

PG Even Semester (CBCS) Exam., May—2018

OR

LIFE SCIENCE AND BIOINFORMATICS

( 2nd Semester )

Course No. : LSBCC-201

( Microbiology )

Full Marks : 70

Pass Marks : 28

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. Explain the various molecular methods used for correct identification of prokaryotes. 14

OR

2. Discuss by giving mechanisms the different physical and chemical methods of sterilization. 7+7=14

3. Elaborate the following with illustrations : 7+7=14

- (a) Differences between archaea and prokaryotes  
(b) Similarities between eukaryotes and archaea

4. Discuss the metabolic process prevalent in microbes (any one) : 14

- (a) Anaerobic  
(b) Methanogenic

5. What is the mechanism and significance of horizontal gene transfer in microbes? 7+7=14

OR

6. Discuss the classification of viruses based on nucleic acid. 14

7. Explain the adaptations seen in thermotolerant microbes. Give an account of the uses of thermotolerant microbes. 10+4=14

OR

8. Write short notes on the following : 7+7=14

- (a) Cyanobacteria  
(b) Microbial biofuels

( 3 )

9. Give an account of different microbial-plant symbiotic associations. Discuss how the two partners benefit each other. 7+7=14

**OR**

10. Discuss the host-defence response exhibited by bacterial pathogens. 14

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