

FIRST YEAR SCIENCE - 2018-19

ENVIRONMENTAL SCIENCES

PAPER – III ECOSYSTEM ECOLOGY

Duration: 3 Hrs.

M.M.:50

UNIT-I

The Ecosystem - Ecosystem concept, its structure and function, homeostasis in the ecosystem.

Energy flow in ecosystems, food chains, food webs, trophic levels, ecological pyramids, ecological efficiencies.

UNIT-II

Major ecosystems of the world: The pond ecosystem, the ocean ecosystem, the forest ecosystem, the grassland ecosystem, the desert ecosystem; Productivity in different ecosystem.

UNIT-III

Concept of production and decomposition in nature, concept of productivity – primary and secondary production; gross and net production; standing crop, turn over, energy subsidies, methods of measuring primary productivity.

UNIT-IV

Concept of plant growth; Primary production process, factors affecting growth and pattern of resource allocation in plants; Plant growth indices and their ecological significance.

UNIT-V

Biogeochemical cycles with special reference to water, nitrogen, carbon, phosphorus and sulphur.