

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2005-06 & thereafter)

SUBJECT CODE: ZL/MO/SB14

B.Sc. DEGREE EXAMINATION NOVEMBER 2007
BRANCH VI.A. – ADVANCED ZOOLOGY & BIOTECHNOLOGY
FIRST SEMESTER

COURSE : MAJOR OPTIONAL
PAPER : SOIL BIOLOGY AND TECHNOLOGY
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A **(10 x 3 = 30)**

1. **FILL IN THE BLANKS WITH SUITABLE ANSWERS**
 - a) Monocrotopos is a
 - b) is the property of soil
 - c) are the called the intestine of Earth
2. List out the Five bio geo chemical cycles.
3. **MATCH THE FOLLOWING**
 - a) Pedogenesis - Pollution
 - b) Earthworm - bio geo chemical cycle
 - c) Carbon Monoxide - bioleaching
 - d) Nitrogen fixing bacteria - Ecosystem
 - e) Microbes - Soil formation
 - f) Pond - Organic farming
4. **STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE/FALSE**
 - a) Use of Pesticides is beneficial to man kind
 - b) Flora and Fauna help in soil fertility
 - c) Microbes reduce pollution
5. **DISTINGUISH BETWEEN**
 - a) Vermicompost and Vermiwash
 - b) Food chain and food web
 - c) Afforestation and Deforestation
6. Define the Following
 - a) Biosphere
 - b) Polyclimax theory
 - c) Soil porosity
7. **CHOOSE THE CORRECT ANSWER**
 - a) *Aspergillus niger* is a
 - i) Fungi
 - ii) bacteria
 - iii) Virus
 - b) Chromium is used
 - i) Sugar industry
 - ii) Leather industry
 - iii) Paper industry
 - c) Air Pollution is caused by
 - i) Animals waste
 - ii) Exhaust from vehicles
 - iii) Hospital waste
8. Explain Auto tropic succession.
9. Briefly write about one sampling methods of soil fauna you have studied.
10. What are the abiotic factors?

SECTION – B

ANSWER ANY FIVE QUESTIONS

(5 x 6 = 30)

11. Write a note on the role of earthworms in organic farming.
12. Explain Nitrogen cycle with a suitable diagram.
13. With a neat Labeled diagram describe the Soil Profile.
14. What do you understand by Pedogenesis.
15. Explain the methods of Pollution control.
16. Define succession and their types.
17. Afforestation will regain the nature's wealth. Explain.

SECTION – C

ANSWER ANY TWO QUESTIONS

(2 x 20 = 40)

18. Write an essay on Soil Pollution.
19. Explain in detail about Vermitechnology.
20. Draw and explain in detail about Ecosystem.
21. Do you agree that fauna, flora and microbes help in soil fertility – Substantiate your answer with suitable example
