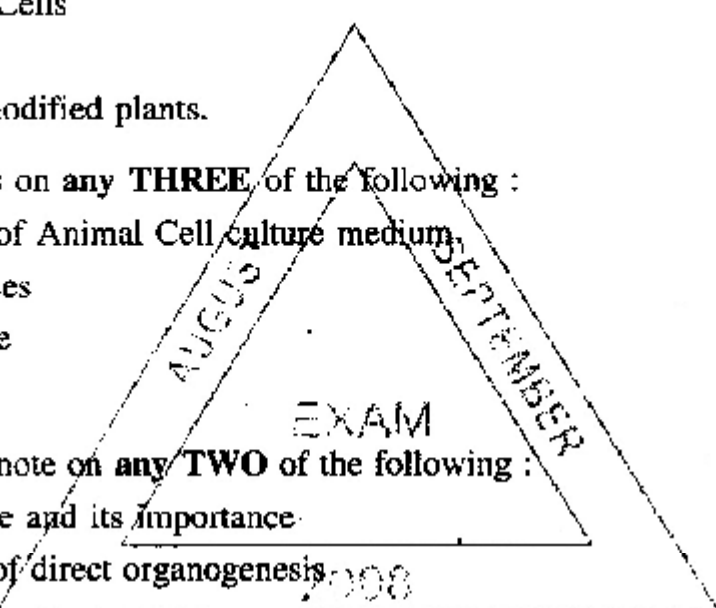


M.Sc. (Final) Biotechnology Examination, August/September 2008  
 Directorate of Correspondence Course  
 Paper – V : CELL AND TISSUE CULTURE TECHNOLOGY

Time : 3 Hours

Max. Marks : 75

*Note : 1) Answer all questions.  
 2) Illustrate wherever necessary.*

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1. Define/Explain (4×3=12)
    - a) Rhizogenesis
    - b) Transformed Cells
    - c) Totipotency
    - d) Genetically modified plants.
  
  2. Write short notes on any **THREE** of the following : (3×5=15)
    - a) Composition of Animal Cell culture medium.
    - b) Carbon Sources
    - c) Pollen Culture
    - d) Genegun.
  
  3. Write a detailed note on any **TWO** of the following : (2×9=18)
    - a) Embryoculture and its importance.
    - b) Significance of direct organogenesis.
    - c) Airlift fermentors.
  
  4. Describe the factors affecting animal tissue culture. 15

OR

Write an account on Suspension culture of blood Leukocytes.
  
  5. Describe the technique of protoplast culture and add a note on importance of somatic hybrids. 15

OR

Explain the importance of plant tissue culture in the field of Agriculture and Forestry.

M.Sc. (Final) Biotechnology Examination, August/September 2008  
 Directorate of Correspondence Course  
 Paper – VI : INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY

Time : 3 Hours

Max. Marks : 75

- Notes :* 1) Answer all questions.  
 2) Illustrate wherever it is necessary.

1. Define explain briefly the following : (4×3=12)  
 a) Drum dryer.  
 b) Anti foaming agents.  
 c) Photochemical Smog.  
 d) Phytoremediation.
2. Write short notes on any **THREE** of the following : (3×5=15)  
 a) Synthetic media.  
 b) Activated sludge process.  
 c) Transgenic pesticide.  
 d) Yeast proteins.
3. Answer any **TWO** questions from the following : (2×9=18)  
 a) Applications of bioreactors.  
 b) Petrochemical effluents.  
 c) Environment legislations in India.

4. Write an account on various process of down streaming of fermented products. 15

OR

Describe the extraction and filtration methods of fermentation products.

5. Give an account of bioremedial methods in the treatment of contaminated soil. 15

OR

Explain the method of biogas production from solid waste.

**M.Sc. Final Biotechnology Examination, August/September 2008**  
**Directorate of Correspondence Course**  
**Paper VII : COMPUTER APPLICATION AND BIOINFORMATICS**

Time : 3 Hours

Max. Marks : 75

- Note :* 1) Answer all questions.  
 2) Illustrate wherever necessary.

1. Explain briefly the following : (4×3=12)

- a) Algorithms
- b) Window 98/2000
- c) MAN
- d) Secondary structure of proteins

2. Write short notes on any **THREE** of the following (3×5=15)

- a) Microcomputer
- b) Types of data bases
- c) Computer auxillary storage devices
- d) Molecular mapping

3. Answer any **TWO** questions from the following: (2×9=18)

- a) Write an account on basic commands of MS-DOS
- b) Define bioinformatics, Explain its aim, history and scope.
- c) Explain about protein structure and function prediction.

P.T.O.

- 4. a) Write an account on input and output devices of computers. (10+5=15)
- b) Comment on supercomputers.

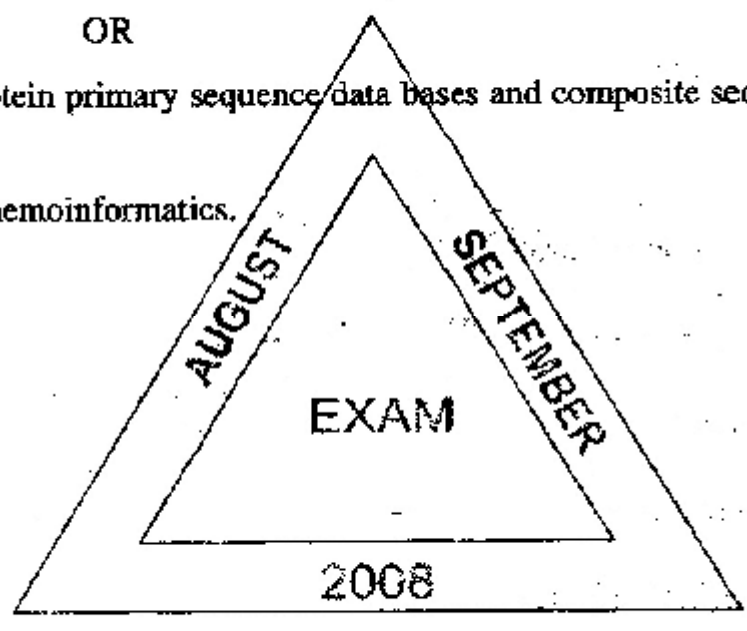
OR

- a) Write an account of genomic data bases. How it is submitted and retrieved ?
- b) Describe DNA chips. (10+5=15)

- 5. Give an account of human genome analysis. Add a note on the alignment of genomic data. (15)

OR

- a) Explain protein primary sequence data bases and composite sequence data bases.
- b) Describe chemoinformatics. (10+5=15)



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M.Sc. (Final) Biotechnology Examination, August/September 2008

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Paper – VIII : RECOMBINANT DNA TECHNOLOGY

Time: 3 Hours

Max. Marks : 75

*Note :* 1) Answer all questions.

2) Illustrate wherever necessary.

1. Write briefly on the following :

(4×3=12)

- a) DNA ligase
- b) Cosmid
- c) cDNA
- d) Interferons.

2. Write short notes on any **THREE** of the following

(3×5=15)

- a) Restriction endonuclease
- b) Gel retardation
- c) RFLP
- d) Nuclear transfer technique.

3. Answer any **TWO** of the following :

(2×9=18)

- a) Monoclonal antibody production
- b) Growth hormone production
- c) Patenting of genetically modified organisms.

