STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11BT/MC/FB14

B. Sc. DEGREE EXAMINATION, NOVEMBER 2013
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIRST SEMESTER

COURSE : MAJOR – CORE
PAPER : ALGAL AND FUNGAL BIOTECHNOLOGY
TIME : 3 HOURS MAX.MARKS:100

SECTION – A

ANSWER ALL QUESTIONS (18 X 1 = 18)

I. CHOOSE THE CORRECT ANSWER (4 x 1 = 4 Marks)

1. Pigment abundantly present in *Spirulina* is
   a. Chlorophyll b. Phycocyanin c. Phycoerythrin d. β-carotene

2. Medium used for antimicrobial activity is -------.
   a. Muller Hilton agar b. LB agar c. Nutrient agar d. PDA medium

3. Which one of the following is not edible but poisonous?
   a. *Pleurotus* b. *Agaricus* c. *Ammanita* d. *Volvariella*

4. Medium used for citric acid production by *A. niger* is
   a. Prescott Dodger medium c. Potato Dextrose agar
   b. LB broth d. BG 11 medium

II. FILL IN THE BLANKS (5 x 1 = 5 Marks)

5. Alginate is isolated from the plant _____.
6. Sea weed fertilizers are used for _____ crop cultivation.
7. Chemical used in spawn preparation is _____.
8. Pencillin is isolated from_____ _____.
9. Association of fungus with roots of higher plants is called_____.

III. State whether the following statements are true or false. (5 x 1 = 5 Marks)

10. *Spirulina* cultivation is with CHU 10 medium.
11. Phycocyanin pigment is found in BGA.
12. Edible part of *Agaricus* is termed as basidiocarp.
13. *Apergillus flavus* is used in the production of citric acid.
14. Mycorrhizae is a nitrogenous biofertilizer.

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IV. Match the following. (4 x 1 = 4 Marks)

15.	a. *Anabaena*	(i) Ascomycetes
16	b. *Spirulina*	(ii) Cyanophyceae
17	c. *Agaricus*	(iii) Chlorophyceae
18	d. *Penicilium*	(iv) Basidiomycetes

V. Write short notes on any SIX, each in about 50 words. 6 x 3 = 18 Marks)

19. Agarophytes
20. Importance of carageenan
21. Biofuel algae
22. Heterocyst
23. Morphology of *Agaricus*
24. Mother spawn
25. Uses of citric acid
26. Criteria for strain selection
27. VAM

SECTION – B

ANSWER ANY FOUR QUESTIONS. EACH ANSWER NOT TO EXCEED 200 WORDS: DRAW DIAGRAMS WHEREVER NECESSARY. (4X6=24)

28. Enumerate the economic importance of *Spirulina*.
29. Bring out the procedure followed in antimicrobial studies.
30. How is compost for *Agaricus* prepared?
31. Give the procedure followed in citric acid production.
32. Explain the applications of mycorrhizae.
33. Describe the production of Agar Agar.

SECTION – C

ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1000 WORDS: DRAW DIAGRAMS WHEREVER NECESSARY. (2X20=40)

34. Elaborate on the use of algae in Bioremediation.
35. Give the methodology and applications of Algal Biofertilisers.
36. How is *Pleurotus* being cultivated in mass.
37. Describe penicillin production procedure and its recovery process.

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