

Fourth Semester

Paper Code: GenEd-GEOL-03

Man and Environment

Full marks: 50: 4 Credit

Marks 35

1. Concept of risk, hazards, disaster and catastrophe.
2. Natural hazards and Environmental impacts: earthquake, volcanism, landslides, floods, Erosions, droughts, dams and reservoirs.
3. Preliminary concepts of pollution: air, water, soil and noise pollution, Biochemical Cycle, eutrophication, greenhouse effect and climate change, acid rain, pesticide contamination; the chemical parameters affecting water, air, soil, sediment qualities
4. Climate change and global warming; sea level rise.
5. Ore deposits, Mining and environment; concepts of sustainability.
6. Solid and nuclear waste disposal.
7. Carbon cycle and carbon sequestration
8. The effect of anthropogenic activities on the environment.
9. Global Environmental concerns; Environmental Treaties and Accords.

Practical/Projects/Internal Assignment:

Marks: 15

Projects on Application of GIS in environmental monitoring/EIA/Natural Hazard Management/Environmental Policies/Climate Change/any related issues.

Suggested books:

1. Edward Kellar, Environmental Geology, 9th Edition
2. D Foley, G McKenzie, R Utgard, Investigations in Environmental Geology, 3rd Edition
3. T Hudson, Living with Earth: An introduction to Environmental Geology
4. Singh, Parbin, Engineering and General Geology, S. K. Kataria and Sons, Delhi - 110 006
5. Waltham, T, Foundations of Engineering Geology, 3rd Edition
6. Alverson K.D., Bradley R.S., Pedersen T.F. [Eds.] 2003. Paleoclimate, global change and the future. Springer, Berlin.
7. Selinus O. 2005. Essentials of medical geology: Impacts of the natural environment on public health. Academic Press.
8. Manahan S. E. 2009. Environmental Chemistry, 9th ed. CRC Press