

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 2013  
BRANCH VI.A. – 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 with suitable answers**
  - a) ----- causes chemical weathering of rocks.
  - b) Most plants prefer pH range of -----.
  - c) Soil texture refers to -----.
2. **Distinguish between**
  - a) Alluvial and colluvial soil
  - b) Humus and litter
3. Illustrate the layers of biosphere.
4. **Match the following**
  - a) Pedosphere - densest part of earth
  - b) Geosphere - gaseous surrounding
  - c) Atmosphere - outermost layer of earth
5. Write a short note on water table.
6. Define ecosystem.
7. What are ecological indicators?
8. What is bioleaching?
9. Name three soil micro arthropods.
10. Mention the characteristics of a marsh.

**SECTION-B**

**ANSWER ANY FIVE QUESTIONS.**

**(5×6=30)**

11. Enumerate points on the scope of soil biology.
12. Correlate vermicomposting with organic farming.
13. Explain food chain and food web with an example.
14. Explain physical, chemical and biological weathering of rocks.
15. Explain the process of ecological succession.
16. Write an account on extraction and sampling methods for soil fauna.
17. Explain the factors responsible for soil erosion.

**SECTION-C**

**ANSWER ANY TWO QUESTIONS.**

**(2×20=40)**

18. Write short notes on the following.
  - a) Soil profile
  - b) Properties of soil
  - c) Soil classification
  - d) Types of soils found in India.
19. Explain how biogeochemical cycles determine soil fertility.
20. Write an essay on soil analysis.
21. Give an account on agricultural pollution and its control measures.

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