

B.Sc. Semester - 5 (CBCS) Examination
December - 2020 (Old Course)
FORENSIC PHYSICS (CORE)

Time: 1:30 Hours**Marks: 42****Instructions:**

1. Figures 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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- Q.1(A) Objective type questions. (04)
1. Define physical properties.
 2. The 3-R rule is related with soil. True or False?
 3. Which physical properties examine for the analysis of glass?
 4. Define Density.
- Q.1(B) Answer in detail. (any 1 out of 2) (03)
1. Which physical methods or techniques used for analysis of soil? Describe the ignition test for soil.
 2. Describe density gradient method for Glass.
- Q.1(C) Write a note on. (any 1 out of 2) (07)
1. Describe glass fractures with labeled figure.
 2. If you are forensic scientist and you obtained a soil as an evidence on crime scene which steps you will follow from crime scene to laboratory for the analysis of that soil.
- Q.2(A) Objective type questions. (04)
1. What is wear bar?
 2. What is used as release agent in casting?
 3. Types of toolmarks.
 4. Give the chemical composition of POP.
- Q.2(B) Answer in detail. (any 1 out of 2) (03)
1. List out the qualities of casting materials.
 2. How one can determine the turning diameter of a vehicle and speed of vehicle from skid marks?
- Q.2(C) Write a note on. (any 1 out of 2) (07)
1. What is biometric? Which information obtained from the footmarks? Write a note on gait pattern.
 2. Describe principle of tool mark examination and types of tool marks.
- Q.3(A) Objective type questions. (04)
1. Instrumental methods used for the forensic analysis of fibers.
 2. Which parameter consider during the forensic examination of coins.
 3. Common Use of etching procedure.
 4. Use of tensilometer in forensic physics Lab.
- Q.3(B) Answer in detail. (any 1 out of 2) (03)
1. Forensic examination of coin.
 2. Describe Physical matching of broken object.
- Q.3(C) Write a note on. (any 1 out of 2) (07)
1. Types of fiber, Classification of fiber and its forensic examination.
 2. Describe etching procedure and list out the different etching reagent for different surface.

- Q.4(A) Objective type questions. (04)
1. Methods for the alteration of video tape.
 2. Human vocal cord starts from _____ and end to _____.
 3. Give the full form of EER, which relates to spectrogram of speech.
 4. Which information obtained from the speech sample.
- Q.4(B) Answer in detail. (any 1 out of 2) (03)
1. Write a note on uniqueness in voice.
 2. Define fundamental and format frequency and give the value of average fundamental frequency of Men, Women and Children?
- Q.4(C) Write a note on. (any 1 out of 2) (07)
1. Define voice and speech and write a note on “Forensic speaker recognition”.
 2. Explain the mechanism of production of frequencies in vocal cord.
- Q.5(A) Objective type questions. (04)
1. Different light source used in forensic photography.
 2. Full form of CCD.
 3. Components of paint.
 4. Use of crime scene photography.
- Q.5(B) Answer in detail. (any 1 out of 2) (03)
1. Discuss the photographic materials which are used to make photographic film.
 2. Write a note on types of camera and lenses.
- Q.5 (C) Write a note on. (any 1 out of 2) (07)
1. Write a note on main components of paint and examination of paint evidence.
 2. Explain crime scene photography.
