

Total No. of Questions: 6

Total No. of Printed Pages:2

Enrollment No.....



Faculty of Science
End Sem Examination May-2024

FS3SE03 Scientific Investigation

Programme: B.Sc. (Hons.)

Branch/Specialisation: Forensic
Science

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. How many years of commercial experience required for the photography of SOC? **1**
(a) 15 years (b) 25 years (c) 20 years (d) 30 years
- ii. Draftsman related to following process- **1**
(a) Videography (b) Sketching
(c) Photography (d) Note making
- iii. Powder pattern seen by following light condition- **1**
(a) UV light (b) Fluorescence light
(c) IR light (d) All of these
- iv. Funnel pattern found in following SOC- **1**
(a) Explosive SOC (b) Arson SOC
(c) Suicide SOC (d) None of these
- v. How many identification marks required for dead body for its identification? **1**
(a) Minimum 2 body marks (b) Minimum 5 body marks
(c) Maximum 4 body marks (d) None of these
- vi. Contusion ring found in following investigation- **1**
(a) Firearm investigation (b) Poison investigation
(c) Explosive investigation (d) None of these
- vii. What is the primary purpose of conducting a vehicle investigation- **1**
(a) To determine the vehicle's color
(b) To assess the vehicle's mileage
(c) To gather evidence related to a crime or accident
(d) None of these

[2]

- viii. Which of the following is a crucial reason for inspecting a vehicle's exterior and interior during an investigation? **1**
(a) To determine the vehicle's previous ownership history
(b) To identify potential signs of tampering or alteration
(c) To assess the vehicle's mileage accuracy
(d) To analyze the vehicle's fuel efficiency
- ix. Similar DNA found in- **1**
(a) Heterozygous twin (b) Homozygous twin
(c) Both (a) and (b) (d) None of these
- x. P30 protein found in- **1**
(a) Semen (b) Blood (c) Saliva (d) None of these
- Q.2 i. Define crime & criminal. **2**
ii. Discuss six challenges to criminal investigation. **3**
iii. Explain complete "police procedure" in detail. **5**
- OR iv. Write the modern & ancient history of criminal investigation. **5**
- Q.3 i. Define portrait Parle. **2**
ii. Explain physical pattern in identification, individualization & reconstruction with examples. **8**
- OR iii. Discuss firearm relevant pattern and fire & arson related pattern in detail with diagram. **8**
- Q.4 i. Write the six differences with bases in murder & suicide. **3**
ii. Define the asphyxia death. Write the different type of asphyxia death. Explain the investigation of cases of asphyxia death. **7**
- OR iii. Discuss detailed investigation of firearms related cases. How will you conduct inspection on that crime scene? **7**
- Q.5 i. Define vehicle & write its types with examples. **4**
ii. How will you determine cause of accidents? Explain. **6**
- OR iii. Discuss investigation of aircraft accident with one case study. **6**
- Q.6 Attempt any two: **5**
i. Explain investigation of bank fraud. **5**
ii. Give explanation of five section of offence against property. **5**
iii. Write the short note on "disputed paternity". **5**

P.T.O.

Marking Scheme

Scientific Investigation (T) - FS3SE03 (T)

| | | | |
|-----|-------|--|---|
| Q.1 | i) | ii. 25 years | 1 |
| | ii) | ii. sketching | 1 |
| | iii) | iii. IR light | 1 |
| | iv) | ii. Arson | 1 |
| | v) | I. Minimum 2 body marks | 1 |
| | vi) | i. Firearm investigation | 1 |
| | vii) | iii. To gather evidence related to a crime or accident | 1 |
| | viii) | ii. To identify potential signs of tampering or alteration | 1 |
| | ix) | i. Homozygous twin | 1 |
| | x) | i. Semen | 1 |
| Q.2 | i. | Definition of Crime - 1 Definition of Criminal - 1 | 2 |
| | ii. | Six challenges to criminal investigation- Each Challenges carry ½ marks- ½ * 6 | 3 |
| | iii. | “Police Procedure” Definition- 1-mark, different steps- 3 marks, Importance- 1 mark | 5 |
| OR | iv. | Modern History of criminal investigation- 2.5 marks Ancient History of criminal investigation- 2.5 marks | 5 |
| Q.3 | i. | Definition portrait Parle- 2 Mark | 2 |
| | ii. | Definition Physical Pattern- 1 Mark, importance – 1 mark Identification- 2 marks, individualization- 2 marks & reconstruction - 2 marks | 8 |

| | | | |
|-----|------|--|---|
| OR | iii. | firearm relevant pattern (Introduction, types, significance)–4 marks fire & arson related pattern (Introduction, types, significance)–4 marks | 8 |
| Q.4 | i. | six differences with bases in murder & suicide- Marks ½*6 | 3 |
| | ii. | Definition of the asphyxia death- 1 mark Different type of asphyxia death- 4 mark Investigation of cases of asphyxia death- 2 marks | 7 |
| OR | iii. | Investigation of firearms related cases- 4 marks Inspection on that crime scene- 3 marks | 7 |
| Q.5 | i. | Definition of Vehicle- 1 mark Its types with examples- 3 marks | 4 |
| | ii. | Determine cause of accidents (introduction- 2 marks, theory – 3 marks, importance- 1 mark) | 6 |
| OR | iii. | investigation of Aircraft Accident (Introduction – 1 mark, procedure- 4 marks, one case study- 1 mark) | 6 |
| Q.6 | i. | Investigation of Bank Fraud (introduction- 1 mark, procedure- 4 marks) | 5 |
| | ii. | explanation of five section of offence against property- 1 mark for each section | 5 |
| | iii. | short note on “Disputed Paternity”- (Introduction-1 mark, investigation- 4 marks) | 5 |
