

- Q.25 Explains optical method of Blood cell counting.
- Q.26 Explain Monochromators & classify them.
- Q.27 Discuss various types of Light sources used in analytical instrumentation.
- Q.28 Explain Electrophoresis.
- Q.29 Explain Beer Lambert Law?
- Q.30 Enlist the difference between Prism & Grating.
- Q.31 Explain Microscope with neat diagram?
- Q.32 Explain Photo Multiplier tube with diagram?
- Q.33 Discuss Spectroscopy.
- Q.34 Write a note on laboratory instrumentation.
- Q.35 Explain Blood cell counter in details.

SECTION-D

Note: Long Answer type question. Attempt any two questions. (2x10=20)

- Q.36 Explain PH meter with block diagram?
- Q.37 Explain Auto Analyzer with diagram?
- Q.38 Explain Flame Photometer with diagram?

No. of Printed Pages : 4

183241/123241/33241

Roll No.....

4th Sem / Medical Electronics Subject : Medical Laboratory Instrumentation (MLI)

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note : Multiple choice questions. All questions are compulsory. (10x1=10)

- Q.1 Which of the following is true about pH meters?
- a) The electrode should be stored in purified water
 - b) They should be calibrated regularly
 - c) They can be stored in really hot, humid places
 - D) All answers are correct
- Q.2 Which one of the following is not a transducer?
- a) Thermocouple
 - b) Photovoltaic
 - c) Electroculogram
 - d) Moving coil generator
- Q.3 the largest blood vessel of heart is
- a) Artery
 - b) Aorta
 - c) Vein
 - d) None of above
- Q.4 Electroencephalogram is obtained from bioelectrical signals from the?
- a) Brain
 - b) Heart
 - c) Muscles
 - d) Retina

- Q.5 The following are methods of blood flow measurement, except?
- Magnetic blood flow measurement
 - Coriolis blood flow measurement
 - Ultrasonic blood flow measurement
 - Radiographic blood flow measurement
- Q.6 Leukocytes is another name for
- RBC
 - WBC
 - Platelets
 - None of the above
- Q.7 Which of the following is a laboratory instruments?
- PH Meter
 - CT Scan
 - Ventilator
 - None of the above
- Q.8 PH Calculation formula
- $\text{Log}_{10}(\text{H}^+)$
 - $-\text{Log}_{10}(\text{H}^+)$
 - $\text{Log}_2(\text{H}^+)$
 - None of above
- Q.9 Common Temperature used in autoclave is (in degree Celsius)
- 109
 - 122
 - 135
 - 142
- Q.10 Autoclave is used for
- Vulcanization
 - Heating
 - Cleaning
 - Sterilization

SECTION-B

Note : Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Write names of two detectors used in analytical measurements.
- Q.12 Define Conductance.
- Q.13 What do you mean by Monochromator.
- Q.14 Define Cuvette.
- Q.15 Define PH.
- Q.16 Beer's Law.
- Q.17 Define Optical Density.
- Q.18 Explain Lambert's Law?
- Q.19 Microtome.
- Q.20 Electro Magetics Spectrum?

SECTION-C

Note : Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain the importance of Acid Base Balance in body.
- Q.22 Explain Autoclave working with block diagram.
- Q.23 Explain Photo-Diode.
- Q.24 Explain Electric Centrifuge machine with diagram?