



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER – NOVEMBER 2017

AZ 5402 - INSTRUMENTATION AND CHEMICAL TECHNIQUES

Date: 15-11-2017
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

Part A

Answer all the questions

(10×2=20 Marks)

1. Illustrate the laboratory symbols used for depicting radiation hazard and biohazard.
2. What is meant by ESR? How is it measured?
3. What are pH indicators? Give two examples.
4. State the Beer-Lambert's law.
5. Enlist any four good laboratory practices.
6. Explain *in vivo* and *in vitro* measurement giving suitable example.
7. Define Electrophoresis and chromatography
8. Enlist the medical uses of radioactive isotopes.
9. Define Buffer and Molarity.
10. Describe competitive ELISA.

Part B

Answer any FOUR questions

(4×10=40 Marks)

11. Give an account of the principle and procedure of colorimetry.
12. Discuss the classification of medical instruments.
13. Write notes on sterilization and disinfection in the laboratory.
14. What is LASER? Explain its types and medical applications?
15. Explain the working principle and use of an autoclave.
16. Explain affinity chromatography.

Part C

Answer any TWO questions

(2×20=40 Marks)

17. Describe the principle and procedure for Agarose gel electrophoresis of DNA.
18. Describe the polymerase chain reaction and mention its applications.
19. Explain the methods of measurement of blood pressure and blood flow.
20. Discuss the working of a flow cytometer

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