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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

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- c) increase its deflecting torque
d) none

- Q.5 A CRO 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

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SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=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. (12x5=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.

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- 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. (2x10=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
 - a) Block diagram of CRO
 - b) Displacement measurement
- Q.38 Describe construction, working, merits & demerits of PMMC instruments.

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