

Program: B. Tech, Course: Computer Science and Engineering
(Artificial Intelligence & Machine Learning)
Subject: Green Technology and Sustainability Code: ETHS-111
Semester: I

Time: 03 Hours

Max Marks: 70

Instructions to the Students:

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of short answer type. All questions are compulsory. Each question carries 02 marks.
3. Section B comprises 8 long answer type questions out of which students must attempt any 5. Each question carries 10 marks.
4. Do not write anything on the question paper.

Q. No.	SECTION -A (SHORT ANSWER TYPE QUESTIONS)	Marks
1. a.	What are the basic principles of Green Technology?	(2)
b.	What is the meaning of the sustainable development?	(2)
c.	Differentiate biodegradable and non-biodegradable waste with examples.	(2)
d.	How waste recycling can be helpful to mitigate environmental problems?	(2)
e.	What do you mean by chemical speciation?	(2)
f.	Mention two biochemical effects of pesticides.	(2)
g.	What are the difference between Chemical oxygen demand (COD) and Biological oxygen demand (BOD)?	(2)
h.	What is the concept of pH?	(2)
i.	What is the photochemical smog and condition of its formation?	(2)
j.	Mention different layers of atmosphere with their suitable heights.	(2)

SECTION - B (LONG ANSWER TYPE QUESTIONS)

2. What is the green technology? Discuss its goal and limitations in detail. (10)
3. What is waste? Explain its various sources and treatment techniques. (10)
4. What do you understand about the fate of organics in environment? Explain their various transformation reaction. (10)
5. What are the environmental chemicals? How the risk associated with them can be evaluated? (10)
6. What is biodegradation? How it takes place for oil and detergent? (10)
7. Discuss importance of analysis the water quality parameters. How alkalinity and Dissolved oxygen (DO) are measured from water? (10)
8. Explain about various chemical and photochemical reaction take place in the atmosphere. (10)
9. What is ozone layer and its importance? Discuss formation and depletion of this layer. (10)

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