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

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

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| **Code :18FP1001** |  | **Duration :** | **3hrs** |
| **Sub. Name : BASICS OF BIOLOGY FOR FOOD ENGINEERS** |  | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Course**  **Outcome** | **Marks** |
| **PART – A (10X1 = 10 MARKS)** | | | |
| 1. | Cell theory was proposed by   1. Robert Hooke b) Tatum c) Schwann d) De Bary | CO1 | 1 |
| 2. | In a cell, Electron transport chain takes place in   1. Peroxisome b) Plastid c) Mitochondria d) Cilia | CO1 | 1 |
| 3. | Sodium glucose tranporter is an example of   1. Facilitated diffusion b) Symport c) Secondary active transport 2. Antiport | CO2 | 1 |
| 4. | Sudden changes occurs in replication, transcription and other cellular process is called   1. Mutation b) DNA repair c) Translation d) Transcription | CO3 | 1 |
| 5. | Which of the following transports only single type of substrate?   1. Uniport carriers b) Symport carriers c) Antiport carriers   d) Membrane proteins | CO2 | 1 |
| 6. | In cell cycle phases, DNA replication occurs during   1. G1 phase b) G2 phase c) S phase d) Prophase | CO4 | 1 |
| 7. | The site for apoptosis   1. Vacuoles b) Chloroplast c) Nucleus d) Mitochondria | CO4 | 1 |
| 8. | Photosynthetic pigment present in   1. Plasma membrane b) Thylakoid membrane   c) Chromatophores d) Chlorosome | CO5 | 1 |
| 9. | Which among the following come under Gram-positive eubacteria?   1. Clostridium b) Actinomyces c) Rhizobium 2. Clostridium, Actinomyces | CO6 | 1 |
| 10. | Addition or deletion of bases causes.   1. Transversion b) Frameshift mutation c) Transition d) Transcription | CO3 | 1 |

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| **PART – B (6 X 3 = 18 MARKS)** | | | |
| 11. | Write the differences between plant cell and animal cell. | CO1 | 3 |
| 12. | Breifly explain the structure and functions of membrane lipids and proteins. | CO2 | 3 |
| 13. | What is Genetic code? Write in detail about its characteristics. | CO3 | 3 |
| 14. | Discuss about the intracellular and extracellular factors for the control of cell division. | CO4 | 3 |
| 15. | Define anabolism and catabolism. | CO5 | 3 |
| 16. | Explain briefly about the classification of microorganism. | CO6 | 3 |

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| **PART – C (6 X 12 = 72 MARKS)**  **(Answer any five Questions from Q.no 17 to 23. Q.No 24 is a Compulsory Question)** | | | | |
| 17. | a. | Write in detail about the cell theory. | CO1 | 6 |
| b. | Explain the structure and functions of mitochondria. | CO1 | 6 |
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| 18. | a. | What is simple and fecilitated diffusion? Write its role in membrane transport. | CO2 | 6 |
| b. | Explain in detail about active transport and its types. | CO2 | 6 |
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| 19. | a. | Give a short note on DNA and its types. | CO3 | 6 |
| b. | Write in detail about the semiconcervative replication of DNA. | CO3 | 6 |
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| 20. | a. | Describe the phases of cell cyle. | CO4 | 6 |
| b. | Write in detail about the components responsible for control of cell cyle. | CO4 | 6 |
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| 21. | a. | Give a short note on oxidative phosphorylation. | CO5 | 6 |
| b. | Explain the mitochondrial respiratory chain. | CO5 | 6 |
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| 22. | a. | Write the properties and principles of classification of microorganisms. | CO6 | 6 |
| b. | Write the function of subcellular organelles in cell. | CO1 | 6 |
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| 23. | a. | Explain about the intracellular junctions in plasma membrane. | CO1 | 6 |
| b. | Give a note on classification of bacterial systems. | CO6 | 6 |
| **Compulsory:** | | | | |
| 24. | a. | Discuss in detail about the intrinsic and extrinsic pathway of apoptosis. | CO4 | 6 |
| b. | Explain the structure and properties of B-DNA. | CO3 | 6 |