

**B.Sc.(FS) Semester - 4 (CBCS) Examination**  
**March/April-2023 [NEW COURSE]**  
**Forensic Science(Core)**

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

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

**Q.1(A) Answer the following questions. (04)**

1. NMR is powerful tool for investigating \_\_\_\_\_ structure.
2. \_\_\_\_\_ is the most important parts of the NMR instrument.
3. Which parameter is measured in TGA?
4. Define: Atomization.

**Q.1(B) Answer the following question. (Any One) (03)**

1. Write the reasons for taking TMS as the reference compound.
2. Explain the detector used in AAS.

**Q.1(C) Answer the following question. (Any One) (07)**

1. Write a brief note on Differential Scanning Calorimetry.
2. Explain the instrumentation of NMR.

**Q.2(A) Answer the following questions. (04)**

1. Define: Epitope.
2. Which cells play main role in production of antibody?
3. Full form of ELISA\_\_\_\_\_.
4. T-Cells are the element of \_\_\_\_\_ immunity response.

**Q.2(B) Answer the following question. (Any One) (03)**

1. Explain Antigen-Antibody reaction.
2. What is Agglutination-Adsorption test?

**Q.2(C) Answer the following question. (Any One) (07)**

1. Write a note on different classes of human Immunoglobulin.
2. Explain: ELISA

**Q.3(A) Answer the following questions. (04)**

1. Define: Adulteration.
2. Write the density of standard petrol at 15° C.
3. In trap related cases generally which chemicals are used?
4. What is fire tetra hydrant model?

- Q.3(B) Answer the following question. (Any One) (03)**
1. Explain the types of heat transfer.
  2. Write the chemical test for Phenolphthalein.
- Q.3(C) Answer the following question. (Any One) (07)**
1. Write a note on crime scene management of arson.
  2. Write a brief note on Petrol & its test method for its analysis.
- Q.4(A) Answer the following questions. (04)**
1. Name the father of Question Document.
  2. Write the types of passports.
  3. What is counterfeiting?
  4. Study of Seal is known as \_\_\_\_\_.
- Q.4(B) Answer the following question. (Any One) (03)**
1. Write the security features of Master Card.
  2. Write the security features of Indian Passport under visible light.
- Q.4(C) Answer the following question. (Any One) (07)**
1. Write a short note on types of alteration in documents.
  2. Explain forensic examination of Coin.
- Q.5(A) Answer the following questions. (04)**
1. Define: Cyber Crime.
  2. Full form of UPI \_\_\_\_\_.
  3. What is phishing?
  4. Write the examples of digital payment app.
- Q.5(B) Answer the following question. (Any One) (03)**
1. Write the general tips to prevent the cyber-crime.
  2. Explain the term: (i.) Cracking (ii.) Salami Attack (iii.) Malware.
- Q.5(C) Answer the following question. (Any One) (07)**
1. Write note on difference type of digital payment system:  
(i.) UPI app's (ii.) AEPS
  2. Write a note on: (i.) Data Security (ii.) Mobile Security (iii.) E-mail Security.

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