

(20518)

Roll No.

B. Sc. (Micro)-I Year

3484

B. Sc. (Microbiology) Examination, May 2018

FUNDAMENTAL OF MICROBIOLOGY

(B-101)

Time : Three Hours]

[Maximum Marks : 50

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

- ✓ 1. Describe the various culture techniques in Microbiology used for bacterial and fungal cultures. 10
2. How do virus differ from other microorganisms ? Discuss in detail the morphology of viruses. 10

(2)

- ✓ 3. What is the role of Microbiology in industries ? How are microbes beneficial in genetic engineering ? 10
4. Write the general characteristics of the following : 5×2
 - (a) Fungi
 - (b) Archaea.
- ✓ 5. Who gave the germ theory of fermentation ? Discuss the theory and its significance. 10
6. What is a bioreactor ? How are they classified ? Discuss the types of bioreactors. 10
7. Discuss the anabolic and catabolic processes in microbes with special reference to bacterial physiology. 10
8. State differences between the following : 2×5
 - (a) Innate and Adaptive immunity
 - (b) Fungi and Protozoan

(3)

- (c) Ribonucleic acid and Deoxy ribonucleic acid
- (d) Whittaker's concept and Carl Woose's concept
- (e) Spread plate culture and Pour plate culture.

9. Discuss in brief the history of Microbiology with special emphasis on the work of the following : 10

- (a) Anton Van Leeuwenhock
- (b) Francesco Redi
- (c) Alexander Fleming
- (d) Paul Ehrlich.

10. Bacterial Genetics studies the mechanisms of their heritable information. Discuss. 10