

**BACHELOR OF MEDICAL LABORATORY
TECHNOLOGY
FOURTH SEMESTER
MICROBIOLOGY IV
BMLT - 404**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

[Objective]

Marks: 20

Choose the correct answer from the following:

1×20=20

1. Most common organism causing UTI
 - a. E. coli
 - b. Staphylococcus
 - c. Streptococci
 - d. Klebsiella
2. The infective dose of S. typhi is
 - a. 1 bacillus
 - b. 10^8 - 10^{10} bacilli
 - c. 10^2 - 10^5 bacilli
 - d. 1-10 bacilli
3. Selective media for Vibrio
 - a. TCBS
 - b. Stuart
 - c. MacConkey agar
 - d. MYPA
4. Widal test is carried out to test
 - a. Malaria
 - b. Diabetes mellitus
 - c. HIV/AIDS
 - d. Typhoid
5. Pyocyanin is formed by
 - a. Streptococcus
 - b. Vibrio
 - c. Proteus
 - d. Pseudomonas
6. Satellitism is seen in culture of
 - a. Klebsiella
 - b. Hemophilus
 - c. Proteus
 - d. Salmonella
7. Which of following is the smallest virus?
 - a. Smallpox virus
 - b. Reo virus
 - c. Parvovirus
 - d. Adenovirus
8. Electron microscopy can be used for the laboratory diagnosis of
 - a. Rotavirus infection
 - b. Hepatitis A virus infection
 - c. Adenovirus infection
 - d. All the above
9. The symmetry of nucleocapsid for pox virus is
 - a. Icosahedral
 - b. Helical
 - c. Complex
 - d. None of the above

10. Koplik's spots on the buccal mucosa is a characteristic feature of
 - a. Mumps
 - b. Measles
 - c. Rubella
 - d. Hepatitis D virus
11. In LPCB, the function of lactic acid is
 - a. It prevent fungus from drying
 - b. Act as disinfectant
 - c. Preserve fungal structure
 - d. It stain the fungal structure
12. Pseudohyphae seen in
 - a. *Candida albicans*
 - b. *Histoplasma capsulatum*
 - c. *Sporothrix schenckii*
 - d. Both b & c
13. In Mycology Negrosin dye is use to detect
 - a. *Aspergillus fumigatus*
 - b. *Cryptococcus neoformans*
 - c. *Candida albicans*
 - d. *Penicillium spp*
14. Which of the following dermatophytes is zoophilic
 - a. *M. gypseum*
 - b. *M. audouinii*
 - c. *M. canis*
 - d. None of the above
15. Which of the following fungus present predominantly in the faeces of pегion
 - a. *Aspergillus fumigatus*
 - b. *Cryptococcus neoformans*
 - c. *Penicillium spp*
 - d. *M. canis*
16. *Cryptococcus neoformans* differentiate from non-pathogenic cryptococci by:
 - a. Growth at 37°c
 - b. Urea hydrolysis
 - c. Production of brown colonies on niger seed agar
 - d. All of the above
17. Which of the following infections may occur by *Candida albicans*
 - a. Oral thrush
 - b. Vulvo vaginitis
 - c. Poronychia
 - d. All of the above
18. Barber's itch is the other name
 - a. Tinea capitis
 - b. Tinea corporis
 - c. Tinea barbae
 - d. Tinea pedis
19. In TSI test what does K/A,H₂S means
 - a. Only Glucose is fermented, H₂S produce
 - b. Only Glucose is fermented
 - c. All sugar are fermented, H₂S produce
 - d. Only Glucose is fermented, gas produce
20. Tryptophan is
 - a. Sugar
 - b. Amino acid
 - c. Lipid
 - d. Enzyme

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(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

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

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| 1. | a. Write morphology, pathogenesis and laboratory diagnosis of Dermatophytes. | 8 |
| | b. Give two example of dimorphic fungus. | 2 |
| 2. | a. Explain the morphology, cultural characteristics, pathogenesis and laboratory diagnosis of Salmonella. | 7 |
| | b. Write a short note on laboratory diagnosis of Proteus spp | 3 |
| 3. | a. Explain the morphology, cultural characteristics, pathogenesis and laboratory diagnosis of Vibrio cholera. | 7 |
| | b. Explain the laboratory diagnosis of Hemophilus spp. | 3 |
| 4. | a. Explain the morphology, cultural characteristics and laboratory diagnosis of E. coli. | 6 |
| | b. Explain the various methods of cultivation of virus. | 4 |
| 5. | a. Explain the lytic and lysogenic cycle of bacteriophages. | 6 |
| | b. Explain the morphology and laboratory diagnosis of polio virus. | 4 |
| 6. | a. How many types of hepatitis virus are there? Write their name. | 2 |
| | b. Explain the morphology, antigenicity, pathogenicity and laboratory diagnosis of Hepatitis B virus. | 8 |
| 7. | a. Write short notes on <i>Candida albicans</i> . | 6 |
| | b. Discuss about habitat and pathogenesis of Cryptococcus neoformans. | 4 |

8. Classify the fungal diseases. Name the four classes of fungus based on morphology.

7+3=10

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