

2018

CBCS

3rd Semester

BIOTECHNOLOGY

PAPER—C5T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

General Microbiology

1. Answer any five questions : 5×2
- (a) What is coacervate? 2
- (b) Define generation time. State its physiological significance. 2

(Turn Over)

- (c) Explain chemotherapeutic agents with suitable examples. 2
- (d) Write the composition of archaebacterial cell wall. 2
- (e) What is differential media? Cite example. 2
- (f) Explain diauxic growth. 2
- (g) Write the composition of endospore. 2
- (h) Write the salient features of coliform bacteria. 2
2. Answer any *four* questions : 4×5
- (a) Give examples of the bacterial and two fungal toxin mentioning their modes of action. What is spoilage of food? 2+2+1
- (b) Write a short note on beneficial food grade microorganisms. Write about any one physical food preservation process. 3+2

- (c) State the importance of synchronous culture. Briefly discuss on the direct measurement approaches of bacterial growth. 1+4
- (d) Illustrate bacterial transformation with suitable diagram. 5
- (e) Classify micro organisms with examples, on the basis of their modes of nutrition. 5
- (f) Write the composition of cell wall of both Gram positive and Gram negative bacteria. How do penicillin and lysozyme act on bacterial cell wall? 3+2
3. Answer any *one* question : 1×10
- (a) Define phototroph and heterotroph. Why 16s r-RNA gene is considered for phylogenic analysis of bacteria? What are conidiophore and sporangiophore? Write on composition of sewage and its disposal processes. (1+1)+2+(1+1)+4

- (b) Describe the different stages of a typical bacterial growth curve with suitable drawing. Explain the roles of different extrinsic factors affecting bacterial growth.

5 + 5
