Register Number:……..

KUMARAGURU
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B.E DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Sixth 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)

1.	What do you understand by the Environmental Impact Statement (EIS), whether EIS and EIA are same?	CO1	[K_1]
2.	What are the limitations of EIA?	CO1	[K_1]
3.	List the evaluation method/methods that can be used in case of multiple subprojects within a project.	CO2	[K_2]
4.	In case of modeling the dispersion of pollutants that is been released from a stack of 10 m height, what will be the suggested software package to simulate the same?	CO2	[K_2]
5.	What do you understand by the term Social Impact Assessment?	CO3	[K_1]
6.	In case of data absence, whether a questionnaire survey alone will be a proper representation of actuals for preparation of SIA?	CO3	[K_2]
7.	Whether Environmental Management Plan and Mitigation are one other the same, justify your stand?	CO4	[K_2]
8.	What do you understand by the term “Post project audit”?	CO4	[K_1]
9.	What are the approaches that are followed in LCA?	CO5	[K_1]
10.	What do you understand by the term “LCSA”?	CO5	[K_2]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Describe a case that may require Environmental Impact Assessment (EIA).	6	CO1	[K_3]
	b)	Illustrate the EIA process that needs to practice towards preparing an effective document on the above case (11 a)	10	CO1	[K_2]
12.	a)	Describe a case and evaluate the impacts using the Checklist method.	8	CO2	[K_3]
	b)	For the above use the Leopold Matrix method to evaluate the impact and its magnitude.	8	CO2	[K_3]
13.	a)	Discuss the relationship that exists between the firm, and the Social impacts caused on stakeholders (Individual & family level).	8	CO3	[K_2]
	b)	Structure a case to illustrate the mitigation proposed to overcome the social impact on an individual or family level	8	CO3	[K_3]
14.	a)	A proposed mine that extracts coal from a depth of 90 ft from the topsoil is said to be operated from the year 2024. The location of the proposed mine holds 2 other mines that are been operated from the year 2000. It is observed from those mines that excess groundwater is pumped out towards facilitating mining operations. Prepare an EMP for the above-identified environmental issue.	12	CO4	[K_3]
	b)	For the above case, prepare a monitoring plan and guidelines.	4	CO4	[K_3]
15.	a)	Describe a case that illustrates cradle to gate approach.	6	CO5	[K_3]
	b)	For the above case, illustrate the LCA process Goal, scope, and inventory analysis.	10	CO5	[K_3]
16.	a)	The government of Tamilnadu had proposed to construct an 8-lane road network between Salem and Chennai to facilitate the logistics. Whether EIA is required for the above project, and if so justify your stand in terms of environmental issues	10	CO4	[K_3]
	b)	In case EIA is required, prepare an EMP towards one of the identified environmental issues.	6	CO4	[K_3]

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