

**End Semester Examinations - 2015-16 Even Semester - May 2016**

**14BT2014 Bioorganic Principles**

**Set B**

**Time : 3 hrs**  
**Total Marks: 100**

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|-----------|---|------------|
| 1.        | a) Discuss the <i>cis-trans</i> configuration with suitable example?                                  | [10 Marks] |
|           | b) Describe the <i>E</i> and <i>Z</i> notation in detail?   | [10 Marks] |
| <b>OR</b> |   |            |
| 2.        | a) What is optical activity?  | [3 Marks]  |
|           | b) Write down the basic rules for a molecule to have optical activity?                                | [3 Marks]  |
|           | c) Illustrate the principle and instrumentation of polarimeter?                                       | [14 Marks] |
| 3.        | Discuss in detail about the types of chemical bonds involved in the protein structure?                | [20 Marks] |
| <b>OR</b> |   |            |
| 4.        | Explain the unimolecular and bimolecular nucleophilic substitution reactions?                         | [20 Marks] |
| 5.        | Explain the catalytic mechanism of action of lysozyme enzyme?   | [20 Marks] |
| <b>OR</b> |   |            |
| 6.        | a) Explain the mechanism of action of carboxypeptidase-A?   | [10 Marks] |
|           | b) Discuss the mechanism of action of enzyme chymotrypsin?  | [10 Marks] |
| 7.        | a) Explain the importance of NAD molecules in enzyme catalysed Oxidation and Reduction reactions      | [14 Marks] |
|           | b) Write about the involvement of Coenzyme-A in enzymated reactions?                                  | [6 Marks]  |
| <b>OR</b> |   |            |
| 8.        | a) Explain the mechanism of Flavin nucleotide coenzymes in enzyme catalysis?                          | [14 Marks] |
|           | b) How can tetra hydro folate (THF) be helpful in transferring carbon units in between the molecules? | [6 Marks]  |
| 9.        | Explain in detail about the Specificity of Enzyme action?   | [20 Marks] |
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**Wishing you All the Best**

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