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



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

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|  |  |  |  |
| **Code :** | **15BT3024** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MICROBIAL NANOTECHNOLOGY** | **Max. Marks :** | **100** |

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

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| **1.** |  | Evaluate methods for *Green Synthesis of Nanoparticles* with a Research example. | CO1 | 20 |
| **(OR)** | | | | |
| **2.** |  | Elaborate the History and Evolution of Nanotechnology stating the events as per the Timeline. | CO1 | 20 |
|  |  |  |  |  |
| **3.** |  | Discuss in detail the various tools used in the Characterization of Nanoparticles. | CO2 | 20 |
| **(OR)** | | | | |
| **4.** |  | Discuss in detail the Characterization of Size, Structure, Stabilization and Aggregation of Nanoparticles using UV-Vis Spectroscopy. | CO2 | 20 |
|  |  |  |  |  |
| **5.** |  | Discuss in detail the Concept of Green Technology in India according to the article studied by you. | CO3 | 20 |
| **(OR)** | | | | |
| **6.** |  | Evaluate the advent of Nanoparticles in Targeted Drug Delivery System in Nano research and its role in Nano Ethics. | CO3 | 20 |
|  |  |  |  |  |
| **7.** |  | Discuss in detail the Structure, Properties and Applications of the following Nanosystems: |  |  |
| a. | Semiconductor Quantum Dots | CO3 | 10 |
| b. | Fullerenes | CO3 | 10 |
| **(OR)** | | | | |
| 8. |  | Discuss in detail the application and diversity of Molecular Nano machines with any three examples. | CO1 | 20 |
|  | | **Compulsory**: |  |  |
| 9. |  | Describe the applications of Nanotechnology in Microbiology in general, Food Mirobiology and Water Microbiology. | CO3 | 20 |