

M. Sc. Semester-IV Examination 2017
Environmental Science
Course: MEC-41
(Environmental Biotechnology)

Time : Three 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) Ice-minus story
 - (b) Biostimulation
 - (c) Petro-Crops
 - (d) Biofuel from algae
 - (e) Metal hyperaccumulators
 - (f) Ideal Biomarker

 2. (a) What is bioremediation?
(b) Discuss the application of bioremediation in the abatement of water pollution. 1+7=8

 3. (a) Discuss the main Global Environmental Problems (GEP) the world is facing today.
(b) How can bioremediation be used for the abatement of GEP? 3+5=8

 4. (a) What is Integrated Pest Management (IPM)?
(b) What are the objectives of IPM?
(c) How can one use IPM for achieving sustainable agriculture? 2+2+4=8

 5. (a) Define clean fuel.
(b) Mention the types of raw materials that can be used in biogas plants.
(c) Discuss the processes involved in the production of biogas. 1+3+4=8

 6. (a) What is a Biomarker?
(b) Discuss with an example the role of Biomarkers in identification of environmental risk. 2+6=8

 7. (a) What are Bioelectrodes?
(b) Name the different types of Bioelectrodes.
(c) Discuss the functions and importance of one Bioelectrode you have studied 1+2+(2+5+2.5)=8
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