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

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**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **14BT2045** | **Duration :** | **3 Hrs** |
| **Sub. Name:** | **BIOPHARMACEUTICAL TECHNOLOGY** | **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. | Explain the mechanism involved in distribution of drug and metabolism of drug in human system. | CO1 | 15 | |
| b. | Distinguish between pharmacokinetics and pharmaco dynamics. | CO1 | 5 | |
| **(OR)** | | | | | |
| 2. | a. | Describe the mechanism of action of drug absorption from the gastrointestinal tract. | CO1 | 15 | |
| b. | Discuss about the ADME properties of drug. | CO1 | 5 | |
| 3. | a. | Explain the various forms of oral solid dosages. | CO1 | 10 | |
| b. | What are the quality control tests used for capsules and tablets? Explain. | CO1 | 10 | |
| **(OR)** | | | | | |
| 4. | a. | Explain the steps involved in the manufacturing of tablets with neat flow diagram. | CO2 | 14 | |
| b. | Compare wet granulation, dry granulation and direct compression process. | CO2 | 6 | |
| 5. | a. | Explain the different packing methods used for semi-solid dosage forms and liquid dosage forms. | CO2 | 7 | |
| b. | Describe the various stages involved in the manufacturing of parenteral solution by terminal sterilization process. | CO2 | 7 | |
| c. | Discuss the types of ointment bases. | CO2 | 6 | |
| **(OR)** | | | | | |  |  | C01 |
| 6. | a. | Explain the manufacturing process of clear liquid dosage forms with neat flow sheet. | CO2 | | 10 |
| b. | Enumerate and describe the evaluation tests for semi-solid dosage forms and liquid dosage forms. | CO2 | | 10 |
| 7. | a. | Explain the production of human growth hormone with neat diagram. | CO2 | | 10 |
| b. | Describe the different types of laxatives. | CO2 | | 10 |
| **(OR)** | | | | | |
| 8. | a. | Explain the production and clinical importance of monoclonal antibodies. | CO3 | | 10 |
| b. | What is gene therapy? Discuss its clinical importance. | CO3 | | 10 |
|  | | **Compulsory:** |  | |  |
| 9. | a. | Explain about preclinical trials and quality control characteristics features in drug regulation. | CO3 | | 10 |
| b. | Discuss the guidelines to be followed in good manufacturing practice. | CO3 | | 10 |