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



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

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|  |  | |  |  |
| **Code : 17BT2058** |  | | **Duration :** | **3hrs** |
| **Sub. Name : MICROBIOLOGY AND IMMUNOLOGY** | |  | **Max. Marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Elucidate the time line of how the Abiogenesis and Biogenesis theories were discussed and deliberated. | CO1 | 20 |
| **(OR)** | | | | |
| 2. |  | List the cascasde of events in the development of microbiology. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Summarize the various nutritional requirements of microorganisms. | CO2 | 20 |
| **(OR)** | | | | |
| 4. |  | Describe the Physical and Chemical methods of Control of Microorganisms. | CO3 | 20 |
|  |  |  |  |  |
| 5. |  | Explain in the detail the Quantification of Microbial growth. | CO3 | 20 |
| **(OR)** | | | | |
| 6. | a. | Discuss the cell types in Cell-mediated immunity as a significant phenomenon in the immune system. | CO4 | 10 |
| b. | Outline the significance of Cytokines. | CO4 | 10 |
|  |  |  |  |  |
| 7. |  | Evaluate the significance of the Complement system in the overall immunity of an individual. | CO5 | 20 |
| **(OR)** | | | | |
| 8. | a. | Debate the importance of the Hypersensitivity in the immune system as a whole. | CO5 | 10 |
| b. | Discuss the properties of Antigens and Haptens in Immune system. | CO5 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss the Mechanism of Auto-immune disorders with proper examples of auto-immune diseases. | CO6 | 10 |
| b. | Evaluate the probability that a graft will be rejected on the basis of tissue typing. | CO6 | 10 |