PGIIS 1090 A-16
M.Sc. IInd Semester Degree Examination
Biotechnology
(General Biotechnology)
Paper : OET-2.1

Time : 3 Hours   Maximum Marks : 8

Instructions to candidates : 1) Section A has all compulsory questions.

2) Answer B and C Sections as per the instructions

PART - A

Answer the following :   (10 × 2 = 2(

1. Cell lines

2. Transport media

3. Totipotency

4. Alexander Fleming

5. Somatic embryogenesis

6. Biofuel

7. Lag phase

8. Thermophiles

9. Probes

10. Synchronized growth

PART - B

Answer any Four of the following :   (4×6=2(

11. Give an account of the contributions of Antony von Leeuenhoeck,

12. Write a brief note on plant tissue culture media.

13. Explain the properties of genetic code.

14. Write a note on enzymes used in genetic engineering.

15. Describe the steps involved in cryopreservation.

16. Explain the technique involved in isolation and culturing of protoplast.

PART - C

Answer any three of the following : $(3 \times 12 = 36)$

17. Explain the applications of Biotechnology in Agriculture.

18. What are fermentors? Explain the structure of typical fermentor. Add a note on its sterilization.

19. What are VNTRs? Describe the method of DNA fingerprinting.

20. Describe the ultrastructure of Bacterial cell.

PGIIS 1090 A-16
M.Sc. IInd Semester Degree Examination
Biotechnology
(General Biotechnology)
Paper : OET-2.1

Time : 3 Hours   Maximum Marks : 80

Instructions to candidates : 1)   Section A has all compulsory questions.

2)   Answer B and C Sections as per the instructions

PART - A

Answer the following :   (10 × 2 = 20)

1.   Cell lines

2.   Transport media

3.   Totipotency

4.   Alexander Fleming

5.   Somatic embryogenesis

6.   Biofuel

7.   Lag phase

8.   Thermophiles

9.   Probes

10.   Synchronized growth

PART - B

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

11.   Give an account of the contributions of Antony von Leeuenhoeck,

12.   Write a brief note on plant tissue culture media.

13.   Explain the properties of genetic code.

14.   Write a note on enzymes used in genetic engineering.

15.   Describe the steps involved in cryopreservation.

16. Explain the technique involved in isolation and culturing of protoplast.

PART - C

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

17. Explain the applications of Biotechnology in Agriculture.

18. What are fermentors? Explain the structure of typical fermentor. Add a note on its sterilization.

19. What are VNTRs? Describe the method of DNA fingerprinting.

20. Describe the ultrastructure of Bacterial cell.

PGIIS 1089 A - 16
M.Sc. IInd Semester (CBCS) Degree Examination
Biotechnology
(Bioinformatics)
Paper : SCT 2.1
(New)

Time : 3 Hours   Maximum Marks : 80

Instructions to Candidates :

    i)   Section 'A' has all compulsory questions.

    ii)   Answer 'B' and 'C' section as per instructions.

SECTION-A

Answer the following   (10×2=20)

1.   Motif

2.   Water and Smith algorithm

3.   SAKURA

4.   Correlation

5.   FASTA

6.   PROCHECK

7.   MIPSX

8.   ExPASy

9.   Pfam

10.   TIGR

SECTION-B

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

11.   Write a note on Chi-square test.

12.   Give an account on ENTREZ.

13.   Explain biochip and its applications.

14. What is BanKit? Explain the steps involved in sequence submission.

15. Describe nucleotide sequence databases.

16. Give an account of protein composite databases

SECTION-C

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

17. Explain in detail the primary, secondary and tertiary protein structure prediction servers.

18. Explain the steps involved in primer designing using Primer 3.

19. Explain the correlation and regression with their applications.

20. What is phylogenetic? Explain phylogenetic tree construction, analysis and applications in evolutionary studies.

PGIIS 1087 A-16
M.Sc. IInd Semester Degree Examination
Biotechnology
(Molecular Biology)
Paper : HCT - 2.2

Time : 3 Hours   Maximum Marks : 80

Instructions to Candidates:

1.   Section A has all compulsory questions.

2.   Answer 'B' and 'C' sections as per university

Section - A

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

1.   Activators

2.   5′ cap

3.   Hfr strain

4.   Repetitive sequences

5.   Promoters

6.   Si RNA

7.   Mini satellite

8.   Chaperones

9.   Lysageny

10. Fork lined method.

Section - B

Write any **four** of the following :   (4×6=24)

11. Describe Davis U - Tube

12. Give an account of replication

13. Prove DNA as a genetic material

14. What is genetic code explain wobble hypothesis.

15. Explain post translational modifications

16. Give an account of the specialized transduction

Section - C

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

17. Describe the mechanism of bacterial conjugation and what is piten

18. Explain the positive and negative transcriptional regulations

19. Discuss in detail the genetic code and prove genetic code is universal.

20. Give an detailed account of the translational process in bacteria.

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PGIIS 1086 A-16
M.Sc. IInd Semester Degree Examination
Biotechnology
(Immunology)
Paper : HCT - 2.1

Time : 3 Hours   Maximum Marks : 80

Instructions to Candidates:

 *1.   Section A has **all** compulsory questions.*

 *2.   Answer **B** and **C** sections as per the instructions*

SECTION - A

Answer the Following :   (10×2=20)

1.   Haptens

2.   Memory Cells

3.   HLA - Typing

4.   Antigen Processing Cell

5.   IgG

6.   Clonal Selection

7.   DNA Vaccines

8.   Atopy

9.   CD4- Cells

10. Autoimmune Diseases

SECTION - B

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

11.   Write a note on Innate Immunity.

12.   Give an account of the structure of Immunoglobulins.

13.   Explain MHC - molecule.

14. Describe Anaphylaxis with example.

15. Explain Cell - Cell cooperation.

16. Discuss subunit Vaccines.

SECTION - C

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

17. Discuss in detail cell mediated immune response with examples.

18. Give an account of mechanism and role of CD4 - cells.

19. Discuss in detail structure and functions of cytokines.

20. Describe various theories related to antibody formation.