

B. Sc. DEGREE EXAMINATION, NOVEMBER 2022
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR – CORE
PAPER : ECOLOGY AND ENVIRONMENTAL BIOTECHNOLOGY
TIME : 3 HOURS MAX.MARKS:100

SECTION –A

(18x1=18 marks)

I. CHOOSE THE CORRECT ANSWER:

- The Leaf size of Latophylls according to Raunkiaer's Biological Spectrum.
(a) 25-225mm² (b) <25 mm² (c) >25 mm² (d) none of the above
- Which among the following is not considered as terrestrial ecosystem.
(a) forest ecosystem (b) desert ecosystem (c) stream ecosystem (d) grassland ecosystem
- ___ occurs within a trophic level.
(a) Bioaccumulation (b) Bioconcentration
(c) Biodilution (d) none of the above
- The bacterium which is used for Bioleaching Process.
(a) *Salmonella* (b) *Rhizobium*
(c) *Escherichia* (d) *Pseudomonas*
- The Primary cause of acid rain is _____.
(a) Nitrous oxide (b) Sulphurdioxide
(c) Nitric oxide (d) none of the above

II. FILL IN THE BLANKS

- Density is the number of plants rooted within each _____.
- The _____ break the dead bodies of plants and animals.
- Bioleaching is otherwise known as _____.
- _____ is the use of plants for degradation of contaminants.
- Indian Ambient Air Quality standard was enforced under the _____ Act in 1986.

III. MATCH THE FOLLOWING

- | | |
|---------------------------------|---|
| 11. Phytosociology | (a) Accumulation of chemicals in single organism |
| 12. Oligotrophic | (b) Inter-relationship among plants. |
| 13. Biomagnification | (c) Young lakes |
| 14. Bioaccumulation | (d) Scoping |
| 15. Key of environmental issues | (e) Accumulation of chemicals lower to higher trophic level |

IV. TRUE OR FALSE

16. Heavy metals are harmful to aquatic organisms -
17. A complete self- sufficient ecosystem is rarely found in nature -
18. Stone leprosy in Taj mahal is a case of water pollution –

V. ANSWER ANY SIX IN 50 WORDS:**(6 x 3=18)**

19. Brief out the Loop method procedure of sampling of population.
20. List out the dynamics of a ecosystem.
21. Predict the impact of DDT on marine organisms.
22. What is Bioleaching ?
23. Discuss the first step in Environment Impact Assessment.
24. Outline the components of Environment Risk Assessment?
25. Write the components of water pollutants.
26. What is Periodicity?
27. What are the advantages of Bioleaching ?

SECTION - B**VI. ANSWER ANY 4 OUT OF 6 QUESTIONS IN 200 WORDS EACH:****(4x6=24)**

28. Explain the Floristic composition of qualitative characters in plant communities.
29. Elucidate on Pond Ecosystem.
30. What is Biomagnification and why is it important ?
31. Describe the different types of plant indicators with suitable examples.
32. Write about the WHO & ISI- Water quality standards(criteria for drinking water)
33. Describe different Legislations for environmental protection.

SECTION - C**VII. ANSWER ANY 2 OUT OF 4 QUESTIONS IN 1000 WORDS EACH:****(2x20=40)**

34. Describe the Quantitative analysis of plant communities.
35. What are Xerophytes ? Describe the various morphological and Physiological adaptations of Xerophytes.
36. Elucidate on Environmental toxicology.
37. Discuss the environmental quality monitoring with reference to air and water.
