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Reg.No : .....

Name : .....

**MAHATMA GANDHI UNIVERSITY, KOTTAYAM**  
**MGU-UGP (HONOURS) REGULAR EXAMINATION MARCH 2025**  
**SECOND SEMESTER**

**Discipline Specific Core Course (DSC) - MG2DSCBTG100, MG2DSCBBT101**  
**- APPLIED BIOTECHNOLOGY**  
(2024 ADMISSION ONWARDS)

**Duration: 1.5 Hours**

**Maximum Marks: 50**

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

Students should attempt at least one question from each course outcome to enhance their overall outcome attainability.

**Part A**

One Word Answer

Answer any **10** questions

Each question carries **2** marks

1. Which 3D printing technology uses a laser to fuse together particles? [K] / [CO1]
2. Mention any two cultural conditions required for yogurt production. [U] / [CO2]
3. Quote the applications of bioprinting. [K] / [CO4]
4. Mention the media components for VitaminB12 production. [U] / [CO2]
5. Identify one common genetically modified crop. [K] / [CO3]
6. Give examples of biotechnological applications in the Dark biotechnology sector. [U] / [CO1]
7. Define artificial cell. [K] / [CO4]
8. What is acid rain? [K] / [CO2]
9. What is the significance of progeny testing in livestock breeding [U] / [CO3]
10. Define cosmid vector [K] / [CO4]

11. Who coordinated the Human Genome Project? [K] / [CO4]
12. Identify the vitamin precursor produced in Golden Rice? [U] / [CO3]
- [2x10 = 20]**

### **Part B**

Short Essay

Answer any **5** questions

Each question carries **4** marks

13. What are the different disciplines that contribute to the field of Biotechnology? [K] / [CO1]
14. Discuss any one common technique used in forensic science. [U] / [CO4]
15. Classify any two merits and demerits of transgenic animals in biotechnology. [U] / [CO3]
16. How are antibiotics typically produced in nature? [U] / [CO4]
17. Explain what an animal vaccine is and why it is used? [K] / [CO3]
18. Illustrate quantum dots. [U] / [CO4]
19. What are the technologies used in biofuel production [U] / [CO2]
- [4x5 = 20]**

### **Part C**

Essay

Answer any **1** questions

Each question carries **10** marks

20. Enlist and make a report on top biotech companies in India? [U] / [CO3]
21. Briefly explain the goals and findings of HGP. Summarise ethical, legal and social issues. [K] / [CO4]
- [10x1 = 10]**