26 JUL 2023

Reg. No.												

Question Paper Code	12091

B.E. / B.Tech - DEGREE EXAMINATIONS, APRIL / MAY 2023

Fourth Semester

Civil Engineering

(Common to Electronics and Communication Engineering)

20OLCY401 - INTRODUCTION TO ENVIRONMENTAL ENGINEERING AND SCIENCE - FUNDAMENTAL AND SUSTAINABILITY CONCEPTS

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	Define Ecosystem.	*2,K1,CO1*
2.	What is Sustainable Development?	*2,K1,CO1*
3.	List out the gases responsible for the Greenhouse effect.	*2,K1,CO2*
4.	What is meant by Eutrophication?	*2,K1,CO2*
5.	Define Risk.	*2,K1,CO3*
6.	What is an Environment impact statement?	*2,K1,CO3*
7.	Define the terms BOD and COD.	*2,K1,CO4*
8.	Difference between Temporary and Permanent Hardness.	*2,K2,CO4*
9.	How does Silent Spring impact the Environment?	*2,K2,CO5*
10.	Cape Town has experienced water shortages. Why?	*2,K2,CO5*

PART - B (5 × 16 = 80 Marks)

Answer Any Five Questions

11.	Explain the 12 principles of Green Chemistry.	*16,K2,CO1*
12.	Explain the different types of Ecological Pyramids.	*16,K2,CO1*
13.	Explain the following - Carbon, Oxygen, Sulphur cycle.	*16,K2,CO2*
14.	Discuss the various processes involved in EIA.	*16,K2,CO3*
15.	The chemical analysis of the water sample indicates the presence of cations as follows Na+ = 20 mg/l, Ca++ = 45 mg/l, Mg++ = 60 mg/l, HCO_3 = 248, SO_4 = 220, Cl = 79.2. Compute total hardness, carbonate and non-carbonate hardness equivalent to $CaCO_3$.	*16,K3,CO4*
16.	Explain the Biological Methods of waste treatment.	*16,K2,CO4*
17.	Explain the Causes, Consequences and control measures of Air Pollution.	*16,K2,CO5*
18.	Discuss the various causes, effects and control measures of Global warming.	*16,K2,CO5*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create