

QP CODE: 24900036



Reg No:.....

Name:.....

**MAHATMA GANDHI UNIVERSITY, KOTTAYAM**  
**FIRST SEMESTER MGU-UGP (HONOURS) REGULAR**  
**EXAMINATION NOVEMBER 2024**

**First Semester**

**Discipline Specific Core Course - MG1DSCBBT102 - BIOTECHNOLOGY AND  
HUMAN WELFARE**

(2024 ADMISSION ONWARDS)

Duration: 1.5 Hours

Maximum Marks: 50

**Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Interest (I),  
Appreciation (Ap), and Skill (S)**

*Students should attempt atleast one question from each course outcome to enhance their overall  
outcome attainability.*

[Learning Domain][CO No(s)]

**Part A**

Answer The Questions In One Word Or Sentence

Answer all questions

Each question carries 1 mark

- |    |   |     |     |
|----|---|-----|-----|
| 1  | Explain central dogma.                                      | [K] | [1] |
| 2  | Who defined the color codes of biotechnology?               | [K] | [1] |
| 3  | Name 5 essential plant nutrients required for their growth. | [U] | [2] |
| 4  | Name any two Bt cotton hybrids available in India.          | [U] | [2] |
| 5  | Write down 2 major biosafety issues of GM crops.            | [U] | [2] |
| 6  | Define an antibiotic.                                       | [A] | [3] |
| 7  | What is a cultured butter?                                  | [A] | [3] |
| 8  | What is a sparger?  | [A] | [3] |
| 9  | Define bioremediation.                                      | [E] | [4] |
| 10 | Give 2 examples for methanogenic bacteria.                  | [E] | [4] |

(10 × 1 = 10)

**Part B**

Short Answer Questions

Answer any 4 questions

Each question carries 3 marks

- |    |   |      |     |
|----|---|------|-----|
| 11 | What are the major discoveries in modern biotechnology? | [K]  | [1] |
| 12 | What is weed management?                                | [U]  | [2] |
| 13 | What are the limitations of golden rice?                | [U]  | [2] |
| 14 | Write down the major concerns on GM crops.              | [U]  | [2] |
| 15 | Explain about acidophilus milk.                         | [An] | [3] |
| 16 | Explain on anaerobic sludge digester.                   | [E]  | [4] |

(4 × 3 = 12)

### **Part C**

Short Essay Questions

Answer any 3 question

Each question carries 6 marks

- |    |  |     |     |
|----|--|-----|-----|
| 17 | Differentiate between conventional and modern biotechnology.         | [K] | [1] |
| 18 | Explain the mechanism of glyphosphate action.                        | [U] | [2] |
| 19 | Write a note on insulin production.                                  | [A] | [3] |
| 20 | Write a note on the biological treatment process of waste water.     | [E] | [4] |
| 21 | Elaborate on open dumps and landfills for the solid waste treatment. | [E] | [4] |

(3 × 6 = 18)

### **Part D**

Essay Questions

Answer any 1 question

Each question carries 10 marks

- |    |   |     |     |
|----|---|-----|-----|
| 22 | Describe in detail about different crop management practices. | [U] | [2] |
| 23 | Explain the role of biotechnology in vaccine production.      | [A] | [3] |

(1 × 10 = 10)

**END OF THE QUESTION PAPER**

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