

R-3841

M. Sc. (Sem. VI) (Integrated Biotechnology) Examination

May / June - 2010

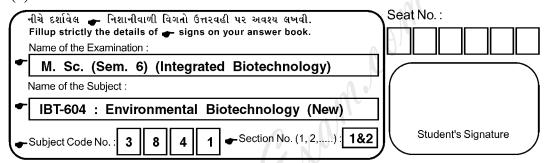
IBT-604: Environmental Biotechnology

(New Course)

Time: 3 Hours [Total Marks: 70

Instructions:

(1)



- (2) Figures to the right indicate full marks of the question.
- (3) Draw neat and labeled diagram whenever necessary.
- (4) Both sections must be written in separate answer books.

SECTION - I

1 Attempt the following:

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- (1) What is ATS? Give its application in Phytoremediation.
- (2) What is return activated sludge (RAS)? Give its significance.
- (3) Define the term: Soil Banking. Give its application.
- (4) Explain : Methanogenesis. Give one example of Acetoclastic methanogen.
- (5) What is carbon sequestration? Give its significance.
- What is bulking sludge? Name several important microbial groups that contribute to this problem. Explain in detail construction and biochemistry of Trickling filter.

OR

R-3841] 1 [Contd...

2	Describe the major types of phytoremediation. What is the role of microorganisms in each of these processes?	10
3	Define Sewage. Give characteristics of Sewage. How sewage can be trated in modern era? OR	10
3	Describe in detail degradation Aromatic and aliphatic hydrocarbons.	10
4	State the general characters of any two:	10
	(a) Anaerobic sludge digestion	
	(b) Removal of N and P by ASP	
	(c) Biosolids - their classes	
	SECTION - II	
1	Attempt the following:	5
	(1) Give two examples of microbes which can produce Biopolymer.	
	(2) What is Biodiversity?	
	(3) What is Red Data book?	
	(4) Explain the term bioleaching.	
	(5) Define biofertilizer.	
2	Explain in detail various methods involved in metals recovery from low grade ore.	10
2	OR Enlist the threatened species and discuss in detail the major factors affecting to loss of biodiversity.	10
3	What is transgenic crop? Give few examples of it. Explain its socio-economic impact. OR	10
3	Elaborate a note on "Methods for conservation of	10
•	Biodiversity".	
4	Write short notes on any two:	10
	(a) Biodiversity and IPR	
	(b) Micropropagation : a remedy for reforestation(c) Biopesticides.	
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