

ENVIRONMENTAL IMPACT ASSESSMENT AND MANAGEMENT

Course Code: 15CE2112

L	P	C
3	0	3

Course Outcomes: At the end of the course, the student will be able to:

- CO1:** Discuss about the likely impacts of the project on individual, society and environment.
- CO2:** Analyse the various indicators to assess the state of health, economy and standard of life either prospering or deteriorating.
- CO3:** Assess the impacts on water bodies and land use related to construction and execution of projects.
- CO4:** Analyse the statement of ‘A smoke tube belching out smoke is a symbol of prosperity’ by considering pros and cons.
- CO5:** Classify the different methodologies of EIA and conditions under which a particular method can be adopted

UNIT – I

(10-Lectures)

BASIC CONCEPTS OF EIA

Elements of EIA – Preparation of environmental base map, Classification of environmental parameters – Environmental setting – Environmental Indicators.

UNIT – II

(10-Lectures)

EIA METHODOLOGIES

Introduction, criteria for the selection of EIA methodology, Categorization of methodologies, Matrix methods, Network method, Environmental Media quality index method, Cost / benefit analysis.

UNIT – III

(10-Lectures)

IMPACT OF DEVELOPMENTAL ACTIVITIES AND LAND USE

Introduction and methodology for the assessment of soil and ground water, delineation of study area, identification of activities. Procurement of relevant soil quality, impact prediction, assessment of impacts

significance, Identification and incorporation of mitigation measures.

UNIT-IV

METHODOLOGY FOR THE ASSESMENT OF IMPACTS OF SOME ATTRIBUTES

Surface water, air and biological environment. Methodology and generalized approach for the assessment of impact of development activities on vegetation and wildlife, Environmental impact of deforestation and incorporation of mitigation measures.

UNIT – V

ENVIRONMENTAL AUDIT – LEGAL ASPECTS

Environmental audit and environmental legislation. Objectives of environmental audit, types of environmental audit, audit protocol, stages of environmental audit, onsite activities, evaluation of audit data and preparation of audit report – Legal aspects – Case studies.

TEXT BOOKS

1. CANTER L.W., “*Environmental Impact Assessment*”, International 1996, McGraw Hill Pub. Co. Ltd., New York
2. Jain, R.K. Urban L.V.Stracy, G.S. “*Environmental Impact Analysis*”, 2nd edition, Vau Nostr and Reinhold Co, New York.
3. Anjaneyulu, Valli Manickam,” *Environmental Impact Assessment Methodologies*”, 2nd Edition, B.S.Publications, Sultanbazar, Hyderabad.

REFERENCES

1. Ran, J.G. & Wooten, D.C., “*Environmental Impact Assessment*”, 1st edition, Mc Graw Hill Pub. Co. Ltd, New York.
2. UNESCO, 1987, “*Methodologies, Guidelines for the Integrated Environmental Evaluation of Water Resources Development*”, UNESCO/UNEP, Paris.