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Name :.....



MAR IVANIOS COLLEGE (AUTONOMOUS) THIRUVANANTHAPURAM

First Semester Career Related B.Sc. Degree Examination, November 20	16
First Degree Programme under CBCSS	
Vocational Course – I: (for Botany and Biotechnology)	
AUBB151: Microbiology	
(Common for $\textbf{Regular} - 2016$ Admn. and $\textbf{Improvement} - 2015$ Admn.)	
Time: 3 Hours Max. Marks	: 80

SECTION - A

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

- 1. Name two nitrifying bacteria.
- 2. What are thermophiles?

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- 3. Expand PDA.
- 4. What is yogurt?
- 5. The most commonly used solidifying agent for culture media.
- 6. Name a gaseous sterilant.
- 7. What is the principle of autoclaving?
- 8. What is antibiosis?
- 9. A bacteria without cell wall.
- 10. What are auxotrophs?

 $(10 \times 1 = 10 \text{ Marks})$

SECTION - B

Answer any **EIGHT** questions, not exceeding one paragraph.

- 11. How does the class Deuteromycetes differ from the other fungi?
- 12. What are mycoplasmas?
- 13. Differentiate prokaryotes and eukaryotes.
- 14. What are induced mutations? Name two chemical agents causing mutations.

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- 15. What is SCP? Name two organism used for SCP production.
- 16. Write short note on methanogenic bacteria.
- 17. What are chemoautotrophs?
- 18. Name any four dairy products and the organism responsible for its production.
- 19. Write short note on filter sterilization.
- 20. What is germ theory of disease and what is Pasteur's role in proposing this theory?
- 21. Briefly discuss the importance of bacteria in Sulphur cycle.
- 22. What are the properties of an ideal antibiotic?

 $(8 \times 2 = 16 \text{ Marks})$

SECTION - C

Short essay type: Answer any SIX questions.

- 23. Differentiate Gram positive and Gram negative bacteria.
- 24. Classify bacteria according to their nutritional requirements.
- 25. How will you check the potency of an antibiotic?
- 26. Briefly explain phosphorous cycle.
- 27. Explain symbiotic nitrogen fixation.
- 28. How is energy trapped during the electron transport system?
- 29. What is culture media? Differentiate selective and differential media.
- 30. Briefly describe the strain improvement strategies.
- 31. What is bacterial growth curve? Explain.

 $(6 \times 4 = 24 \text{ Marks})$

SECTION - D

Long essay type: Answer any TWO questions.

- 32. Illustrate the lytic and lysogenic cycle of bacteriophage.
- 33. Discuss the role of microorganisms in Nitrogen cycle.
- 34. What is pure culture? Why are pure cultures of microorganisms required in the laboratory? How will you obtain pure culture of bacteria?
- 35. List various physical and chemical agents used to control microbial growth.

 $(2 \times 15 = 30 \text{ Marks})$