

**BACHELOR OF MEDICAL LABORATORY
TECHNOLOGY
FIRST SEMESTER
MICROBIOLOGY I
BMLT – 104 [REPEAT]
(USE OMR SHEET FOR OBJECTIVE PART)**

**SET
A**

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

Marks: 20

(Objective)

Choose the correct answer from the following:

1 × 20 = 20

1. Viable count of bacteria means
 - a. Total count of bacteria
 - b. No of living cell
 - c. Both a & b
 - d. No of death bacteria
2. Lipopolysaccharide is a major component of cell in
 - a. Gram positive bacteria
 - b. Gram negative bacteria
 - c. Fungus
 - d. Parasite
3. Holder method is the example of
 - a. Tyndallisation
 - b. Pasteurization of milk
 - c. Dry heat sterilization
 - d. Chemical method sterilization
4. Chemical disinfectants which can be safely applied to living tissues to prevent infection are known as:
 - a. Antiseptics
 - b. Formaldehyde
 - c. Ethylene oxide
 - d. None of the above
5. Which of the following sterilisation conditions are used in autoclave?
 - a. 121°C, 15 pounds pressure/sq inch, 15 minutes
 - b. 140°C, 10 pounds pressure/sq inch, 15 minutes
 - c. 160°C, 20 pounds, pressure/sq inch 20 minutes
 - d. None of the above
6. Which bacterial spores are used as sterilisation control in autoclave?
 - a. Clostridium perfringens
 - b. Bacillus cereus
 - c. Bacillus stearothermophilus
 - d. Pseudomonas aeruginosa
7. The process by which an article, surface or medium is made free of all microorganisms either in the vegetative or spore form is known as
 - a. Sterilization
 - b. Disinfection
 - c. Asepsis
 - d. Antiseptic
8. Function of decolourizer in gram staining is
 - a. Remove the excess stain
 - b. Form complex with crystal violet
 - c. Swell the bacterial cell
 - d. Both b & c

9. Bacteria which can grow at temperature between 25°C and 40°C are known as:
 - a. Mesophiles
 - b. Psychrophiles
 - c. Thermophiles
 - d. All of the above
10. Generation time of *Mycobacterium tuberculosis* is about:
 - a. 20 seconds
 - b. 20 minutes
 - c. 20 hours
 - d. 20 days
11. Light Source in microscope also called as
 - a. Condenser
 - b. Fine adjustment
 - c. Stage
 - d. Illuminator
12. Other name of 10X objective lens
 - a. High Power
 - b. Low power
 - c. Scan
 - d. Oil immersion
13. PCR was discovered by
 - a. Metchnikoff
 - b. Kary B Mullis
 - c. Gilbert
 - d. Fleming
14. Father of modern microbiology is
 - a. Gilbert
 - b. Joseph lister
 - c. Fleming
 - d. Antonie Van Leeuwenhoek
15. Gram's iodine is a
 - a. Decolorizer
 - b. Mordant
 - c. Primary stain
 - d. Secondary Stain
16. Agar concentration required to prepare culture media
 - a. 2%
 - b. 0.25%
 - c. 3-5%
 - d. 0.5%
17. Amies media is an example of
 - a. Anaerobic media
 - b. liquid media
 - c. Semi-solid media
 - d. Solid media
18. All of the following are examples of enriched media except
 - a. Nutrient agar
 - b. Blood agar
 - c. Chocolate agar
 - d. MacConkey Agar
19. The process by which an article, surface or medium is made free of all microorganisms either in the vegetative not necessarily spore form is known as
 - a. Sterilization
 - b. Disinfection
 - c. Asepsis
 - d. Antiseptic
20. Who is known as the father of antiseptic surgery?
 - a. Robert Koch
 - b. Louis Pasteur
 - c. Paul Ehrlich
 - d. Joseph Lister

(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. Define Sterilization. Explain the process of sterilization | 2+8=10 |
| 2. Write the principle procedure and interpretation of gram staining | 10 |
| 3. a. Write the principle of simple staining.
b. Explain bacterial growth curve along with Diagram. | 4+6=10 |
| 4. a. Classify bacterial based on their morphology.
b. Discuss shortly about Autoclave. | 6+4=10 |
| 5. a. Discuss briefly about different culture methods.
b. List at least five differences between eukaryotic and prokaryotic cells. | 5+5=10 |
| 6. a. Discuss factors affecting bacterial growth.
b. Draw a diagram of cell and level it. | 6+4=10 |
| 7. a. What is microscope? What are the various types of microscopes?
b. Explain bacterial cell division and bacterial count. | 4+6=10 |
| 8. What is culture media? What is the important of culture media in microbiology? Describe the types of culture media in details. | 2+2+6
=10 |

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