

[4]

Or

Describe Environmental and physiological factors affecting microbial growth.

4. Explain viral capsids and their arrangement and types of envelops.

Or

Describe the life cycle of Bacteriophages and difference between Lysogeny and lytic pathway.

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Roll No.....

I Semester Examination, April-2021

M.Sc.

BIOCHEMISTRY

Paper III

(Microbiology)

Time : 3 Hours]

[Maximum Marks : 80

Note : All questions are compulsory. Question Paper comprises of 3 sections. **Section A** is objective type/Multiple Choice questions with no internal choice. **Section B** is short answer type with internal choice. **Section C** is long answer type with internal choice.

SECTION 'A'

(Multiple Choice Questions)

Choose the correct answer :

- Which of the following diseases are related to corona virus ?
(a) MERS and SARS (b) Respiratory Syncytial Virus (RSV)
(c) All are correct (d) None of above
- What is Corona virus ?
(a) It is a large family of viruses
(b) It belongs to the family of Nidovirus
(c) Both A and B are correct
(d) A is correct
- Which of the following comes under the category of positive association ?
(a) Neutralism (b) Parasitism
(c) Commensalism (d) Ammensalism

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4. *S. pneumoniae* produces which of the following type of colonies ?

- (a) Alpha-haemolytic (b) Beta-haemolytic
(c) Non-haemolytic (d) Alpha, beta haemolytic

5. Cord factor is a

- (a) Protein (b) Teichoic acid derivative
(c) Mycolic acid derivative
(d) Carbohydrate

6. Growth in broth cultures occurs mainly in the form of

- (a) Slightly turbid (b) Heavy surface pellicle
(c) Sediment (d) Viscous

7. According to Bergey's Manual of Systematic Bacteriology, prokaryotes that lack a cell wall belong to the group ?

- (a) Gracilicutes (b) Firmicutes
(c) Tenericutes (d) Mendosicutes

8. Which of the following viruses have a complex symmetry ?

- (a) Alphavirus (b) Mobillivirus
(c) Orthopoxvirus (d) Parvovirus

9. Which of the following organism contains the largest genome size ?

- (a) HBV (b) Phage lambda
(c) Mimivirus (d) Mycoplasma genitalium

SECTION 'B'

(Short Answer Type Questions)

Note : Answer the following questions in 250 words.

1. Outline classification of fungi with examples.

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Or

Write about VAM fungi.

2. Type of green algae and economic importance.

Or

Principles of bioremediation.

3. Difference between synchronous and asynchronous growth of bacteria.

Or

Classification of bacteria on the basis of shape.

4. Classification of Virus.

Or

Difference between Corona virus and Influenza virus.

SECTION 'C'

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

1. Reproduction of algae and its ecological importance.

Or

Describe relationship of fungi between plants and animals with suitable example.

2. Explain structure, composition and properties of cell membrane in bacteria.

Or

Explain horizontal gene transfer mechanism.

3. Classification of the bacteria on the basis of mode of nutrition.

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P.T.O.