

Seat No. : _____

AE-131

April-2023

B.Sc., Sem.-VI

CC-310 : Biotechnology (Environmental Biotechnology)

Time : 2½ Hours]

[Max. Marks : 70

- Instructions :**
- (1) Draw figures wherever necessary.
 - (2) Show question number against each answer.
 - (3) Figures in right are marks.

1. (A) Discuss the Testing and Indian standards for drinking water. 14

OR

- (A) Explain Activated sludge process used for the treatment of liquid waste. 7
- (B) Discuss the treatment of solid waste materials by Landfills. 7

2. (A) Define Bio-Medical Waste. Discuss the categories of Bio-medical waste and the steps involved in its management. 14

OR

- (A) Write a note on Biopiles, listing its advantages and drawbacks. 7
- (B) Discuss the causes and effects of Biomagnification. 7

3. (A) Discuss the organisms, mechanism, advantages, and applications of Biobleaching. Explain biobleaching of Uranium. 14

OR

- (A) Write a note on the production of Hydrogen. 7
- (B) Discuss the mechanism of Microbial enhanced oil recovery. 7

4. (A) Discuss the role of Green-house gases and Stratospheric ozone depletion in Global warming and list the measures to overcome it. 14

OR

- (A) What is a Pest ? Discuss Integrated Pest Management. 7
- (B) Explain Microbial risk assessment. 7

5. Answer the following : (Any 7)

14

- (i) What is meant by the “Oxygen demand” ?
 - (ii) Define : Bioventing
 - (iii) Which bioremediation methods are used to control air pollution ?
 - (iv) What is Bioslurping ?
 - (v) Give any four examples of Recalcitrant Xenobiotic compounds.
 - (vi) Define : Environmental Risk Assessment.
 - (vii) Define Bioaugmentation and give its use.
 - (viii) Which methods are used for microbial control of algal bloom ?
 - (ix) What is Windrow system ?
 - (x) Define : Biodiversity Conservation
 - (xi) What is fixed film system in Wastewater treatment ?
 - (xii) What is Acid rain ? Write the reactions involved in the development of Acid rain.
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