Exam. Code : 206603
Subject Code : 4664

M.Sc. Bio-Informatics 3rd Semester

SYSTEM BIOLOGY & METABOLIC PATHWAY ENGG.

Paper—BI–633

Time Allowed—3 Hours]　　　　　[Maximum Marks—75

Note :— Candidates are required to attempt **FIVE** questions, 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 is system biology ? Discuss different properties of models in system biology. 15

2. Explain rapid pole to pole oscillations in *E. coli*. 15

SECTION—B

3. Derive Michaelis-Menton equation. Explain its applications in system biology. 15

4. What is a bioreactor ? Discuss cell as a well stirred bioreactor. 15

SECTION—C

5. Discuss system biology of any one complex disease. 15

6. Explain human erythrocyte model. Discuss its applications. 15

SECTION—D

7. What is KEGG ? Discuss significance of metabolic pathway databases. 15

8. What is BRENDA ? Explain its significance. 15

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