PG Odd Semester (CBCS) Exam., December—2018

BIOTECHNOLOGY

(1st Semester)

Course No. : BTYCC–104

(Microbiology and Virology)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Write in detail the structure of a bacterial cell. Give the distinguishing features of cell wall of Gram-positive and Gram-negative bacteria. 7+7=14

OR

2. What do you mean by biological nitrogen fixation? Write the molecular mechanism of biological nitrogen fixation. Add a note on *Agrobacterium*. 2+8+4=14

3. What is the basic principle of microbial nutrition? What are the different media used for culture of microbes? Write about the enrichment techniques for isolation of nutritional categories. 2+6+6=14

OR

4. How will you measure microbial growth? Analyse the growth curve with special emphasis on growth kinetics. 2+12=14

5. What is the difference between conventional and molecular taxonomy? Write how molecular taxonomy is helpful to classify the fungi and study of their evolution. 4+10=14

OR

6. Write a note on the role of fungi involved in causing diseases in human beings giving at least two examples. 14

7. Compare and contrast between the structure of RNA and DNA viruses, giving two examples of each. 5+5+2+2=14

OR

8. Write about the replication of DNA viruses and retroviruses. 7+7=14

9. Discuss the immuno- and molecular methods for diagnosis of viruses. 14

OR

10. What is vaccine? Write the methods of development of protein, peptide and DNA vaccine against the viruses. 2+4+4+4=14

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