STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2015– 2016)

SUBJECT CODE: 15ZL/MC/EE64

B. Sc. DEGREE EXAMINATION APRIL 2018
BRANCH VI.A. ADVANCED ZOOLOGY & BIOTECHNOLOGY
SIXTH SEMESTER

COURSE : MAJOR CORE
PAPER : ECOLOGY AND EVOLUTION
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS : **(10 X 3 = 30)**

1. Differentiate Autecology & Synecolgy.
2. What is Circadian rhythm? Classify.
3. Define Permafrost, Taiga & Ecotone.
4. Explain how the estuary acts as a Nutrient trap.
5. Name the three periods of the Mesozoic era.
6. State Hardy Weinberg Law. What is genetic drift?
7. What are Convergent and Divergent evolution? Give an example each.
8. What is C Value Paradox?
9. Write a note on Neanderthal man.
10. What are barriers? Classify natural barriers with an example each.

SECTION – B

ANSWER ANY FIVE QUESTIONS : **(5 X 6 = 30)**

11. Describe Thermal stratification in the aquatic medium. Add a note on range of temperature tolerance.
12. Define Natality, Mortality. Add a note on growth forms in a Population.
13. Explain the different methods of Dating of fossils.
14. What is genetic isolation? Detail on pre-mating isolating mechanisms.
15. What is molecular evolution? State the advantages of molecular data over morphological data.
16. Explain Batesian and Mullerian mimicry with suitable examples and state the significance of mimicry in evolution.
17. Enumerate any six adaptations of Desert animals.

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SECTION – C

ANSWER ANY TWO QUESTIONS : **(2 X 20 = 40)**

18. Trace the evolution of Horse from *Eohippus* to *Equus.*
19. Enumerate the five postulates of Darwinism. Explain the Modern perspectives and modern synthetic theory of Natural Selection.
20. Discuss the biological effects of light on Aquatic and terrestrial Animals.
21. Detail the physico-chemical aspects of the Marine environment and add a note on how it affects the biotic communities.

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