SEMESTER: S6

ENVIRONMENTAL IMPACT ANALYSIS

Course Code	PEPOT636	CIE Marks	40
Teaching Hours/Week (L: T:P: R)	3:0:0:0	ESE Marks	60
Credits	3	Exam Hours	2 Hrs. 30 Min.
Prerequisites (if any)	None	Course Type	Theory

Course Objectives:

1. To provide in depth knowledge from methodology of impact analysis, socio impact analysis, air quality impact analysis and water quality impact analysis.
2. Understand the fundamentals of environmental impact and factors for consideration in assessing environmental impact analysis.

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SYLLABUS

Module No.	Syllabus Description	Contact Hours
1	**Concepts of environmental impact analysis**-Environmental protections, legislations, laws and Acts-air quality legislation-energy legislation-fish and wild life resources.	9
2	**Legislation**-historical preservation legislation Factors for consideration in assessing environmental impact concept short term vs. long term effects. Socio impact analysis-physical, social, aesthetic and economic environment-examples of types of socio impact analysis.	9
3	**Air quality impact analysis**- air pollutants-sources-atmospheric interactions-environmental impact-assessment methodology, case studies. Noise impact analysis-effects of noise on people-estimating transportation noise impact-examples.	9

4	**Water quality impact analysis**-water quality criteria and standards-modelling-water quality impact by projects like High ways, power plants, agriculture and irrigation, forest management, vegetation and wild life impact analysis. Assessment methodologies- impact on biota-summarisation of environmental impact-checklist method.	**9**

Course Assessment Method
(CIE: 40 marks, ESE: 60 marks)

Continuous Internal Evaluation Marks (CIE):

Attendance	Assignment/ Microproject	Internal Examination-1 (Written)	Internal Examination- 2 (Written)	Total
5	**15**	**10**	**10**	**40**

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End Semester Examination Marks (ESE)

In Part A, all questions need to be answered and in Part B, each student can choose any one full question out of two questions

Part A	Part B	Total
• 2 Questions from each module. • Total of 8 Questions, each carrying 3 marks **(8x3 =24marks)**	• Each question carries 9 marks. • Two questions will be given from each module, out of which 1 question should be answered. • Each question can have a maximum of 3 sub divisions. **(4x9 = 36 marks)**	**60**

Course Outcomes (COs)

At the end of the course students should be able to:

Course Outcome		Bloom's Knowledge Level (KL)
CO1	Explain the fundamentals of impact analysis	**K2**
CO2	Summarize the significance of environmental impact analysis.	**K2**
CO3	Demonstrate Socio impact analysis	**K2**
CO4	Examine the Relationship between water quality criteria and standards.	**K4**
CO5	Compare Assessment methodologies	**K4**

Note*: K1- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate, K6- Create*

CO-PO Mapping Table:

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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3								2			1
CO2	3								2			1
CO3	3								2			1
CO4	3								2			1
CO5	3								2			1

Text Books				
Sl. No	**Title of the Book**	**Name of the Author/s**	**Name of the Publisher**	**Edition and Year**
1	Environmental impact analysis handbook.	Rau, J. G., & Wooten, D. C.	McGraw Hill	1980
2	The EIS book: Managing and preparing environmental impact statements**.**	Eccleston, Charles H.	CRC Press	2013
3	Strategic environmental assessment in action.	Therivel, Riki.	Routledge	2012

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Reference Books				
Sl. No	**Title of the Book**	**Name of the Author/s**	**Name of the Publisher**	**Edition and Year**
1	Managing water quality: economics, technology, institutions.	Kneese, A. V., & Bower, B. T.	Rff Press.	2013
2	Introduction to environmental impact assessment.	Glasson, J., &Therivel, R.	Routledge	2014
3	Book of Environmental Science.	Thakur, Vidya.	Scientific Publishers	2016

Video Links (NPTEL, SWAYAM…)	
Module No.	**Link ID**
1	https://youtu.be/E_oRwSRdgcQ?si=daLas9URNIaGv8tB
2	https://youtu.be/PrFskfLGHG8?si=aBDfbk5utvJrRR3k
3	https://youtu.be/_mLdjd7WqU4?si=wcQ6nzTwxLABgEKH
4	https://youtu.be/VlyqdbH-GbQ?si=lsjwkEbY9W-XTUi6

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