

**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 2012**  
**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)**

- Fill in the blanks with suitable answers
  - The smallest three dimensional volume of soil is known as \_\_\_\_\_.
  - \_\_\_\_\_ is the breakdown of bigger rocks into finer particles.
  - Bulk density of the soil is inversely proportionate to \_\_\_\_\_.
- Distinguish between
  - Hygroscopic co-efficient and Wilting co-efficient
  - Residual soil and transported soil
- Match the following
  - Eolian - soil transported by snow
  - Glacial - soil transported by running water
  - Alluvial - soil transported by wind
- Define soil.
- What are edaphic factors?
- Draw a flow chart showing water cycle.
- What are epigeics?
- Differentiate between Mor humus and Mull humus.
- Define Glaciation.
- Explain Biomagnification

**SECTION-B**

Answer **ANY FIVE** Questions.

**(5×6=30)**

- With a neat labeled diagram explain soil profile.
- What is an ecosystem? Explain soil as an ecosystem.
- Write short notes on soil reclamation.
- Explain the methods used in extraction of soil fauna.
- Discuss the role of microbes in bioleaching.
- Enumerate the properties of soil.
- Write a short note on Phosphorus Cycle.

**SECTION-C**

Answer **ANY TWO** Questions.

**(2×20=40)**

18. Explain in detail the nitrogen cycle.
19. Discuss the cause and effects of soil pollution.
20. What is Ecological succession? Explain terrestrial succession.
21. Write an essay on vermicomposting.

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