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221533

3rd Sem / Instrumentation & Control, Medical Electronics

Subject : Measurement and Instrumentation

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Wheatstone bridge is used for measurement of_____.

a) Voltage b) Resistance

c) Current d) Inductance

Q.2 In electrodynamometer wattmeter fixed coil is also called_____.

a) Current coil b) Pressure coil

c) Both a & b d) None of these

Q.3 _____ is used to measure voltage

a) ammeter b) voltmeter

c) balance d) thermocouple

Q.4 Unit of Inductance is_____.

a) Henry b) Weber

c) Watt d) Joule

Q.5 Stroboscope is used to measure _____

a) energy b) power

c) frequency d) mass

Q.6 In CRO, sweep voltage is applied to the_____.

a) Horizontal deflection plates

b) Vertical deflection plates

c) Both (a) and (b)

d) None of these

SECTION-B

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

Q.7 Potentiometer method is used for measuring_____

Q.8 Digital frequency meter measures_____.

Q.9 Expand CRT.

Q.10 What is Wattmeter.

Q.11 Maxwell Bridge is used to measurement of capacitance. (True/False)

Q.12 Energy meter is used for measuremet of_____.

SECTION-C

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

Q.13 Explain Rectifier type voltmeter.

Q.14 Describe Maxwell bridge.

Q.15 Explain detail frequency meter.

Q.16 Explain construction and working of stroboscopes.

Q.17 Explain permanent Magnet Moving Coil Meters.

Q.18 Explain Potentiometer method for measurement of resistance.

Q.19 Explain construction and working of Cathode Ray Tube (CRT).

Q.20 Comparison between three-phase and single-phase system.

Q.21 Explain De Sauty's bridge. Discuss their advantages and disadvantages.

Q.22 Explain applications and diagram of energy meter.

SECTION-D

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

Q.23 Describe Wagner earthing device with suitable diagram.

Q.24 Explain block diagram and working principle of a basic CRO. Also discuss their merits and demerits.

Q.25 Explain Wheatstone Bridge in detail.