

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 O in CRO stands for: (CO4)

- a) Oscillator b) Oscillatory
- c) Oscilloscope d) Oxilloscope

Q.2 Which type of instrument is prone to "creeping"? (CO2)

- a) Voltmeter b) Power Factor Meter
- c) Ammeter d) Energy Meter

Q.3 Extremely low resistance can be measured by : (CO1)

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

(1)

220932

Q.4 LVDT is _____ type of device. (CO5)

- a) Inductive b) Resistive
- c) Capacitive d) None of the above

Q.5 A voltmeter should be connected in: (CO2)

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

Q.6 What does "C" stand for in "CT"? (CO1)

- a) Complementary b) Complex
- c) Current d) Complete

SECTION-B

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

Q.7 Expand CRT ? (CO1)

Q.8 Range of an ammeter can be extended by connecting resistance in parallel. (T/F) (CO1)

Q.9 Define DSO? (CO4)

Q.10 Provide an example of a recording instrument? (CO1)

(2)

220932

- Q.11 Write down one use of Thermistor? (CO2)
- Q.12 Give one application of indicating instruments? (CO1)

SECTION-C

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

- Q.13 Describe the 2-wattmeter method for power measurement in a 3 ϕ system ? (CO3)
- Q.14 Provide a brief explanation of a Meggar? (CO1)
- Q.15 Explain construction and working of a bourdon tube? (CO1)
- Q.16 Differentiate LVDT and RVDT? (CO5)
- Q.17 Draw a block diagram of a digital multimeter and list three of its applications? (CO2)
- Q.18 Compare 3 ϕ and 1 ϕ energy meter? (CO1)
- Q.19 Explain the significance of reactive power in an electrical system? (CO3)
- Q.20 Discuss importance of transducers in electrical measurement? (CO5)
- Q.21 Explain one method for pH measurement using suitable diagram? (CO2)
- Q.22 Write a note on Piezoelectric Transducer? (CO5)

SECTION-D

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

- Q.23 Draw and explain construction and working principle of 3 ϕ energy meter (induction type) ? (CO1)
- Q.24 Compare moving coil and moving iron instruments? Give four merits and demerits of each? (CO3)
- Q.25 What is frequency meter? Describe the dynamometer type frequency meter using a suitable diagram? (CO4)