

Model Test Paper-I  
**M.Sc. Biotechnology (final)**  
Paper XI

**Environmental Biotechnology, Bio safety, ethics and research methodology**

Time Allowed: 3Hours

Max. Marks: 100

**Attempt five questions in all, including question no. 1, which is compulsory, each question carry equal marks.**

Q.1 Attempt all

A. Intellectual property is categorized into:

1. industrial property
2. artistic and literary property
3. Both 1& 2
4. None of these

B. the biological amplification of DDT in various tropic levels is known as.....

C. Jet aeroplanes release pollutants in air is called.....

D. CFCs methane and nitrogen oxide gases have capacity to react with ozone to convert into:

1. Nitrogen
2. Hydrogen
3. Oxygen
4. None of these

E. Lichens indicate pollution by:

1. O<sub>3</sub>
2. SO<sub>2</sub>
3. NO<sub>2</sub>
4. CO

F. Percentage of fresh water in the hydrosphere is:

1. 2.7%
2. 30%
3. 13%
4. 33%

G. layer of ozone is present in:

1. Stratosphere
2. Thermosphere
3. Troposphere
4. None of these

H. Bioethics is related to:

1. Preventing biopiracy
2. Regulation of unethical activities like gene cloning
3. Moral guidance to the problem in biology
4. None of these

I. Define biofuels

J. Define Xenobiotics

Q.2 Water resources and management in context of India along with aerobic and anaerobic methods of water treatment.

Q.3 Describe the methodology used for the degradation of xenobiotics in environmental conditions.

Q.4 Explain the Bio-safety and laboratory information management system for the different types of research laboratories.

Q.5 Explain in detail about the human population growth and global food safety prospect, also discuss about the food safety bill of Indian Government.

Q.6 Explain in detail about ethical issues regarding ignorance of laws, codes and policies.

Q.7 Basic research methodology and identification of research problems-explain.

Q.8 Methods of literature search, information sources required for gathering literature-explain.

Q.9 Biodiversity and its conservation with example of biological parks.

Model Test Paper-II  
**M.Sc. Biotechnology (final)**  
Paper XI

**Environmental Biotechnology, Bio safety, ethics and research methodology**

Time Allowed: 3Hours

Max. Marks: 100

**Attempt five questions in all, including question no. 1, which is compulsory, each question carry equal marks.**

Q.1 Write short note on:

- A. Vermiculture
- B. Composting
- C. Molecular basis of genetic modification
- D. Crop improvement
- E. Biosafety
- F. Ethical dilemmas
- G. Research problem
- H. The plant variety protection act
- I. Products will be applicable for patenting
- J. Validation of finding

Q.2 Explain water pollution. Discuss methods of biological treatment process and their microbiology- in detail.

Q.3 Bioremediation and its role in soil improvement and waste monitoring-discuss.

Q.4 What is green house effect? Role of biotechnology in protection of environment.

Q.5 Explain the role of biopesticides in integrated pest management.

Q.6 Health hazardous compound and their waste management.

Q.7 Reasons behind unethical acts, ignorance of laws- explain.

Q.8 professional ethics of research and reason behind ethical delimitations.

Q.9 laboratory information system and its role in biosafety.