

APRIL 2017

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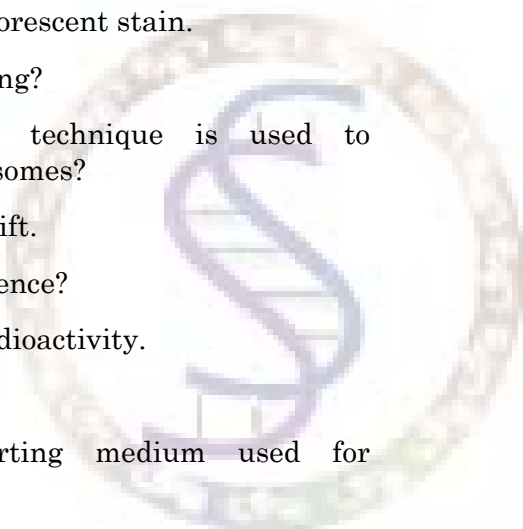
Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer any TEN questions.

Each question carries 1 mark.

1. What is cryopreservation?
 2. Write any one importance of fed batch culture.
 3. Define partition coefficient.
 4. What is dead space?
 5. Give an example for fluorescent stain.
 6. What is column switching?
 7. Which electrophoretic technique is used to separate whole chromosomes?
 8. Define bathochromic shift.
 9. What is chemiluminescence?
 10. List any two units of radioactivity.
 11. Define magnification.
 12. List out the supporting medium used for electrophoresis.
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SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

Each question carries 5 marks.

13. What are ion selective electrodes? Write their applications with suitable examples.
14. Bring out the application of hydroxylapatite chromatography.
15. Explain the technique of immunoelectrophoresis.
16. Write the principle and instrumentation of CD spectroscopy.
17. Bring out the various methods of specimen preparation for SEM analysis.
18. Give a brief account on pulsed field gel electrophoresis.
19. With a neat sketch, explain the components of a mass spectrometer.

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions.

Each question carries 10 marks.

20. Elaborate on the general approaches to biochemical investigation.
21. Discuss the principle, instrumentation and application of HPLC.

22. How will you determine the molecular weight of a protein by SDS-PAGE?
23. Explain the components of flame photometer and its applications.
24. Describe the measurement of radioactivity by liquid scintillation counters.
25. Write in detail about the working principle and applications of fluorescent microscope.

