

**M. Sc. (Previous) Environmental Sciences  
Semester I**

**PAPER-IV  
ENVIRONMENTAL POLLUTION AND MONITORING**

**Unit I**

Natural and anthropogenic sources of pollution; primary and secondary pollutants; Transport and diffusion of pollutants; Photochemical smog and acid rain; Air pollution: source, effect of gaseous air pollutants on plants and animals, TSP and their effect on plants and animals; Principles of air monitoring; Air Pollution Tolerance Index, Air Quality Standards, control of air pollution, Euro standards. Indoor air pollution.

**Unit II**

Sources and consequences of water pollution; Principles of water quality monitoring, physicochemical and bacteriological sampling and analysis of water quality; water quality standards; water pollution control; Ganga Action Plan; Marine pollution; Thermal pollution.

**Unit III**

Sources and classification of Radioactive pollution, effect of radioactive pollution on biological system; Sources and measurement of noise pollution, noise exposure levels and standards; noise pollution control and abatement measures.

**Unit IV**

Sources of Soil pollution, Heavy metals sources and effects on biological systems; Pesticides sources and effect on biological systems, Detrimental effects of soil pollutants on soil micro biota, Ecological consequences and soil pollution control.

**Unit V**

Sources and characteristics of solid wastes, Solid waste disposal and management, Biomonitoring of air, water and soil environment, concept of indicator species and their environmental significance.