

## SEMESTER-III

PAPER CODE: ENVSC3031 [ENVSC Multidisciplinary: COURSE NO.3]

CLIMATE CHANGE & CLIMATE ACTION

TOTAL CREDITS: 3

TIME: 2 Hours

MARKS: 40

Lecture: 50

### Learning objectives

- Explain the fundamentals of climate change science
- Present the international climate change legal and policy framework and explain key issues under negotiation
- Describe the expected consequences of climate change and the role of adaptation
- Provide a rationale for climate change mitigation and propose actions in key sectors
- Outline basic elements of planning processes to deliver climate change action

**The Science of climate change:** Atmosphere of the Earth; Global temperature – Past and present trend, Greenhouse effects; Global energy balance: Greenhouse gases and aerosols; its effects on global warming **15**

**Climate change and its effects:** Impact of climate change on the perspective of biodiversity, ocean, natural hazards, health risk, food supply, poverty, environmental refugee **10**

**Climate action:** Climate change-adoption, Vulnerability assessment-IPCC Framework (AR5 and AR6); Identifying and selecting adaptation options, linking adaptation and development Planning **10**

**Policy and mitigation:** Policy approaches for mitigation and Low Carbon Development; Role of National and Sectorial Institutions in climate change planning, National Action Plan on Climate **15**

### Learning outcome

*After completion of this course students should learn about-*

*Fundamentals of climate change science as well as know-how of the equipment with techniques for adaptation and vulnerability assessment*

*Knowledge and understanding on future implementation of low carbon development policy*

### Proposed faculty involvement

*Unit 1 & 2: Social Science/*

*Botany/Zoology*

*Unit 3: Geography/Botany/Zoology/History*

*Unit 4: Geography/ Social Science/ Physics*

*Unit 5: Political Science/Social Science*