

- Q.28 Draw well labelled block diagram of auto analyser.
 Q.29 Explain the working of a microscope in a short note.
 Q.30 Write a short note on the operation of chromatography.
 Q.31 Explain the physical method of sterilization in a short note.
 Q.32 Write a short note on the diffraction grating used in the spectrophotometer.
 Q.33 Explain the acid base balance in a short note.
 Q.34 Explain the types of monochromators used in the photo colorimeter.
 Q.35 Write name of five parts of auto analyser.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
 Q.36 Draw the block diagram of flame photo meter and explain its various parts.
 Q.37 Explain in details the following methods of blood cell counting
 a) Automater optical method
 b) Electrical conductivity method
 Q.38 Explain the working principle of photo colorimeter and draw its block diagram.

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Roll No.

4th Sem / Branch : Medical Electronics Sub.: Medical Laboratory Instruments/Analy Inst. (BM)

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 The principle of the centrifugation technique is to separate the particles present in liquid medium with the help of a _____.
 a) Gravitational pull b) Centrifugal field
 c) Magnetic field d) Electric field
 Q.2 _____ is a part of microscope.
 a) Objective lens b) Gentry
 c) Collimator d) RF Coil
 Q.3 An apparatus with a chamber used to provide controlled and contaminate - free environmental conditions is known as
 a) MRI b) X Ray
 c) USG d) Laboratory incubator
 Q.4 Electrophoresis is a process which separates charged particles in a fluid with the help of _____.
 a) Electrical charge b) Gravity
 c) Magnet d) None

- Q.5 _____ consists of mobile phase and stationary phase for the separation of a mixture
- a) Oven b) Xray
c) Microscope d) Chromatography
- Q.6 The steam pressure autoclave is one of the most effective methods of _____.
- a) Sterilization b) pH Measurement
c) Blood cell counting d) BP measurement
- Q.7 Select the method of blood cell counting
- a) Microscopic method
b) Automate optical method
c) Electrical conductivity method
d) All of the above
- Q.8 Atomizer is a part of
- a) Flame photo meter b) ECG
c) X-Ray d) Microscope
- Q.9 The _____ states that the amount the amount of light absorbed is directly proportional to the length and thickness of the solution under analysis.
- a) Newton 1st Law b) Newton 2nd Law
c) Lambert's Law d) None
- Q.10 A _____ is an instrument which measures the hydrogen _____ ion activity in solutions, indicating the acidity or basicity.
- a) Flame photo meter
b) pH meter
c) Blood cell counter
d) USG

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SECTION-B

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

- Q.11 Write one application of oven.
- Q.12 Expand WBC.
- Q.13 Write one part of pH meter.
- Q.14 Write the definition of sterilization.
- Q.15 _____ is a part of auto analyzer.
- Q.16 Microscopic method is used for _____ counting.
- Q.17 Write name of one Medical Laboratory Instrument.
- Q.18 Write one use of microscope.
- Q.19 _____ is the pH of distilled water.
- Q.20 Write the full form of MLI.

SECTION-C

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

- Q.21 Write a short note on the optical filters used in the photo colorimeter.
- Q.22 Draw the block diagram of spectrophotometer.
- Q.23 Explain the working principle os incubators.
- Q.24 Write name of five parts of pH meter.
- Q.25 Write a short note on photodiode.
- Q.26 Explain microscopic method of blood cell counting in a short note.
- Q.27 Write a short note on the optical filters used in the flame photo meter.

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