

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
First Semester 2023-2024 Mid Semester Examination
BIO G525, Environmental Biotechnology & Waste Management

Duration: 1.5 h

Date: 14-10-2023

Total marks: 40

Each question carries 5 marks.

- Q1. Who discovered penicillin? How was large scale production of penicillin achieved? What is the biotechnological principle behind it?
- Q2. What are conventions and protocols? Give one example each.
- Q3. Give the flow chart of fate of a pollutant released into the environment with examples.
- Q4. A leather processing industry is situated on the bank of Yamuna. The effluents from leather processing processes are released into the river water after some pretreatment. Give the method for water sampling from the river to monitor quality of water and comment on water purification system.
- Q5. A patch of land is contaminated by heating oil. Give a method to sample the soil and a biotechnological method to detect the pollutant.
- Q6. Explain attached growth process and suspended growth process for secondary treatment of waste water. Give illustrations of both the processes.
- Q7. Explain three major sludge treatment processes. Suggest the best one. Justify.
- Q8. Suggest two suitable types of vectors for preparation of metagenomics DNA libraries. Which of them is best? Justify.

ALL THE BEST
