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

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

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| **Code :** | **15BT3005** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MICROBIAL TAXONOMY AND PHYLOGENY** | **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 Principle, Working and Application of Transmission Electron Microscope. | CO1 | 15 |
| b. | Confer the specimen preparation techniques for Electron Microscopy in general. | CO1 | 5 |
| (OR) | | | | |
| 2. |  | Discuss the Role of Microorganisms and their nature of pathogenesis in the present day scenario. | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | Debate the importance of the ubiquitous nature of Prokaryotic microbial diversity? | CO2 | 10 |
| b. | Discuss the various methods of multiplication in Prokaryotes. | CO2 | 10 |
| (OR) | | | | |
| 4. |  | List the significant dissimilarities of Prokaryotes and Eukaryotes. | CO2 | 20 |
|  |  |  |  |  |
| 5. |  | Discuss and differentiate the Cell wall structure and make-up of the following in detail: |  |  |
| a. | Archaea | CO3 | 10 |
| b. | Protists | CO3 | 10 |
| (OR) | | | | |
| 6. |  | Discuss the significance of Algae and Fungi in the prevailing diverse ecosystem. | CO2 | 20 |
|  |  |  |  |  |
| 7. | a. | Illustrate the difference between a phylogeny, an evolutionary tree, a phylogenetic tree, and a Cladogram. | CO3 | 12 |
| b. | Construct the common Phylogenetic tree of Bacteria, Archaea and Eukarya. | CO3 | 8 |
| (OR) | | | | |
| 8. |  | Elaborate the Significance of Microbial Nutrition and their survival strategy. | CO2 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Construct an algorithm of Phylogenetic trees using any ONE Software you have learnt. | CO3 | 20 |