Q.24 Draw a block diagram showing the main components in a digital storage oscilloscope. What advantages does a digital phosphor oscilloscope have over a digital storage one?

Q.25 Explain the working principle of moving iron meter with labelled diagram. What is the main difference between moving iron and PMMC instruments?

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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 Maxwell bridge is used for measurement of_____.

a) Inductance b) Capacitance

c) Resistance d) None of these

Q.2 The moving coil in electrodynamometer is also called.

a) Fixed Coil b) Pressure Coil

c) Current d) None of these

Q.3 Unit of energy is_____.

a) Watt b) volt

c) Joule d) Henry

Q.4 Which of the following cannot be used as a unit for frequency?

a) Hz b) BPM

c) RPM d) S

Q.5 In CRO, sweep voltage is applied to the_____.

a) Horizontal deflection plates

b) Vertical deflection plates

c) Both (a) & (b)

d) None of these

Q.6 Unit of Inductance is

a) Henry b) Weber

c) Watt d) Joule

SECTION-B

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

Q.7 Expand CRO.

Q.8 Thermocouple type meter utilize thermocouple. (True/False)

Q.9 An audible frequency range of human is 20 Hz to _____ kHz.

Q.10 Expand DSO.

Q.11 Wattmeter power measurement method uses 2 wattmeter. (True/False)

Q.12 Expand PMMC.

SECTION-C

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

Q.13 Describe in detail PMCC meter with diagram.

Q.14 Draw and explain the working of Wheatstone bridge circuit ?

Q.15 Explain applications and diagram of energy meter.

Q.16 Explain the working of stroboscopes.

Q.17 Writes a short note on digital frequency meter.

Q.18 Draw and Explain Block diagram of D.S.O.

Q.19 What are the main differences between analogue and digital oscilloscopes?

Q.20 Explain the working of Maxwell bridge with the help of diagram.

Q.21 Explain the working of rectifier meter with diagram.

Q.22 Explain power measurement methods in details.

SECTION-D

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

Q.23 Explain construction & working principle of dynamometer type wattmeter. What are the applications of it?