

BACHELOR IN 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 mins.

Marks: 20

(Objective)

1×20=20

Choose the correct answer from the following:

- Which of the following is used as a solidifying agent for media?
 - Beef extract
 - Peptone
 - Agar
 - Yeast extract
- Zn staining stands for
 - Zehl Nelson staining
 - Zeihl Neelson staining
 - Ziehl Neelsen staining
 - Zeihl Neelsen staining
- Blood agar is used for the cultivation of?
 - Mosquitoes
 - Fastidious bacteria
 - Halophiles
 - Red algae only
- Generation time for *M.tuberculosis* is
 - 20 mins
 - 20 days
 - 20 weeks
 - 20 hours
- What is the difference between nutrient agar and nutrient broth?
 - one is liquid and one is solid
 - one is sterile and one is not sterile
 - one is acidic and one is basic
 - one has extra sugar and one does not
- Which of the following instrument is used for sterilizing the media after it has been prepared?
 - Autoclave
 - Laminar Air Flow Chamber
 - Inoculum Needle
 - Incubator
- Anaerobic bacteria better can grow in
 - In the presence of oxygen
 - In the absence of oxygen
 - Both a & b
 - Presence of oxygen does not matter
- Regardless of the media type, the best temperature for most bacteria is
 - 10 -15°C
 - 25 - 40°C
 - 60°C
 - 100°C
- Viable count means
 - It measure the total no of living cell
 - This indicates total no of bacteria in the specimen
 - It count the only death cell
 - None of the above

10. Which one is not part of bacterial growth curve
- | | |
|---------------------|---------------------|
| a. Log phase | b. Lag phase |
| c. Incubation phase | d. Phase of decline |
11. 40X objective lens also called as
- | | |
|--------------|------------------|
| a. Scanning | b. High power |
| c. Low Power | d. Oil immersion |
12. Lipopolysaccharide is a major component of cell wall in:
- (a) (b)
(c) (d) Parasites
- | | |
|---------------------------|---------------------------|
| a. Gram positive bacteria | b. Gram negative bacteria |
| c. Both a & b | d. Fungi |
13. Temperature and time period used in hot air oven is :
- | | |
|------------------------|------------------------|
| a. 160°C for two hours | b. 140°C for two hours |
| c. 160°C for one hour | d. 170°C for 2 hours |
14. Peptidoglycan layer of cell wall is thicker in:
- | | |
|---------------------------|---------------------------|
| a. Parasites | b. Fungi |
| c. Gram positive bacteria | d. Gram negative bacteria |
15. Generation time of *Mycobacterium tuberculosis* is about:
- | | |
|---------------|---------------|
| a. 20 seconds | b. 20 days |
| c. 20 hours | d. 20 minutes |
16. Father of modern Microbiology is
- | | |
|----------------|------------------|
| a. Robert Hook | b. Joseph Lister |
| c. Robert Koch | d. Louis Pasteur |
17. Which of the following sterilisation conditions are used in autoclave?
- | | |
|--|--|
| a. 160°C, 20 pounds pressure/sq inch, 20 minutes | b. 121 °C , 15 pounds pressure/sq inch, 15 minutes |
| c. 140°C, 10 pounds pressure/sq inch, 15 minutes | d. None of the above |
18. Which one of the following bacteria can grow in acidic pH?
- | | |
|----------------------------------|---------------------------|
| a. Klebsiella sp. | b. Lactobacilli |
| c. <i>Pseudomonas aeruginosa</i> | d. <i>Vibrio cholerae</i> |
19. Indian ink staining is used to demonstrate:
- | | |
|-----------------------|----------------------|
| a. Cell wall | b. Bacterial capsule |
| c. Bacterial flagella | d. Spore |
20. The term vaccine was coined by:
- | | |
|------------------|------------------|
| a. Louis Pasteur | b. Robert Koch |
| c. Joseph Lister | d. Edward Jenner |

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(Descriptive)

Time : 2 hrs. 30 mins.

Marks : 50

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

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|--|----|
| 1. Define culture media? Write a short note on types of culture media | 10 |
| 2. Write the different methods of sterilization. | 10 |
| 3. Explain parts microscope in details. | 10 |
| 4. a) Write principle, procedure, interpretation Gram staining | 5 |
| b) Write principle, procedure, interpretation acid fast staining | 5 |
| 5. a) Explain briefly the contribution of Pasteur and Robert Hooke in the development of microbiology. | 5 |
| b) Tabulate the difference between eukaryotes and prokaryotes | 5 |
| 6. a) Write a short note on collection, preservation and transportation of microbiological specimen. | 6 |
| b) Explain host Parasite relationship briefly. | 4 |
| 7. a) Explain bacterial growth in details | 5 |
| b) Draw the diagram of bacterial growth curve | 5 |
| 8. Define aerobic and anaerobic bacteria. Explain bacterial cell division. | 10 |

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