 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION - **ZOOLOGY**

SECOND SEMESTER – APRIL 2011

# ZO 2815 / 2809 - BIOPHYSICS

Date : 05-04-2011 Dept. No. Max. : 100 Marks

Time : 1:00 - 4:00

**Part –A**

Answer **ALL** the questions  **(10×2=20 Marks)**

1. Define Gibb’s free energy.
2. Comment on Fick’s law.
3. Differentiate entropy from enthalpy.
4. List down any two applications of laser.
5. What is Plasmolysis?
6. Explain Turgor pressure.
7. Define Viscosity.
8. What is Refractive index?
9. Write down the principle of Thin Layer Chromatography.
10. Explain Donnan’s equilibrium.

**Part –B**

Answer any **FOUR** questions **(4×10= 40 Marks)**

1. Give an account of Geiger Muller counter.
2. Describe the surface tension by drop weight method.
3. What are the factors affecting enzyme action.
4. Give a detailed account on nuclear magnetic resonance.
5. Write the principle, procedure and applications of ascending paper chromatography.
6. Discuss X-ray diffraction and discuss their application.

**Part –C**

Answer any **TWO** questions **(2×20=40 Marks)**

1. Write an essay on the evolution of electrophoresis.
2. Elaborate the influence of biophysics in photosynthesis.
3. Give a detailed account of Photoelectric effect.
4. What are lasers? Explain the ruby laser and enumerate its applications.

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