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221533

**3rd Sem / Branch : Instrumentation & Control,  
Medical Electronics  
Sub.: Measurement and Instrumentation**

Time : 3Hrs.

M.M. : 60

**SECTION-A**

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

- Q.1 Hay bridge is used for measuring  
a) Inductance                      b) Capacitance  
c) Resistance                      d) None of the above
- Q.2 Multimeter is used to measure  
a) AC Voltage                      b) DC Voltage  
c) Resistance                      d) All of the above
- Q.3 Resistance can be measured with help of  
a) Wattmeter  
b) Voltmeter  
c) Ammeter  
d) Ohmmeter and Resistance bridge
- Q.4 CRO can be used for measuring  
a) AC Voltage only              b) DC Voltage only  
c) Frequency                      d) Any of above

- Q.5 A potentiometer may be used for
- Measurement of Resistance
  - Measurement of current
  - Calibration of ammeter and voltmeter
  - All of the above
- Q.6 The internal resistance of an ammeter should be
- Very Small
  - Medium
  - High
  - Infinity

### SECTION-B

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

- Q.7 What is DSO?
- Q.8 Define single phase system.
- Q.9 Ammetre is used to measure\_\_\_\_\_.
- Q.10 Write any one name of measurement of capacitance.
- Q.11 What is resistance?
- Q.12 Write the full form of PMMC.

### SECTION-C

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

- Q.13 What is the major application of CRO.

- Q.14 Explain any one method of resistance measurement.
- Q.15 How does electrostatic type instrument work.
- Q.16 List atleast four difference between single phase and three phase system.
- Q.17 What are the various forcing technique.
- Q.18 Write a short note on 3-phase system.
- Q.19 Explain potentiometer method for resistance measurement.
- Q.20 Write a short note on delay sweep.
- Q.21 What is energy meter?
- Q.22 Explain time base operation in CRO.

### SECTION-D

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

- Q.23 Explain wheatstone bridge in detail
- Q.24 Explain working principle of digital frequency meter.
- Q.25 Write and explain working principle of moving iron instrument.