

No. of Printed Pages : 4

Roll No.

220932

3rd Sem. / Electrical

**Subject : Electrical Measurement
& Instrumentation**

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Which part is called as heart of CRO? (CO4)

- a) Trigger circuit b) Sweep generator
- c) Cathode Ray Tube d) Amplifier

Q.2 Rotating disk of an energy meter is provided with holes to: (CO2)

- a) Avoid Creeping
- b) Reduce Frictional Force
- c) Reduce Eddy Current
- d) Reduce Breaking Torque

Q.3 Insulation resistance can be measured by (CO2)

- a) Earth Tester b) Meggar
- c) Ohmmeter d) The Kelvin Bridge

Q.4 LVDT is used to measure: (CO5)

- a) Temperature b) Velocity
- c) Acceleration d) Displacement

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Q.5 An ammeter should be connected in (CO2)

- a) Series
- b) Parallel
- c) Either Series or Parallel
- d) Depends on Load Rating

Q.6 S in DSO stands for (CO4)

- a) Sampling b) Storage
- c) Singalling d) Sensitivity

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Expand the acronym "CRO". (CO4)

Q.8 Range of a voltmeter can be extended using resistance. (True or False) (CO3)

Q.9 Give one application of Piezoelectric transducer. (CO5)

Q.10 Define recording instruments. (CO1)

Q.11 Write down one use of RTD. (CO3)

Q.12 Give an example of indicating instruments. (CO1)

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SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 List and explain various errors in measurement? (CO3)

Q.14 Write a short note on earth tester. (CO1)

Q.15 Explain construction and working of a thermocouple. (CO1)

Q.16 Differentiate between CT and Pt. List one application of each. (CO1)

Q.17 Illustrate and explain one method of pressure measurement. (CO3)

Q.18 List four advantages and disadvantages of induction-type 3-phase energy meters. (CO1)

Q.19 Define both active and reactive power in electrical systems. (CO3)

Q.20 Define and classify Transducers. (CO5)

Q.21 Write a brief note on pH measurements. (CO5)

Q.22 List essential requirements of an indicating instrument. (CO1)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the measurement of power in balanced and unbalanced 3-phase systems, including suitable diagrams and equations. (CO3)

Q.24 Draw block diagram of CRO? Explain its construction and working in detail. (CO4)

Q.25 What is a power factor meter? Explain electrodynamicometer type power factor meter using appropriate diagram. (CO1)

(**Note:** Course outcome/CO is for office use only)