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| **University of Kerala** | | |
| **Discipline: Biochemistry** |  | **Time: 1 Hour 30 Minutes (90Mins)** |
| **Course Code: UK1DSCBCH101** |  | **Total Marks: 42** |
| **Course Title: FOUNDATIONS OF BIOCHEMISTRY** |  |  |
| **Type of Course: DSC** |  |  |
| **Semester: 1** |  |  |
| **Academic Level: 100 - 199** |  |  |
| **Total Credit: 4, Theory: 3 Credits, Practical: 1 Credit** |  |  |

**Part A. 6 Marks. Time: 6 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 | What type of cell lacks a membrane-bound nucleus? | Remember | CO1 |
| 2 | What is the bond angle of the water molecule? | Remember | CO2 |
| 3 | Classify various RNAs . | Understand | CO3 |
| 4 | Name one commonly used laboratory glassware and its usage. | Understand | CO4 |
| 5 | Name one key difference between prokaryotic and eukaryotic cells. | Understand | CO1 |
| 6 | What is the universal solvent in biological systems? | Understand | CO2 |

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

**Objective Type. 2 Mark Each. Answer All Questions**

(Cognitive Level: Understand/ Apply)

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| **Qn No** | **Question** | **Cognitive level** | **Course Outcome (CO)** |
| 7 | Why the cell is considered the structural and functional unit of life? | Understand | CO1 |
| 8 | Explain the difference between ionic and covalent bonds. | Understand | CO2 |
| 9 | Illustrate how traits are passed from parents to offspring. | Apply | CO3 |
| 10 | Demonstrate the preparation of a standard solution. | Apply | CO4 |

**Part C. 28 Marks. Time: 60 Minutes**

**Objective Type. 7 Mark Each. Answer All 4 Questions, Choosing among**

**options within each question.**

**(Cognitive Level: Apply/ Analyse/ Evaluate/ Create)**

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| **Qn. No** | **Question** | **Cognitive level** | **Course Outcome (CO)** |
| 11 | 1. Compare the structures and functions of prokaryotic and eukaryotic cells.   OR   1. Describe the functional importance of the plasma membrane and its various components. | Apply/ Analyse | CO1 |
| 12 | 1. Calculate the pH of 0.001M HCl.   OR   1. Analyse the characteristics of covalent, ionic and van der Waals forces. | Apply/  Analyse | CO2 |
| 13 | 1. Evaluate any classical experiments designed to prove DNA as genetic material.   OR   1. Explain the Hershey Chase Blender experiment. | Evaluate | CO3 |
| 14 | 1. Write a note on good laboratory practices.   OR   1. Design measures for laboratory safety. | Create | CO4 |