

(20518)

Roll No.

B. Sc. (Micro.) -II Year

3496

B. Sc. (Micro.) Examination, May 2018

Microbial Physiology

(B-203)

Time : Three Hours]

[Maximum Marks : 50

Note : Answer any Five questions. All questions carry equal marks.

1. Write in detail about the mechanism of photosynthesis in bacteria. Explain with the help of diagrams. 10
2. Discuss the growth of microbes with special reference to effect of physical and chemical factors on it. 10

(2)

3. "Assimilation of CO₂ can be used as a measure of metabolic activity in heterophilic bacteria." Is the statement true or false ? Support your answer with suitable explanation and also give examples. 10
4. What is Microbial Physiology ? What do we study under it ? Write a short description of microbial metabolic processes. 10
5. Describe the importance of microorganisms and their diversity in nature with reference to their cellular structure and function.
6. Write short notes on the following : 2½×4=10
 - (a) Acidophile
 - (b) Halophile
 - (c) Obligate aerobe
 - (d) Chemotaxis.
7. How do solid cultures differ from liquid cultures ? Explain Batch cultures and continuous cultures with examples. 10

(3)

8. Write short notes on the following : $5+5=10$

- (a) Phases of growth in microbial batch cultures
- (b) Secondary metabolites in microorganisms.

9. What are bacterial autotransporters ? Explain the nutrient transport mechanism in microbes. Give diagrams. 10

10. Write short notes on the following : $2\frac{1}{2}\times 4=10$

- (a) Passive transport
- (b) Symport and antiport
- (c) Bacteriochlorophyll
- (d) Difference between plant photosynthesis and bacterial photosynthesis.