

[1/A-12] Seat No. _____

No. of Printed Pages: 02

Sardar Patel University
M. Sc. Integrated Biotechnology, Third Semester Examination
Thursday, 28th April, 2016
10:30 a.m. – 01:30 p.m.
PS03CIGB04: Microbiology – II

Note:

1. Figures to the right indicate marks.
2. Draw neat and labeled diagram, wherever necessary.

Q-1 Attempt the followings **[08 X 01 = 08]**

1. In _____ year five kingdom concept was given by scientist Whittaker.
a) 1960 b) 1965 c) 1968 d) 1969
2. _____ character represent study of energy formation and chemical reaction used for bacterial classification.
a) Antigenic b) Morphological c) Metabolic d) All of these
3. Which micro-organism causes dandruff on human scalp?
a) Virus b) Bacteria c) Protozoa d) Fungi
4. Bacterial pathogens attach most often by all except which of the following mechanisms?
a) Spikes b) Pili c) Flagella d) Capsules
5. In what form(s) do plant and bacteria use nitrogen?
a) NH_4^+ b) NH_3 c) NO_3 d) Both a & b
6. _____ is used for quatitative analysis of milk.
a) Standard plate count b) Total volatile count
c) Standard disk count d) None of these
7. _____ is indicator of faecal contamination.
a) *Staphylococcus aureus* b) *Pseudomonas aeruginosa*
c) *Escherichia coli* d) *Salmonella spp*
8. Nitrogen makes up about _____ of air present in atmosphere.
a) 58% b) 68% c) 78% d) 98%

Q-2 Answer the following questions (Any seven). **[07 X 02 = 14]**

1. Enlist the criteria of Whittaker's five kingdom concept.
2. What is difference between first and second edition of Bergey's Manual?
3. Define : Gnotobiotic animal
4. Explain Fulminating infection and actue infection.
5. What is Humus? Give its role.
6. Define : Pasteurization
7. What is BOD? Give its significance
8. Write microbial characteristics of wastewater in brief.
9. Give difference between exotoxins and endotoxins.

P.T.O.

- Q-3** (A) Write a brief note on Whittaker's five kingdom concept. [06]
(B) Explain nucleic acid hybridization used for classification of micro-organism. [06]
OR
(B) Give an account on Numerical taxonomy. [06]
- Q-4** (A) Which are factors responsible for transmission of diseases? [06]
(B) Explain factors responsible for discouraging skin colonization. [06]
OR
(B) Discuss in brief normal flora of respiratory tract. [06]
- Q5** (A) Explain Carbon Cycle and its significance to life on earth. [06]
(B) Define: Biofertilizers. Explain its importance in brief. [06]
OR
(B) Enlist and explain any two methods used for preservation of foods. [06]
- Q6** (A) Mention different methods of air sanitation [06]
(B) Enlist various wastewater treatment processes. Explain any two in detail. [06]
OR
(B) Explain quantitative methods used for water analysis. [06]
