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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – April/May – 2017**

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| **Code :** | **14BT2059** | **Duration :** | **3hrs** |
| **Sub. Name :** | **CELL BIOLOGY AND MICROBIOLOGY** | **Max. marks :** | **100** |

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

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. |  | Name the phases of cell cycle with its major features of each phase and molecules that control cell cycle. | CO3 | 20 |
| (OR) | | | | |
| 2. |  | Differentiate a Prokaryotic cell from a Eukaryotic cell with diagrammatic representation. | CO1 | 20 |
| 3. |  | Give a brief account of ligand gated and voltage gated channels against neuronal cell membrane. | CO4 | 20 |
| (OR) | | | | |
| 4. |  | With a neat diagram, explain the function of Na+K+ pump. How does the passive diffusion helps to maintain the osmotic balance of the cell? | CO3 | 20 |
| 5. |  | What is differential staining? With a neat flow chart, explain role of dyes and steps involved in Gram staining. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Discuss the principle and working mechanism of phase contrast and fluorescence microscopy and their applications. | CO2 | 20 |
| 7. |  | Mention the major discoveries and contributions of various scientists for the development of Microbiology. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Give a brief note on lytic and lysogeny cycle of bacteriophages. | CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Write a brief note on major nutritional types of microorganisms. | CO4 | 10 |
|  | b. | Physical agents that are used for control of microorganism’s growth- Discuss. | CO3 | 10 |

ALL THE BEST