

PGIIS-1566 B-18
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. Algal Proteins
2. C:N ratio
3. Scale down process
4. Biotransformation
5. Culture perservation
6. Food colours
7. Fed Batch fermentor
8. Alkaloids
9. Bacillus thurengensis
10. Probiotics

SECTION-B**II. Answer any four of the following.****(4×6=24)**

11. Rhizobium
12. SCO
13. Media formulation
14. Transformation of sterols
15. Cell immobilization
16. Bacterioans

SECTION-C**III. Answer any Three of the following.****(3×12=36)**

17. Discuss in detail the optimization and standardization of bioprocess variables.
18. Give a detailed account on the microbial production of organic acids.
19. Write a detailed account on the microbial production of polysaccharides.
20. Describe the Biological nitrogen fixation process by Diazotrophs.

PGIIS-1564 B-18
M.Sc. III Semester 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' as per the instructions.

SECTION-A

Answer the following in brief:

(10×2=20)

1. Adeno Associated virus
2. Tubectomy
3. Surrogate pregnancy
4. Mesenchymal cells
5. Histone Acetyl transferase
6. Super ovulation
7. BAC vectors
8. LH
9. Nucleic acid probes
10. Ecdysone

SECTION-BAnswer any **four** of the following.**(4×6=24)**

11. Structure of sperm
12. Lymphocyte preparation
13. Embryo splitting
14. Hybrid antibodies
15. Fish culture methods
16. Tissue typing

SECTION-CAnswer any **Three** of the following.**(3×12=36)**

17. Explain the mechanism of signal transduction by hormones.
18. Describe the structure and functions of male reproductive organs.
19. Discuss in detail about animal cell culture methods biology, and culture media.
20. Explain the methods for culturing of specialized cell with suitable example.

Roll No. _____

[Total No. of Pages : 2

PGIIS-1565 B-18
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 Section B and C as per instructions.*

SECTION-A

Answer the following:

(10×2=20)

1. Z-DNA
2. Random Primers
3. BAC
4. Phagemids
5. Restriction Endonucleases
6. DNA-Library
7. RFLP
8. Gene Knockout
9. Mutagenesis
10. p^{UC19}

SECTION-B

Answer **any four** of the following.

(4×6=24)

11. Electro mobility Shift Assay
12. Ti-Plasmid
13. cDNA Cloning
14. Proof Reading Enzymes
15. Primers Design
16. Yeast Two Hybrid System

SECTION-C

Answer **any Three** of the following.

(3×12=36)

17. Write a note on Restriction Enzymes and its applications.
 18. Discuss in detail various types of PCR and their uses.
 19. Discuss in detail cloning vectors.
 20. Explain two methods of DNA sequencing.
-