



**RR-0837**

**Third Year B. Sc. Examination**

**March / April – 2010**

**Microbiology : Paper - VIII**

*(Microbial Ecology & Environmental Microbiology)*

Time : 3 Hours]

[Total Marks : 70

**Instructions :**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="T. Y. B. Sc."/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Microbiology : 8"/>	<input type="text"/>
Subject Code No. : <input type="text" value="0"/> <input type="text" value="8"/> <input type="text" value="3"/> <input type="text" value="7"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	<input type="text"/>
	<input type="text" value="Student's Signature"/>

(2) Figures to the right indicate full marks of the question.

(3) Draw neat diagrams wherever necessary.

1 Answer the following in brief :

14

- What is "Nitrogen Saturation Point"?
- Elaborate "Bloom in aquatic environment."
- Define with an example :
  - Mosaic
  - Wilting.
- List the important water borne pathogens not controlled liably by chlorination.
- State the mechanism of Direct and Indirect bacterial leaching.
- What is 'Compensation depth' in aquatic habitat.
- State the infections transmitted by aerosol.

- 2** Comment on explain any **three** of the following : **15**
- (a) Mutual advantage is the main aim of many organism - organism interactions.
  - (b) Several microorganisms have adopted to life in deep sea.
  - (c) Use of biofuels is increasing day by day.
  - (d) Bioremediation is a new biotechnological solution to pollution.
  - (e) Microorganisms bring about different types of biochemical changes in marine environment.
- 3** Answer any **two** of the following : **14**
- (a) What is mineralization? Discuss the two biological processes that drive the cycling of carbon.
  - (b) Define "Coliforms". Outline the general scheme of laboratory testing for detection of coliform group in water.
  - (c) Enlist various methods and discuss any two for the microbiological analysis of air.
- 4** Write an essay on : **12**
- Microorganisms as Biofertilizers and Biopesticides.
- OR**
- Waste water treatment processes.
- 5** Write short notes on any **three** of the following : **15**
- (a) Hyperthermophiles
  - (b) Production and Applications of Bioethanol.
  - (c) Septic Tank
  - (d) Biodegradation of Herbicides and Pesticides
  - (e) Microbiological Analysis of soil.