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PGIIIS-014-A-22

M.Sc. III Semester (CBCS) Degree Examination

BIOTECHNOLOGY

Animal Biotechnology

Paper : HCT - 3.1

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates :

1. **Section 'A' has all compulsory questions.**
2. **Answer 'B' and 'C' sections as per instructions.**

SECTION - A

Answer the following in brief: **(10×2=20)**

1. Hormones
2. Spermatozoa
3. Cell proliferation
4. Recombinant proteins
5. Yeast vectors
6. Amniocytes
7. Baculoviruses
8. Dolly
9. Hybrid antibodies
10. Primary culture.

SECTION - B

Answer any FOUR of the following **(4×6=24)**

11. Mechanism of hormonal signal transduction.
12. Structure of sperm

13. Biology of cultured animal cell.

14. Super Ovulation

15. Bombyx mori

16. Menstrual cycle.

SECTION - C

Answer any THREE of the following **(3×12=36)**

17. Describe the structure and function of Female reproductive system.

18. Discuss in detail about production of valuable products from animal cell culture.

19. What is transgenic? Explain the Methodology of the transgenic animal production.

20. What is vermiculture? Explain the role of earthworms in biodegradation of organic wastes.

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PGIIIS-016-A-22

M.Sc. III Semester Degree Examination

BIOTECHNOLOGY

Microbial Biotechnology and Fermentation Technology

Paper : SCT - 3.1

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates:

1. **Section 'A' has all compulsory questions**
2. **Answer 'B' and 'C' sections as per instructions.**

SECTION - A

I. Answer the following in brief: **(10×2=20)**

1. Batch fermentation.
2. Cell immobilization
3. SCP
4. Carotenoids
5. Fermented foods
6. Ammensalism.
7. Micronutrients
8. Scale down fermentation
9. CPV
10. Rhizobium.

SECTION - B

II. Answer any FOUR of the following **(4×6=24)**

11. Microbes used in pickling
12. Submerged fermentation.

13. Production of Algal Proteins.

14. Strain improvement.

15. Microbes used in Agri-biotechnology

16. Bio-fertilizers.

SECTION - C

III. Answer any THREE of the following **(3×12=36)**

17. Explain in detail the study of biological nitrogen fixation by Rhizobium.

18. Give a detailed account on the Microbial transformation of Sterols/ Xenobiotics.

19. Write a detailed account on the Measurement and control of bioprocess parameters used in the fermentation process.

20. Describe in detail the microbial production of any two organic acids used in the industries.

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PGIIIS-015-A-22

M.Sc III Semester (CBCS) Degree Examination

BIOTECHNOLOGY

Genetic Engineering

Paper : HCT - 3.2

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates :

1. **Section 'A' has all compulsory questions**
2. **Answer 'B' and 'C' sections as per instructions.**

SECTION - A

Answer the following in brief: **(10×2=20)**

1. cDNA
2. Passenger DNA.
3. Automated DNA Sequencing
4. Target DNA
5. P^{BR322}.
6. Phosphodiester bond
7. Plasmid
8. GM-Foods
9. Baculovirus
10. Restriction enzynes.

SECTION - B

Answer any FOUR of the following **(4×6=24)**

11. Pyrosequencing
12. c-DNA Library

13. Human Genome Sequencing

14. DNA Amplification.

15. DNA Markers

16. DNA Ligases.

SECTION - C

Answer any THREE of the following **(3×12=36)**

17. Write a note on tools of Genetic Engineering.

18. Discuss in detail cloning vectors with necessary diagrams.

19. Describe in detail genetically engineered Bio Therapeutics and Vaccine manufacturing procedures.

20. Give an account on DNA Fingerprinting.

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PGIIIS-017-A-22

M.Sc. III Semester (CBCS) Degree Examination

BIOTECHNOLOGY

Molecular Biotechnology

Paper : OET - 3.1

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates:

1. **Section has all compulsory questions.**
2. **Answer 'B' and 'C' sections as per instructions.**

SECTION - A

Answer the following in brief: **(10×2=20)**

1. Allele.
2. Law of segregation
3. DNA polymerase
4. Palindromes
5. Transposons
6. Mutageneic Agents
7. SOS Repair
8. Operon
9. Donor Cell
10. Catabolic repression

SECTION - B

Answer any FOUR of the following **(4×6=24)**

11. Griffith Experiment

12. Gene Expression in Eukaryotes

13. Generalised Transformation.

14. Neurospora

15. Forms of DNA

16. DNA Repair System.

SECTION - C

Answer any THREE of the following **(3×12=36)**

17. Write a note on various models of DNA replication.

18. Give an account Mendels laws of Inheritance.

19. Explain in detail an overview of Genetic Code.

20. Describe in detail Transduction with labelled diagrams.
