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120932

Roll No.

3rd Sem / Elect Engg./ Power Stations / Elect & Eltx Engg

Subject:- Electrical Measurement and Measuring Instruments

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 The moving system of indicating type electrical instrument is subjected to

- a) deflecting torque b) controlling torque
- c) damping torque d) All of these

Q.2 Moving iron and PMMC instruments can be distinguished from each other by looking at

- a) Pointer b) Terminal Size
- c) Scale d) None

Q.3 An ammeter is connected in _____ with the circuit?

- a) Parallel b) Series
- c) Both d) none

Q.4 Two holes in the disc at energy meter are drilled at the opposite sides of spindle to

- a) Improve its ventilation
- b) eliminating creeping effect

- c) increase its deflecting torque

- d) none

Q.5 ACRO can be used to measure _____

- a) AC voltage b) DC voltage
- c) Frequency d) Any of above

Q.6 Among which meter is used as insulation tester _____

- a) Meggar b) Frequency meter
- c) watt meter d) none of these

Q.7 The purpose of a shunt in an ammeter is to _____.

- a) By pass the current
- b) increase resistance of Ammeter
- c) both
- d) none

Q.8 The linear variable differential transformer is _____

- a) Inductive b) Non inductive
- c) Capacitive d) none of these

Q.9 The deflecting torque can be produced by _____.

- a) Gravity Control b) Spring control
- c) Air friction d) Magnetically

Q.10 The series magnet of a single phase energy meter consists of coil of _____

- a) Thin wire of few turns
- b) thick wire of few turns
- c) Thick wire of more turns
- d) none of these

(1)

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(2)

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SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

- Q.11 Secondary instruments are widely used in practice? (True/False)
- Q.12 Name the types of moving iron instruments.
- Q.13 The meter used to measure electrical power is called _____?
- Q.14 Expand the term MDI _____.
- Q.15 The maximum value of power factor is _____.
- Q.16 Write full form of CT.
- Q.17 On which principle PMMC instrument work.
- Q.18 Write one use of Phase sequence indicator.
- Q.19 Define transducer.
- Q.20 Platinum has a _____ temperature coefficient of resistance.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

- Q.21 What are the essentials of indicating instruments?
- Q.22 Differentiate between Ammeter & Voltmeter.
- Q.23 Explain construction & working of single phase energy meter.
- Q.24 Analyze & compensate different errors in induction type energy meter.

- Q.25 Explain construction & working of meggar.
- Q.26 What is damping torque? Discuss any one method of providing damping torque.
- Q.27 Describe the working principle of current transformer with neat sketch.
- Q.28 Differentiate between active and passive transducers.
- Q.29 Draw & Explain the block diagram of LCR meter.
- Q.30 Analyze the working of dynamo meter type watt meter.
- Q.31 Describe the working of frequency meter.
- Q.32 Explain the disadvantages of poor power factor.
- Q.33 Explain any one method of level measurement.
- Q.34 Write a short note on temperature measurement by thermocouple.
- Q.35 Draw the block diagram of Multimeter.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 10 = 20)$

- Q.36 Explain in detail two wattmeter methods to measure power in three phase circuit (Unbalanced load).
- Q.37 Write a short note on
- Block diagram of CRO
 - Displacement measurement
- Q.38 Describe construction, working, merits & demerits of PMMC instruments.