

M.Sc. Semester-3 Examination**504****Environmental Science****Time : 2-30 Hours]****March-2024****[Max. Marks : 70**

Instructions: All Questions carry equal marks
Attempt all Questions

Q I	Write a note on concept of Environmental Biotechnology along with its objectives and explain public perception of Environmental Biotechnology .	14
	OR	
Q I	A. What is sustainable development? State 5R policy and explain in reference to Environmental Biotechnology.	7
	B. Describe the concept of Genetic Engineering in detail .	7
Q II	How to remove metal ions with different microbial mechanisms?	14
	OR	
Q II	A. Discuss the techniques to treat contaminated soil with the help of bio-remediation.	7
	B. Explain the concept of bio-remediation with factors affecting it.	7
QIII	Write a note (i) Environmental Clean up Technology Plant biotechnology and (ii) anaerobic vs aerobic degradation.	14
	OR	
Q III	A. Explain Plant biotechnology in detail.	7
	B. Name the types of bio-pesticides and their significance.	7
Q IV	Enlist any seven applications of remote sensing and explain each in detail.	14
Q IV	A. Explain basic concept and technique of remote sensing	7
	B. Discuss on IRS satellite and their sensors and state its significance in aerial photography	7
Q V	Attempt any 7 out of 12 Short question.	14
1	What is Kyoto Protocol?	2
2	Enlist Indian Remote Sensing systems.	2
3	Explain : Biosorption	2
4	Define: Biomineralization and nanotechnology	2
5	What is light source for chemoheterotrophs and photoheterotrophs.	2
6	Define: bio-oxidation	2
7	State the full form of GIS and CBD	2
8	What is bioleaching?	2
9	State two difference between GIS and GPS.	2
10	Define: gene and genome	2
11	State the uses of GPS.	2
12	What is composting?	2