STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2011 - 12)

SUBJECT CODE: 11BT/MC/AF14

B. Sc. DEGREE EXAMINATION, NOVEMBER 2011
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIRST SEMESTER

COURSE : MAJOR – CORE
PAPER : ALGAE, FUNGI AND LICHENS
TIME : 3 HOURS MAX.MARKS:100

SECTION A (36 marks)

ANSWER ALL QUESTIONS:

I. CHOOSE THE CORRECT ANSWER : (1 x 5 = 5 marks)

1. Heterocysts are found in
   [a] Chara [b] Ulva [c] Nostoc [d] Cladophora

2. Gonimoblast filaments are seen in
   [a] Cladophora [b] Volvox [c] Sargassum [d] Polysiphonia

3. The reserve food in red algal cells is
   [a] Floridean starch [b] Glycogen [c] Volutin [d] Starch

4. Which one of the following is a unicellular, endobiotic, holocarpic pathogen ?
   [a] *Albugo* [b] *Cercospora* [c] *Puccinia* [d] *Synchytrium*

5. Club root disease of crucifers is caused by
   [a] *Cercospora arachidicola* [b] *Plasmodiophora brassicae*
   [c] *Albugo candida* [d] *Puccinia graminis*

II. STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE: (1 x 5 = 5 marks)

6. The thallus of *Caulerpa* is diploid.
7. The receptacular branches of *Sargassum* bear sterile conceptacles.
8. The perfect stage of A*spergillus nidulans* is *Emericella nidulans*.
9. The fruiting body of *Polyporus* is an ascocarp.
10. Teliospores of *Puccinia* are formed on a holobasidium.

III. COMPLETE THE FOLLOWING : (1 x 4 = 4 marks)

11. Phaeophycophyta are commonly called the ----------
12. The female sex organ of Chara is known as ----------.
13. Soredia and Isidia are found in ----------.
14. Skeletal strands in the rhizome of *Caulerpa* are called ----------.

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IV. MATCH THE FOLLOWING : (1 x 4 = 4 marks)

15. Myxomycetes	[a] White rust
16. Deuteromycetes	[b] Sea lettuce
17. *Ulva lactuca*	[c] Slime molds
18. *Albugo candida*	[d] Red rust
	[e] Fungi Imperfecti

V. ANSWER ANY SIX WITHIN 50 WORDS: (6 x 3 = 18 marks)

19. Point out any three distinguishing features of Cyanochloronta
20. Describe the structure of thallus of fruticose Lichen.
21. Describe the plantbody of Sargassum.
22. Describe the structure of the asexual reproductive body of Aspergillus.
23. List the characteristics of Phaeophycophyta.
24. Mention the host plant, pathogen and the symptoms of the tikka disease.
25. Write notes on thallus of volvox.
26. List the range of host plants and the symptoms produced by *Synchytrium*.
27. What is dikaryotization ?

SECTION B

ANSWER ANY FOUR QUESTIONS, EACH WITHIN 200 WORDS, DRAW DIAGRAMS WHEREVER NECESSARY : (4 x 6 = 24 marks)

28. Explain alternation of generation in *Ulva*.
29. Describe asexual reproduction in *Cladophora*
30. Describe the symptoms, causal organism & control measures for tikka disease.
31. Describe the apothecium of *Peziza*.
32. Explain sexual reproduction in *Albugo*.
33. Discuss the association seen in lichen and point out the different types.

SECTION C

ANSWER ANY TWO QUESTIONS IN NOT MORE THAN 1000 W0RDS EACH. DRAW DIAGRAMS WHEREVER NECESSARY. (2 x 20 = 40 marks)

34. Give an illustrated account of the life cycle of *Polysiphonia*.

35. Describe thallus organization & Sex organs of Chara.

36. Give a concise account of the characteristics of the major fungal class.

37. Describe the life cycle of Puccinia.

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