

October 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.]

PART – A

1. Define electrical power.
2. What is impedance?
3. What is filter?
4. Mention the types of DC machines.
5. Mention the methods of speed control of DC motor.
6. What do you understand by cable looming?
7. What is electrostatic discharge?
8. Two resistors each of 10 ohm resistance are connected in parallel. What is the effective resistance?

PART – B

9. Draw the sinusoidal waveform and mark peak and peak to peak values.
10. Define power factor.
11. Draw the frequency response curve of low pass filter.
12. What is the basic principle behind DC generator?
13. Write a note on permanent magnet generator.
14. Write the procedure of removal of connector pin.
15. What is HIRF?
16. What is the current through 10 ohm resistor? When it is excited from 200V DC source?

[Turn over.....

PART - C

17. (a) Define the following: (i) Ohm's law (ii) Internal resistance of supply.

(Or)

- (b) Two resistors of 10 ohm and 15 ohm resistance are connected in series and fed from 250V supply. Find (i) Total resistance (ii) Current through circuit (iii) Voltage across each resistor.

18. (a) A series circuit consists of $10\ \Omega$ resistor and 1H inductor. Find (i) Impedance (ii) Current through circuit when voltage applied is 100V (iii) Power factor.

(Or)

- (b) Explain the operation and application of any one type of filter.

19. (a) Explain the constructional details of DC generator.

(Or)

- (b) Explain the operation of single phase induction motor.

20. (a) Describe the construction and characteristics of high tension cables.

(Or)

- (b) Explain the testing procedures of electrical wiring interconnection system.

21. (a) Describe about lighting and protection against lighting.

(Or)

- (b) With simple sketches, explain personnel anti static protection devices.
