



Date:

Registration number:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27

B.Sc. Biochemistry - II SEMESTER

SEMESTER EXAMINATION: April 2022

(Examination conducted in July 2022)

**BCHOE1repeat (NEP) B**

Time- 2 hrs

Max Marks-60

This question paper contains 2 printed pages and 2 parts

**Part A**

**Answer any 30 questions in one word or one sentence, each question carries 1 mark**

1. What is DNA?
2. Name two fictional characters who used the principles of forensic science even before it was used by the police?
3. What does one study in forensic chemistry?
4. What is the major chemical component of a bullet?
5. Why do forensic entomologists study the life cycle of insects?
6. Which toxin affects the central nervous system?
7. What is anthropometry?
8. Who observed that fingerprints had unique patterns?
9. What is 'mug shot'?
10. What is Eugenics?
11. With which biomolecule are toxins most likely to react with?
12. Where was the first Central Forensic Science institute set up in India?
13. What is *Actus Reus*?
14. Why is photography an important part of crime scene recording?
15. Draw a schematic diagram of the wheel or ray search pattern for the systematic search of evidence?
16. Which modern technology supports Locard's exchange principle?
17. What is an atom composed of?
18. Name two of the most common elements that are analysed in a forensic laboratory?
19. Who was the first scientist who was responsible for systematically organising elements in the periodic table?
20. How did forensics narrow down "Adam" as coming from West Nigeria?
21. Name a technique used to detect very minute quantities of a chemical?
22. Who was the scientist who first used a prism to demonstrate the splitting of light?
23. Why was helium not observed on earth initially?
24. Which have lower energy microwaves or X-rays?
25. When calcium metal is introduced into a flame what does the colour of the flame become?
26. What is the main purpose of chromatographic techniques?
27. How is the mass of a substance related to the degree of deflection under the influence of a magnetic field?
28. What are discreet little packages of energy also called?
29. What is Liver Mortis?

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30. Name the elements easily absorbed by bones?
31. Name two toxins?
32. What is PCR used for?

### **Part B**

**Answer any 15 questions in one or two sentences or words, each question carries 2 mark**

33. What are the two things that have to be established before a person is convicted?
34. Distinguish between criminal and civil law?
35. Name two drugs that cause hallucination?
36. Diagrammatically explain how a polymerase chain reaction is carried out?
37. Which part of an IR spectrum gives the most information, what is it called?
38. Give the spot test for the identification of cocaine?
39. Why is blood splatter analysed?
40. How is rigor mortis used to tell time of death?
41. Explain how bones are dated using carbon-14?
42. What is the use of GC-MS to the forensic scientist?
43. According to Rutherford what is the dense material found in the centre of an atom?
44. What is the principle of atomic absorption spectroscopy?
45. What are the two essential principles of any chromatographic technique?
46. How was it proved that Roberto Calvi was murdered?
47. What was Karl Landsteiner known for?
48. Forensics is not just about finding a murderer – then what is it about?