(BIT40111)

M.Sc. DEGREE EXAMINATION, APRIL 2018.

Fourth Semester

Biotechnology

Paper I : IPR, BIOETHICS, BIOSAFETY AND RESEARCH METHODOLOGY

(Regulation 2011)

Time : Three hours Maximum : 70 marks

Answer FIVE Questions, ONE question from each Unit.

All questions carry equal marks

UNIT I

1. Describe the causes of unethical acts, personal gains and professional ethics.

Or

2. Explain ethical decision making, ethical dilemmas and laboratory accreditation.

UNIT II

3. Describe social and ethical issues of biosafety.

Or

4. Describe the use of genetically modified organisms and their release into the environment.

UNIT III

5. Write an account on IPR and IPP.

Or

6. Enumerate National and International conventions on biotechnology and related areas.

UNIT IV

7. Write an account on the design of the experimental programme.

Or

8. Explain evaluation of results, statistical approach and comparison with existing methodologies.

UNIT V

9. Describe the origin of research proposal, National and International status and expected outcome of the project.

Or

10. Write an account on sources of Funding agencies in India and Royal Society Fellowship of U,K.

(BIT40211)

M.Sc. DEGREE EXAMINATION, APRIL 2018.

Fourth Semester

Biotechnology

Paper II — ANIMAL BIOTECHNOLOGY

(Regulation 2011)

Time : Three hours Maximum : 70 marks

Answer FIVE Questions, ONE question from each Unit.

All questions carry equal marks.

UNIT I

1. Describe the principles of sterile techniques.

Or

2. Describe the components of medium and its physical, chemical and metabolic functions.

UNIT II

3. Describe different types of stem cells.

Or

4. Write an account on embryonic stem cells and their significance.

UNIT III

5. Write an account on animal cloning and applications in wild life and life stock.

Or

6. Enumerate the regulatory aspects of therapeutical use of stem cells.

UNIT IV

7. Explain the generation of chimeric, transgenic and knock out mice and its characterization.

Or

8. Describe the transgenic poultry and transgenic insects as Bioreators.

UNIT V

9. Describe the production of vaccines and their importance.

Or

10. Write an account on animal nutrition and biotechnology.

(BIT40311)

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Fourth Semester

Biotechnology

Paper III — PLANT BIOTECHNOLOGY

(Regulation 2011)

Time : Three hours Maximum : 70 marks

Answer FIVE questions, ONE question from each unit

All question carry equal marks.

UNIT I

1. Describe the requirements of plant tissue culture laboratory.

Or

2. Explain the concepts of differentiation and dedifferentiation

UNIT-II

3. Describe the cell culture techniques for micropropagation of elite plants.

Or

4. Write an account on the production of secondary metabolites of commercial importance.

UNIT III

5. Write an account on the applications of genetic engineering technology for crop improvement.

Or

6. Enumerate the production of transgenic plants for production of viral antigens.

UNIT IV

7. Describe biosynthesis of enzymes from plants.

Or

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

UNIT V

9. Describe the industrial and medicinal uses of algae.

Or

10. Write an account on indoor and outdoor cultivation of economically important algae.

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