

M.Sc.(FS) Semester - 2 (CBCS) Examination**May/June-2021****Forensic Biology and DNA Fingerprinting****Time: 1:30 Hours****Marks: 42****Instructions:**

1. Figure to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

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- Que-1(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.
- Que-1(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.
- Que-2(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.
- Que-2(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. Describe the forensic significance of the different body fluids.
- Que-3(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.
- Que-3(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.
- Que-4(A) Answer in short: (04)
1. Define the following: Opium, Opiates and Opioids.
2. Explain briefly Wildlife Protection Act 1972.
- Que-4(B) Answer any two questions out of three : (14)
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).
- Que-5(A) Answer in short : (04)
1. Define 'Forensic Entomology' and its scope.
2. Mention the forensically relevant insect categories.
- Que-5(B) Answer any two questions out of three : (14)
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?
