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| **University of Kerala** | | |
| **Discipline: Biochemistry** |  | **Time: 1 Hour 30 Minutes**  **(90Mins.)** |
| **Course Code: UK1DSCBCH102** |  | **Total Marks:42** |
| **Course Title : ORIGIN OF LIFE** |  |  |
| **Type of Course: DSC** |  |  |
| **Semester:1** |  |  |
| **Academic Level:100-199** |  |  |
| **Total Credit :4, Theory: 3 Credit, Practical:1Credit** |  |  |

**Part A. 6 Marks**. Time : 5 Minutes

Objective Type. 1 Mark Each. Answer All Questions

(Cognitive Level : Remember/Understand)

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course**  **Outcome(CO)** |
| 1. | List the differences between an animal cell and a virus. | Remember | CO-3 |
| 2. | Name the scientists who postulated Cell theory. | Remember | CO-3 |
| 3. | Mention the cell organelle in which the Tricarboxylic acid cycle takes place. | Understand | CO-3 |
| 4. | Name the covalent bond that connects two amino acids. | Understand | CO-4 |
| 5. | Indicate the key property of an ester bond. | Understand | CO-4 |
| 6. | What is the composition of the ribosomes in a eukaryotic cell? | Understand | CO-3 |

**Part B. 8 Marks**.Time:24 Minutes

Short Answer. 2 Marks Each. Answer All Questions (Cognitive Level: Remember/Understand)

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course**  **Outcome(CO)** |
| 7. | State the importance of Biochemistry in everyday life. | Understand | CO-1 |
| 8. | Identify the features that distinguish a plant cell from an animal cell. | Understand | CO-3 |
| 9. | Give any two characteristic features of the living matter. | Remember | CO-1 |
| 10. | Compare ionic bonds with hydrogen bonds. | Remember | CO-4 |

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**PartC. 28 Marks**. Time:60 Minutes

Long Answer. 7 Marks Each. Answer all 4 questions, choosing among options within each question.

(Cognitive Level: Remember/Understand)

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course**  **Outcome (CO)** |
| 11. | A. Compare and contrast Lamarckism with Darwinism.  OR  B. Interpret the concept of Natural selection with two examples. | Understand | CO-2 |
| 12. | A. Describe covalent interactions seen in biological macromolecules.  OR  B. Explain the various non-covalent interactions found in biomolecules. | Understand | CO-4 |
| 13. | A. Discuss the experiment which demonstrated that plants produce oxygen during photosynthesis.  OR  B. Describe the experiment which supported that life originates from chemicals. | Remember/ Understand | CO-1 |
| 14. | A. Create a visual representation of chloroplast and discuss its functions.  OR  B. Sketch and label the basic structure of a plant cell and describe the salient features of it. | Remember/ Understand | CO-3 |

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