Environmental Geography & Disaster Risk Reduction (with Lab Work)

BLOCK-1 INTRODUCTION TO ENVIRONMENTAL GEOGRAPHY

UNIT: 1 Meaning, Nature, and scope of Environmental Geography, Components of environment: Lithosphere, Atmosphere, Hydrosphere & Biosphere.

UNIT: 2 Men- Environment relationship: historical and contemporary perspectives, Ecosystem: concept, structure and functioning.

UNIT: 3 Environmental resources: renewable and non-renewable, Environmental issues: pollution (Air, Water, Soil, Noise), global warming, ozone depletion, deforestation, loss of biodiversity.

BLOCK-2 ENVIRONMENTAL MANAGEMENT

UNIT: 4 Environmental management: meaning and need, Environmental impact assessment (EIA): concept, process and importance.

UNIT: 5 Sustainable developments: principles and strategies, Environmental policies and programs in India.

UNIT: 6 Climate change: causes, impacts and mitigation.

UNIT: 7 Environmental conservation measures: watershed management, afforestation, waste management, rainwater harvesting.

BLOCK-3 FUNDAMENTAL OF DISASTER STUDIES

UNIT: 8 Disaster: concept, types (natural and human-induced), Hazard, vulnerability, risk and disaster cycle (preparedness, response, recovery, mitigation)

UNIT: 9 Major hazards in India: earthquakes, floods, cyclones, landslides, droughts, forest fires, Anthropogenic disasters: industrial accidents, chemical hazards, nuclear hazards.

UNIT: 10 Role of NDMA, SDMA, NDRF, UN agencies and NGOs in disaster management

UNIT: 11 Community-based disaster risk reduction (CBDRR).

BLOCK-4 DISASTER RISK REDUCTION (DRR) APPROACHES

UNIT: 12 Risk assessment and risk mapping, Early warning systems.

UNIT: 13 Disaster mitigation strategies: structural and non-structural measures.

UNIT: 14 Remote sensing and GIS in disaster monitoring and management.

UNIT: 15 Case studies of resent disasters in India, Disaster education, capacity building and resilience planning.

BLOCK-5 PRACTICAL/ LAB WORK

UNIT: 1 Map & Spatial Analysis.

UNIT: 2 Hazard zonation mapping (earthquake, Flood, Cyclones, Landslides)

UNIT: 3 Use of topographical sheets for identification of vulnerable zones

UNIT: 4 Preparation of thematical maps using GIS (land use/land cover, drainage, slope ect)

BLOCK-6 DATA INTERPRETATION & FIELD-BASED STUDY

UNIT: 5 Collection and interpretation of climate, pollution, and population data.

UNIT: 6 Field visit report on any environmental issue or disaster- prone area

UNIT: 7 Preparation of a vulnerability and risk assessment report for a selected locality.