

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086  
(For candidates admitted during the academic year 2008-09 & thereafter)

SUBJECT CODE: BT/MC/FB14

B. Sc. DEGREE EXAMINATION, NOVEMBER 2008  
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 (5 X 1 = 5)

I FILL IN THE BLANKS:

1. The Seaweeds that yield agar-agar are known as \_\_\_\_\_.
2. \_\_\_\_\_ and \_\_\_\_\_ are important vitamins found in mushrooms.
3. \_\_\_\_\_ is the precursor of Penicillin.
4. The chemical constituent of alginates are \_\_\_\_\_.
5. All carrageenans are Linear \_\_\_\_\_.

II. STATE WHETHER TRUE OR FALSE: (5 X 1 = 5)

6. Spirulina is a red alga.
7. Algal biofertilisers do not contaminate ground water.
8. Beet Molasses is used as 'N' source in citric acid production.
9. Fruit bodies of mushroom can be used to make handbags.
10. *Candida lipolytica* produces Penicillin.

III MATCH THE FOLLOWING (5 X 1 = 5)

- |                        |   |                       |
|------------------------|---|-----------------------|
| 11. <i>Gracilaria</i>  | - | Oyster mushroom.      |
| 12. <i>Grateloupia</i> | - | Biofertiliser.        |
| 13. <i>Nostoc</i>      | - | Paddy straw mushroom. |
| 14. <i>Volvariella</i> | - | Agar-agar.            |
| 15. <i>Pleurotus</i>   | - | Carrageenan.          |

IV. GIVE THE SPECIES NAME OF POLYPORUS WHICH PRODUCE THE FOLLOWING PRODUCTS 6x½ =3

- | Name                       | Product                |
|----------------------------|------------------------|
| 16. <i>Polyporus</i> _____ | - snuff                |
| 17. P. _____               | - flower pot           |
| 18. P. _____               | - dye                  |
| 19. P. _____               | - emits light          |
| 20. P. _____               | - medicine             |
| 21. P. _____               | - causes hallucination |

**V. ANSWER ANY SIX IN 50 WORDS****6x3=18**

22. Liquid seaweed fertilizer.
23. SCP.
24. Alginic acid.
25. Casing.
26. Uses of citric acid.
27. Composting.
28. High yielding strains of *Penicillium chrysogenum*

**SECTION – B****ANSWER ANY FOUR QUESTIONS. EACH ANSWER NOT TO EXCEED 200 WORDS:****(4X6=24)**

29. Outline the uses of carrageenan.
30. Give an account of the extraction of agar – agar.
31. Draw and describe internal structure of mushrooms.
32. Write notes on recovery and preparation of inoculum in citric acid production.
33. Describe the method of extraction of alginic acid.
34. Give a brief account on spawn and methods of spawning.

**SECTION – C****ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1000 WORDS:****(2X20=40)**

35. Compare the production of *Agaricus bisporous* and *Pleurotus* sp
36. Give an account of the production of algal biofertiliser.
37. Explain penicillin production.
38. Explain in detail the out door culture of *Spirulina*.

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