

Semester I
Environmental Physics

Course No: PHY18109GE	Max. Marks: 50
	External Examination: 40
No. of credits: 02	Internal Assessment: 10

UNIT – I

Review of harmful radiations; Natural background radiation, radon, the benefits and risks related to radioactive sources and radioactive pollution, the use of ionizing radiation in medicine and research, nuclear power, fusion, fission, biological consequences of ionizing radiation, radiation induced cancer;

UNIT – II

The atmosphere and its composition, the greenhouse effect, the role of the greenhouse effect for life on earth, green house gasses, the variations in the global green house effect and its consequences.

Production and destruction of ozone and the ozone layer, the development of the ozone hole, UV radiation, , biological effects related to too much and too little UV-exposure, D-vitamin deficiency, skin cancer;

Text & Reference Books:

- 1) Radon in the Environment, M. Wilkening, Elsevier Publishing Company (1990)
- 2) The Physics of Atmosphere (Cambridge Univ. Press, 1977), Houghton, J.T
- 3) Radon Prevalence, Measurements, Health Risks and Control, Niren Laxmichand, Nagda Astm Manual Series, Mnl 5 (1994)
- 4) Introduction to Environmental Physics: Planet Earth, Life and Climate, Nigel Mason and Peter Hughes: Taylor and Francis, 2001
- 5) Environmental Nnaotechnology , John Knight, D.K. Chauhan, Amit Raman, Black Prints