

LESSON PLAN

Name of the Faculty: Mrs. Anita Girdhar

Discipline: M.Sc: Environmental Sciences

Semester: First

Subject: Environmental Geosciences

Lesson plan duration: 16 weeks

Week	Theory	
	Lecture day	Topic
1	1	Structure of the Earth
	2	Composition of the Earth
	3	Materials of Earth
	4	Minerals
2	5	Rocks-Sedimentary
	6	Rocks-Igneous
	7	Rocks-Metamorphic
	8	Plate tectonics;
3	9	Formation of oceans and landmasses;
	10	Mountain Building; Mass Movements
	11	Volcanicity; Seismicity;
	12	Formation of lakes, rivers and streams;
4	13	Wind; Glacial processes;
	14	Weathering and Erosion; Mass movement;
	15	Geological Time Scale.
	16	Doubts
5	17	Fundamentals of meteorology,
	18	Scales of meteorology,
	19	Parameters of meteorology- pressure, wind,
	20	Parameters of meteorology- temperature, humidity, radiation;
6	21	Radiation Budget of Earth;
	22	Application of meteorological principles to transport and diffusion of pollutants,
	23	Topographic effects.,
	24	Cloud classification and formation.
7	25	The boundary layer,
	26	Radiations: Radiation laws, short wave and long wave radiations,
	27	Albedo, Emissivity, Inversion,
	28	Local microclimate, Greenhouse effect, Radiation balance, Precipitation
8	29	Atmospheric movements,
	30	Distribution of radiation,
	31	Doubts
	32	Rotation of earth- Coriolis acceleration, angular momentum,
9	33	General meridional circulations, Hadley cells, Middle latitudes,
	34	Circulation of water and energy in atmosphere
	35	Weather and Climate in India, El Nino, La Nina, seasons and monsoons,
	36	Class test
10	37	Seasons and monsoons
	38	Precipitation
	39	Cloud Classification and formation
	40	Local microclimate
11	41	Weather and Climate in India
	42	Climatic classification schemes,
	43	Biogeographical regions of the world,
	44	Climate change - Emissions and Global warming, impact on sea level in South Asian region,
12	45	Environmental disruptions and their implications.
	46	Sea water properties,

	47	Chemistry of seawater,
13	48	Wind driven circulations in upper oceans,
	49	Waves,Tides and Currents,
	50	Upwelling and El Nino,
	51	Doubts
	52	Deep Ocean Circulations,
14	53	Marine Resources
	54	Marine flora and fauna- Benthic and Pelagic Communities,
	55	Marine Pollution
	56	Global Warming and Oceans - Greenhouse effect
15	57	Ocean warming, Sea level rise,
	58	Acidification, Carbon sequestration.
	59	Class test