

M.Sc. (Forensic Sci.) Semester - 2 (CBCS) Examination
May/June-2022 (New Course)
Forensic Biology and Serology (Core)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q1 (A) Answer all questions in short : (04)
1. Define Immunoglobulin. Mention its types.
 2. Write the basic functions of an animal cell or a human cell.
- Q1 (B) Answer any two questions out of three : (10)
1. Briefly explain about the "Human Immune System".
 2. Explain about Nucleic Acids and their types. Write its forensic significance.
 3. Write a note on Antigen - Antibody reaction.
- Q2 (A) Answer all questions in short : (04)
1. Mention the structural features that differentiates an animal hair from a human hair.
 2. We can do DNA extraction from a given saliva or sweat sample. Justify with appropriate reasons.
- Q2 (B) Answer any two questions out of three : (10)
1. Explain briefly about the structure of hair. (Include labeled diagram of it)
 2. Write a note on blood and its components. Mention their functions.
 3. Write about different Blood groups. Mention its detection technique and its Forensic Significance.
- Q3 (A) Answer in short : (04)
1. Define Molecular markers and mention its types.
 2. Write briefly the working principle of Silica based method of DNA extraction.
- Q3 (B) Answer any two questions out of three : (10)
1. Write a note on PCR.
 2. Write a note on Differential Extraction of DNA and its forensic significance.
 3. Write a note on the general principles of DNA extraction and isolation method.
- Q4 (A) Answer in short: (04)
1. Define the following: Opium, Opiates and Opioids.
 2. Explain briefly Wildlife Protection Act 1972.
- Q4 (B) Answer any two questions out of three : (10)
1. Write a note on the classification of plant poison.
 2. Write a note on Palynology. Mention its forensic significance.
 3. Write a brief note on the various functions of WCCB (Wildlife Crime Control Bureau).
- Q5 (A) Answer in short : (04)
1. Define 'Forensic Entomology' and its scope.
 2. Mention the forensically relevant insect categories.
- Q5 (B) Answer any two questions out of three : (10)
1. Write a note on the lifecycle of blow flies.
 2. Write briefly about the collection and preservation of forensic entomology evidences.
 3. How can you estimate time since death using forensic entomology?
