



27513-31826-35968-44786



Library
Department of Allied Health Sciences
Brainware University
Barasat, Kolkata- 700125

BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Sc.(OTT)-2022/B.Sc.(OTT)-2023/B.Sc.(OTT)-2024/B.Sc.(OTT)-2025

Course Name – Clinical Microbiology

Course Code - BOTTC201

(Semester II)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

(i) Identify the organ which allows bacteria to move.

- | | |
|------------------|--------------|
| a) Fimbriae | b) Flagella |
| c) Cell membrane | d) Ribosomes |

(ii) Identify the name of commonest method of sterilization used in a laboratory setting.

- | | |
|--------------------|--------------------------|
| a) Phenol cleaning | b) Autoclaving |
| c) UV radiation | d) Chemical disinfection |

(iii) Identify the principle of Autoclave.

- | | |
|---------------------------|-----------------------------|
| a) Dry heat Sterilization | b) Moist heat Sterilization |
| c) Vapour filtration | d) Radiation |

(iv) Identify the principle of Hot air oven .

- | | |
|---------------------------|-----------------------------|
| a) Dry heat sterilization | b) Moist heat sterilization |
| c) Vapour filtration | d) UV Radiations |

(v) Choose the sterilization conditions required for Autoclaving.

- | | |
|----------------------|----------------------|
| a) 121°C for 10 mins | b) 131°C for 15 mins |
| c) 121°C for 15 mins | d) 131°C for 20 mins |

(vi) Identify the acid fast bacteria .

- | | |
|-------------------------------|--------------------------|
| a) E.coli | b) Staphylococcus aureus |
| c) Mycobacterium tuberculosis | d) Candida albicans |

(vii) Discover the use of iodine in Gram staining.

- | | |
|------------------|--------------------|
| a) Fixative | b) Mordant |
| c) Primary stain | d) Secondary stain |

(viii) State the correct statement for Gram-negative bacteria.

- | | |
|--|--|
| a) upon alcohol treatment, the permeability of the cell wall increases | b) crystal violet-iodine (CV-I) complex is extracted |
| c) pore size decreases and the CV-I complex cannot be extracted | d) alcohol treatment increases the permeability of the cell wall and the CV- |

Complex can be extracted

- (ix) Identify the example of Gram positive bacteria.
- | | |
|---------------------|-----------------------|
| a) Escherichia coli | b) Staphylococcus sp. |
| c) Pseudomonas sp. | d) Salmonella typhi |
- (x) Justify BCG vaccine is used for.
- | | |
|---------------|-----------------|
| a) Typhoid | b) Tuberculosis |
| c) Diphtheria | d) Tetanus |
- (xi) state that widal test is used for diagnosis of:
- | | |
|------------|------------|
| a) TB | b) Malaria |
| c) Typhoid | d) HIV |
- (xii) state that HIV mainly infects.
- | | |
|----------------|----------------|
| a) CD4 T cells | b) B cells |
| c) Neutrophils | d) Macrophages |
- (xiii) Discuss UTI is most commonly caused by :
- | | |
|------------|----------------|
| a) Proteus | b) Klebsiella |
| c) E. coli | d) Pseudomonas |
- (xiv) Describe CSF examination is important in:
- | | |
|---------------|-------------|
| a) UTI | b) RTI |
| c) Meningitis | d) Diarrhea |
- (xv) Identify the meaning of sterilization.
- | | |
|----------------------|---------------------|
| a) Killing spores | b) Killing bacteria |
| c) Removal of toxins | d) Removal of dirt |

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Describe normal microbial flora of the human body. (3)
3. Define sterilization and mention two physical methods. (3)
4. Distinguish between Gram-positive and Gram-negative bacteria in terms of cell wall structure. (3)
5. Discuss about Bacterial Flagella. (3)
6. Illustrate briefly about the morphology of bacteria. (3)

OR

- Compare and contrast between sterilization and disinfection. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Discuss the symptoms of hepatitis, and how is it diagnosed. (5)
8. Analyze the test to detect Tuberculosis. (5)
9. Explain the Laboratory diagnosis of Typhoid. (5)
10. Explain the Laboratory diagnosis of Protozoan dysentery. (5)
11. Prepare a list and mention all the parasitic infections along with their causative agent. (5)
12. Illustrate briefly about the laboratory diagnosis of fungal infection. (5)

OR

- Illustrate the Laboratory diagnosis of Malaria. (5)

Library
Department of Allied Health Sciences
Brainware University
Barasat, Kolkata- 700125