

NITDGP/Int. MSc/Reg/Even/2021-22

NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR
Even Semester End-term Examination, 2021-22

Course Code: CYE-611

Full Marks: 30

Course Name: Analytical and Environmental Chemistry

Time: 90 Minutes

Question Paper No.: NITDGP/CYE611/4

Date of Exam: 22/04/2022

Instructions: Answer all the questions.

Question No.	Body of the Question	Marks	Mapped CO
1	Define Biomedical Waste? Briefly mention any three categories of Biomedical wastes as per MoEF notification. How will you segregated the Biomedical waste by Colour Coded Bag.	2+3+2	CO5
2	Mention various sources of radioactive waste. Distinguish between Natural radioactive waste and artificial radioactive waste.	2+2+3	CO2
3	What are reasons for the motivations behind green chemistry? Describe any Principles of Green Chemistry with suitable example.	2+3	CO5
4	What is industrial symbiosis? How will you make Zero waste in an industrial sector through this concept?	2+3	CO5
5	Distinguish between BOD and COD parameters of wastewater. How BOD/COD ratio will help to design a wastewater treatment?	2+2	CO4
6	Mention few important soil quality parameters for evaluation of soil quality.	2	CO2

Course Outcomes

- **CO1:** Knowledge on chemical processes that regulate the environment as well as attention will be paid to understanding chemical equilibrium and kinetics of natural systems.
- **CO2:** The course is designed to give the students a broad understanding of the issues related to the basic concepts and principle of different analytical techniques.
- **CO3:** This course imparting the knowledge about the theory and techniques of analysis including introductory instrumental methods and its fundamental principle.
- **CO4:** Knowledge on quantification of various environmental parameters.
- **CO5:** Knowledge on Ecologically safe alternatives and basic principle of green chemistry.