

(BIT 40111)

UNIT III

M.Sc. DEGREE EXAMINATION, APRIL 2016.

Fourth Semester

Biotechnology

Paper I – IPR, BIOETHICS, BIOSAFETY AND
RESEARCH METHODOLOGY

(Regulation 2011)

Time : Three hours

Maximum : 70 marks

Answer ONE question from each Unit.

All questions carry equal marks.

UNIT I

1. What is Bioethic's? Discuss the social and ethical issues in biotechnology.

Or

2. Give an account on good laboratory practices and laboratory accreditations.

UNIT II

3. Explain the uses of BT – cotton and BT – brinjal? Add a note on the implications of their release into the environment?

Or

4. Discuss the special procedures for rDNA based products.

5. What are patents? Describe the procedure for applying a patent.

Or

6. Write an essay on national and international conventions in biotechnology and related areas.

UNIT IV

7. Explain the various aspects of literature research.

Or

8. Discuss the progress of research with respect to statistical approach and comparison with existing methodologies.

UNIT V

9. Give an account on the preparation of a research proposal for funding.

Or

10. Enlist different funding organizations and their role in the development of science.

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Paper – II : ANIMAL BIOTECHNOLOGY

(Regulation 2011)

Time : Three hours

Maximum : 70 marks

Answer ALL questions.

All questions carry equal marks.

UNIT I

1. Discuss the types of tissues used in animal tissue culture.

Or

2. Give an account on the factors influencing growth.

UNIT II

3. Explain the isolation and propagation of embryonic stem cells.

Or

4. Enumerate the clinical applications of stem cell therapy.

5. Briefly outline the major steps involved in the Nuclear transfer technique.

Or

6. Discuss the challenges in human therapeutic cloning and their impact on society.

UNIT IV

7. Explain the development of transgenic mice and other animal models.

Or

8. What is molecular pharming? Discuss the production of peptides and proteins of pharmaceutical interest.

UNIT V

9. Briefly outline the applications of biotechnology to animal health.

Or

10. Give an account on microbial supplements and utilization of animal waste as line stock feed.

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Paper III – PLANT BIOTECHNOLOGY

(Regulation 2011)

Time : Three hours

Maximum : 70 marks

Answer ALL questions.

All questions carry equal marks.

UNIT I

1. Explain the different techniques used for the manipulation of plant genome.

Or

2. Give an account on organogenesis and plant regeneration.



UNIT II

3. Describe the cell culture techniques for the micropropagation of Medicinal and endangered plants.

Or

4. Discuss the Isolation of protoplasts and their fusion methods.

UNIT III

5. Enumerate the applications of genetic engineering for crop improvement.

Or

6. Discuss the production and significance of pest and herbicide resistant transgenic plants.

UNIT IV

7. Explain the biosynthesis of food and food additives from plants.

Or

8. Describe the breeding strategies for enhancing active principles in plants.

UNIT V

9. Give an account on the industrial applications of algae.

Or

10. Write an essay on the cultivation of algae.

