

184

Register No.:

April 2024

Time – Three hours
(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. Define voltage. Mention the unit of voltage.
2. Compare series circuit and parallel circuit.
3. Define power and power factor in AC circuit.
4. Write the working principle of Alternator.
5. Define servo motor. Mention the applications of servo motor.
6. Draw a block diagram of Variable Frequency Drive.
7. Define Rectifier. Mention the types of Rectifiers.
8. Write the need of Earthing.
9. Define LCD. Mention the applications of LCD.
10. Mention the features of PLC.

[Turn over.....

PART – B

11. (a) Explain the working principle of DC motor with a neat sketch.

(Or)

- (b) (i) State and explain Kirchoff's Laws. (7)
(ii) State and explain Faraday's Law of Electromagnetic Induction. (7)

12. (a) Explain with neat diagram working principle of star delta starter.

(Or)

- (b) (i) Why single phase motors are not self starting? (7)
(ii) With neat sketches explain the principle of capacitor start induction motor. (7)

13. (a) With suitable sketches explain the working principle of BLDC motor.

(Or)

- (b) (i) Write short notes on Industrial drives and their applications. (7)
(ii) Write short notes on single stepping servo drives. (7)

14. (a) Explain the construction and working principle of MCB.

(Or)

- (b) (i) Write short notes on Fixed IC voltage regulators. (7)
(ii) Write short notes on trouble shooting in batteries. (7)

15. (a) Draw a symbol, Boolean equation, truth table for the following gates AND, OR, NOT, NAND, NOR, Ex-OR, Ex-NOR.

(Or)

- (b) Draw the block diagram of PLC and explain its each block.
