Jane -2023,

# BLDE (DEEMED TO BE UNIVERSITY)

# **B.Sc.** in Biotechnology

[Time: 3 Hours]

[Max. Marks: 80]

#### **V SEMESTER**

# PAPER - I (Food Biotechnology)

**QP CODE: 8575** 

Your answer should be specific to the questions asked. Write Question No. in left side of margin.

### **Long Questions**

10X1 = 10 Marks

1. Explain in detail the role of biotechnology in the food industry.

Short Essays: (Any - 8)

 $5 \times 8 = 40 \text{ Marks}$ 

- 2. What are fermented foods? Types of fermented foods
- 3. Write a note on fermented dairy products.
- 4. Explain food preserves using chemicals.
- 5. Write a note on food additives and flavoring agents.
- 6. Importance of bacteria in food.
- 7. What is food spoilage? Explain briefly.
- 8. Write a note on food poisoning.
- 9. What are essential and non-essential amino acids?
- 10. What are the benefits of fermented foods?

### Short Answers: (Any - 10)

- 11. Write a short note on Aflatoxins and Ochratoxins.
- 12. What are different types of fermented foods?
- 13. What is food microbiology?
- 14. Write a short note on Pasteurization.
- 15. What is food biotechnology?
- 16. Write a note on fermented foods.
- 17. What is sterilization? Give an example.
- 18. Write a note on dairy products with examples.
- 19. Write a short note on the importance of fungi in food.
- **20.** What are mycotoxins and Botulinum?
- 21. Write a note on Single Cell Protein.

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#### **V SEMESTER**

# PAPER - II (Agriculture Biotechnology) OP CODE: 8576

Your answer should be specific to the questions asked. Write Question No. in left side of margin.

# **Long Questions**

10X1 = 10 Marks

1. Write in detail about protoplast isolation & its culture.

Short Essays: (Any - 8)

5 X 8 = 40 Marks

- 2. General composition of plant tissue culture media
- 3. Discuss about another culture.
- 4. Sterilization of explant
- 5. Application of agricultural biotechnology
- 6. Embryogenesis
- 7. What are transgenic plants? Give its examples
- 8. Macronutrients
- 9. Ti plasmid.
- 10. Anti -Sense RNA technique

# Short Answers: (Any – 10)

- 11. Define haploid & cybrids
- 12. Application of embryogenesis
- 13. Steps involved in single cell isolation
- 14. Bt-cotton plant
- 15. Enzymatic isolation of protoplast
- 16. organogenesis
- 17. RAPD technique
- 18. Chemical method of gene transfer
- 19. CaMV (cauliflower mosaic virus)
- 20. Secondary metabolite
- 21. Suspension culture

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[Time: 3 Hours]

[Max. Marks: 80]

#### **V SEMESTER**

# PAPER - III (Medical Biotechnology)

**QP CODE: 8577** 

Your answer should be specific to the questions asked. Write Question No. in left side of margin.

# **Long Questions**

10X1 = 10 Marks

1. Human Genome project

Short Essays: (Any - 8)

 $5 \times 8 = 40 \text{ Marks}$ 

- 2. FISH
- 3. HGH
- 4. DNA finger printing
- 5. Stem Cells
- 6. RIA
- 7. Cheomotheorphy
- 8. Gene Gun
- 9. cystic fibrosis
- 10. Sonotheorphy

### Short Answers: (Any – 10)

- 11. Insulin
- 12. Tissue plasminogen activator
- 13. Magnetofection
- 14. Tumor suppresser genes
- 15. Metastasis
- 16. alziemers diseases
- **17. SCID**
- 18. Vaccines
- 19. Cytogenetics
- 20. Downsyndrome
- 21. Prto- oncogenes

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**B.Sc.** in Biotechnology

[Time: 3 Hours]

[Max. Marks: 80]

#### **V SEMESTER**

# PAPER I – Environment Biotechnology OP CODE: -2528

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

### **Long Questions**

10X1 = 10 Marks

1. Define pollution& explain in detail about various types of pollution

Short Essays: (Any – 8)

 $5 \times 8 = 40 \text{ Marks}$ 

- 2. Biomagnification & its effect
- 3. What are different sources of pollution
- 4. Green-house gases & its effect
- 5. Afforestation
- 6. List out effect of water pollution on aquatic life
- 7. Biofertilizers
- 8. Define bioremediation & give its type
- 9. Give classification of sewage treatment
- 10. Control measures of soil pollution

# Short Answers: (Any – 10)

- 11. Define xenobiotics
- 12. Nitrification
- 13. Acid rain its causes
- 14. Effect of air pollution on human being
- 15. Difference between adsorption & absorption
- 16. Devices used to control air pollution
- 17. Single cell protein
- 18. Non convectional energy sources
- 19. Biogas plant structure
- 20. What is Bioluminescence
- 21. Superbugs