

**PARUL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**M.Sc. Winter 2018-19 Examination**

**Semester: 1**  
**Subject Code: 11207103**  
**Subject Name: Forensic Physics**

**Date: 05/12/2018**  
**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 Brief note (4x2) (Each of 04 marks) (08)**  
 (a) Explain: "Paint as an evidence in Forensic science"  
 (b) Write a note on Tool marks.
- Q.1. B) Answer the following questions (Any two) (04)**  
 (a) Write Short Answers (Each of 02 marks)  
 1. Describe cement analysis.  
 2. Explain collection of soil samples.  
 (b) Short note on photographic examination of tool marks (04)  
 (c) Short note on different types of glass fractures (04)
- Q.2. A) Answer the following questions. (04)**  
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks)  
 1. Explain microscopic examination of paint pigments  
 2. Write the composition of Portland cement.  
 (b) Short note on density gradient technique for soil sample (04)
- Q.2. B) Answer the following questions (Any two) (03)**  
 (a) Short note.(Each of 01 marks)  
 1. Write note on concrete.  
 2. Write microscopic examination of soil sample.  
 3. Write microscopic examination of fiber.  
 (b) Short note on forensic significance of fiber (03)  
 (c) Short note on forensic significance of broken glass (03)
- Q.3. A) Write Brief note on (Each of 04 marks) (08)**  
 (a) Explain types of glass and their composition  
 (b) Explain forensic examination of broken objects
- Q.3. B) Answer the following questions (Any two) (04)**  
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks)  
 1. Mortar is the mixture of .....  
 2. Ignition test for cement is performed at which temperature.....  
 (b) Short note on types of glass fractures (04)  
 (c) Short note on pyrolysis gas chromatography (04)
- Q.4. A) Answer the following questions. (04)**  
 (a) Write Short Answers.(Each of 02 marks)  
 1. What are physical characteristics of cement?  
 2. Concrete is the mixture of .....  
 (b) Short note on natural and man-made fibers. (04)
- Q.4. B) Answer the following questions (Any two) (03)**  
 (a) Write Short Answers.(Each of 01 marks)  
 1. Write the name of instrument, which is use for cement analysis .....  
 2. Define indentation mark.  
 3. Define Mortar.  
 (b) Write Short note on IR spectroscopy (03)  
 (c) Short note on TLC examination for dye composition of fibers. (03)