

- Q.18 Write a short note on Microtome.
- Q.19 Write four application of flame photometer.
- Q.20 Write a short note on the accidents in laboratory.
- Q.21 Explain ELIZA reader in a short note.
- Q.22 Write a short note on the professional laws for medical laboratories.

#### **SECTION-D**

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

- Q.23 Draw block diagram of electric centrifuge and explain its principle in detail.
- Q.24 Draw block diagram of fully automatic analyzer and explain its parts.
- Q.25 Draw block diagram of photo colorimeter and explain its components.

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**5th Sem. / Medical Electronics**  
**Subject : Medical Laboratory Instruments**

Time : 3 Hrs.

M.M. : 60

#### **SECTION-A**

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

- Q.1 What is the primary function of medical laboratory services in healthcare ?  
a) To provide surgical interventions  
b) To conduct diagnostic testing on patient specimens  
c) To administer medications  
d) To perform physical examinations
- Q.2 What is the primary function of a photo colorimeter ?  
a) To measure the temperature of a solution  
b) To measure the viscosity of liquids  
c) To analyze the pH level of a solution  
d) To determine the concentration of colored compounds in a solution

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Q.3 What is typically displayed on the screen of a digital pH meter?

- a) Temperature of the solution
- b) Voltage readings
- c) pH value of the solution
- d) Color intensity of the solution

Q.4 What is the primary function of a fully automatic analyzer in a laboratory setting?

- a) To manually conduct tests
- b) To automate the process of analyzing samples for various parameters
- c) To store patient data
- d) To perform surgical procedures

Q.5 What is the primary function of a microscope?

- a) To magnify small objects for detailed observation
- b) To measure temperature
- c) To project images onto a screen
- d) To analyze chemical composition

Q.6 What is the primary function of blood cell counter?

- a) To measure blood pressure
- b) To analyze the biochemical composition of blood.
- c) To count and differentiate various type of blood cells
- d) To perform blood transfusions

## SECTION-B

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

Q.7 Write one role of medical laboratory services in health care .

Q.8 Write one precaution to avoid laboratory accidents .

Q.9 Write name of one clinical laboratory instrument .

Q.10 Write name of one component of fully automatic analyzer.

Q.11 Write one system component of blood cell counter.

Q.12 Expand PCR.

## SECTION-C

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

Q.13 Write a short note on the microscopic method of blood cell counting.

Q.14 Write a short note on the buffer solution .

Q.15 Draw block diagram of spectrophotometer .

Q.16 Explain atomizer in a short note.

Q.17 Write a short note on the acid base balance .