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



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

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| **Code :** | **18BT3001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ADVANCES IN BIOPOLYMER AND APPLICATIONS** | **Max. marks :** | **100** |

**ANSWER ANY FIVE QUESTIONS (5 x 16 = 80 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Based on glycan composition, propose a function for the antigenic determinant observed in the ABO blood group system. | CO2 | 12 |
| b. | What are therapeutic glycans? | CO2 | 4 |
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| 2. | a. | Misfolding of proteins plays a significant role in Alzhemier disease. Explain the mechansim. | CO3 | 8 |
| b. | How do amniocentesis and biopsy techniques aid in disease diagnosis. | CO3 | 8 |
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| 3. | a. | Comment on the role of Glucose oxidase as biosensors. | CO5 | 6 |
| b. | Discuss the relationship between oxidative stress and cancer. | CO4 | 10 |
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| 4. | a. | With specific examples, illustrate the mechanism of actions of hormones that bind intracellular receptors. | CO5 | 10 |
| b. | How are hormones classified based on the proximity of their action? | CO5 | 6 |
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| 5. | a. | Highlight the medical applications of Liposomes in humans. | CO4 | 8 |
| b. | Lipids are used in pharmaceutical and cosmetic preparations. Explain with suitable examples. | CO4 | 8 |
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| 6. | a. | Explain how the structure of Myoglobin and Hemoglobin help in oxygen binding and diffusion. | CO3 | 10 |
| b. | Compare N and O linked glycans in terms of their structure and function. | CO2 | 6 |
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| 7. | a. | Summarize the approaches and applications of protein engineering in environment. | CO3 | 10 |
| b. | List any 5 diagnostic enzymes and their applications. | CO4 | 6 |
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| **COMPULSORY QUESTION (1 x 20 = 20 Marks)** | | | | |
| 8. | a. | Give an account on i) Gene therapy ii) Functional nucleic acids. | CO6 | 10 |
| b. | Demonstrate the significance of RNA interference in therapeutics. | CO5 | 10 |