Register No.: ☐

343

October 2023

<u>*Time – Three hours*</u>
(Maximum Marks: 100)

[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. State the Faraday's law of Electromagnetic Induction.

2. What is the necessity of starter?

3. Write the losses in transformer.

4. Write the working principle of universal motor.

5. Write short notes on VFD.

6. List types of servomotor.

7. Draw a neat diagram of full wave rectifier.

8. What are the factors considered for selection of fuse?

9. Draw a symbol, Boolean equation, truth table for OR Gate.

10. What is meant by Ladder Diagram?

[Turn over.....

PART – B

11. (a) Four resistances of values 4 Ohms, 8 Ohms, 10 Ohms and 40 Ohms, respectively, are connected in parallel. A total current of 12 A is supplied to them. Determine the current flow through each resistance.

(Or)

(b) With neat sketches explain the principle of DC Generator.

12. (a) Explain working principle of Transformer with neat diagram.

(Or)

(b) Draw and explain the working principle of star delta starter.

13. (a) Explain construction and working principle of stepper motor with neat diagram.

(Or)

(b) Write short notes on Brushless servo motor and their applications.

14. (a) Explain the working of bridge rectifier.

(Or)

(b) Explain the first aid procedure and the precautions of electric shock.

15. (a) Explain working principle of 7 segment LED with neat diagram.

(Or)

(b) Explain input scan, program scan and output scan with suitable sketches.