REV-01
BMLT/49/54

2025/06

SET A

BACHELOR OF MEDICAL LABORATORY TECHNOLOGY
SIXTH SEMESTER
MICROBIOLOGY VI
BMLT - 604

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs. **Full Marks: 70**

Objective

Time: 30 min. **Marks: 20**

Choose the correct answer from the following: ***1×20=20***

1. Which of the following cocci may cause UTI
   a. *Shigella* b. Staphylococcus aureus
   c. *Staphylococcus epidermidis* d. All of the above

2. Which of the following bacteria cause pneumonia
   a. *Streptococcus pneumonia* b. H. influenzae
   c. Both a & b d. None of the above

3. Example of Live attenuated vaccine is/are
   a. Typhoid vaccine b. Hepatitis B vaccine
   c. BCG vaccine d. All of the following

4. In Eijkman test, MacConkey broth tubes are incubated at;
   a. 52°C b. 44°C
   c. 37°C d. 25°C

5. Which of the following bacterial infection not result in FUO?
   a. Diphtheria b. Enteric fever
   c. Histoplasmosis d. SLE

6. Which of the following below is water borne pathogen
   a. ***Vibrio cholera*** b. ***Salmonella*** Typhi
   c. ***E coli*** d. All of the above

7. Temp & time require for flash and holder method for pasteurisation of milk
   a. 63°c for 20 sec & 72° for 30 min b. 63°c for 30 min & 72° for 20 sec
   c. 72° for 20 sec & 63°c for 30 min d. 72° for 30 min & 63°c for 20 sec

8. "Chinese liver fluke" is other name
   a. *Fisciola hepatica* b. *Fasciolopsis buski*
   c. *Schitosome spp* d. *Clonochis sinesis*

9. Identify the predominant gram-negative bacteria typically found in cases of hospital-acquired infection
   a. Klebsiella pneumonia b. Staphylococcus aureus
   c. Pseudomonas d. Streptococcus pneumonia

10. True about Durham's tube
    a. It's put inverted
    b. Use to check gas production
    c. Use in sugar fermentation test
    d. All of the above

11. Which of the following can cause acute pyogenic infection
    a. Neisserria
    b. *Streptococcus pneumonia*
    c. H influenzae
    d. All of the above

12. Which bacteria use to check sterility of autoclave
    a. *Azospirillum*
    b. *Bacillus stearothermophilus*
    c. *Pseudomonas*
    d. *Azotobacter*

13. What are the signs of UTI?
    a. Increased frequency of urination
    b. Painful urination
    c. Milky/cloudy urine
    d. All the above

14. Which of the following parasitic infections may present in FUO
    a. Malaria
    b. Hepatic amoebiasis
    c. Both a & b
    d. None of the above

15. Buffer substrate solution needed in which of the following test
    a. Methylene blue reduction test
    b. Coliform count test
    c. Phosphatase test
    d. Turbidity test

16. What is the time duration for medical hand washing?
    a. 60 sec
    b. 30 sec
    c. 2 mins
    d. 4 mins

17. Drinking water is considered satisfactory if the presumptive count of water is
    a. 0/100 mL
    b. 1-3/100 mL
    c. 4-10/100 mL
    d. >10/100 mL

18. This virus that can infect bacteria
    a. Bacteriophage
    b. T7 phage
    c. T4 phage
    d. Lambda phage

19. Transfer of genetic material from the donor to recipient bacterium through pili is termed as
    a. Transduction
    b. Recombination
    c. Conjugation
    d. Transformation

20. Which of the following largest tapeworm infecting human
    a. *Faciolopis buski*
    b. *Faciola hepatica*
    c. Schitosome spp
    d. None of the above

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Descriptive

Time : 2 hrs. 30 min. Marks : 50

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

1. **a.** Explain the meningitis infection in details. **7+3=10**
   b. Name metal use in inoculation loop and mention the advantage of it.

2. **a.** Write short notes on Nosocomial infection. **8+2=10**
   b. Importance of quality control in microbiology.

3. **a.** Explain briefly about fever of unknown origin. **7+3=10**
   b. What is the advantage of vacultainer over syringe?

4. **a.** Write short note on bacteriology of milk. **7+3=10**
   b. Mention the molecular methods use in microbiology.

5. Write short note **9+1=10**
   a. *ascaris lumbricoides.*
   b. Who is father of modern microbiology?

6. **a.** What is PCR? Explain the steps involved in PCR. **6+4=10**
   b. Explain briefly the principle and applications of Western blotting

7. **a.** Write short note on *Taenia solium.* **9+1=10**
   b. Which bacteria use to check sterility of autoclave?

8. **a.** Explain briefly on quality control in microbiology. **7+3=10**
   b. Mention the factor determining the no of bacteria in water.

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