Name of Faculty: TAVINDER SINGH

Discipline: **MECHANICAL ENGG.**

Semester: **1st**

Subject: **Environmental Studies and Disaster Management**

Lesson Plan Duration: **15 Weeks**

Week	Lecture Day	Theory
		Topic (including assignment/ test)
1st	1	**UNIT 1: Introduction** Basics of ecology, eco system- concept, and sustainable development.
	2	Sources, advantages, disadvantages of renewable and nonrenewable energy
2nd	3	Rain water harvesting.
	4	Deforestation – its effects & control measures.
3rd	5	**UNIT II Air and Noise Pollution**: Source of air pollution. Effect of air pollution on human health, economy.
	6	Air pollution control methods.
4th	7	**Noise Pollution**: Source of noise pollution, Unit of noise, Effect of noise pollution.
	8	Acceptable noise level, Different method of minimizing noise pollution.
5th	9	**UNIT III Water and Soil Pollution** Water Pollution: Impurities in water,Cause of water pollution.
	10	Source of water pollution.
6th	11	Effect of water pollution on human health, Concept of DO, BOD, COD.
	12	Prevention of water pollution- Water treatment processes.
7th	13	Sewage treatment. Water quality standard.
	14	**Soil Pollution** : Sources of soil pollution, Effects and Control of soil pollution.
8th	15	Types of Solid waste- House hold, Industrial, Agricultural, Biomedical.
	16	Disposal of solid waste.
9th	17	Solid waste management E-waste, E – waste management
	18	**UNIT IV Impact of Energy Usage on Environmen**t Global Warming, Green House Effect, Depletion of Ozone Layer.
10th	19	Acid Rain. Eco-friendly Material.
	20	Recycling of Material.
11th	21	Concept of Green Buildings.
	22	Concept of Carbon Credit & Carbon footprint.
12th	23	**UNIT V Disaster Management A. Different Types of Disaste**r: Natural Disaster: such as Flood, Cyclone.
	24	Earthquakes and Landslides etc.
13th	25	Man-made Disaster: such as Fire, Industrial Pollution and Nuclear Disaster.
	26	Biological Disasters, Accidents (Air, Sea Rail & Road), Structural failures(Building and Bridge), War & Terrorism etc.
14th	27	**B.Disaster Preparedness**: Disaster Preparedness Plan
	28	Prediction, Early Warnings and Safety Measures of Disaster.
15th	29	Psychological response and Management (Trauma, Stress, Rumour and Panic).
	30	Revison