

M.Sc. Examination, 2016

Semester-III

Biotechnology

Course – XIV

(Environmental Biotechnology, Bioethics, Intellectual Property Rights)

Time: 3 Hours

Full Marks: 40

Questions are of value as indicated in the margin.

Answer *any four* questions.

1. What is ecological amplitude? How ecological niche differ from habitat? What is a trophic level? Diagrammatically describe the nitrogen cycle with proper labelling.
2+2+1+5=10
2. Write short notes on the following:
 - (a) Highlight the major changes brought in the Indian patent Act to make it TRIPs compliant.
5×2=10
 - (b) Write briefly on the Protection of Plant Variety and Farmers' Right Act, 2001.
10
3. What are the health concerns which have been expressed regarding genetically engineered foods?
2.5×4=10
4. Write short notes on the following:
 - (a) Bioremediation
 - (b) Biological Oxygen Demand
 - (c) Berne convention
 - (d) Bayh-Dole Act
5. Answer the following:
 - (a) What is meant by 'holistic approach towards environment'?
 - (b) Why is environmental biotechnology designated as "solutions without boundaries"?
 - (c) Discuss about the scope of application of biotechnology in solving different environmental problems.
2+3+3+2=10
 - (d) Discuss how individual choice and corporate influence can govern the application of biotechnology in solving environmental problems.
6. (a) What do you mean by ecological resources? How is the resource dimension represented in terms of ecological niche?
(3+2)+5=10
- (b) Illustrate the mode of energy flow within a standard ecosystem.