods?
- 5 Define energy audit.
- 6 Define energy balance.
- 7 What is electric load management?
- 8 What are the losses in induction motor?
- 9 Define compressor efficiency.
- 10 What are variable speed drives?

Part-B

Answer All the following questions.

- 11 Explain in detail the long-term energy scenario in India. (10)
OR
12 Explain in detail, the Energy Conservation Act 2001 and its features. (10)
- 13 A. Define power factor and with a phasor diagram obtain the relation between power, voltage and current. (5)
B. Explain the various laws of thermodynamics. (5)
OR
14 Explain the various components in basic electricity in detail. (10)
- 15 Explain briefly the various types of audits and its approach. (10)
OR
16 Discuss the various types of instruments used in energy audit. (10)
- 17 What are the factors affecting energy efficiency in motor? (10)
OR
18 A. Discuss the rewinding effects on energy efficiency. (4)
B. Based on the losses, discuss briefly about the motor efficiency. (6)
- 19 Explain in detail the various types of refrigeration system. (10)
OR
20 What are the components of compressed air system? Explain the efficient operation of air compressed system. (10)