2023
M.Sc.
Second Semester
CORE – 07
ZOOLOGY
Course Code: MZOC 2.31
(Proteomic & Enzymology)

Total Mark: 70 *Pass Mark: 28*
Time: 3 hours

Answer five *questions, taking* one *from each unit.*

UNIT–I

1. Explain tertiary structure of protein. Add a note on the concept of subunit and their association. 7+7=14

2. Describe the diversity in alpha-helices. Write a note on the beta-stand secondary structures of protein. 7+7=14

UNIT–II

3. Discuss on the factor involve in protein folding curve with diagram. 14

4. Write notes on the following: 7×2=14
   (a) Anfinsen's experiment of protein folding
   (b) Protein targeting

UNIT–III

5. Explain the basic principle of mass spectrometry. What are the four stages of mass spectrometry and its application? 4+10=14

6. What is nuclear magnetic resonance (NMR)? Write the principle, working technique and its application. 2+12=14

UNIT–IV

7. Write the properties of enzyme. Explain the different type of specificity of enzyme action. 7+7=14

8. Write notes on the following: 7×2=14
   (a) Coenzyme
   (b) Cofactors

UNIT–V

9. Differentiate between Fischer's lock and key theory and Koshland's induced fit model. Write the mechanism of enzyme catalysis. 7+7=14

10. Give a detail account on the three types of inhibition. Explain the different form of isoenzyme. 7+7=14