

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. What are absolute instruments?
2. Define instrument efficiency.
3. What is shunt?
4. What is phase angle error in CT?
5. Write the relationship between power and energy.
6. Write the expression for reactive power.
7. What are the three quantities measured by trivector meter?
8. What is the use of Schering Bridge?

PART - B

9. Write about recording instruments. Give an example.
10. Give a comparison between spring and gravity controls.
11. What are the requirements of shunts?
12. What are the uses of multimeters?
13. Draw the sketch of 3 phase 2 element Wattmeter.
14. What is creep in energy meters? How it can be prevented?
15. Explain the working of rotating type phase sequence indicator.
16. List the applications of CRO.

PART - C

17. (a) Explain the various operating forces of an indicating instrument.
- (Or)
- (b) Explain with neat sketches, the various types of supports used in indicating instruments. Also write about magnets, scales and pointers.
18. (a) Describe with a neat sketch the construction and working of a PMMC meter.
- (Or)
- (b) Explain with a neat sketch, the construction and working of Megger.
19. (a) Explain with a sketch, the construction and working of LPF Wattmeter.
- (Or)
- (b) Describe with a sketch the construction and principle of working of single phase induction type energy meter.
20. (a) Describe the construction and working of Weston synchroscope.
- (Or)
- (b) Explain with a block diagram the working of digital frequency meter.
21. (a) Explain with a block diagram the construction and working of a CRO.
- (Or)
- (b) Draw the block diagram of a digital storage oscilloscope and explain its working.
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