Code No: 158DF **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech IV Year II Semester Examinations, July - 2023

ENVIRONMENTAL IMPACT ASSESSMENT

(Common to ME, ECE, MMT, AE, MIE)

Time: 3 Hours **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	What is the importance of baseline data collection in EIA studies?	[2]
b)	Explain the concept of impact prediction in EIA.	[3]
c)	What are the criteria for selecting an appropriate EIA methodology for a specific project?	[2]
d)	Explain the process of impact identification in EIA.	[3]
e)	What is the significance of pre-appraisal and appraisal in relation to an EMP?	[2]
f)	What is the role of remote sensing in monitoring an EMP?	[3]
g)	Write a short note on LCA.	[2]
h)	What are the responsibilities of government in addressing environmental issues?	[3]
i)	What are the factors to be considered to prepare EIA in the case of nuclear fuel complex?	[2]
j)	Give the importance of socio-economic factors in constructing air ports?	[3]

PART – B

(50 Marks)

2.a) Discuss the components of an EIA study. Explain the key elements that should be included in an EIA report.

b) Explain the roles and responsibilities of the Expert Committee and other regulatory bodies involved in granting environmental clearance. [5+5]

OR

3.a) Explain the process of identifying and designing measures to prevent, minimize, or compensate for adverse environmental impacts

b) What is the role of public hearings in the EIA process? [5+5]

4.a) Explain how checklists help in systematically identifying and evaluating potential impacts based on predefined criteria.

b) Analyze the strengths and weaknesses of checklist methods and their suitability for different project contexts. [5+5]

OR

5.a) Discuss how matrices are used to assess the interactions between project activities and environmental components.

b) Provide examples of matrix-based approaches and discuss their effectiveness in capturing complex relationships and cumulative impacts. [5+5]

6.a) Analyze the challenges and opportunities in implementing effective mitigation plans and relief and rehabilitation measures.

b) What are the steps are involved in EMP? Discuss each step with examples. [5+5]

OR

7.a) What is scoping? Give its significance in the scope and objectives of an EMP.

b) What are the factors which should be considered in collecting the baseline data and explain their contribution in EMP? [5+5]

8.a) How LCA helps in identifying the various opportunities for improve decision making in EIA?

b) Describe the methodology of conducting a life cycle analysis. Discuss the key steps involved, such as goal and scope definition, life cycle inventory, impact assessment, and interpretation. [5+5]

OR

9.a) Discuss about the constitutional provisions related to environmental governance and the powers and functions assigned to the central and state governments enable effective environmental management and policy implementation.

b) Discuss the role of each government level in policy making, enforcement and coordination. [5+5]

10.a) Evaluate the potential ecological impacts of a water resources project on aquatic ecosystems considering the effects on fish populations, water quality, and wetland habitats. Give a mitigation plan.

b) Discuss about the risks associated release of waste from pharmaceutical industries. Evaluate proper treatment and disposal systems and propose proper strategies for sustainable development. [5+5]

OR

11.a) Evaluate the strategies and technologies available to mitigate the environmental impacts of a thermal plant, such as emissions control systems and alternative energy sources. Assess their effectiveness and feasibility.

b) Evaluate the measures and design considerations that can minimize the environmental impact of a highway project, such as wildlife crossings, noise barriers, and sustainable landscaping practices. Discuss their effectiveness and potential challenges. [5+5]

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