



MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No. :.....

Name :.....

First Semester Career Related B.Sc. Degree Examination, November 2015

First Degree Programme under CBCSS

Vocational Course – I: (for Botany and Biotechnology)

AUBB151: Microbiology

(for 2015 Admissions Only)

Time: 3 Hours

Max. Marks : 80

SECTION – A

Answer ALL the following each in a word or as short notes.

1. Define Fungi.
2. Give an example of free living nitrogen fixing bacteria.
3. Who is known as the Father of Microbiology ?
4. What is peritrichous flagellation ?
5. What is a defined culture medium ?
6. Expand SSF.
7. Name an algae used as SCP.
8. What is an antibiotic ?
9. Name a protozoan disease in human.
10. Define pure culture.

(10 × 1 = 10 Marks)

SECTION – B

Answer any EIGHT questions, not exceeding one paragraph.

11. What is filter sterilization ?
12. Explain the types of flagellation seen in bacteria.
13. Explain Disc diffusion assay.

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14. Write notes on human diseases caused by Mycoplasma.
15. Explain the role of bacteria in sulphur cycle.
16. Explain the mode of action of any two antibiotics.
17. What is static fermentation ?
18. Explain Pasteurization.
19. What you mean by Stab culture ?
20. Write notes on any two bacterial culture media and their use.
21. What is diauxic growth curve ?
22. What are the various physical agents used in the control of microorganisms ?

(8 × 2 = 16 Marks)

SECTION – C

Short essay type : Answer any SIX questions.

23. Explain the production of heterologous proteins in microbes.
24. Explain the industrial production of penicillin.
25. Write notes on the isolation of anaerobic microbes.
26. Write notes on methanogenic bacteria.
27. Write notes on photosynthetic bacteria.
28. Explain classification of bacteria based on nutrition.
29. Explain the cell wall of gram positive bacteria.
30. Explain the techniques of isolation of anaerobic bacteria.
31. Explain the role of bacteria in phosphorous cycle.

(6 × 4 = 24 Marks)

SECTION – D

Long essay type : Answer any TWO questions.

32. Explain Lytic cycle.
33. Explain Nitrogen cycle with special emphasis on microbes involved.
34. Explain the various assays used to detect antibiotic production.
35. List out the strain improvement strategies used in industrial microbiology.

(2 × 15 = 30 Marks)

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