

[44/A-22]

SEAT No. \_\_\_\_\_

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY  
B.Sc. EXAMINATION (2018)  
USO3 CMIC 02 (SEMESTER III)  
SUB: MICROBIOLOGY  
Fundamentals Microbiology II

Date: 26-11-2018, Monday  
Time: 2-00 p.m. to 5-00 p.m

Total Marks: 70

Q-1 Attempt the following multiple choice questions. (10)

(1) According to Whittaker's classification, bacteria are included in the kingdom:

(a) Fungi. (b) Monera. (c) Plantae. (d) Protista.

(2) A group of similar order is called :

(a) Class. (b) Family. (c) Division. (d) Kingdom.

(3) Yeast extract is a very good source of:

(a) Vitamin B<sub>2</sub> (b) Vitamin B<sub>6</sub> (c) Vitamin B<sub>12</sub> (d) All of them.

(4) Bacteria which use organic compounds as carbon source are called :

(a) Autotrophs. (b) Lithotrophs. (c) Heterotrophs. (d) Phototrophs.

(5) Following is the example of a differential medium.

(a) Blood agar. (b) Nutrient agar. (c) Starch agar. (d) None of them.

(6) Which method is used for isolation of pure culture?

(a) Micromanipulator. (b) Serial dilution. (c) Streak plate. (d) All of them.

(7) The time required for population to double is called:

(a) Log time. (b) Growth time. (c) Generation time (d) none of them.

(8) Capsid is made up of morphological subunits called:

(a) Capsomeres. (b) Glycoproteins. (c) Nucleases. (d) Ligases.

(9) The word bacteriophage was given by:

(a) Stanley. (b) D'Herelle. (c) Pasteur. (d) None of them.

(10) During transcription, bacteriophage tail fibre is coded by :

(a) Early genes. (b) Delayed early genes. (c) Late genes. (d) None of these

Q-2 Attempt the following (any ten) (20)

(1) Write a note on Haeckel's classification.

(2) What is classification?

(3) Define: (i) Type strain (ii) nomenclature.

(4) Discuss the role of peptone in bacteriological media.

(5) Define: (i) lithotrophs (ii) autotrophs.

(6) Write in brief on obligate parasites.

(7) Enlist various methods of preservation.

(8) Define (i) isolation (ii) continuous culture.

(9) What is synchronous culture?

(10) Give two examples of viral vaccines prepared using embryonated egg technique.

(11) Define prophage.

(12) What is the role of repressor protein in lysogeny?

(1)

(PTO)

- Q-3 Write a note on (A) Whittaker's five kingdom classification. (05)  
(B) Numerical taxonomy. (05)  
OR
- Q-3 Explain the following: (A) r-RNA cataloguing. (05)  
(B) Nucleic acid hybridization (05)
- Q-4 Describe in detail : nutritional requirements of bacteria. (10)  
OR
- Q-4 Write in detail on types of media on the basis of application and function. (10)
- Q-5 Define pure culture. Describe various methods for isolation of pure culture. (10)  
OR
- Q-5 Describe in detail on normal growth curve of bacteria. (10)
- Q-6 Write in detail on Lytic cycle. (10)  
OR
- Q-6 Write a note on (A) Lysogeny. (06)  
(B) Cultivation of plant viruses. (04)

