

QP Code : U24A081

Reg. No :

Name :

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER B.Voc (CBCSS - VUG) DEGREE EXAMINATION, November 2024

**B.Voc Applied Biotechnology
SDC1APB03 : Medical Microbiology
2024 Admission Onwards
(Credits: 4)**

Time : 2.5 Hours

Maximum Marks : 80

Section A

Short answer type carries 2 Marks each (Ceiling : 25 Marks)

1. List two methods used for isolating pure cultures. [BTL1]
2. List the contributions of Louis Pasteur. [BTL1]
3. What is the temperature typically used in hot air oven for sterilization? [BTL1]
4. Name the causative agent of Typhoid fever. [BTL1]
5. Apply bacterial morphology to identify the bacterial shapes in a mixed culture of cocci and spirilla. [BTL3]
6. Explain about the term "MRSA". [BTL2]
7. How would the removal of a bacterial capsule affect its ability to cause disease? [BTL3]
8. How would you apply your knowledge of *Vibrio cholerae* to differentiate it from other *Vibrio* species? [BTL3]
9. Describe how would you manage a patient with chronic Hepatitis B to prevent liver damage. [BTL3]
10. A patient was diagnosed with high fever and rash, how would you confirm measles as the cause for the same. [BTL3]
11. Analyze the limitations of using simple stains in identifying bacterial species compared to differential stains. [BTL4]
12. Compare the effectiveness of different types of light microscopy objectives. [BTL4]
13. Compare the structural features of enveloped Vs non enveloped viruses. [BTL4]
14. Compare the general characteristics of fungi with mycoplasma. [BTL4]
15. Compare indirect methods for measuring microbial growth. [BTL4]

Turn Over

Section B

Paragraph types carries 5 Marks each (Ceiling : 35 Marks)

16. Define the role of Cryopreservation and Lyophilization in preserving microbial cultures. [BTL1]
17. What is the primary mode of transmission for *Aspergillus* species? [BTL1]
18. Describe the role of adhesins in microbial attachment to host tissues. [BTL2]
19. Describe the role of *Candida albicans* as part of normal flora and how it becomes pathogenic. [BTL2]
20. Examine how would you apply the plate count method to determine the number of viable bacteria in a sample. [BTL3]
21. Apply hand hygiene protocols to control the spread of community- acquired and nosocomial infections. [BTL3]
22. Analyze the effectiveness of BCG vaccination in preventing tuberculosis. [BTL4]
23. Assess the role of public health programs in controlling the spread of *Neisseria gonorrhoeae* infections. [BTL5]

Section C

Essay-type carries 10 Marks : Answer any two questions.

24. Describe working principle, types and application of Electron microscopy. [BTL2]
25. Using your knowledge of filariasis, how would you give a public health plan for controlling and preventing the disease in a region where it is highly prevalent. [BTL3]
26. Analyze the effectiveness of physical Vs chemical sterilization methods. [BTL4]
27. Evaluate the role of community health education in controlling Malaria. [BTL5]
