LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION – **ADV. ZOOLOGY & BIOTECHNOLOGY**

FIRST SEMESTER – NOVEMBER 2010

# ZO 1815 - ADVANCED EVOLUTIONARY BIOLOGY

Date : 03-11-10 Dept. No. Max. : 100 Marks

Time : 1:00 - 4:00

**Part A**

**Answer ALL the questions. Each question carries 2 marks (10x2 = 20 marks)**

1. Comment on Agnostic period.
2. Explain Germplasm theory.
3. What are Gamma gardens?
4. Define ‘atavism’.
5. What are sibling species?
6. Distinguish ‘living fossils’ from ‘fossils of the living being’.
7. Comment on Narmada man.
8. Mention any EIGHT vestigial organs.
9. With one suitable example explain co-evolution.
10. What is biochemical metamorphosis?

**Part B**

**Answer any FOUR questions. Each question carries 10 marks (4x10 = 40 marks)**

1. Write notes on Darwinian principles.
2. Explain evolutionary significance of gene mutations.
3. Categorize animal colouration.
4. Write notes on pre-adaptation.
5. Describe the biological significance of Mesozoic and Coenozoic eras.
6. ‘Hybridization is an evolutionary catalyst’ – Substantiate.

**Part C**

**Answer any TWO questions. Each question carries 20 marks (2x20 = 40 marks)**

1. Elaborate the nature of fossils, conditions for fossilization and dating of fossils.
2. Discuss the recent concepts of Biogenetic law.
3. Write an essay on genetic polymorphism.
4. Write notes on:
5. origin of eukaryotes and
6. contributions of any FOUR Neo Lamarckians.

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