

2/7/26
PM

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Forensic Science

[Time: 3 Hours]

[Max. Marks: 80]

IV SEMESTER

PAPER - I (Forensic Chemistry)

QP CODE: 8455

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. What is forensic chemistry? Describe distillation and fractionation of petroleum

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Describe significant of forensic chemistry
3. Write commercial uses of different petroleum along with merit and demerits
4. Importance of petroleum products in forensic investigation
5. Recognition of type of fire incident
6. Explain collection and preservation of arson evidence
7. Write about forensic information from smoke staining
8. Discuss analysis of fire debris
9. Explain post blast residue collection procedure
10. Write about detection of hidden explosives

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Write Post-flashover burning
12. Discuss smoke as forensic evidence
13. Write a characteristics of RDX
14. Write about Bomb scene management
15. Explain blast injuries
16. Define homemade explosives with examples
17. PETN (pentaerythritol tetranitrate)
18. Name the different fire patterns seen at the crime.
19. Explain mechanism of explosion
20. Bomb detection methods
21. Post blast residue analysis

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IV SEMESTER

PAPER - II (Forensic Biology)

QP CODE: 8456

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Define *biological evidence*. Explain the role and importance of biological evidence in forensic investigation.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain the structure and growth cycle of human hair.
3. Describe the process of comparison of hair samples in forensic analysis.
4. Explain how microorganisms help in postmortem interval estimation.
5. Discuss the forensic examination of plant seeds and fruits.
6. Describe the methods used to identify animal tissues in wildlife crime.
7. Write a note on the forensic value of soil microflora.
8. Explain the process of identifying unknown wood samples in forensic botany.
9. Discuss the importance of diatom test in drowning cases.
10. Explain the collection and preservation of entomological specimens.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Write the scope of forensic biology.
12. Mention any three characteristics used to identify human hair.
13. What is keratin? State its role in hair composition.
14. Define microbial forensics.
15. Write two differences between monocot and dicot leaf structures.
16. Mention any three protected plant species in India.
17. Write a note on identification of animal claws.
18. What is the significance of shell or bone fragments in wildlife cases?
19. Write two features of The Wildlife (Protection) Amendment Act, 2006.
20. Define forensic entomology and give one example of a forensic insect.
21. What is the role of maggots in estimating time since death?

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IV SEMESTER

PAPER - III (Technologic Methods in Forensic Science)

QP CODE: 8457

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Define sample preparation and analysis methods in chromatographic techniques

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Fundamental principles of gas chromatography
3. Applications and principles of liquid chromatography
4. Fundamental principles ultraviolet visible spectroscopy
5. Describe infrared spectroscopy
6. Applications of atomic absorption spectroscopy
7. Explain mass spectroscopy
8. Define principles of electrophoresis
9. Discuss infrared photography
10. Explain crime scene photography

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Write in detail atomic emission spectroscopy
12. Define fundamental principles of Microscopes
13. Describe the electron microscope
14. Describe forensic applications of microscopy
15. Discuss X-ray spectrometry
16. Write about neutron activation analysis
17. Define types of microscopes in forensic investigation
18. Discuss applications of comparison microscope
19. Applications of 3D photography in crime solving
20. Explain videography as evidence
21. Write a short note on crime scene photography