

**M.Sc.(FS) Semester - 3 (CBCS) Examination**  
**Nov/Dec-2023 (NEW COURSE)**  
**Forensic Engineering (Core)**

**Time: 2:30 Hours****Marks: 70****Instructions:**

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

- Que.1(A) Answer the following question. (04)  
1. What is OPC? Classify OPC accordingly to grade.  
2. Explain any two types of beams.
- Que.1(B) Answer any two questions out of three. (10)  
1. Explain to what extent are eyewitnesses very helpful during a judicial engineering investigation.  
2. Explain the standard consistency and setting time test for cement and its importance.  
3. Briefly explain any two types of concrete and their uses.
- Que.2(A) Answer the following question. (04)  
1. Explain the responsibilities and duties of first responding officer in accident type of crime scene.
- Que.2(B) Answer any two questions out of three. (10)  
1. What is skid marks? How it would be helpful to investigate hit and run type of cases?  
2. Explain the main causes of crashes in detail.  
3. Briefly explain about the primary causes of motor vehicle accident.
- Que.3(A) Answer the following question. (04)  
1. What is machine? Explain any two types of machine with examples.
- Que.3(B) Answer any two questions out of three. (10)  
1. What do you understand about fundamentals causes of machine failures? Explain manufacturing defects of machines with examples.  
2. Briefly explain the main steps of machinery failure investigation.  
3. Write a note on different points for successful analysis of machine failure.
- Que.4(A) Answer the following question. (04)  
1. What are the implications of irregular fire patterns.  
2. What is the disparity between rapid and spontaneous combustion.
- Que.4(B) Answer any two questions out of three. (10)  
1. Classify fuels accordingly to fire extinguishment purpose, with suitable example.  
2. Write a note on varied types of combustion reactions.  
3. Briefly explain forensic analysis process for arson cases.
- Que.5(A) Answer the following question. (04)  
1. Define the term: Fly rock.  
2. Briefly explain about griess test of explosive residue.
- Que.5(B) Answer any two questions out of three. (10)  
1. Explain the steps taken while investigating explosive type crime scene.  
2. Discuss: How explosive weapons affect the building and structures?  
3. Briefly explain investigation of explosive type crime scene.

\*\*\*\*\*