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Roll No.

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4th Sem. / Elect, Power Station Engg. Elect. & Eltx Engg.

**Sub. : Electrical Measuring Instruments and Instrumentation
/Elect. & Eltx. Measuring Instr.**

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Ammeter is connected in (CO1)
a) Series b) Parallel
c) Perpendicular d) None of these
- Q.2 Moving iron instruments are (CO2)
a) Permanent magnet type
b) Attraction & repulsion type
c) Attraction type
d) All of three
- Q.3 Thermometer be used to measure (CO5)
a) Power b) Temperature
c) Electrical Energy d) Voltage
- Q.4 C in CRO stands for (CO2)
a) Capacitor b) Cathode
c) Conductor d) All of three

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- Q5. An ammeter is a (CO1)
a) Secondary Instrument b) Absolute instrument
c) Recording Instruments d) Integrating Instruments
- Q.6 Induction types single phase energy meter measure electric energy in (CO2)
a) KW b) Wh
c) KWh d) None of these
- Q.7 A LCR meter can measure : (CO6)
a) Inductance b) Displacement
c) Level d) Humidity
- Q.8 The scale of PMMC type instruments is (CO1)
a) Uniform
b) Non-Uniform
c) Cramped at the lower ends
d) Crowded in the middle
- Q.9 RTD is used to measure (CO5)
a) Flow b) Pressure
c) Temperature d) Stress
- Q.10 Potential transformer is (CO4)
a) Step up b) Step Down
c) Both a & b d) None of these

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SECTION-B

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

- Q.11 MDI stands for _____. (CO2)
Q.12 Write down one use of RTD. (CO3)
Q.13 The energy meters are called ____ instruments. (CO2)
Q.14 What is controlling torque? (CO1)
Q.15 Power factor = Active Power / ____ (CO2)
Q.16 Write full form of CT. (CO4)
Q.17 Pyrometer is used to measure _____. (CO5)
Q.18 Define thermocouple. (CO5)
Q.19 DSO stands for _____. (CO6)
Q.20 Define creeping in energy meter. (CO2)

SECTION-C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen Questions. (12x5=60)

- Q.21 Explain the Recording and Controlling instruments. (CO1)
Q.22 List and explain various errors in measurement. (CO1)
Q.23 Explain the principle of thermocouple. (CO7)
Q.24 Explain the working of digital multimeter with block diagram. (CO2)
Q.25 Differentiate between PMMC & Moving Iron Instruments. (CO6)

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- Q.26 Explain the block diagram of CRO. (CO6)
Q.27 Explain the application of LCR meter. (CO5)
Q.28 Explain the MDI. (CO6)
Q.29 List any five merits and demerits of single-phase energy meter. (CO6)
Q.30 Differentiate between voltmeter and ammeter. (CO2)
Q.31 List five advantages of three phase system over single-phase system. (CO6)
Q.32 Write short note on Current transformer. (CO4)
Q.33 Write the disadvantages of poor power factor. (CO6)
Q.34 Describe the construction and working of LVDT. (CO7)
Q.35 Explain the working of Dynamo meter type frequency meter. (CO2)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three Questions. (2x10=20)

- Q.36 Explain in detail two watt meter method to measure power in three phase circuit (Balanced Load) (CO6)
Q.37 Explain the working principle and construction of RTD. (CO7)
Q.38 Write short note on (CO6)
1) Power factor meter
2) Photovoltaic cell

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