

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 | |
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| | 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 | Dobts |
| 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, |

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| | 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 |