

972**October 2017**

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. What are the functions of measurement systems?
2. Define accuracy.
3. What is multiplier?
4. How resistances can be classified?
5. What is the purpose of copper shading bands in energy meters?
6. What are the three quantities measured by trivector meter.
7. What is the use of Anderson's bridge?
8. Write the names of fluorescent materials used in CRO screen.

PART – B

9. Explain briefly any three effects used in instruments.
10. Write short notes on gravity control.
11. Explain why a PMMC meter can't be used for AC measurements.
12. Define ratio error and phase angle error in current transformers.
13. Draw the sketch of LPF wattmeter.
14. What is creep in energy meters? What are its causes?
15. Explain the working of rotating type phase sequence indicator.
16. Draw Schering bridge.

PART - C

17. (a) Explain the various operating forces of an indicating instrument.
(Or)
(b) Describe with neat sketches, the various methods of damping.
18. (a) Describe with a neat sketch, the construction and working of attraction type moving iron instrument.
(Or)
(b) Explain with a sketch, the construction and working of earth tester.
19. (a) Describe with a sketch, the construction and working of single phase dynamometer type wattmeter.
(Or)
(b) Draw a neat sketch and explain the constructional details of single phase induction type energy meter.
20. (a) Describe with a sketch, the construction and working of single phase dynamometer type power factor meter.
(Or)
(b) Explain with a sketch, the construction and working of Weston frequency meter.
21. (a) Describe with a sketch, the constructional details and working of cathode ray tube.
(Or)
(b) Draw the block diagram of a dual trace CRO and explain.
