

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – ZOOLOGY

SECOND SEMESTER – APRIL 2010

ZO 2815 / 2809 - BIOPHYSICS

Date & Time: 19/04/2010 / 1:00 - 4:00

Dept. No.

Max. : 100 Marks

PART – A

Answer **ALL** the questions

10 x 2 = 20 Marks

1. What are isotopes?
2. What is Gibb's free energy?
3. Give any two uses of X-rays.
4. What is Quantum theory?
5. Explain antigen-antibody reaction.
6. Define Refractive index and Relative front.
7. Explain the principle involved in photoelectric effect.
8. Distinguish plasmolysis and haemolysis.
9. Comment on TEM and SEM.
10. Differentiate Centripetal from Centrifugal forces.

PART – B

Answer any **FOUR** questions

4 x 10 = 40 Marks

11. Give an account of GM Counter.
12. Write a paragraph on biomedical uses of X-rays.
13. What is centrifugation? Explain in detail ultra centrifuge.
14. Describe Brownian movement.
15. Classify chromatography and add notes on circular paper chromatography.
16. Give an account of the laws of Osmosis.

PART – C

Answer any **TWO** questions

2 x 20 = 40 Marks

17. Write an essay on the principles of Photosynthesis.
18. State and explain the Laws of Thermodynamics.
19. (a) Define Isoelectric Point. (b) Give an account of the principle and procedure involved in protein identification, using PAGE.
20. (a) Write the principle involved in detection of viscosity of a liquid. (b) Write a detailed account on the procedure involved in the estimation of the viscosity of water.
