



Name :

Roll No. :

Invigilator's Signature :

CS/B.Sc (H)(BT/GE/MICRO-BIO/MOL-BIO)/SEM-5/EVB-503/2011-12

2011

ENVIRONMENTAL BIOTECHNOLOGY

Time Allotted : 3 Hours

Full Marks : 70

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 *ten* of the following : 10 × 1 = 10

i) The process of accumulating higher and higher amounts of a toxic material such as PCBs within the body of any animal is called

- a) Bioaccumulation
- b) Biological amplification
- c) Biological persistence
- d) None of these.

ii) Which is a secondary pollutant ?

- a) PAN
- b) MIC
- c) DDT
- d) PAH.



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

8. What is the full form of IUCN ? When and why was it established ? What is the priority area of this organization ? What is the role of IUCN in environmental protection ? What do you mean by environmental law ? $1 + 2 + 4 + 5 + 3$
9. Define green energy. Characterize biohazard elements according to their impacts. What are the decibel and dobson units ? $5 + 5 + 2\frac{1}{2} + 2\frac{1}{2}$
10. What is biochemical oxygen demand (BOD) ? Why is BOD reduction necessary in waste water treatment ? The atmosphere is the site and source of our weather. How is the atmosphere structured and how does it function to bring us the major features of our weather ? Why do the bacterial colonies recovered from drinking water and grown on EMB media indicate fecal contamination of the water supply ? Identify the specific roles chlorine plays in water purification. $2 + 2 + 5 + 3 + 3$
11. Taking mercury as an example explain, what is biological detoxification. What are HAZMATs ? Give examples. What can be the impact of DDT in the environment ? Which chemical property of dioxin favours it to persist in the environment ? Name one endocrine disrupting chemical. $6 + 2 + 4 + 2 + 1$
12. What do you mean by oil spill ? What are the cleaning up processes you would suggest ? What are the effects of oil spills on nature ? “Arsenic is a metalloid whose name conjures up images of murder.” How can be microorganisms used to minimize this scenario ? $2 + 4 + 5 + 4$