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

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

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| **Code :** | **09BT209/12BI211/ 12BT212/ BC210** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BIOORGANIC CHEMISTRY** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | Molecules that are not superimposable on their mirror images are called as \_\_\_\_\_\_\_\_\_. | 1 |
| 2. | What is the common aspect between enantiomers and diastereoisomers? | 1 |
| 3. | Name the amino acids that are responsible for disulphide bond formation? | 1 |
| 4. | What is the type of bond exist in disulphide bridge? | 1 |
| 5. | List out the type of mechanism of hydrolysis of ethyl bromide into ethanol? | 1 |
| 6. | The metal ‘Zn’ present in carboxypeptidase-A is acting as \_\_\_\_\_\_\_ during the catalytic reaction. | 1 |
| 7. | Find out an amino acid that is optically inactive? | 1 |
| 8. | Name the particles that are present in the nucleus of an atom? | 1 |
| 9. | Name the coenzyme derived from vitamin B2? | 1 |
| 10. | What is the biological significance of TPP? | 1 |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11. | Define - chiral carbon? | 3 |
| 12. | What are the differences between the hemolytic and heterolytic fission? | 3 |
| 13. | How is peptide bond formed? | 3 |
| 14. | Write short notes on exopeptidases and endopeptidases? | 3 |
| 15. | Comment on acid-base catalysis? | 3 |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | Describe the Cahn-Ingold-Prelog procedure involved in finding the R and S configuration of a compound with example? | 15 |
| (OR) | | | |
| 17. | a. | What is optical activity? List out the basic criteria of an organic molecule to be optically active? | 7 |
| b. | Describe the principles and instrumentation of ploarimeter? | 8 |
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| 18. |  | Compose the mechanisms of Sn1 and Sn2 reactions with suitable examples? | 15 |
| (OR) | | | |
| 19. |  | Demonstrate the 3’D-structural organization of proteins in detail? | 15 |
|  |  |  |  |
| 20. | a. | Evaluate the catalytic mechanism of ribonucleases | 8 |
| b. | Comment on the denaturation and renaturation mechanisms of ribonucleases | 7 |
| (OR) | | | |
| 21. |  | Explain the structural features responsible for calalytic mechanism of lysozyme on peptidoglycon layer? | 15 |
|  |  |  |  |
| 22. | a. | Outline the types of proteases? | 5 |
| b. | What are the essential residues participate in catalysis of serine protease? Outline its catalytic mechanism? | 10 |
| (OR) | | | |
| 23. |  | Analyze the specificity of enzyme action in detail? | 15 |
|  |  |  |  |
| 24. |  | Illustrate the catalytic mechanism of pyruvate dehydrogenase (PDH) complex | 15 |
| (OR) | | | |
| 25. | a. | Discuss in detail the NAD dependent oxidation-reduction reactions with suitable examples? | 10 |
| b. | Note on tetrahydro folate? | 5 |