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



**End Semester Examination – Nov/Dec - 2017**

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| **Code :** | **14BT2004** | **Duration :** | **3hrs** |
| **Sub. Name :** | **CELL BIOLOGY** | **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. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Differentiate a Prokaryotic cell from a Eukaryotic cell with diagrammatic representation? | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | How plasmodesmata communicate with its adjacent cell in plants and cell junction in animals with neat sketch. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | What are the three types of protein filaments that make up the cytoskeleton? Please explain the functions of microtubules. | CO3 | 20 |
|  |  |  |  |  |
| 5. |  | Give a brief account of ligand gated and voltage gated channels against neuronal cell membrane. | CO2 | 20 |
| (OR) | | | | |
| 6. | a. | Write a note on: Symport and Antiport. | CO2 | 5 |
|  | b. | Define Osmosis? Write their major types and functions. | CO2 | 5 |
|  | c. | With a neat diagram, explain the function of Na+K+ pump. How does the pump help to maintain the osmotic balance of the cell? | CO2 | 10 |
|  |  |  |  |  |
| 7. |  | Illustrate with neat sketch of G-protein activates cAMP dependant protein kinase. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Give a brief account of inoisitol triphosphate (IP3) in signal transduction for calcium mobilization. | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory:** |  |  |
| 9. |  | What are the three modes of cell signaling molecules and explain the endocrine signaling molecule with neat sketch. | CO4 | 20 |

ALL THE BEST