

M.Sc. Examination, 2019
Semester-IV
Environmental Science
Course : MEC-41
(Environmental Biotechnology)

Time : 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin

Answer question No. **1** and **any four** from the rest.

1. Write short notes on **any four** of the following : 2×4=8
 - a) Fluoroacetate story
 - b) SCPs
 - c) Energy Crops
 - d) Rhizofiltration
 - e) Amperometric Biosensor
 - f) Sentinal species
 2. a) What is 'Environmental Biotechnology'?
b) How can it be applied for mitigation of various environmental problems? 2+6=8
 3. a) Define bioremediation.
b) Discuss the applications of bioremediation in the abatement of water pollution. 2+6=8
 4. a) Name any six global environmental problems.
b) How can one employ bioremediation for sorting out these problems? 3+5=8
 5. a) What is biosorption?
b) Explain the role of different microbes in the abatement of metals from soil and water. 2+6=8
 6. "Biomarkers are ideal for providing an inexpensive, rapid and sensitive response of a contaminated environmental site." Discuss this statement with an example. 8
 7. a) What are bioelectrodes?
b) What are the differences between bioelectrodes and biosensors?
c) Discuss the features and functions of a bioelectrode you have studied. 1+2+(2.5+2.5)=8
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