Roll No. _____ [Total No. of Pages : 2

PGIIIS-1564 B-17
M.Sc. III Semester Degree Examination
BIOTECHNOLOGY
(Animal Biotechnology)
Paper : 3.1 HCT

Time : 3 Hours Maximum Marks : 80

Instructions to Candidates :

i) Section A has all compulsory questions.

ii) Answer B and C sections as per instructions.

SECTION - A

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

1. Adrenal gland.

2. ISH.

3. Receptors.

4. Super ovulation.

5. Serum free medium.

6. Cryopreservation.

7. Follicular atresia.

8. Balanced salt solution.

9. Monoestrous.

10. Nucleic acid probes.

SECTION - B

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

11. Prawn culture.

12. Recombinant proteins.

13. Hybrid Anti bodies.

14. Embryo splitting.

15. Structure of sperm.

16. Cyclic AMP.

SECTION - C

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

17. Explain the estrons & menstrual cycle & its hormonal regulation.

18. Discuss in detail about history advantages & Limitations of animal cell culture.

19. Describe the life cycle & rearing method of silkworm.

20. Write an account on use of RAPD in clinical diagnosis & tissue typing.

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Roll No. _____ [Total No. of Pages : 2

PGIIIS-1565 B-17
M.Sc. IIIrd Semester Degree Examination
BIOTECHNOLOGY
(Genetic Engineering)
Paper : HCT - 3.2

Time : 3 Hours Maximum Marks : 80

Instructions to Candidates :

i) Section A is compulsory questions.

ii) Answer B and C sections as per instructions.

Section -A

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

1. Palindromic Sequence.

2. Nick translation.

3. EMBL.

4. Replacement Vectors.

5. DNA Ligase.

6. Ti-Plasmid.

7. RFLP.

8. Suicide gene therapy.

9. Reverse transcriptase.

10. MBP-tag.

Section - B

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

11. SV40-Vectors.

12. Fluorescence Insitu Hybridization.

13. Maxam and Gilbert Method of DNA sequencing.

14. Gene Silencing techniques.

15. Cloning Vectors.

16. Application of Enzymes in genetic engineering.

Section - C

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

17. Explain in detail about Hybridization techniques.

18. Write in detail about expression vectors.

19. Write a detailed note on construction of cDNA and genomic DNA libraries.

20. Explain in detail about DNA protein interaction.

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Roll No. _____ [Total No. of Pages : 2

PGIIIS-1567 B-17
M.Sc. III Semester Degree Examination
BIOTECHNOLOGY
Molecular Genetics
Paper : OET - 3.2

Time : 3 Hours Maximum Marks : 80

Instructions to Candidates :

i) Section A has all compulsory questions.

ii) Answer B and C as per instructions.

SECTION-A

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

1. Restriction enzymes.
2. Recessive characters.
3. Pilli.
4. Neurospora.
5. A-DNA.
6. Griffith experiment.
7. Muton.
8. Conjugation tube.
9. Transposons
10. Introns

SECTION - B

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

11. One gene one protein hypothesis.
12. Mendel's laws of inheritance.

13. Griffith experimentations.

14. Genetic code.

15. Nutations.

16. Generalized transductions.

SECTION - C

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

17. Discuss in detail the different models of replication in bacteria.

18. Describe in detail the DNA repair mechanisms.

19. Give a detailed account on regulation of gene expression with lac operon and Trp operon.

20. Write an detailed account on the transcriptional process involved in prokaryotes and list out the differences in both eukaryotes and prokaryotes.

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Roll No. _____ [Total No. of Pages : 2

PGIIIS-1566 B-17
M.Sc. III Semester (CBCS) Degree Examination
BIOTECHNOLOGY
Microbial Biotechnology
Paper : SCT - 3.1

Time : 3 Hours Maximum Marks : 80

Instructions to Candidates :

i) Section A has all compulsory questions.

ii) Answer B and C sections as per instructions.

SECTION-A

Answer the following. **(10×2=20)**

1. Biotransformation.

2. Aeration.

3. Bacteriocins.

4. *Saccharomyces cerevisiae*

5. Single cell protein.

6. Probiotics.

7. Neutraceuticals.

8. NPV.

9. *Rhizobium.*

10. Sterols.

SECTION - B

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

11. Explain the measurement and control of bioprocess parameters.

12. Write briefly on microbes used in pickling.

13. Describe biotechnological production of new protein foods.

14. Write briefly on microbial transformation of non-steroid compounds.

15. Explain the microbial production of polysaccharides.

16. Explain the mechanism of N_2 fixation.

SECTION - C

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

17. Describe different types of fermentation process.

18. Write an account on application of microbes in the production of colors and flavors.

19. Describe microbial production of biopesticides and their applications.

20. Describe the applications of biotechnology in the production of vitamins and organic acids.

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