Reg. No.: .....

Name:.....

University of Kerala

First Semester Degree Examination,November 2024

Four Year Under Graduate Programme

Discipline Specific Core Course

BIOTECHNOLOGY

UK1DSCBIT100 - Essentials of Biotechnology

Academic Level: 100-199

Time:1½Hours **Max.Marks:42**

Part A.

Answer All Questions Objective Type.1 Mark Each.

(Cognitive Level: Remember/Understand)

6 Marks. Time: 6 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome(CO)
1.	Name any two biofuels derived from lignocellulosic waste	Remember	CO3
2.	Recognize what is molecular scissors	Remember	CO2
3.	Compare FlavrSavr tomato with ordinary tomato	Understand	CO3
4.	Identify the application of spidergoat	Understand	CO3
5.	Explain the process of malting in beer production	Understand	CO5
6.	Describe the primary microorganism used for Vitamin B12 production	Understand	CO5

Part B.

Answer All Questions Short Answer. 2 Marks Each.

(Cognitive Level: Understand/Apply)

8 Marks. Time: 24 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome(CO)
7.	Identify any two advantages of solid state fermetation	Understand	CO5
8.	Describe the role of *Lactobacillus acidophilus* in yogurt fermentation	Understand	CO5
9.	Figure out any two differences between ancient and modern biotechnology	Apply	CO1
10.	Identify two specific examples for applications of biomimetics	Apply	CO3

Part C.

Answer all 4 Questions, choosing among options within each question.
Long Answer. 7 marks each. (Cognitive Level: Apply/Analyse/Evaluate/Create)
28 Marks. Time: 60 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome(CO)
11.	A. Illustrate how green biotechnology works for better food and better environment Or B. Illustarte how biotechnology has transformed different sectors of human healthcare	Apply	CO1
12.	A. A biotech company wants to develop a monoclonal antibody against a breast cancer type for therapeutic purpose. Examine how hybridoma technology works for disease diagnosis and treatment Or B. Analyse how fermentation technology enhanced commercial production of different antibiotics and evaluate how microbial growth parameters affects industrial bioprocess	Analyze	CO5
13.	A. Evaluate why plasmids are chosen as a convenient vector for genetic engineering experiments, cite with examples Or B. Assess the utility of the enzymatic tools to conduct genetic engineering	Evaluate	CO2
14.	A. Create a sustainable bioprocess for producing biodegradable plastics from renewable resources Or B. Articulate how could genetic engineering transform an animal into a drug factory	Create	CO3