GUJARAT TECHNOLOGICAL UNIVERSITY

BE 7 SEMESTER – OLD PAPER – S22 TO S26 – QUESTION BANK

Subject Name & Code: Environmental Impact Assessment - 3170625

Chapter 1: Concepts of Environmental Impact Assessment

Repeated Questions:

1. Concept, Objectives and Purpose of EIA (Theory):

- **Q.** State the objectives of EIA. **(U1, 4 Marks; SUMMER 2023, 3 Marks; WINTER 2024, 4 Marks; SUMMER 2026, 4 Marks)**
- **Q.** State the concept of Environmental Impact Assessment. **(SUMMER 2022, 3 Marks; WINTER 2024, 3 Marks)**
- **Q.** What is the purpose of EIA and EIS? / Write the difference between Environmental Impact Assessment and Environmental Impact Statement. **(U1, 4 Marks; WINTER 2022, 4 Marks)**
- **Q.** Define Environmental Impact Statement, Environmental Impact Assessment. / Define: Impact Assessment and Impact Statement. **(SUMMER 2023, 3 Marks; WINTER 2025, 3 Marks)**

2. EIA in Planning, Decision Making and Sustainable Development (Theory):

- **Q.** Discuss/Explain EIA as an Integral Part of The Planning Process. / Explain how Environmental Impact Assessment (EIA) is integrated into the planning process for industrial development projects in India. Why is it considered crucial for sustainable development? **(U1, 4 Marks; SUMMER 2022, 4 Marks; WINTER 2024, 4 Marks; SUMMER 2025, 3 Marks; SUMMER 2026, 4 Marks)**
- **Q.** Explain the importance of EIA as an integral part of decision making process. **(U1, 4 Marks; SUMMER 2023, 3 Marks; WINTER 2024, 3 Marks)**
- **Q.** State the principles of sustainable development. **(SUMMER 2023, 4 Marks; WINTER 2024, 4 Marks)**

3. EIA Process and Types of Impacts (Theory):

- **Q.** Explain Environmental Impact Assessment process in brief. / Explain the generalized procedure adopted for environmental impact assessment with the necessary flow chart. / Briefly explain the various stages involved in Environment Impact Assessment (EIA) with a flow chart. [Diagram required – refer to the original question paper] **(WINTER 2022, 7 Marks; WINTER 2024, 7 Marks; SUMMER 2026, 7 Marks)**
- **Q.** Differentiate giving examples: Quantifiable and non-quantifiable impacts. **(SUMMER 2023, 4 Marks; WINTER 2024, 3 Marks; SUMMER 2026, 3 Marks)**

Other Important Questions:

1. Concepts, Definitions and Objectives (Theory):

- **Q.** What is Environmental Impact and Environmental Impact Analysis? **(WINTER 2022, 3 Marks)**
- **Q.** What is the purpose of Environmental Impact Evaluation? **(WINTER 2022, 3 Marks)**
- **Q.** Comment on Environmental Impact Analysis. **(SUMMER 2022, 3 Marks)**
- **Q.** How to write Environmental Impact Statement? **(SUMMER 2022, 3 Marks OR)**
- **Q.** What are the primary objectives of conducting an Environmental Impact Assessment (EIA) for a proposed project? **(SUMMER 2025, 4 Marks)**
- **Q.** What is the primary purpose of conducting an Environmental Impact Assessment (EIA) in the context of development projects in India? **(SUMMER 2025, 3 Marks OR)**
- **Q.** State the objectives and principles of EIA. **(WINTER 2025, 3 Marks)**
- **Q.** What is the difference between Impact Assessment and mitigation. **(WINTER 2025, 3 Marks)**

- **Q.** Define environment and write a note on components of environment. **(WINTER 2025, 4 Marks)**

2. Types and Classification of Impacts (Theory):

- **Q.** Classify giving examples the impacts based on acceptability. **(SUMMER 2023, 3 Marks)**
- **Q.** Write a note on relationship between man's action, environmental effects and environmental impacts. **(SUMMER 2023, 3 Marks OR)**
- **Q.** Write a note on various types of environmental impacts. **(WINTER 2025, 7 Marks)**

3. EIA Agencies, Types and Steps (Theory):

- **Q.** Enlist the different agencies for EIA and explain their roles. **(U1, 7 Marks; SUMMER 2023, 7 Marks OR)**
- **Q.** Differentiate between Rapid and Comprehensive EIA. **(U1, 4 Marks OR)**
- **Q.** List the steps involved in the Environmental Impact Assessment (EIA) process. **(SUMMER 2025, 3 Marks)**

4. Sustainable Development (Theory):

- **Q.** What is sustainable development? Enlist the methods to achieve sustainable development. **(SUMMER 2023, 7 Marks)**
- **Q.** 'EIA is the important tool for achieving the goal of sustainable development', justify the statement. **(SUMMER 2026, 7 Marks)**

Chapter 2: Detailed Contents of EIA

Repeated Questions:

1. Cost Benefit Analysis and Analysis of Alternatives (Theory):

- **Q.** Discuss/Explain Environmental Cost Benefit Analysis in detail. / What is cost benefit analysis? What are the general steps to determine it? **(U1, 4 Marks; SUMMER 2022, 7 Marks; SUMMER 2023, 3 Marks OR; WINTER 2024, 7 Marks; WINTER 2025, 7 Marks)**
- **Q.** What is the importance of analysis of alternatives in EIA? / Why analysis of alternatives in EIA is required? / What procedures should be conducted for analysis of alternatives? **(U1, 7 Marks; SUMMER 2022, 3 Marks; WINTER 2022, 7 Marks; WINTER 2024, 3 Marks; SUMMER 2026, 4 Marks)**

2. EIA Report Contents and Environmental Monitoring (Theory):

- **Q.** Discuss/Enlist the detailed content of EIA report. / Enlist detailed Contents of EIS. **(U1, 7 Marks; SUMMER 2022, 4 Marks; SUMMER 2023, 7 Marks; WINTER 2024, 4 Marks; SUMMER 2026, 4 Marks)**
- **Q.** Explain Environmental monitoring in EIA. **(U1, 7 Marks OR; WINTER 2024, 7 Marks; WINTER 2025, 7 Marks; SUMMER 2026, 7 Marks OR)**

3. Mitigation Measures (Theory):

- **Q.** Describe anticipated environmental impacts and mitigation measures required to overcome them. / Describe types of mitigation measures in EIA. / Write a short note on mitigation measure for anticipated environmental impacts. **(SUMMER 2022, 7 Marks; WINTER 2022, 7 Marks OR; WINTER 2022, 4 Marks; WINTER 2025, 4 Marks OR)**

Other Important Questions:

1. EIA Report Contents and Additional Studies (Theory):

- **Q.** Discuss points of Additional studies in EIA. **(SUMMER 2022, 3 Marks)**
- **Q.** What is Project Description? **(SUMMER 2022, 3 Marks OR)**
- **Q.** Define public consultation as part of additional studies for EIA. **(WINTER 2022, 3 Marks)**
- **Q.** Describe the structure of a typical EIA report for a construction project in India, outlining the key components that must be included according to Indian regulations. **(SUMMER 2025, 4 Marks)**
- **Q.** What are the approaches to EIA reporting and review? **(WINTER 2025, 7 Marks OR)**
- **Q.** Define social and economic benefits of the project. **(WINTER 2025, 3 Marks)**

2. Cost Benefit Analysis and Environmental Monitoring (Theory):

- **Q.** What are the two methods of environmental Cost Benefit analysis? **(WINTER 2022, 4 Marks)**
- **Q.** What are the objectives of environmental monitoring? **(WINTER 2022, 3 Marks)**
- **Q.** Write a note on Environmental Monitoring Programme. **(SUMMER 2023, 4 Marks OR)**

3. Environmental Management Plan and Mitigation (Application):

- **Q.** Create a comprehensive Environmental Management Plan (EMP) for a proposed industrial park in Gujarat, addressing key environmental concerns, mitigation strategies, and monitoring protocols. **(SUMMER 2025, 7 Marks)**
- **Q.** What are the main components of an Environmental Management Plan (EMP) in the context of EIA? **(SUMMER 2025, 3 Marks OR)**
- **Q.** The Environmental Impact Assessment (EIA) process in India is essential for identifying potential environmental impacts associated with proposed projects... Based on the above paragraph, Analyze the impact of effective mitigation measures on environmental sustainability in India's EIA process. How can these measures contribute to long-term ecological balance? [Data truncated in source – refer to the original question paper] **(SUMMER 2025, 7 Marks)**

- **Q.** The Environmental Impact Assessment (EIA) process is a crucial mechanism for assessing the potential environmental effects of proposed development projects in India... Based on the above paragraph, How would you apply the findings of an Environmental Impact Assessment (EIA) to develop a mitigation plan for a proposed mining project in India? [Data truncated in source – refer to the original question paper] **(SUMMER 2025, 7 Marks OR)**

Chapter 3: Environment attributes and Description of the Baseline Environment

Repeated Questions:

1. Environmental Attributes and Environmental Setting (Theory):

- **Q.** Write a short note on Environmental attributes. / Explain different Environmental attributes. / Write Environment attributes for air, water and soil. **(U1, 7 Marks; SUMMER 2022, 7 Marks; SUMMER 2023, 7 Marks OR; WINTER 2024, 7 Marks; SUMMER 2026, 7 Marks)**
- **Q.** Explain Environmental Setting. / Why, defining the Environmental Setting is needed? / Explain the purpose of defining the environmental setting when conducting an Environmental Impact Assessment (EIA). How does it contribute to the assessment process? **(U1, 7 Marks OR; SUMMER 2022, 4 Marks OR; SUMMER 2025, 3 Marks; WINTER 2025, 7 Marks OR)**

2. Baseline Study and Data Collection (Theory):

- **Q.** What is Baseline study? What is its importance in EIA? / Define baseline data and discuss how to collect and interpret the baseline data for environmental attributes. / How is the baseline environment data collected? / Why is it important to define the baseline environment before starting a construction project? Explain how baseline data collection helps in environmental impact assessment (EIA). **(U1, 4 Marks OR; SUMMER 2022, 7 Marks OR; WINTER 2022, 4 Marks; WINTER 2024, 7 Marks OR; SUMMER 2025, 4 Marks; WINTER 2025, 4 Marks; SUMMER 2026, 7 Marks OR)**
- **Q.** How to assess the existing environmental status in the project area? / How to do the description of the baseline Environment? **(SUMMER 2022, 4 Marks OR; WINTER 2022, 7 Marks)**
- **Q.** Discuss the procedure of Monitoring of physical environmental parameters in EIA / Enlist the data to be collected for baseline monitoring and explain the points to be kept in mind during data collection. **(SUMMER 2022, 7 Marks; SUMMER 2023, 4 Marks)**
- **Q.** Highlight the difference between primary data and secondary data for EIA process. / Write the difference between primary data and secondary data for EIA process. **(WINTER 2024, 3 Marks; SUMMER 2026, 3 Marks OR)**
- **Q.** Explain the importance of describing land use in EIA. **(WINTER 2024, 3 Marks OR; SUMMER 2026, 4 Marks OR)**

Other Important Questions:

1. Environmental Attributes, Air Pollutants and Meteorology (Theory):

- **Q.** Differentiate the effect of impacts for Air Environment and Water Environment. **(SUMMER 2022, 4 Marks)**
- **Q.** Explain any two attributes which should be considered in meteorological condition study. **(WINTER 2022, 4 Marks OR)**
- **Q.** Enlist the sources and effect of important air pollutants. **(SUMMER 2026, 3 Marks)**
- **Q.** What are the key environmental attributes considered in the Environmental Impact Assessment (EIA) process in India? **(SUMMER 2025, 3 Marks OR)**

Chapter 4: Prediction and Methods of Assessment of Impacts

Repeated Questions:

1. Prediction of Impacts on Air, Water and Noise Environment (Theory):

- **Q.** Discuss application of various models for the Prediction of impact on Air Environment. / Explain any one model to predict environmental impact on air environment. / How to predict impacts on air environment in EIA? / What are the conceptual approaches for addressing air environment impacts? / Describe how the Air Quality Index (AQI) can be applied to predict the impact of a proposed urban development project... [Data truncated in source – refer to the original question paper] **(U1, 4 Marks OR; WINTER 2022, 7 Marks OR; WINTER 2024, 4 Marks OR; SUMMER 2025, 4 Marks OR; WINTER 2025, 7 Marks; SUMMER 2026, 4 Marks OR; SUMMER 2026, 3 Marks)**
- **Q.** Describe proposed model for EIA study on water Environment. / How can the use of hydrological modeling be applied to predict the potential impacts of a new industrial project on the water environment in Gujarat? / What are the approaches for predicting impact on water environment. / How to predict impacts on water environment in EIA? **(WINTER 2022, 7 Marks; WINTER 2024, 3 Marks; SUMMER 2025, 4 Marks; WINTER 2025, 7 Marks OR)**
- **Q.** Describe proposed model for EIA study on Noise Environment. / Describe various models for the prediction of impact on Noise and Land Environment. **(SUMMER 2022, 7 Marks OR; WINTER 2022, 7 Marks OR)**

2. EIA Methods and Methodologies (Theory):

- **Q.** Explain the Checklist method of EIA. / Explain the different types of checklist methods for EIA. / Explain simple and descriptive checklists used for the EIA process. / Describe checklist method of impact prediction in detail. **(U1, 3 Marks; SUMMER 2023, 7 Marks; WINTER 2024, 7 Marks OR; WINTER 2025, 4 Marks OR; SUMMER 2026, 7 Marks OR)**
- **Q.** Write a short note on the AdHoc Method used in EIA studies. / Explain ad-hoc and overlays methods of environment impact identification. **(U1, 3 Marks; WINTER 2022, 4 Marks OR)**
- **Q.** What are the models used to predict the environmental impact? / Enlist different methods used for impact identification. / What are the criteria used for selecting best EIA method? / Enlist the requirements of a good EIA method. **(WINTER 2022, 3 Marks OR; SUMMER 2023, 3 Marks; WINTER 2024, 4 Marks OR; SUMMER 2026, 3 Marks; SUMMER 2026, 4 Marks OR)**
- **Q.** Explain the matrix methodology for EIA. / Explain Leopold matrix in detail. **(WINTER 2024, 7 Marks; SUMMER 2026, 7 Marks)**
- **Q.** Describe network method of impact prediction in detail. / Explain with example the method of a network analysis in methodology study for EIA. **(WINTER 2022, 3 Marks OR; WINTER 2025, 4 Marks)**

Other Important Questions:

1. Socio-economic Impact, Air Environment Steps and Life Cycle Assessment (Theory):

- **Q.** Discuss the socio-economic impact in EIA. **(U1, 3 Marks)**
- **Q.** List the steps that are to be followed when conducting an EIA for air environment. **(SUMMER 2023, 4 Marks OR)**
- **Q.** Explain in brief Life Cycle Assessment. **(WINTER 2025, 3 Marks OR)**

Chapter 5: EIA notification, Public participation and Case studies

Repeated Questions:

1. Public Participation (Theory):

- **Q.** What is the role of public participation in EIA process? / Explain the importance of public participation in EIA process. / How Public participation is important in environmental decision making process? / What is public participation in environmental decision-making? / Analyze the role of public participation in the Environmental Impact Assessment (EIA) process. Discuss how public involvement can influence project outcomes and decision-making, using relevant examples. **(U1, 4 Marks; SUMMER 2022, 3 Marks; WINTER 2022, 4 Marks OR; SUMMER 2023, 4 Marks; WINTER 2024, 4 Marks; SUMMER 2025, 7 Marks OR; WINTER 2025, 4 Marks OR; SUMMER 2026, 4 Marks)**

2. EIA Notification 2006 and Environmental Clearance (Theory):

- **Q.** Discuss EIA notification 2006. / State salient features of EIA notification September 2006. / Explain the procedure for obtaining environmental clearance as per EIA notification 2006. / Explain the procedure for obtaining environmental clearance. **(U1, 7 Marks OR; SUMMER 2022, 4 Marks; WINTER 2022, 7 Marks; WINTER 2025, 4 Marks; WINTER 2025, 7 Marks)**
- **Q.** How Categorization of projects is done in EIA. / Discuss in brief categorization of projects w.r.t. EIA. / Which type of projects come under B2 category and why? / How the projects are classified as per EIA Notification 2006. / Which type of projects come under B1 and B2 category and why? / How would you apply the guidelines from the EIA Notification of September 2006 to categorize a new industrial project in Gujarat? Provide an example of the. / List the types of projects that typically require a full Environmental Impact Assessment (EIA) under the EIA Notification of September 2006 in India. [Data truncated in source – refer to the original question paper] **(U1, 3 Marks OR; SUMMER 2022, 4 Marks; WINTER 2022, 4 Marks; SUMMER 2025, 4 Marks; SUMMER 2025, 4 Marks OR; WINTER 2025, 4 Marks; WINTER 2025, 3 Marks OR; SUMMER 2026, 3 Marks OR)**
- **Q.** Explain the public hearing process for Environmental clearance in India. / Write the stages in the prior environmental clearance process for new projects. / When is Environmental clearance required? / Which authorities are responsible for granting environmental clearance for projects in India as per the EIA Notification of September 2006? **(U1, 4 Marks; U1, OR; WINTER 2022, 3 Marks OR; SUMMER 2025)**
- **Q.** Explain the terms screening and scoping. / What are screening, scoping and terms of reference (TOR) in EIA? / What is SEIAA? Explain its function. / What is EIA Amendment? / Explain the latest amendment of EIA notification. **(U1, 3 Marks OR - TOR, Screening, SEIAA; WINTER 2022, 3 Marks; SUMMER 2023, 4 Marks; SUMMER 2023, 7 Marks; WINTER 2024, 4 Marks; WINTER 2024, 7 Marks OR; WINTER 2025, 3 Marks; SUMMER 2026, 3 Marks; SUMMER 2026, 3 Marks)**

3. Case Studies and Impacts of Construction Activities:

- **Q.** Discuss a Case study on EIA for any one Infrastructure project. / Discuss a Case study on EIA for one Infrastructure project. / Discuss a Case study on EIA for one industry with relevant details. / Write EIA Case study on fertilizer industry with relevant details. / Write a Case study on EIA for Textile Industry. **(SUMMER 2022, 7 Marks; SUMMER 2022, 7 Marks OR; WINTER 2022, 7 Marks OR; SUMMER 2023, 7 Marks OR; WINTER 2025, 7 Marks OR; SUMMER 2026, 7 Marks)**
- **Q.** Discuss various direct and indirect impacts likely to occur for typical Road Construction Activity. / Discuss various direct and indirect impacts likely to occur for typical (i) Land Cleaning Activity and (ii) Road Construction Activity. / Discuss different activities in a major road laying project likely to have impacts on soil and ground water environment. **(U1, 7 Marks OR; SUMMER 2023, 7 Marks; SUMMER 2023, 7 Marks OR)**

Other Important Questions:

1. Impacts of Specific Projects (Theory):

- **Q.** Discuss Environmental impacts likely to occur in Airport project. **(U1, 7 Marks)**
- **Q.** Enlist four short term and four long term impacts of mining project. **(SUMMER 2023, 4 Marks OR)**
- **Q.** Describe in detail Biological environment impacts of a Construction Project. **(SUMMER 2023, 3 Marks OR)**
- **Q.** Explain briefly the different socio-economic impacts of the transportation projects. **(WINTER 2024, 7 Marks)**

2. EIA Legislation and Effectiveness of the EIA Process in India (Theory):

- **Q.** Narrate in detail Environmental legislations in India for EIA. **(SUMMER 2023, 7 Marks OR)**
- **Q.** Evaluate the effectiveness of India's Environmental Impact Assessment (EIA) process in addressing the environmental concerns of large infrastructure projects, such as highways or dams. Discuss the strengths and weaknesses of the current system. **(SUMMER 2025, 7 Marks)**
- **Q.** Analyze the challenges faced in implementing the Environmental Impact Assessment (EIA) process in India, considering aspects such as regulatory framework, capacity building, and stakeholder engagement. Provide recommendations to improve the effectiveness of the EIA process. **(SUMMER 2025, 7 Marks)**
- **Q.** Analyze the impact of industrialization on environmental sustainability in India, considering both positive and negative effects. Discuss how effective Environmental Impact Assessments (EIAs) can mitigate negative impacts while promoting sustainable industrial development. **(SUMMER 2025)**
- **Q.** How can project developers in India apply the findings of an Environmental Impact Assessment (EIA) to improve their project designs? **(SUMMER 2025, 4 Marks OR)**
- **Q.** The role of Environmental Impact Assessment (EIA) in India extends beyond merely evaluating projects... Based on the above paragraph, Analyze how the integration of green technologies in project planning, supported by the EIA process, contributes to environmental sustainability in India. [Data truncated in source – refer to the original question paper] **(SUMMER 2025, 7 Marks OR)**
- **Q.** Environmental Impact Assessment (EIA) plays a pivotal role in sustainable development... Based on the above paragraph, Evaluate the effectiveness of the Environmental Impact Assessment (EIA) process in promoting sustainable development in India. What are the strengths and limitations of the current EIA framework? [Data truncated in source – refer to the original question paper] **(SUMMER 2025, 7 Marks)**

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