

**BACHELOR OF MEDICAL LABORATORY
TECHNOLOGY
FIRST SEMESTER
MICROBIOLOGY I
BMLT – 104**

**SET
B**

(USE OMR SHEET FOR OBJECTIVE PART)

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

1×20=20

Choose the correct answer from the following:

- Other name of 10X objective lens
 - High Power
 - Low power
 - Scan
 - Oil immersion
- Amies media is an example of
 - Anaerobic media
 - liquid media
 - Semi-solid media
 - Solid media
- 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
 - Sterilization
 - Disinfection
 - Asepsis
 - Antiseptic
- Who is known as the father of antiseptic surgery?
 - Robert Koch
 - Louis Pasteur
 - Paul Ehrlich
 - Joseph Lister
- All of the following are examples of enriched media except
 - Nutrient agar
 - Blood agar
 - Chocolate agar
 - MacConkey Agar
- Gram's iodine is a
 - Decolorizer
 - Mordant
 - Primary stain
 - Secondary Stain
- Father of modern microbiology is
 - Gilbert
 - Joshep lister
 - Fleming
 - Antonie Van Leeuwenhoek
- Generation time of *Mycobacterium tuberculosis* is about:
 - 20 seconds
 - 20 minutes
 - 20 hours
 - 20 days
- PCR was discovered by
 - Metchnikoff
 - Karry B Mullis
 - Gilbert
 - Fleming

10. Agar concentration required to prepare culture media
 - a. 2%
 - b. 0.25%
 - c. 3-5%
 - d. 0.5%
11. 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
12. 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
13. 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
14. 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
15. Viable count of bacteria means
 - a. Total count of bacteria
 - b. No of living cell
 - c. Both a & b
 - d. No of death bacteria
16. 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
17. Light Source in microscope also called as
 - a. Condenser
 - b. Fine adjustment
 - c. Stage
 - d. Illuminator
18. Lipopolysaccharide is a major component of cell in
 - a. Gram positive bacteria
 - b. Gram negative bacteria
 - c. Fungus
 - d. Parasite
19. Which bacterial spores are used as sterilisation control in autoclave?
 - a. Clostridium perfringens
 - b. Bacillus cereus
 - c. Bacillus stearothermophilus
 - d. Pseudomonas aeruginosa
20. Holder method is the example of
 - a. Tyndallisation
 - b. Pasteurization of milk
 - c. Dry heat sterilization
 - d. Chemical method sterilization

(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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