



Reg. No.:

Name:

University of Kerala

First Semester FYUGP Degree Examination, December 2025

Discipline Specific Core Course

BIOTECHNOLOGY

UK1DSCBIT100 - Essentials of Biotechnology

Academic Level: 100-199

2024 Admission onwards

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark
Each.Answer all questions

Qn No.	Question	CL	CO
1	Name the technology involved in developing Flavr Savr tomato.	RE	3
2	Name two major Biotechnology Institutes in India.	RE	2
3	Explain, what type of biotechnological products is Biocon primarily known for producing?	UN	1
4	Explain SciFi food.	UN	4
5	Identify the enzyme that cuts DNA at specific recognition sites.	UN	2
6	Describe synthetic genome	UN	4

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Explain green biotechnology.	UN	1
8	What does biomimetics refer to?	UN	5
9	Examine the role of microorganisms in bioremediation	AP	4
10	A drug prevents RNA polymerase from functioning in a cell, explains which process will be halted first.	AP	2

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A)	AP	1, 1

Qn No.	Question	CL	CO
	<p>Explain the applications of major areas of biotechnology—red, white, green, and blue biotechnology with examples.</p> <p>OR</p> <p>B)</p> <p>Discuss the scope and significance of Biotechnology in contributing to India's economic growth</p>		
12	<p>A)</p> <p>Analyse the ecological and environmental benefits of Enviropig compared to conventional pigs.</p> <p>OR</p> <p>B)</p> <p>Analyze the role of transgenic animals in producing value added therapeutics.</p>	AN	3, 3
13	<p>A)</p> <p>Explore the role of microorganisms in fermented food production.</p> <p>OR</p> <p>B)</p> <p>Evaluate the role of microorganisms in bioremediation.</p>	EV	4, 4
14	<p>A)</p> <p>Develop a procedure to produce a genetically modified crop that can resist insect pests.</p> <p>OR</p> <p>B)</p> <p>Illustrate the steps involved in the creation of recombinant vector and explain the role of various enzymes involved in this process.</p>	CR	2, 2