



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

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

**FIRST SEMESTER – NOVEMBER 2013**

**ZO 1821 - ADVANCED EVOLUTIONARY BIOLOGY**

Date : 11/11/2013

Dept. No.

Max. : 100 Marks

Time : 1:00 - 4:00

**SECTION A**

**Answer ALL the question**

**(10×2=20 Marks)**

1. Mention the contributions of Hugo de Vries.
2. Differentiate Batesian mimicry from Mullerian mimicry.
3. Comment on biochemical recapitulation.
4. Explain the theory of Panspermia.
5. Comment on substitution mutations.
6. What are Gamma gardens?
7. What is evolutionary constancy?
8. What are sibling species?
9. Define the law of adaptive radiation.
10. Primitive atmosphere was anoxic. Justify.

**SECTION B**

**Answer any FOUR of the following**

**(4×10=40 Marks)**

11. Evaluate Neo Lamarckism.
12. Explain any two methods of radiometric dating.
13. Describe chemical colouration in animals.
14. Categorize and describe modes of fossilization.
15. Elaborate the significance of point mutation.
16. Write notes on the contributions of Urey and Miller.

**SECTION C**

**Answer any TWO of the following**

**(2×20=40 Marks)**

17. Write an essay on natural selection and genetic polymorphism.
18. Discuss speciation and isolating mechanisms.
19. Trace evidences from biochemistry and physiology in favour of the theory of evolution.
20. How genetic principles are exploited in relation to human welfare. Explain.

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