



B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2022

(Regulation 2018)

Seventh Semester

CIVIL ENGINEERING

U18CEE0004: Environmental Impact Assessment and Life Cycle Analysis

COURSE OUTCOMES

- CO1:** Create EIA Team and Process flow diagram for Civil Engineering Projects
CO2: Apply various method of EIA for assessing the impact on major environments
CO3: Conduct Socio-Economic Impact Assessment
CO4: Perform EIA for various Civil Engineering Projects
CO5: Apply LCA as a tool for decision making

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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|---|-----|-------------------|
| 1. How do EIA contribute for sustainable development? | CO1 | [K ₂] |
| 2. What is the purpose of screening in EIA? | CO1 | [K ₁] |
| 3. Distinguish the scope of Rapid EIA and Cumulative EIA. | CO2 | [K ₂] |
| 4. Give an example of an activity that can adversely affect the water environment and suggest an appropriate mitigation action. | CO2 | [K ₂] |
| 5. Define Social Impact Assessment. | CO3 | [K ₁] |
| 6. List any four methods to mitigate social impacts due to development projects. | CO3 | [K ₂] |
| 7. State the essential components of an Environmental Management Plan (EMP). | CO4 | [K ₁] |
| 8. Give any two adverse impacts associated with Mining and Thermal power plants. | CO4 | [K ₂] |
| 9. Write the five stages of a Life-cycle Assessment (LCA). | CO5 | [K ₁] |
| 10. Mention the various methods LCA. | CO5 | [K ₁] |

Answer any FIVE Questions:-

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

11.	a)	Discuss the role of EIA in Project Cycle.	8	CO1	[K ₂]
	b)	Describe the predictive measures used in Public participation.	8	CO1	[K ₂]
12.	a)	With the help of a curve, explain in detail about Cost Benefit analysis for EIA and list its advantages and disadvantages.	10	CO2	[K ₂]
	b)	State the advantages and disadvantages of using Checklist method in EIA.	6	CO2	[K ₂]
13.	a)	Explain the different Ecological impacts associated with developmental projects and suggest mitigation measures for each.	10	CO3	[K ₃]
	b)	Elaborate the procedure for selecting, testing and understanding significant social impacts for a highway project.	6	CO3	[K ₂]
14.	a)	What is Environmental Management Plan? Discuss in detail about the requirements of an Environmental Management Plan.	8	CO4	[K ₂]
	b)	Considering nuclear power plant as a case study, describe the positive and negative environmental impacts and suggest an EMP mitigate the negative impacts.	8	CO4	[K ₂]
15.	a)	With an example, discuss in detail about the application of Life Cycle Assessment for a product.	10	CO5	[K ₃]
	b)	Write the short note on need and importance of LCA.	6	CO5	[K ₂]
16.		Explain the process of EIA to be conducted for a Highway project connecting two state capitals.	16	CO4	[K ₃]
