

SECTION—C

5. What is E-cell ? Discuss concept and significance of computer simulation of the cell.
6. Discuss system biology of organism and its interaction with environment.

SECTION—D

7. What are allosteric enzymes ? Discuss mechanism related to regulation of enzyme activity.
8. Discuss EMP and KEGG databases. Explain their significance.

Exam. Code : 206603

Subject Code : 4770

**M.Sc. Bio-Informatics 3rd Semester (Batch 2020-22)
SYSTEM BIOLOGY AND METABOLIC PATHWAY
ENGINEERING**

Paper : BI-633

Time Allowed—3 Hours] [Maximum Marks—75

Note :— Attempt **five** questions in all, selecting at least **one** question from each section. The **fifth** question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. What do you understand by system level understanding of a biological system ? Discuss impacts of system biology.
2. Explain a model for eukaryotic gradient sensing.

SECTION—B

3. What is bioreactor ? Discuss the cell as a well-stirred bioreactor.
4. What are synthetic genetic switches ? Discuss genetic switch in Lambda phage.