

10 APR 2019

B.Sc. Semester VI Examination – April 2019
MICROBIOLOGY

Paper: MIC-CC-601 Genetic Engineering and Biotechnology
Time: 2:30 Hours

Paper Code: 21848
Total Marks: 70

Instructions: (a) Figures to the right indicate total marks of respective questions.
(b) Draw neat, clean and labeled diagram wherever necessary.

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| 1 | (a) Write on: Construction and mechanism of Ti plasmid. | 09 |
| | (b) Discuss: Reverse transcriptase as a tool of Biotechnology. | 05 |
| | OR | |
| 1 | (a) Write on: Thermocycler. | 09 |
| | (b) Write briefly on: site directed mutagenesis. | 05 |
| 2 | (a) Discuss: Use of X-gal dye in selection of recombinant. | 09 |
| | (b) Explain briefly: Protoplast fusion. | 05 |
| | OR | |
| 2 | (a) Write in detail on: Southern blotting. | 09 |
| | (b) Write briefly on: Enzymes used to prepare cDNA. | 05 |
| 3 | (a) Discuss: Molecular hybridization. | 09 |
| | (b) Write on: Principle, working and uses of thin layer chromatography. | 05 |
| | OR | |
| 3 | (a) Discuss: Animal tissue culture technique. | 09 |
| | (b) Write briefly on: Spectrophotometer. | 05 |
| 4 | (a) Explain: Biofertilizers and their applications. | 09 |
| | (b) Write a note on: Feed-stock materials used for biofuels. | 05 |
| | OR | |
| 4 | (a) What is bioleaching? Explain the process with a suitable example. | 09 |
| | (b) Write on: Bioinsecticides. | 05 |
| 5 | (a) What is IPR? Explain various intellectual properties. | 09 |
| | (b) Write a note on: Enzymes and their analytical applications. | 05 |
| | OR | |
| 5 | (a) Explain the process of <i>in vitro</i> rennet production in detail. | 09 |
| | (b) Write a note on: Ethical issues in Biotechnology. | 05 |
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