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



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

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| **Sub. 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. |  | | | Explain in detail the Experiments and Statements of the following Scientists in Disproving Spontaneous generation theory:  i. Francesco Redi. ii. John Needham.  iii. LazarroSpalanzani. iv. Louis Pastuer. | CO1 | 5+5  5+5 |
| (OR) | | | | | | |
| 2. |  | | Explain in detail the Structure and Function:(With Neat Diagrams)  i. Nucleus and Nucleous. ii. Golgi Body and Lysosomes. | | CO1 | 10+10 |
|  |  | |  | |  |  |
| 3. |  | | Describe the significance of Signaling Molecules, Cell Surface receptors and the cascade effect brought about by Intracellular Signal Transduction. | | CO2 | 20 |
| (OR) | | | | | | |
| 4. |  | Elaborate the phenomenon of Cell Cycle with a special mention of its Regulation, Check points and the role of CDKs in its progression. | | | CO2 | 20 |
|  |  |  | | |  |  |
| 5. |  | Explain in detail the Physical and Chemical methods for the Control of microorganisms with proper illustrations. | | | CO3 | 20 |
|  | | (OR) | | | | |
| 6. | a. | | Discuss the various concepts of membrane transport mechanisms used by the Plasma Membrane to permit components in and out of the Cell. | | CO2 | 15 |
| b. | | Justify the concept of Protein folding and Chaperones as an important function in a Cell. | | CO2 | 5 |
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| 7. | a. | | Discuss the concept of Cancer, Metastasis and Oncogenic loss/gain of function mutations. | | CO2 | 15 |
| b. | | Mention the role of Carcinogens in the incidence of Cancer. | | CO2 | 5 |
| (OR) | | | | | | |
| 8. | a. | | | Interpret the significance of the statement, “Genetic diversity is important for the evolution and species variation”, with neat diagrams. | CO2 | 14 |
| b. | | | List the differences between Mitosis and Meiosis with illustrations. | CO2 | 6 |
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|  | | | | **Compulsory**: |  |  |
| 9. | a. | | | Elucidate the Principle, Working and Application of the Transmission Electron Microscope and the strides they have made in the Field of modern Microscopy. | CO3 | 15 |
| b. | | | List the Novel/advanced techniques in Microscopy. | CO3 | 5 |

ALL THE BEST