

- N.B. 1) All questions are compulsory.**
2) Draw a neat and labelled diagram wherever necessary.
3) Figures to the right indicate full marks.

Q1 A) Define the following terms (Any five) (5 Marks)

- a) Karyotyping
- b) Idiogram
- c) Genetic disorder
- d) Electrophoresis
- e) Agarose gel electrophoresis
- f) Gene
- g) Electric potential
- h) Cations

Q.1 B) Answer the following (Any Two) (10 Marks)

- 1) Explain the Polyacrylamide gel electrophoresis?
- 2) Explain the Southern hybridization?
- 3) Give brief explanation on - Down syndrome is genetic disorder.

Q2 A) Define the following terms(Any five) (5 Marks)

- a) Ethics
- b) Fluorescence
- c) Antigen
- d) Antibody
- e) Luminescence
- f) Chemiluminescence
- g) CLIA
- h) Immunoassay

Q.2 B) Answer the following (Any Two) (10 Marks)

- 1) Explain the care and handling of laboratory animals?
- 2) Write a note on CLIA technique?
- 3) Give significance of CLIA technique?

Q3 A) Give the significance of the following items (any five)

(5 Marks)

- a) Passive Immunity
- b) Active Immunity
- c) Racial Immunity
- d) Antibody
- e) Antigen
- f) Lytic cycle
- g) Lysogenic cycle
- h) T cells

Q.3 B) Answer the following (Any Two)

(10 Marks)

- 1) Write a note on Acquired Immunity?
- 2) Explain the Oncogenic virus?
- 3) Give a brief summary on cells of Immune system?

Q 4 A) Answers the following in one or two sentence (any five)

(5 Marks)

- 1) Define- Heavy metal
- 2) Illegal drug
- 3) Toxicology
- 4) Gas Chromatography
- 5) Confirmatory test
- 6) Drug screening
- 7) Immunoassay
- 8) Toxins

Q4 B) Answer the following (any two)

(10 Marks)

- 1) Explain any two analytical techniques used in toxicological screening?
- 2) Write a note on Presumptive test in drug screening?
- 3) Explain different techniques used in heavy metal screening?

Q5 Answer the following (any three)

(15 marks)

- 1) AGE
- 2) Karyotyping
- 3) Innate Immunity
- 4) Ethics in the use of laboratory animals
- 5) Hepatitis B