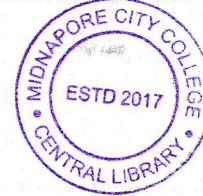


**PG (CBCS)**  
**M.Sc. Semester-III Examination, 2022**  
**MEDICAL LABORATORY TECHNOLOGY**  
**PAPER: MLT 303B**  
**(CLINICAL BACTERIOLOGY & MYCOLOGY)**



**Full Marks: 40**

**Time: 2 Hours**

**GROUP-A**

**Answer any FOUR questions out of the following:**

**2X4 = 8**

1. What is bactoprenol? State its function. 1+1
2. Define bacterial mean growth rate constant.
3. What are capnophiles?
4. Define transient flora.
5. State any two characteristics features of *Mycobacterium tuberculosis*.
6. Name the causative microorganism for athlete's foot.
7. Which proteins are involved in the stabilization of divisome complex?
8. How could you destroy the *Cornebacterium diphtheriae*?

**GROUP-B**

**Answer any FOUR questions out of the following:**

**4X4 = 16**

9. Write down the mechanism of bacterial antibiotic resistance.
10. Define chemostat? Establish that mean generation time is reciprocal to mean growth rate constant. 1+3
11. What is the significance of the unculturable bacteria?
12. Discuss on diphtheria toxin.
13. Why are the phenotypic & genotypic characterizations of bacteria performed during the exponential growth phase?
14. What is nosocomial infection? Describe different types of nosocomial infection. 1+3
15. State the role of Min proteins in bacterial cell wall synthesis.
16. How do you perform the quality control test after bacteriological media preparation?

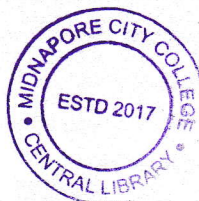
**P.T.O.**

**GROUP-C**

Answer any **TWO** questions out of the following:

**2X8 = 16**

17. State the pathogenesis of *Vibrio cholerae*. Describe the identification process of this pathogen in laboratory? 4+4
18. State the pathogenesis of *Mycobacterium tuberculosis*. How do you detect this pathogen in laboratory? 4+4
19. What are the roles of resident microflora? State their disadvantages. Name the normal microflora of upper respiratory tract and mouth. 3+2+3
20. What is quorum sensing? Briefly describe the quorum sensing of *Vibrio fischeri* with diagram. 3+5



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