**First Semester FYUGP Degree Examination November 2024**

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| **University of Kerala** | | |
| Discipline |  | **Microbiology** |
| Course Code |  | **UK1DSCMBY101** |
| Course Title |  | **Introduction to Microbial World** |
| Type of Course |  | **DSC** |
| Semester |  | **1** |
| Academic Level |  | **100-199** |
| Total Credit |  | **Total Credit: 4, Theory: 3 credit** |

**Time: 1 Hr 30 Min Total : 42 Marks**

**Part A.**

**Objective Type Questions. Answer All Questions. 1 Mark Each.**

**6 Marks. Time: 6 Minutes**

**(Cognitive Level: Remember/Understand)**

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course**  **Outcome**  **(CO)** | **Module** |
| 1. | Who is known for his contributions to the germ theory of disease? | Remember | CO2 | 2 |
| 2. | Which scientist is known for the invention of the microscope? | Remember | CO2 | 2 |
| 3. | Name the causative organism of Botulism. | Remember | CO1 | 1 |
| 4. | What is the primary role of enrichment media in microbiology | Understand | CO4 | 4 |
| 5. | What type of microorganisms are used in biofertilizers to enhance soil fertility? | Understand | CO1 | 1 |
| 6. | What is the shape of bacteria classified as cocci? | Understand | CO3 | 3 |

**Part B.**

**Short Answer Questions. Answer All Questions. 2 Marks Each.**

**8 Marks. Time: 24 Minutes**

**(Cognitive Level: Understand/Apply)**

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course**  **Outcome**  **(CO)** | **Module** |
| **7.** | Name the causative agent of Typhoid and describe its transmission. | Understand | CO1 | 1 |
| 8. | What discovery is Edward Jenner known for? | Understand | CO2 | 2 |
| 9. | Explain the significance of the outer membrane in gram-negative bacteria. | Understand | CO3 | 3 |
| 10. | What is the function of a colony counter? | Understand | CO4 | 4 |

**Part C.**

**Long Answer Questions. Answer All Questions. 7 Marks Each.**

**28 Marks. Time: 60 Minutes**

**Choosing among options within each question**

**(Cognitive Level: Understand)**

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course**  **Outcome**  **(CO)** | **Module** |
| 11. | A)Describe the function and operation of an autoclave in a microbiology laboratory. | Understand | CO4 | 4 |
| OR | | | |
| B)Explain the various types of culture media and their applications in microbiology. | Understand | CO4 | 4 |
| 12. | A)Describe the structural components of T4 Virus | Understand | CO3 | 3 |
| **OR** | | | |
| B)Discuss the structural features of *Rhizopus* species and its role in decomposition. | Understand | CO3 | 3 |
| 13. | A)Explore Alexander Fleming's discovery of penicillin. Discuss its significance in the context of antibiotic development and its broader implications for medical microbiology. | Understand | CO2 | 2 |
| **OR** | | | |
| B)Compare and contrast the concepts of biogenesis and abiogenesis. What key experiments contributed to the acceptance of biogenesis as the dominant theory? | Understand | CO2 | 2 |
| 14 | A)Describe the role of microbes in the production of cheese and how they influence its flavor and texture. | Understand | CO1 | 1 |
| **OR** | | | |
| B)Explain the role of microbes in the preparation of household products like Idli, and Curd . | Understand | CO1 | 1 |