373 Register No.: _____

April 2018

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.

(4) Estimation table should be provided.]

PART – A

1. Expand ELCB and state its use.
2. Convert 5 HP into Watts.
3. P=1200 watts and V=230 volts and $\cos\theta = 0.8$, find load current.
4. State the need of energy auditing.
5. Define motor efficiency.
6. Define lumen.
7. List the factors affecting the selection of diesel generating system.
8. What is meant by wiring? State its types.

PART – B

9. State the effects of electric shock.
10. What is earthing? State its types.
11. Write short notes on selection of wire in electrical installation.
12. Explain about maximum demand control.
13. What are the benefits of power factor improvement?
14. List the energy saving opportunities in energy efficient motors.
15. Explain occupancy sensor.
16. Write short notes on VFD's.

[Turn over.....

PART – C

17. (a) Explain looping back system, joint box system and tree system.

(Or)

(b) Explain in detail about the methods of protection against electric shock.

18. (a) Estimate the material required to erect a 15HP induction motor in a workshop.

(Or)

(b) Estimate the material required for a small workshop with 3 or 4 machines.

19. (a) Write short notes about energy costs, bench marking and energy performance.

(Or)

(b) Explain in detail about the selection and location of capacitors in power factor improvement.

20. (a) Explain the various types of losses in induction motor.

(Or)

(b) Explain briefly about the energy co ervation avenues available in lighting system.

21. (a) Explain energy performance assessment of diesel conservation avenues.

(Or)

(b) Explain in detail about energy efficient transformers.
