



# BRAINWARE UNIVERSITY

**Term End Examination 2022**  
**Programme – M.Sc.(MB)-2022**  
**Course Name – General Microbiology**  
**Course Code - MMBC101**  
**( Semester I )**

**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) Who discovered Bacterial Transformation?  
a) Griffith  
b) Jenner  
c) Fleming  
d) Domagk
- (ii) The vector for sleeping sickness is:  
a) Housefly  
b) Tsetse fly  
c) Sandfly  
d) Fruit fly
- (iii) What are the cell wall structural components of fungi?  
a) chitin, cellulose, or hemicellulose  
b) cellulose  
c) chitin  
d) peptidoglycan
- (iv) Transfer of genetic material from one bacterium to another in the process of transduction is by  
a) Conjugation between bacteria of opposite strains  
b) Physical contact between donor and recipient  
c) Bacteriophages  
d) Special organ for conjugation
- (v) Example of dsDNA virus is  
a) Adenovirus  
b) Reo virus  
c) Parvo virus  
d) Retro virus
- (vi) \_are the root like structure of Fungus  
a) Rhizoids  
b) Septa  
c) Thallus  
d) Stolons
- (vii) Cell containing many nuclei are called:  
a) Coenocyte  
b) Hyphae  
c) Mycelium  
d) Sporophore
- (viii) Generation time of Escherichia coli is

- a) 20 minutes  
c) 20 seconds
- b) 20 hours  
d) 20 days
- (ix) The ribosome of E.coli is made up of which two subunits?  
a) 60S and 40S  
c) 50S and 40S
- b) 60S and 30S  
d) 50S and 30S
- (x) -----is a process in which packaged and non-packaged foods are treated with mild heat, usually to less than 100°C (212°F), to eliminate pathogens and extend shelf life  
a) Fermentation  
c) Tyndellization
- b) Pasteurization  
d) None of them
- (xi) Germ theory of disease was proposed by  
a) Sumner  
c) Koch
- b) A.A. Jenner  
d) Edward Buchner
- (xii) Isolation if pure culture was done by  
a) Pour plate technique  
c) Spread Plate technique
- b) Streak-plate technique  
d) All of these
- (xiii) Different preservation techniques are  
a) Dehydration  
c) Both a and b
- b) Frozen storage  
d) Discontinuous growth
- (xiv) ATCC stands for  
a) American Type Culture Collection Centre  
c) Asian Type Culture Collection Centre
- b) American Tissue Culture Collection Centre  
d) American Type Culture Collection Council
- (xv) The inhibitory substance is added to a solid media to inhibit commensal or contaminating bacteria  
a) Antibiotics  
c) Dyes
- b) Chemicals  
d) All of these

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Describe and contrast between prokaryotic and eukaryotic cells. (3)
3. Explain the endospore and sporulation process in bacteria. (3)
4. State the physical requirements of culture medium (3)
5. Define species and genus (3)
6. Define acidophile and neutrophile. (3)

OR

Difference between Gram-positive bacteria and Gram-negative bacteria (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. State the physical methods of sterilization (5)
8. Write down the techniques for identifying or determining taxonomical characters (5)
9. Explain the structure and functions of Mesosomes. (5)
10. Define culture media? Classify the types of culture media with examples and their uses (5)
11. Classify bacteria on the basis of flagellar arrangement (5)
12. Describe how the two different kinds of continuous culture systems, the chemostat and turbidostat, operate. (5)

OR

State the different methods of isolation of pure culture (5)

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