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VI Semester B.Sc./ B.C.U. Degree Examination July/August - 2024

BIOTECHNOLOGY**Bioprocess and Environment Biotechnology****(NEP Scheme 2023-2024 Fresher)****Paper : VIII****Time : 2½ Hours****Maximum Marks :60****Instructions to Candidates:****All Sections are compulsory Draw neat labelled diagram.****SECTION -A**

- I. Write short notes on any Four of the following questions. Each question carries 2 marks. (4×2=8)**
1. Upstream Processing
 2. Impeller
 3. Filtration
 4. Environmental Conservation
 5. Phyto remediation
 6. In-situ Bio remediation

SECTION-B

- II. Answer any Four of the following questions. Each question carries 5 marks. (4×5=20)**
7. What is inoculum? Write briefly about inoculum development process. (2+3)
 8. Define fermenter? Explain airlift bioreactor. (2+3)
 9. What is Biosensor? Describe its Construction and application. (2+3)
 10. What is SCP? Give an account on microbial production of SCP. (2+3)
 11. What is Xenobiotics? Discuss its application. (2+3)
 12. What is biometallurgy? Briefly explain biomining (2+3)

[P.T.O.]



SECTION - C

- III. Answer any Four questions. Each question carries 8 marks. (4×8=32)
13. Explain downstream processing in detail. Add a note on its significance. (6+2)
14. Write notes on Microbial production of (4+4)
- a) Amylase
- b) Ethanol
15. Discuss membrane Bioreactor and spray dry technology in detail. (4+4)
16. Explain Ex-Situ Bioremediation methods and write its significance. (6+2)
17. What is Biogas? Describe its composition and production. (2+6)
18. What is waste water treatment? Describe the biological process involved. (2+6)
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