



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Sc.(OTT)-2022/B.Sc.(OTT)-2023
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) Flagella is basically related to
- | | |
|-----------------|----------------------|
| a) Locomotion | b) Adhesion |
| c) Reproduction | d) Protein synthesis |
- (ii) Name term used to describe a cluster of spherical bacteria
- | | |
|------------------|-----------------|
| a) Sarcina | b) Streptococci |
| c) Staphylococci | d) Diplococci |
- (iii) Choose the type of Immunoglobulin which is found in the secretions such as tears, saliva, and breast milk
- | | |
|--------|--------|
| a) IgA | b) IgD |
| c) IgM | d) IgE |
- (iv) Select the causative agent of enteric fever
- | | |
|---------------------|--------------------------|
| a) Klebsiella spp. | b) Salmonella typhi |
| c) Escherichia coli | d) Staphylococcus aureus |
- (v) Select the correct method among the following regarding commonly used methods for antibiotic susceptibility testing
- | | |
|------------------------------------|--------------------------|
| a) ELISA | b) Agar diffusion method |
| c) Polymerase chain reaction (PCR) | d) Western blotting |
- (vi) Which Primary stain is associated with Gram Staining
- | | |
|-------------|-------------------|
| a) safranin | b) acid fuchsin |
| c) iodine | d) crystal violet |
- (vii) State the correct order of staining reagents in Gram-Staining?

- a) Crystal violet, alcohol, iodine solution, safranin
 b) Crystal violet, iodine solution, alcohol, safranin
 c) Crystal violet, safranin, alcohol, iodine solution
 d) Iodine solution, crystal violet, alcohol, safranin
- (viii) Indicate the terms which refers to a prokaryotic cell that is comma shaped?
 a) Coccus
 b) Vibrio
 c) Bacillus
 d) Palisade
- (ix) Quote the genus member to which HIV belongs
 a) Ortho myxovirus
 b) Retrovirus
 c) Parvovirus
 d) Reovirus
- (x) Select term used to describe a cluster of spherical bacteria
 a) Streptococci
 b) Staphylococci
 c) Diplococci
 d) Bacilli
- (xi) Identify the antibiotic which is typically used to treat tuberculosis
 a) Penicillin
 b) Streptomycin
 c) Tetracycline
 d) Amoxicillin
- (xii) Identify the term used to describe the ability of the immune system to recognize and respond to specific antigens
 a) Immunization
 b) Immune tolerance
 c) Immune surveillance
 d) Immune specificity
- (xiii) Select the type of antibody first produced in response to an antigen
 a) IgA
 b) IgD
 c) IgE
 d) IgM
- (xiv) Choose the treatment option for chronic Hepatitis B or C
 a) Antiviral medication
 b) Liver transplantation
 c) Both a) and b)
 d) None of these
- (xv) Select the vector responsible for transmitting malaria
 a) Mosquitoes
 b) Ticks
 c) Fleas
 d) Lice

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Compose a short note on Bacterial cell wall. (3)
3. Develop a chart mentioning the differentiation between Sterilization and Disinfection. (3)
4. Compare and contrast between Advantages and disadvantages of Normal flora in Human body. (3)
5. Define Immunity and its types (3)
6. Conclude the pathophysiology of Enteric fever. (3)

OR

Compare and contrast between Catalase and Coagulase Test on the basis of purpose, mechanism, medium. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Discuss the working of vaccines. What role do they play in preventing infectious diseases? (5)
8. Explain the Laboratory diagnosis of Tuberculosis (5)

9. "Distinguish between Gram-positive and Gram-negative bacteria in terms of the cell wall structure. Explain how this relates to Gram staining." (5)
10. Explain the affect of typhiod on the body. What are the potential complications (5)
11. Generalize the public health implications of COVID-19. Discuss how has it affected global society. (5)
12. How would you diagnose a urine specimen for detection of UTI? (5)
- OR**
- How would you analyze a sample for positive Hepatitis B? (5)
