STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2010 - 11)

SUBJECT CODE: BT/MC/EE54

B. Sc. DEGREE EXAMINATION, NOVEMBER 2012
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR – CORE
PAPER : ECOLOGY AND ENVIRONMENTAL BIOTECHNOLOGY
TIME : 3 HOURS MAX.MARKS:100

SECTION -A (18x1= 18)

Answer ALL questions: (18 x 1=18 marks)

I .Choose the correct answer:

1. The use of bacteria to clean up unwanted harmful substances is known as
   a) Biosphere b) Biota c) Bioremediation d) Biomass
2. Diversity depends on
   a) same species b) species richness c) fragile species
3. Acute toxicity testing is for a duration of
   a) 14 days b) 14 weeks c) 14 months
4. One of the substance that is absorbed by marine algae leading to biomagnification is
   a) sodium b) mercury c) potassium
5. EIA for a major project should be exercised
   a) before the project starts b) during the project c) at the end

II. Fill in the blanks:

6. Animals that maintain a constant body temperature irrespective of the environment are called_____.
7. Communities with one or few abundant species and many rare ones show_____.
8. Food chains dependent on phytoplankton production gives a _____ pyramid of biomass.
9. The nuclear power plant that received environmental clearance recently is _____.
10. Mutagenicity test is a _____ test for toxicity.

III. Say True or False:

11. The Keystone species are those species whose removal would have a significant effect on the community structure.
12. Number and nature of species in the various trophic levels is a characteristic feature of the ecosystem.
13. Diversity depends on evenness and not on species richness.
14. Algal blooms can become toxic for feeding organisms like oysters.

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IV. Match the following:

15. Salix sp.	-	pesticide
16. Phytoplankton	-	bioaccumulator
17. Polychlorinated biphenyl	-	producer
18. Dichloro diphenyl trichloroethane	-	xenobiotics

Answer any 6 questions in not more than 50 words: **(6 x 3=18 marks)**

19. Define Homeostasis.
20. Explain Index of Similarity.
21. What is point method of sampling?
22. Define cover
23. What is biotransformation?
24. Define bioleaching.
25. What are bioindicators?
26. What is phytoremediation?
27. Explain risk characterization.

Section-B

Answer any 4 questions in not more than 200 words each . Draw diagrams wherever necessary. : **(4 x 6=24 marks)**

28. With examples explain Biomagnification.
29. Illustrate and explain food chain.
30. Explain Stratification.
31. Use of microbes in biodegradation of Xenobiotics – Discuss.
32. Describe the structure of any one kind of Ecosystem.
33. Write about the various types of toxicity testing methods.

Section – C

Answer any 2 questions in not more than 1000 words each. Draw diagrams wherever necessary: **(2 x 20 = 40 marks)**

34. Describe the different methods of study of Plant Communities and mention the merits and demerits in each method.
35. What is the role of Environment impact assessment in the current scenario?
36. Explain the different types of Bioremediation with examples.
37. Elaborately discuss the concept of Energy flow in the ecosystem.

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