

Model syllabus

ENVIRONMENTAL STUDIES & DISASTER MANAGEMENT (AECC- I)

SEMESTER-1

FOR UNDER-GRADUATE COURSE ARTS, SCIENCE AND COMMERCE

FULL MARKS-100 (Credit-4)

Unit-I (Environment)

(13 periods X 45 min)

The Environment: The Atmosphere, Lithosphere, Hydrosphere, Biosphere. (01 period)

Ecosystem: Energy flow in the ecosystem (01 period)

Biogeochemical Cycle: Water Cycle, Carbon Cycle, Nitrogen Cycle (02 periods)

Pollution: Water Pollution, Air Pollution, Soil Pollution, Radiation Pollution, Industrial Pollution, Light Pollution, Sound Pollution. (05 periods)

Environmental Laws: (Water Act 1974, Air act 1981, The Wildlife Protection Act 1972, The Environment Protection Act 1986), The Forest Conservation Act 1980. (04 periods)

Unit-II (Climate Change & Sustainable Development)

(13 periods X 45 min)

Population Ecology: Individuals, Species, Population, Community (01 Period)

Human Population Growth, Population Control Methods (01 period)

Urbanization and its effect on society (01 Period)

Climate Change: Cause, Effect, Global Warming, Carbon Footprint and environmental protection (05 Periods)

Step taken towards Sustainable Development: Ban of single-use plastic, automobile Scrapping Policy, Promotion of Electrical Vehicles (03 Periods)

Brief idea on Sustainable Development Goals (SDGs), Agenda 21 of Rio Earth Summit (02 Periods)

Unit-III (Disaster Management)

(13 periods X 45 min)

Disaster Management: Types of Disasters (Natural and Man-made and their cause and effect) (02 periods)

Vulnerability Assessment and Risk Analysis: Vulnerability to various disasters (Flood, Cyclone, Earthquake, Heat waves and Lightning)

Institutional Framework: Institutional arrangements for disaster management (National Disaster Management Authority (NDMA), State Disaster Management Authority (SDMA), District Disaster Management Authority (DDMA), National Disaster Response Force (NDRF) and Odisha Disaster Rapid Action Force (ODRAF) (02 Periods)

Preparedness Measure: Disaster Management Cycle, Early Warning System, Pre-Disaster and Post-Disaster Preparedness, Strengthening of SDMA and DDMA, Community Preparedness, Stakeholder Participation, Corporate Social Responsibility (CSR) (05 periods)

Survival Skills: Survival skills adopted during and after disaster (Flood, Fire, Earthquake, Cyclone and Lightning). (02 period)

Unit-IV (Public Health Management)

(13 periods X 45 min)

Brief idea on Epidemics and Pandemics (01 period)

Non-Communicable Diseases with special reference to cardiovascular diseases, Cancer, diabetes, Hypertension and Obesity and their prevention. (02 periods)

Communicable Diseases with special reference to Covid-19, Flu, Hepatitis, AIDS and Tuberculosis and their transmission (02 periods)

Dynamics of Disease Transmission: Mode of transmission (Direct/Indirect), Events after infection: Immunity (Active vrs Passive, Innate vrs Acquired, Herd Immunity), Incubation Period. (02 periods)

Prevention of Epidemics/Pandemics Disease: Preventing Measures (Quarantine, Sanitization, Personal Protective measures such as Hand Washing and use of protective devices, Vaccination); Control Measures (Surveillance, Isolation, Contact Tracing) (03 periods)

Life Style Management (Diet, Physical Exercise, Yoga and sleeping habit) (02 periods)

Role of Different Sectors in managing Health Disaster: Role of Government (Centre and State), Community, Civil Society, Student mass, NGOs (01 period)