



**R18 Regulation**

**Subject code: 2E6BA**

**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**

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

**B.Tech VI Semester Supplementary Examinations, January 2023**

**ELECTRICAL ENERGY CONSERVATION AND AUDITING  
(EEE)**

**Maximum Marks: 70**

**21-01-2023**

**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

**(10x2M=20 Marks)**

- 1 Write the primary energy sources.
- 2 Define energy conservation.
- 3 Define maximum demand control.
- 4 Define sensible and latent heat.
- 5 What is the need of Energy management?
- 6 Draw the energy balance diagram.
- 7 List the factors that affect the performance of a motor.
- 8 Define power factor. List methods to improve power factor.
- 9 List the different types of Air compressors.
- 10 What is meant by simple payback period?

**Part-B**

Answer All the following questions.

**(10MX 5=50Marks)**

- 11 Explain the methodology for detailed Energy Audit Process. 10M  
OR
- 12 Describe Energy conservation Act 2001 and its features. 10M
- 13 A. Write short notes on selection and location of capacitors. 5M  
B. Write brief notes on fuels. 5M  
OR
- 14 What is the effect of low power factor on energy consumption? Explain. 10M
- 15 Describe the types of energy audit in detail. 10M  
OR
- 16 Describe various Energy audit instruments. 10M
- 17 Explain the different types of Electric heating methods. 10M  
OR
- 18 Analyze the performance of PF Capacitors. 10M
- 19 A. What are savings opportunities in HVAC Systems? 5M  
B. Write short notes on variable speed drives. 5M  
OR
- 20 Discuss in detail about the computation of economic aspects by Simple Payback Method and Net Present Worth method.

