

2021091992

Indian Institute of Information Technology Ranchi

Department of Electronics & Communication Engineering/Computer Science & Engineering

B. Tech End Semester Examination – Spring Semester 2022-23

Semester: IV

Course Instructor: Dr. Sandhir/Dr. Rohit/Dr. Manju

Course Code: ES 2002

Course Title: Environmental Science & Green Technology

QUESTION PAPER

Max Marks: 100

Duration: 3 Hrs.

Instructions:

- (1). Number in [] indicates marks.
- (2). Any missing data can be assumed suitably.
- (3). Symbols have their usual meaning.

Section A: Answer ALL questions.

1. (a) Define green technology and outline its main components [8]
(b) Discuss in detail about the energy flow and nutrient flow of an ecosystem [12]
2. (a) Outline the various factors that play key role in the formation of soil [5]
(b) Describe in detail about the various sources of soil pollution [10]
(c) Discuss the ecological and human health impact of soil pollution [5]
3. (a) Describe the major types of anthropogenic air pollutants and their harmful effects [10]
(b) With the help of neat sketch, describe the working of any ONE air purifier [10]

Section B: Answer any TWO questions

4. (a) Define noise pollution. Describe the various sources of noise pollution [4]
(b) Discuss the detrimental effects of noise pollution. Propose a few methods to control noise pollution [6]
(c) Outline the complete steps involved in municipal water treatment process [10]
5. (a) Define radio activity and the various units of radio activity [7]
(b) Discuss the various sources and effects of radioactive pollution [8]
(c) Propose a few methods to control radioactive pollution [5]
6. Write short notes on ANY FOUR (if required, include diagrams too) [20]
(a) Indoor Air Pollution (b) Photochemical Smog (c) Carbon Footprint
(d) Green Energy (e) Atmospheric Layers (f) Climate Change