**647510** **BSc5FScC503x** **Seat No :_____**

# B.Sc. Semester - 5 (Remedial) (*CBCS*) Examination
## Feb/Mar. -2021 (NEW 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 4 Marks

1. Define soil.
2. The 3-R rule is related with glass. True or false?
3. Which physical properties examine for the analysis of glass?
4. Give the full form of DTA.

Q – 1 (B) Answer in detail (Any 1 out of 2) 3 Marks

1. Define glass and write a note on physical matching of glass.
2. Which physical methods or techniques used for analysis of soil? Describe the ignition test for soil.

Q – 1 (C) Write a note on (Any 1 out of 2) 7 Marks

1. Short note on soil formation. Explain the density gradient tube method for forensic soil analysis.
2. Describe glass fractures with labeled figure.

Q – 2 (A) Objective type questions 4 Marks

1. Give the chemical composition of POP.
2. Types of toolmarks.
3. In which instrument, a delicate probe moves over the surface to scanned a change in the depth and alivaiton of tool marks?
4. What is wear bar?

Q – 2(B) Answer in detail (Any 1 out of 2) 3 Marks

1. Describe the parameters which are used in gait pattern analysis.
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) 7 Marks

1. Define sunkan foot prints, describe the POP casting procedure for it and List out the qualities of casting materials.
2. Describe principle of tool mark examination and types of tool marks.

Q – 3 (A) Objective type questions 4 Marks

1. Common Use of etching procedure.
2. Use of tensilometer in forensic physics Lab.
3. Instrument used in forensic physics division.
4. Types of fiber on the basis of their origin.

Q – 3 (B) Answer in detail (Any 1 out of 2) 3 Marks

1. Forensic examination of coin.
2. How can we do physical matching of broken edges and forensic significance of it.

Q – 3 (C) Write a note on (Any 1 out of 2) 7 Marks

1. Classification of fiber and primary forensic examination of it.
2. Describe etching procedure and list out the different etching reagent for different surface.

Q – 4 (A) Objective type questions 4 Marks

1. Which information obtained from the speech sample.
2. Define Text dependent speaker analysis.
3. Give the full form of EER, which relates to spectrogram of speech
4. Methods for the alteration of video tape.

Q – 4 (B) Answer in detail (Any 1 out of 2) 3 Marks

1. What is the value of average fundamental frequency of Men, Women and Children?
2. Write a note on "Forensic speaker recognition"

Q – 4(C) Write a note on (Any 1 out of 2) 7 Marks

1. What is speech enhancement and purpose of it and methods used for speech enhancement.
2. Define voice and speech And Write a note on uniqueness in voice.

Q – 5 (A) Objective type questions 4 Marks

1. Use of crime scene photography.
2. Which light source is used for the photography of charred document?
3. Full form of CCD.
4. Components of paint

Q – 5 (B) Answer in detail (Any 1 out of 2) 3 Marks

1. What is the use of light source in photography? Discus different types of light source used for rime scene photography.
2. Write a note on main components of paint and examination of paint evidence.

Q – 5 (C) Write a note on (Any 1 out of 2) 7 Marks

1. Explain crime scene photography.
2. Define : (i) Exposure, (ii) Aperture, (iii) Depth of field

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