



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering

Subject Code: 3170625

Semester –VII

Subject Name: ENVIRONMENTAL IMPACT ASSESSMENT

Type of course: NA

Prerequisite:

Rationale:

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	0	2	4	70	30	30	20	150

Sr. No.	Contents	Total hrs
1	Concepts of Environmental Impact Assessment : Environment; Environmental Impacts; Environmental Impact Analysis; Environmental Impact Assessment And Environmental Impact Statement; EIA- As An Integral Part of The Planning Process	6
2	Detailed Contents of EIA: Introduction; Project Description; Description of The Environment; Anticipated Environmental Impacts And Mitigation Measures: Analysis of Alternatives; Environmental Monitoring Programme; Additional studies; Project Benefits; Environmental Cost Benefit Analysis	10
3	Environment attributes: air; water; noise; land and soil. Description of the Baseline Environment : Purposes for defining the Environmental Setting; Selection of parameters, Monitoring of physical environmental parameters, Collection and interpretation of baseline data for various environmental attributes	8
4	Prediction and Methods of Assessment of Impacts on Various aspects of Environment; Application of various models for the Prediction of impact on Air Environment, Water Environment, Noise Environment and Land	8
5	EIA notification September 2006 and amendments: Categorization of projects, Procedure for getting environmental clearance. Public participation in environmental decision making process. Case studies on EIA for Industries and Infrastructure projects	10

Suggested Specification table with Marks (Theory):

Distribution of marks as per Blooms taxonomy					
R level	U level	A level	N level	E level	C level
10	25	25	20	10	10

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.



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Reference Books:

1. Environmental Impact Analysis Handbook – by Rau Whooten; McGraw Hill publications
2. Environmental Impact Assessment – by Larry Canter; McGraw Hill publications
3. Environmental Impact Analysis – A Decision Making Tool by R K Jain
4. Handbook of Environment Impact Assessment by Judith Petts; McGraw Hill publications

Course Outcome: After learning the course the students should be able to:

Sr. No.	CO Statement	% age weightage
CO1	Explain the importance of EIA as an integral part of planning process	20
CO2	Examine different environmental attributes and selecting the environmental parameters affecting project	30
CO3	Apply various methods to Predict the Environmental impacts of project after deciding various environmental attributes	30
CO4	Create the EIA report for getting Environmental clearance	20

List of Experiments and Tutorials:

1. Determination of pH and conductivity for water and wastewater
2. Determination of DO of the sample from water body
3. Determination of biodegradability (BOD/COD) for industrial wastewater sample
4. Determination of SO₂, NO₂ and PM of effluent gaseous sample
5. Tutorial based on Environmental Attributes and Environmental Setting
6. Tutorial based on Methods of Prediction for Assessment of impacts

List of Open Source Software/learning website:

1. <http://nptel.ac.in/>
2. Website of GPCB, CPCB and MoEF