

Roll No.

Total Pages : 3

OMDQ/M-20

2461

BASIC MICROBIOLOGY

Paper–BCH–22

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. Explain the following briefly : 3×5=15
- (a) Differentiate between Fungi, bacteria, viruses, viroids, prions.
 - (b) Differentiate between Archaeobacteria and Eubacteria.
 - (c) Differentiate between Gram +ve and Gram –ve bacteria.
 - (d) Differentiate between batch, continuous and synchronous cultures.
 - (e) Differentiate between Actinomycetes and Mycoplasma.

UNIT-I

2. Write short notes on any **two** of the following : 7½×2=15
- (a) Cell wall composition of Gram +ve Eubacteria.

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- (b) Endal pore farming bacteria.
 - (c) Role of bacteria in Industry with suitable examples.
3. Explain any **two** of the following : $7\frac{1}{2}\times 2=15$
- (a) Economic importance of Algae.
 - (b) Cell wall composition of Archaeobacteria.
 - (c) Cyanobacteria as biofertilizer.

UNIT-II

4. Write short notes on any **two** of the following : $7\frac{1}{2}\times 2=15$
- (a) Nutrition in bacteria.
 - (b) Pure culture techniques.
 - (c) Control of microbes by chemical agents.
5. Explain any **two** of the following : $7\frac{1}{2}\times 2=15$
- (a) Transformation in bacteria.
 - (b) Transduction in Bacteria.
 - (c) Effect of environmental factors on growth of bacteria.

UNIT-III

6. Explain briefly any **two** of the following : $7\frac{1}{2}\times 2=15$
- (a) Role of microbes in Citric acid production.

- (b) Role of microbes in penicillin production.
- (c) Fungi as Biofertilizers.

7. Write short notes on any **two** of the following :
 $7\frac{1}{2} \times 2 = 15$

- (a) Single cell protein.
- (b) Methods of Food preservation.
- (c) Biopesticides.

UNIT-IV

8. Write short notes on any **two** of the following :
 $7\frac{1}{2} \times 2 = 15$

- (a) Mechanism of action of any three antibacterial drugs.
- (b) Mechanism of action of any three antifungal drugs.
- (c) Mechanism of action of any three antiviral drugs.

9. Explain any **two** of the following : $7\frac{1}{2} \times 2 = 15$

- (a) Transmission and infection of microbes.
- (b) Structure of TMV.
- (c) Food borne intoxication.