

Register No.:

569

October 2023

Time - Three hours
(Maximum Marks: 100)

- (5)
- [N.B.]**
1. Answer all questions under Part-A. Each question carries 3 marks.
 2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. What is meant by Primary Energy? Give an example.
2. Write in short about MEDA.
3. What are the points involved in periodic maintenance to conserve the energy of a motor?
4. List out any six advantages of IPFC for the improvement in energy efficiency.
5. What are technical losses?
6. Write the actions of Automatic Power Factor Controller.
7. What are the objectives of energy audit?
8. What are the instruments used in temperature measurements?
9. What is co-generation?
10. List out any three guidelines for writing energy audit report.

PART - B

11. (a) Explain about safety rules for working with Electrical Equipments.
(Or)
(b) Explain about the role of TEDA.
12. (a) Discuss how sizing to variable load and Power factor correction impacts the motor efficiency.
(Or)
(b) What is the impact of replacing energy efficient transformer? Explain.
13. (a) Explain how the technical losses are reduced by
(i) Controlling I^2R losses (ii) Balancing phase currents
(Or)
(b) Explain the working principle and operation of Maximum Demand Controller and KVAR Controller.
14. (a) Draw and explain the Sankey diagram for
(i) Converting electrical energy -> Heat -> Light. (7)
(ii) Electrical to Mechanical conversion. (7)
(Or)
(b) Write in short about the following instruments
(i) Load and power factor measuring equipments. (4)
(ii) Wattmeter(3)
(iii) Flue Gas Analysis(3)
(iv) Temperature and Thermal loss measurements.(4)
15. (a) Explain topping cycle and bottoming cycle.
(Or)
(b) Explain the types of traffic structure.
