



## BRAINWARE UNIVERSITY

Term End Examination 2022

Programme – B.Sc.(BT)-Hons-2018/B.Sc.(BT)-Hons-2019/B.Sc.(BT)-Hons-2020/B.Sc.  
(BT)-Hons-2021

Course Name – General Microbiology

Course Code - BBTH010401/BBTC101

( Semester I )

Full Marks : 70

Time : 3:0 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) Peptidoglycan is also known as
- |                          |                            |
|--------------------------|----------------------------|
| a) N-acetyl muramic acid | b) murein mucopeptide      |
| c) N acetylglucosamine   | d) mesodiaminopimetic acid |
- (ii) Name the scientist, who discovered Spontaneous Generation theory?
- |                |           |
|----------------|-----------|
| a) Muller      | b) Jenner |
| c) Spallanzani | d) Redi   |
- (iii) Memorize the name father of Microbiology?
- |                      |                           |
|----------------------|---------------------------|
| a) Edwin John Butler | b) Ferdinand Cohn         |
| c) Robert Koch       | d) Antoni van Leeuwenhoek |
- (iv) Classify *Clostridium tetani* to be a type of microbes
- |                |                    |
|----------------|--------------------|
| a) Aerobic     | b) Anaerobic       |
| c) Facultative | d) Microaerophilic |
- (v) Recall the name who developed Anthrax vaccine
- |           |            |
|-----------|------------|
| a) Koch   | b) Laveran |
| c) Lister | d) Pasteur |
- (vi) The autoclave was first illustrated in which year
- |         |         |
|---------|---------|
| a) 1882 | b) 1887 |
| c) 1884 | d) 1886 |
- (vii) Malaria fever is anticipated with liberation of:
- |                    |                        |
|--------------------|------------------------|
| a) cryptomerzoties | b) metacryptomerzoties |
| c) merozoites      | d) trophozoite         |
- (viii) Predicted the prevention method from
- |                          |                            |
|--------------------------|----------------------------|
| a) eating balanced food  | b) eating plenty of fruits |
| c) drinking boiled water | d) using mosquito nets     |
- (ix) Choose microorganisms that can cause fever in humans and can withstand autoclaving?
- |                       |                  |
|-----------------------|------------------|
| a) Endotoxin          | b) Lipid A       |
| c) Lipopolysaccharide | d) Peptidoglycan |

- (x) What group listed below does not have a true cell wall?  
 a) Algae  
 b) Mycoplasma  
 c) Fungi  
 d) Bacteria
- (xi) Bacterial endospores develops as  
 a) are resistant to pasteurization  
 b) contain calcium dipicolinate  
 c) are an inactive cell form  
 d) all of the above
- (xii) Some hyperthermophilic organisms that grow in highly acidic (pH, 2) habitats belong to the two groups called \_\_\_\_\_.  
 a) Cyanobacteria and Diatoms  
 b) Liverworts and Yeasts  
 c) Protists and Mosses  
 d) Eubacteria and Archaea
- (xiii) Transduction process facilitates  
 a) Bacteria obtaining DNA from the external environment  
 b) Bacteria obtaining DNA from the mother cell  
 c) Transfer of genome by conjugation  
 d) Transfer of genetic material through virus(Y)
- (xiv) Recognize Saprophytic organism from the following  
 a) Fungi  
 b) Cyanobacteria  
 c) Viruses  
 d) all of the above
- (xv) This fungi division includes "Club fungi"  
 a) Zygomycota  
 b) Deuteromycota  
 c) Basidiomycota  
 d) Ascomycota

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Sketch out the Bacterial Conjugation Process? (3)
3. 7. Difference between Gram-positive bacteria and Gram-negative bacteria (3)
4. Illustrate the procedure for measurement of Bacterial Growth quantitatively? (3)
5. Differentiate between Batch Culture and Continuous Culture? (3)
6. Explain the endospore and sporulation process in bacteria? (3)

OR

In which condition Chemical sterilization process is employed? (3)

### Group-C

(Long Answer Type Questions)

5 x 8=40

7. Explain mode of action Laminar Air Flow (5)
8. What are the different biological factors influencing the growth and survival of microorganisms? (5)
9. Define culture media? Classify the types of culture media with examples and their uses. (5)
10. How can we classify microbes based on nutrition? (5)
11. How microbial growth is measured quantitatively? (5)
12. Analyze the role of methyl-accepting chemotaxis proteins (MCPs) in Chemotaxis. (5)
13. Write the different methods of sterilization highlighting their principles involved. (5)
14. Explain different mode of reproduction of Bacteria. (5)

OR

Explain various experimental steps for isolation and preservation of pure culture. (5)

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