2017/ODD/09/26/LSB–103/070

PG Odd Semester (CBCS) Exam., December—2017

LIFE SCIENCE AND BIOINFORMATICS

(1st Semester)

Course No. : LSBCC–103

(Biochemistry)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Illustrate the roles of various non-covalent interactions important for protein 3D structures. 14

OR

2. Derive the relationship between pH and buffer concentration. Discuss with examples how physiological pH is maintained in cell. 7+7=14

3. Discuss the various reversible inhibitions of enzyme actions with Michaelis-Menten equations for each. 14

OR

4. What are the features of -helix secondary structure in proteins? Add a note on Ramachandran plot. 10+4=14

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

(a) -oxidation

(b) Phospholipids

OR

6. Discuss the mechanism of ATP synthesis in mitochondria. 14

7. Discuss the electron transport system of PS-I and PS-II in chloroplast. Add a note on photooxidation of water. 14

OR

8. Illustrate the structure and functions of some important plant secondary metabolites. 14

9. *(a)* Using suitable models, describe molecular events involved in flowering process. 10

(b) Write the role of photoreceptors in flowering. 4

OR

10. *(a)* Describe signal transduction and gene expression mechanism involved with phytochrome. 10

(b) How are photomorphogenic events regulated in plants? 4

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