	Utech
Name:	
Roll No. :	To Annual O'S amenday and Explored
Invigilator's Signature :	

CS/M.Sc(GENETICS)/SEM-3/MSGEN(EBT)-305B/2011-12

2011

BIOTECHNOLOGY IN ENVIRONMENT

 $\it Time\ Allotted: 1\frac{1}{2}\ Hours \qquad \qquad \it Full\ Marks: 35$

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A (Multiple Choice Type Questions)

1. Choose the correct alternatives for any *five* of the following:

 $5 \times 1 = 5$

- i) BOD stands for
 - a) Biological Oxygen Demand
 - b) Biochemical Oxygen Demand
 - c) Bioavailable Oxygen Demand
 - d) Biosorptive Oxygen Demand.
- ii) Albedo is related to
 - a) solar radiation
- b) ocean current
- c) chemical toxicity
- d) soil erosion.
- iii) The instrument used to measure air pressure is
 - a) Hygrometer
- b) Barometer
- c) Viscometer
- d) Spherometer.

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CS/M.Sc(GENETICS)/SEM-3/MSGEN(EBT)-305B/2011 About 90% of the body burden of lead due iv) poisoning can be found in a) blood b) bones c) hair d) skin. An efficient transfer of chemical from food to consumer, v) so that residue concentration increases systematically from one trophic level to next, is called a) Bioavailability b) Biosorption Biomagnification d) Bioaccumulation. c) The most probable cause of Arsenic pollution in West vi) Bengal is a) ground water contamination industrial waste b) c) pesticides burning of fossil fuel. Polycythemia is one complication caused by vii) CO b) NO a) CO_2 d) SO_2 . c) viii) Which one is the most toxic photochemical oxidants? SO_2 a) CS_2 CO. c) O_3 d) GROUP - B (Short Answer Type Questions) Answer any three of the following $3 \times 5 = 15$ (Brief description of each point is necessary)

- 2. What is deodorisation process?
- 3. Give an instance of use of distillery waste by biotechnology.
- 4. Which enzymes are used for leather processing?

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- 5. What is the current status of biotechnology in environment protection?
- 6. Briefly describe the types of bioenergy produced from wastes.

GROUP - C

(Long Answer Type Questions)

Answer any *one* of the following. $1 \times 15 = 15$ (*Brief description of each point is necessary*)

- 7. a) Give an account of Lignin biodegration and biotechnological utilization of such renewable natural resources.
 - b) What are the recalcitrant compounds? How recalcitrant compounds can be degraded? Give one example of recalcitrant waste management. 7 + 8
- 8. a) Describe biotechnological application of Cyanobacteria in development of clean technology.
 - b) Describe the utility of membrane filter technique in management of municipal solid waste. $7\frac{1}{2} \times 7\frac{1}{2}$

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