

Register No.:

871

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 energy and state its unit.
2. What is NVR operation?
3. What is form factors?
4. Define power factor.
5. What is the emf equation of primary and secondary winding?
6. What is the purpose of doing OC test on transformer?
7. What are the applications of brushless servo motor?
8. What is earthing?
9. What are universal gates?
10. What are the types contactor?

[Turn over.....

PART – B

11. (a) (i) Draw and explain torque-speed characteristic curve. (10)
(ii) If three resistors 4 ohm, 12 ohm and 6 ohm are connected in parallel, find the equivalent resistance. (4)

(Or)

- (b) With neat sketch, explain the construction and working of 4 point starter.

12. (a) Derive an expression for total capacitance if three capacitors are connected in parallel.

(Or)

- (b) Explain the construction and working principle of capacitor start and run induction motor.

13. (a) Explain the constructional and working details of shell type transformer.

(Or)

- (b) Explain transformer under ON LOAD condition with vector diagram.

14. (a) With neat diagram explain permanent magnet servo motor.

(Or)

- (b) (i) List out the precautions to be taken to avoid electric shock. (7)
(ii) What are the methods of conservation of electrical energy? (7)

15. (a) Explain the followings with neat sketch.

(i) Push button switch (7)

(ii) Pressure switch (7)

(Or)

- (b) With neat diagram explain the construction and working of Oil Circuit breaker.
