

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc., Winter 2019-20 Examination

Semester: 1
Subject Code: 11207109
Subject Name: Forensic Physics & speech recognition

Date: 27-11-2019
Time: 10:30 am to 01:00 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Write a Brief note (4x2) (Each of 04 marks) (08)**
- (a) Write a brief note on analysis of soil evidence.
 - (b) Analysis of glass evidence with different Instrumentation Technique.
- Q.1. B) Answer the following questions (Any two) (04)**
- (a) Write a Short note on given topics. (2x2) (04)
 1. Soda-lime Glass
 2. Collection and preservation of soil samples
 - (b) Short note: What is Skid Mark? Describe its importance. (04)
 - (c) Short note: Types of Tool Marks (04)
- Q.2. A) Answer the following questions. (04)**
- (a) Write a Short note on given topics. (2x2) (04)
 1. What is Physical Evidence?
 2. Physical matching of Glass
 - (b) Short note: density gradient method to analyze soil sample (04)
- Q.2. B) Answer the following questions (Any two) (03)**
- (a) Do as directed. (Each of 01 marks) (03)
 1. What is speech?
 2. What is Density?
 3. Give the full form of DTA
 - (b) Short note: 3D impression (03)
 - (c) Short note: Comparison of Tool mark (03)
- Q.3. A) Write a Brief note on following questions (4x2) (Each of 04 marks) (08)**
- (a) Write a note on Tire Impressions with forensic aspects.
 - (b) Write a note on source and Filter theory
- Q.3. B) Answer the following questions (Any two) (04)**
- (a) Do as directed (2x2) (Each of 02 marks) (04)
 1. Acoustic is.....
 2. Natural Fiber is Extracted from.....like.....
 - (b) Short note: Analysis of paint (04)
 - (c) Short note: Analysis of cement (04)
- Q.4. A) Answer the following questions. (04)**
- (a) Write a Short note on given topics. (2x2) (Each of 02 marks) (04)
 1. Toughened glass
 2. Bulletproof glass
 - (b) Short note: Audio tape editing Methods (04)
- Q.4. B) Answer the following questions (Any two) (03)**
- (a) Fill in the blanks. (Each of 01 marks) (03)
 1. Voice net is for
 2. Fundamental frequency is.....
 3. Blue colored glass is because of.....
 - (b) Short note: Importance of spectrographic Analysis in Speech recognition (03)
 - (c) Differentiate: Radial fracture vs. Concentric fracture (03)