

B.Sc. Semester - 5 (Remedial) (CBCS) Examination**March/April-2022 (NEW COURSE)****Forensic Physics(Core)****Time: 2:30 Hours****Marks: 70****Instructions:**

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

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- Que-1 (A) **Answer the following questions:- (Any 4)** (04)
1. Define: Primary fracture.
 2. Write the “4R Rule”.
 3. Write full form: i.) ICPMS; ii.) XRF
 4. Write the formula for the percentage of weight loss of soil on ignition.
 5. Write the elements used in production of borosilicate glass.
- Que-1 (B) **Answer the following questions:- (Any 1)** (03)
1. Explain forensic examination of glass.
 2. Write a note on sample collection of soil evidence.
- Que-1 (C) **Answer the following questions:- (Any 1)** (07)
1. Explain the production of glass fracture & types of glass fractures.
 2. Write a brief note on analysis of soil.
- Que-2 (A) **Answer the following questions:- (Any 4)** (04)
1. What is Foot line?
 2. Write the principle for tool mark.
 3. What does the number 4901 indicates on side wall of tyre.
 4. Define: wheel base.
 5. Name the types of skid marks.
- Que-2 (B) **Answer the following questions:- (Any 1)** (03)
1. Explain “casting” a collection method for foot print.
 2. What is skid mark? Write the importance of skid marks.
- Que-2 (C) **Answer the following questions:- (Any 1)** (07)
1. Write a note on forensic examination of footwear impression.
 2. i.) Explain the types of tool marks.
ii.) Describe the analysis of tool marks?
- Que-3 (A) **Answer the following questions:- (Any 4)** (04)
1. Define: Numismatic.
 2. Define: Seal.
 3. Define coin according to IPC.
 4. What is center punching?
 5. Write etching solution required for gold & it's alloy surface for restoration of marks.
- Que-3 (B) **Answer the following questions:- (Any 1)** (03)
1. Explain briefly (i.) Mechanical fit & (ii.) Side by side matching.
 2. Write the scope & principle for restoration of marks.
- Que-3 (C) **Answer the following questions:- (Any 1)** (07)
1. Write a note on a forensic examination of wire & cable.
 2. Explain the methods of obliteration & Write the procedure for chemical etching method for restoration.

- Que-4 (A) **Answer the following questions:- (Any 4)** (04)
1. Define: Fundamental frequency.
 2. Name the methods used for speech enhancement.
 3. Give the range of voice for man, woman, & child.
 4. What is assemble editing?
 5. What is the need of tape analysis?
- Que-4 (B) **Answer the following questions:- (Any 1)** (03)
1. Explain briefly speech enhancement.
 2. Explain briefly the uniqueness in person's voice.
- Que-4 (C) **Answer the following questions:- (Any 1)** (07)
1. Define: a.) i.) Open test; ii.) Close test; iii.) Discriminating test
b.) Difference between Text Dependent vs Text Independent
c.) Explain Intra-speaker & Inter-speaker
 2. Write a note on speech production in human being.
- Que-5 (A) **Answer the following questions:- (Any 4)** (04)
1. What is image sensor ?
 2. What is emulsion ?
 3. Write the importance of Photography.
 4. Name the sub-type of synthetic adhesive.
 5. Write the classification of adhesive on the basis of its raw material.
- Que-5 (B) **Answer the following questions:- (Any 1)** (03)
1. Define: Paint. Describe the main components of paint.
 2. Explain: i.) Depth of field; ii.) Aperture; iii.) Exposure.
- Que-5 (C) **Answer the following questions:- (Any 1)** (07)
1. Write a note on a digital photography.
 2. Write a note on a crime scene photography.
