

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11ZL/MC/SB13

B.Sc. DEGREE EXAMINATION NOVEMBER 2014
BRANCH VLA. – ADVANCED ZOOLOGY & BIOTECHNOLOGY
FIRST SEMESTER

COURSE : MAJOR CORE
PAPER : SOIL BIOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION - A

ANSWER ALL QUESTIONS

(10×3=30)

1. Fill in the blanks

- a. Moisture that is held at the surface of soil particles by surface tension is called _____.
- b. Salinization of soil is a greater problem in _____.
- c. Silt is characterized by which particle size? _____.

2. How can human activities affect the carbon cycle?

3. Distinguish between climatic climax and edaphic climax.

4. Match the following

- | | |
|--|----------------------------|
| a) The process of extracting metals from ore bearing rocks | – Biosorption |
| b) The process of converting environmental pollutants into harmless products by naturally occurring microbes | – Intrinsic bioremediation |
| c) A non- directed physio chemical interaction between heavy metal ions and microbial surface | – Bioleaching |

5. Write about biomagnification.

6. Give the schematic diagram of water cycle.

7. Explain briefly food web with an example.

8. Give the importance of Bioleaching.

9. How do you prevent soil erosion?

10. Write a note on sodic soils?

SECTION - B

ANSWER ANY FIVE QUESTIONS

(5 x 6 = 30 MARKS)

11. Write a brief account on properties of soil
12. Explain carbon cycle with illustrations.
13. Briefly describe the structure of an ecosystem.
14. Evaluate the role of soil flora and fauna in improving soil fertility.
15. Write a note on soil conservation measures.
16. Give a brief account on soil profile.
17. Explain food chain with examples.

SECTION - C

ANSWER ANY TWO QUESTIONS.

(2 x 20 = 40 MARKS)

18. Give a detailed account on the types of soils found in India, their characteristics and crops supported.
19. Explain nitrogen cycle with neat illustrations.
20. Give a detailed account on ecological succession. Explain with examples.
21. Write an essay on soil pollution and control measures.
