

(7 pages)

Reg. No. :

Code No. : 7835

Sub. Code : WCHSE 31

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2024.

Third Semester

Chemistry – Elective

Skill Enhancement Course II — FORENSIC
CHEMISTRY

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (15 × 1 = 15 marks)

Answer ALL questions.

Choose the correct answer :

1. The use of scientific techniques to analyze and interpret evidence in criminal cases is known as _____

- (a) Forensic science
- (b) Criminalistics
- (c) Criminology
- (d) Forensic medicine

2. Which of the following is a type of forensic evidence?

- (a) Blood
- (b) DNA
- (c) Finger prints
- (d) All of the above

3. The use of facial recognition technology and other biometric data to identify individuals and detect forgeries is known as _____

- (a) Forensic Biometrics
- (b) Forensic Anthropology
- (c) Forensic Pathology
- (d) Forensic Psychology

4. Which indicator is used in color test of blood stains _____

- (a) methyl orange
- (b) phenolphthalein
- (c) methyl red
- (d) eriochrome black - T

5. The color of blood in deaths due to burns is _____

- (a) cherry red
- (b) pink
- (c) blue
- (d) brown

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6. For most finger print examiners the chemical method of choice for visualizing latent prints is _____

- (a) Ninhydrin (b) Iodine
- (c) Silver nitrate (d) Chlorate

7. The oldest chemical method used to visualize latent prints is _____

- (a) Laser illumination
- (b) Iodine fuming
- (c) Cyane acrylate ester fuming
- (d) Silver nitrate reagent

8. Which alkaloid is found in tobacco?

- (a) Cocaine (b) Caffine
- (c) Nicotine (d) Morphine

9. Which refers to the study of blood groups?

- (a) serology (b) chemistry
- (c) physics (d) botany

10. It is said to be the best evidence to place an individual at a scene of a crime

- (a) Bite Marks
- (b) Finger prints
- (c) Broken finger mails
- (d) Video examinations

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11. The world forensic science is derived from

- (a) Latin word (b) Greek word
- (c) American word (d) English word

12. First central forensic science laboratory in India in _____

- (a) Delhi (b) Mumbai
- (c) Kolkata (d) Chennai

13. The following drugs can be detected via the hair specimens except

- (a) Cannabsis (b) Heroin
- (c) Cocaine (d) Alcohol

14. Computer forensics also known as?

- (a) Digital forensic science
- (b) Computer crime
- (c) Computer forensic science
- (d) Computer forensics investigations

15. CCFP stands for?

- (a) Cyber certified forensics professional
- (b) Certified cyber forensics professional
- (c) Certified cyber forensics program
- (d) Certified cyber forensics product

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PART B — (5 × 4 = 20 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

16. (a) Define forensic science. Explain the role of forensic laboratory.

Or

- (b) Write down the concepts of Biometric Authentication.

17. (a) What is finger printing? Explain general principles of finger printing.

Or

- (b) Write down the details of the dry powder method.

18. (a) Write a short note on Gamma hydroxybutyric acid (GHB).

Or

- (b) Write a short note on the following:

- (i) Heroin
- (ii) Cocaine.

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19. (a) Define forensic toxicology. Explain its types of forensic toxicology.

Or

- (b) Write a note on forensic DNA typing.

20. (a) Write down the uses of computers in forensic science.

Or

- (b) Write a short note on:

- (i) Image Databases
- (ii) NA Database.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)

Each answer should not exceed 600 words.

21. (a) Explain the following :

- (i) Face Recognition
- (ii) Speaker Recognition.

Or

- (b) Briefly describe the role of person identification.

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22. (a) Write a short note on :

- (i) Silver nitrate test
- (ii) Ninhydrin test.

Or

(b) Write a note on characterisation of blood stains and bloodstain patterns.

23. (a) Elaborate physical and chemical analysis of inks and paper.

Or

(b) Explain Gamma butyrolactone and its adverse effects.

24. (a) Discuss the applications of DNA testing.

Or

(b) Define forensic toxicology. Explain analytical methods in forensic toxicology.

25. (a) Discuss in detail about use of computers in forensic science.

Or

(b) Explain video image processing and animation software.

