Form A: Paper –Setting Blank **Ref No.:** EX/PG/CE/T/114C/2024

M.E. CIVIL ENGINEERING 1st YEAR 1st SEMESTER EXAMINATION, 2024

(1st / ~~2nd~~ Semester / ~~Repeat~~ / ~~Supplementary~~ / ~~Annual~~ / ~~Biannual~~)

SUBJECT: ENVIRONMENTAL IMPACT ASSESSMENT

Full Marks: 100

Time: ~~Two hours~~/Three hours/~~Four hours~~/ ~~Six hours~~ (60 marks for this part)

Use a separate Answer-Script for each part

No. of Question	Part-I	Marks
	Answer Question-1 and any *two* from the rest	
Q.1) a)	State the **objectives** behind the **'Environmental Impact Assessment'**.	3
b)	Discuss in brief on different **participants** engaged in an EIA project.	4
c)	Delineate the basic steps associated with the prediction of changes and assessment of impact of consequent changes in **noise environment**.	10
d)	What are the **various parameters** used for describing the impact of a project **qualitatively**.	4
e)	Deduce the necessary expression for **"O'Connor Model"** of determining the concentration of a conservative constituent in a riverine system.	9
Q.2) a)	State the basic assumptions behind the formulation of **"CFSTR Model"**.	2
b)	Deduce the pertinent expression for estimating the pollutant concentration assuming a river reach as a **PFR**.	6
c)	A river reach is assumed to have a **plug flow hydraulic regime**. Determine the effluent concentrations after **2.75 days with proper interpretation** under following circumstances. i) Without retardation reaction. ii) With retardation reaction having order of kinetics **n=1.0** iii) With retardation reaction having order of kinetics **n=1.5** Given, Concentration of pollutant entering the river reach= **C_0= 245mg/L** Rate constant **(K)= 0.33/day** Retardation coefficient **(r_t)=0.735/day** **(Assume any other relevant data, if required)**	7

[Turn Over

Form A: Paper –Setting Blank **Ref No.:** EX/PG/CE/T/114C/2024

M.E. CIVIL ENGINEERING 1st YEAR 1st SEMESTER EXAMINATION, 2024

(1st /~~2nd~~ Semester / ~~Repeat~~ / ~~Supplementary~~ / ~~Annual~~ / ~~Biannual~~)

SUBJECT: ENVIRONMENTAL IMPACT ASSESSMENT

Full Marks: 100

Time: ~~Two hours~~/Three hours/~~Four hours~~/ ~~Six hours~~ (60 marks for this part)

No. of Question	Part-I	Marks
Q.3) a)	What are the essential features of **"Overlay methods of** Environmental **Impact Analysis"**?	4
b)	Discuss in brief on the steps followed in the **"Semi-quantitative Index Method of Environmental Impact Analysis"** to estimate the potential environmental impact.	7
c)	State the fundamental differences between **"Scaling Checklists"** and **"Scaling Weighting Checklists".**	4
Q.4) a)	What are the essential features of a full-proof **Environmental Management Plan (EMP)?**	4
b)	Describe the **three-step process** applied for impact mitigation for any type of developmental project	7
c)	State the **mitigation measures** recommended by MoEF for **air environment.**	4

Ref No: EX/PG/CE/T/114C/2024

M. E. Civil Engineering First Year First Semester Examination 2024

Environmental Impact Assessment

Time: Three Hours | Full Marks: 100

Use separate Answer-Scripts for each part

Part-II (40 marks)

Answer **Question No. 1** and any **Two** from the rest. Answers should be brief.

1. Answer the followings briefly:

   a) Correlate Environmental Impact Assessment (EIA) and Sustainable Development

   b) Write a brief note about application procedure of EIA

   c) How was EIA started in India?

   d) Write all the threshold values of the project 'Thermal Power Plant' in a tabular form. 4X4=**16**

2. a) Write in details about selection of site of a proposed project.

   b) How are the proposed project screened? Give examples in details. Name the screening committees.

   c) What is the significance of Scoping stage? 3+5+4=**12**

Ref No: EX/PG/CE/T/114C/2024

M. E. Civil Engineering First Year First Semester Examination 2024

Environmental Impact Assessment

Environmental Impact Assessment

Time: Three Hours | Full Marks: 100

Part-II (40 marks)

3. a) How are 'background monitoring, and 'base line standard' related?

   b) Write the significance of 'Terms of Reference' (TOR).

   b) When was 'public hearing' first incorporated in EIA study? What were its loopholes? How some of which areremoved in current notification? What else can be done to involve more affected public?5+7=**12**

4. a) Which documents are appraised for EC? Mention about the time limits for appraisal and grant of EC.

   b) Mention about transferability of an EIA report. Write a brief note about 'post monitoring'.

   c) Give example of two projects for which you have to apply to MoEF for EC.

   d) Give example of two projects (other than 'B2') for which Public Consultation need not to be undertaken.

   4+4+2+2= **12**