

Q.21 Explain the working of De Sauty's bridge with diagram.

Q.22 Explain dynamometer type wattmeter 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 2 wattmeter type wattmeter. What are the applications of it?

Q.24 Draw a block diagram showing the main components in a basic CRO. What advantages does a digital STORAGE oscilloscope have over a CRO?

Q.25 Explain the working principle of PMMC meter with labelled diagram. Write any two applications of PMMC. How it is different from moving iron instrument?

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### 3rd Sem / Instrumentation & Control, Medical Electronics

**Subject:- Measurement and Instrumentation**

Time : 3Hrs.

M.M. : 60

### SECTION-A

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

Q.1 Wagner earth devices are used for \_\_\_\_\_

- a) A.C. bridge                      b) D.C. bridge
- c) both a and b                      d) None of these

Q.2 Which method is used for high resistance measurement?

- a) Megger                              b) Potentiometer method
- c) Maxwell bridge                      d) None of these

Q.3 Unit of power is \_\_\_\_\_

- a) Watt                                  b) Volt
- c) Joule                                  d) Henry

Q.4 PMMC meter stands for

- a) Permanent magnet moving circuit
- b) Pressure magnet moving coil

- c) Pressure magnet moving circuit
- d) Permanent magnet moving coil

Q.5 Which of the following device can be used for measurement of frequency?

- a) Seismic transducer    b) Ammeter
- c) Stroboscope            d) Voltmeter

Q.6 Unit of capacitance is

- a) Henry                      b) Farad
- c) Watt                        d) Weber

### SECTION-B

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

Q.7 Expand CRT.

Q.8 \_\_\_\_\_ is the main part of cathode ray tube.

Q.9 Maxwell bridge is used for the measurement of \_\_\_\_\_.

Q.10 PMMC is a null type instrument. (true/false)

Q.11 Define rectifier type meter.

Q.12 In electrodynamic wattmeter fixed coil is also called \_\_\_\_\_.

### SECTION-C

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

Q.13 Describe in detail moving iron meter with diagram.

Q.14 Draw and explain the working of Maxwell bridge circuit.

Q.15 Explain the applications and diagram of CRO.

Q.16 Explain the working of digital frequency meter.

Q.17 Write a short note on stroboscope.

Q.18 Draw and explain the working of thermocouple meter.

Q.19 What are the main differences between three phase and single phase system?

Q.20 Explain the working of potentiometer method for resistance measurement with the help of diagram.