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SARDAR PATEL UNIVERSITY

B.Sc. 5th Semester

BOTANY: US05CBOT21

MICROBIOLOGY AND PHYCOLOGY

Date: 23/11/2021 23/11/21

Time : 3:00 pm to 5:00 pm

Day : Tuesday Tuesday

Total Marks : 70

Note : Draw neat and labeled diagrams wherever necessary.

Q. 1 Multiple Choice Questions (Attempt all) (10)

1. Medium which is composed of known chemical compound is called _____ medium.

- (a) Natural (b) Synthetic (c) Complex (d) Selective

2. Best method for getting pure culture is _____ method.

- (a) Streak plate (b) Agar slant (c) Both a & b (d) None of the these

3. _____ can be used as solidifying agent for media preparation.

- (a) Agar Agar (b) Silica gel (c) Gelatin (d) All of the above

4. Archaeobacteria differs from Eubacteria in.....

- (a) Mode of reproduction (b) Mode of nutrition
(c) Cell membrane structure (d) Cell shape

5. Bacteria bearing flagella all over the body is-----

- (a) Peritrichous (b) Monotrichous (c) Atrichous (d) None of these

6. Which of the following enzyme is not present in the heterocyst-----

- (a) Nitrogenase (b) GOGAT (c) Glutamine synthetase (d) All of these

7. Endophytic blue green algae found in the root of *Cycas* _____

- (a) *Nostoc* (b) *Anabaena* (c) Both a & b (d) None of the these

8. The pigment present in blue green algae is _____

- (a) Chlorophyll-b (b) c- phycocyanin (c) Chlorophyll - c (d) All of these

9. An alga growing on snail is called:

- (a) Epiphyte (b) Endophyte (c) Epizoic (d) Endozoic

10. Motile cells are completely absent in-----

- (a) Red algae (b) Blue green algae (c) Both a & b (d) None of these

[PTO]



Q. 2 Fill in the blanks / True or False : (08)

- (1) Staining material of gram positive Bacteria is _____. (Crystal violet/ Safranin)
- (2) Viruses can multiply in _____ cells. (dead/living)
- (3) Cell structure of cyanophyceae is _____. (prokaryotic / eukaryotic)
- (4) Motile asexual flagellated cells are called _____. (gametes / zoospores)
- (5) Agar is obtained from red algae. (True/False)
- (6) N acetyl muramic acid is found as cell wall component of bacteria. (True/False)
- (7) M. O. P. Iyenger was a mycologist. (True/False)
- (8) Chlorophyceae store food material in the form of oil droplets. (True/False)

Q. 3 Short questions (Attempt any 10 out of 12) (20)

1. Write flame sterilization.
2. What is pasteurization?
3. Write difference between gram positive and gram negative bacteria.
4. Define binary fission.
5. Write difference between Prions and Virion.
6. What is photoautotrophic and chemoautotrophic?
7. Define aplanospore.
8. What are akinetes?
9. Name any two members of Cyanophyceae which can fix atmospheric nitrogen.
10. Name the reserve food materials found in Phaeophyta and Rhodophyta.
11. What is oogamy?
12. Write the contribution of F. E. Fritsch in algae.

Q. 4 Long questions (Attempt any 4 out of 8) (8X4 = 32)

- (1) Explain characteristic features of Microorganisms in different group.
- (2) Describe the method of preparation of culture media.
- (3) Write notes on : (a) Mycoplasma
(b) TMV
- (4) Describe lytic cycle in Bactriophage.
- (5) Give an account of range of thallus organization in blue green algae.
- (6) Describe structure and function of heterocyst.
- (7) Write role of algae in industry.
- (8) Describe the structure of flagella and cell wall in algae.

