PG Even Semester (CBCS) Exam., May—2019

LIFE SCIENCE AND BIOINFORMATICS

(2nd Semester)

Course No. : LSBCC–204

(Biotechnology)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **all** questions

1. *(a)* Write down the important features of bacterial expression vector.

(b) Illustrate the production of human insulin in bacterial hosts. 7+7=14

OR

2. Discuss one physical and one chemical method of gene transfer. 7+7=14

3. Write short notes on (any *two*) : 7×2=14

(a) Primary cell culture

(b) Characterization of transformed cells

(c) Hayflick's phenomenon

OR

4. What is HAT medium? Briefly describe how hybridoma technology is used to produce monoclonal antibodies. 4+10=14

5. Write notes on the following (any *two*) : 7×2=14

(a) MS (Murashige and Skoog) Medium

(b) Cryopreservation and Germplasm Conservation

(c) Cybrid

OR

6. What is somaclonal variation? What are different types of somaclonal variations found in plants? Write down the possible mechanisms of variation. 2+8+4=14

7. What is enzyme immobilization? Explain the different types of enzyme immobilization. 4+10=14

OR

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

(a) Batch fermentation

(b) Production of single protein

9. Write a note on bioinformatics mentioning the role of this branch of new science in studying Biology. 14

OR

10. Write short notes on the following (any *two*) : 7×2=14

(a) Molecular docking

(b) Nucleotide sequence submission method

(c) Drug likeness study

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