

Roll No. ....

Total Pages : 4

**11706/NH****BS/2111****ENVIRONMENTAL BIOTECHNOLOGY**

Paper–BHB–16

Semester–III

Time Allowed : 3 Hours] [Maximum Marks : 74

**Note :** The candidates are required to attempt **two** questions each from Sections A and B carrying 11 marks each and the entire Section C consisting of 15 short answer type questions carrying 2 marks each.

**SECTION—A**

1. What do you mean by modern fuels? Discuss about various environmental impacts due to utilization of modern fuels. 11

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2. What do you mean by Phytoremediation? Discuss about the Microbial degradation of lignin and cellulose. 11
3. What do you mean by Bioremediation? Discuss the role of Microbes in Bioremediation of Water contaminated with oil spill and detergents. 11
4. Discuss the role of Microorganisms in the degradation of pesticides and toxic Chemicals. 11

**SECTION—B**

5. Discuss about various treatment methods for treatment of municipal waste. 11
6. Discuss the role of symbiotic and asymbiotic nitrogen fixing bacteria in enhancing soil nutrients. 11
7. What do you mean by Biofertilizers? Discuss about the role of algal and fungal Biofertilizers. 11
8. Discuss about the environmental significance of genetically modified plants and animals. 11

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**SECTION—C**

9. Write short notes on the following : 15×2=30

- (i) Methanogenic bacteria.
- (ii) Conventional fuels.
- (iii) Microbial degradation of aromatic hydrocarbons.
- (iv) Microbial degradation of Chlorinates.
- (v) Bioleaching.
- (vi) Bioremediation of Water contaminated with heavy metals.
- (vii) Microbial enrichment of ores.
- (viii) Biogas.
- (ix) Treatment of Industrial effluent.
- (x) Bioremediation of heavy metal contaminated soil.

- (xi) Genetically modified microbes.
- (xii) Genetically modified Animals.
- (xiii) Degradation of petroleum products.
- (xiv) Microbial Hydrogen production.
- (xv) Environmental impact of firewood.