Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14BT2014** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BIOORGANIC PRINCIPLES** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Discuss the cis- trans configuration with suitable examples? | CO1 | 10 |
| b. | Explain the rules and procedures for describing the molecules as ‘*rectus*’ and ‘*sinster*’? | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | The amino acid glycine is optically inactive- Justify this statement? | CO1 | 6 |
| b. | Describe the principles and functions of polarimeter with a neat diagram? | CO1 | 14 |
|  |  |  |  |  |
| 3. | a. | Discuss in detail about the bonds involved in stabilizing the 3’D structure of proteins? | CO3 | 15 |
| b. | Note on the structure of insulin molecule? | CO3 | 5 |
| (OR) | | | | |
| 4. |  | Compare the types of mechanism of nucleophilic substitution reactions with suitable examples? | CO2 | 20 |
|  |  |  |  |  |
| 5. | a. | Note on covalent catalysis? | CO2 | 5 |
| b. | Differentiate the exopeptidases with endopeptidases? | CO2 | 5 |
| c. | Illustrate the mechanism of action of carboxypeptidase- A? | CO2 | 10 |
| (OR) | | | | |
| 6. |  | Construct the mechanism of action of lysozyme enzyme on its substrate peptidoglycon layer? | CO3 | 20 |
|  |  |  |  |  |
| 7. | a. | Discuss the mechanism of ester bond hydrolysis? | CO2 | 10 |
| b. | Compile the mechanism of amide bond hydrolysis? | CO2 | 10 |
| (OR) | | | | |
| 8. | a. | Describe in detail about the types of Specificity of Enzyme action? | CO1 | 14 |
| b. | Explain how can the enzyme specificity be modified by hormones with reference to the enzyme lactose synthetase? | CO2 | 6 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Describe the mechanism of action of NAD dependent oxidation and reduction reactions in enzyme catalysis? | CO3 | 14 |
| b. | Write short notes on the coenzyme-A in enzyme catalysis? | CO2 | 6 |