425 Register No.:

April 2019

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.]

PART – A

1. Define resistance. State its unit.
2. State the unit of capacitance and inductance.
3. Define true power.
4. State the phase angle in pure resistive and pure inductive circuits.
5. State any two advantages of 3-phase connection.
6. State the uses of crimp tools.
7. What is HIRF?
8. Write the EMF equation of DC generator.

PART – B

9. State and explain Ohm's law.
10. Define instantaneous value and average value of an AC quantity.
11. State the basic principle of transformer.
12. Briefly explain band pass filter.
13. List the speed control methods used in single phase induction motors.
14. Explain about cable clamps.
15. What is electromagnetic interference?
16. State the basic principle of transformer.

[Turn over.....

PART – C

17. (a) Define current, voltage, reactance and impedance.

(Or)

(b) State and explain Kirchoff's laws.

18. (a) Explain in detail the transformer losses and methods for overcoming them.

(Or)

(b) With neat sketch, explain low pass and high pass filters.

19. (a) With neat sketch, explain the construction and working of permanent magnet generator.

(Or)

(b) Explain the construction and working of single phase induction motor.

20. (a) Explain in detail the insulation and bonding techniques used in electrical wiring interconnection system.

(Or)

(b) Briefly explain the installation and inspection of EWIS installations.

21. (a) Explain the concepts of electromagnetic compatibility and electromagnetic interference.

(Or)

(b) Briefly explain about the special handling of components, that are sensitive to electrostatic discharges.
