

17/10/13

DEPARTMENT OF CIVIL ENGG., ANNA UNIVERSITY, CHENNAI -600 025
B.E. Degree Examinations, November/December 2013

Register No.

Degree:B.E **Branch :** Civil Engineering **Semester:** VI (Arrears)
Course Code:CE 9046 **Course Name:** Environmental Impact Assessment
Max. Time : 3 hours **Max. Marks :** 100 **Regulation:** 2008

Instructions

- Answer all Questions in Part A
- Answer Question 11 and (a) OR (b) of Questions 12 to 15 in Part B
- Assume suitable data wherever necessary.
- Each Question in Part A carry 2 marks and that in Part B carry 16 marks

Part A (10 x 2 = 20 marks)

- 1 What is the practice in India for Quality Assurance of Environmental Impact Assessment (EIA)?
- 2 How do EIA contribute to sustainable development?
- 3 What is the purpose of screening in EIA?
- 4 Describe the classification of developmental projects in India for the purpose of Environmental Clearance
- 5 Distinguish the difference between "Prediction "and "Assessment "in EIA.
- 6 What are the generic impacts of projects on flora and fauna?
- 7 What is the importance of public participation in EIA?
- 8 Suggest the mitigation options for noise pollution
- 9 List the essential components of an Environmental Management Plan
- 10 Explain two adverse impacts associated with Ports and harbor projects.

Part B (5 x 16 = 80 mark)

- 11 (i) What are the different types of EIA? How are they different? [4]
(ii) Discuss the role of EIA in a Project Cycle [6]
(iii) Briefly describe the Legal requirements in India regarding EIA [6]
- 12 (a) (i) Explain the different objective criteria for selecting EIA methods [6]
(ii) List the different elements of EIA and explain the purpose of each element. [10]

(OR)

- 12 (b) (i) Compare the strengths, weakness and applicability of four methodologies commonly used in EIA [12]
(ii) Explain the process of scoping in EIA [4]

- 13 (a) (i) Explain a mathematical model to predict the impact of emissions through a stack and detail the data requirements and data source for the application of the model. [10]
- (ii) A Power plant with a once through cooling system proposes to draw cooling water at the rate of 400 L/s from a river having a flow of 5 m³/s. The temperature of river water is 27 °C and that of hot water is 90 °C. It is proposed to dispose the effluent into the same river at a distance 600m downstream of the intake point ensuring that the river water temperature will not exceed 30°C. Determine the temperature to which the industry has to cool the water before disposal. Assume that 5% of the water is lost during cooling process. [6]

(OR)

- 13 (b) (i) What are the typical impacts of development projects on land environment? [8]
- (ii) Describe the procedure of Public Consultation in India. [8]
- 14 (a) (i) Explain the factors based on which the significance of environmental impacts can be assessed? [8]
- (ii) What are the important considerations associated with rehabilitation of Project Affected People. [8]

(OR)

- 14 (b) (i) Explain the difference between "Environmental indicator" and "Environmental Index" by citing an example for each and the method of their determination [6]
- (ii) Present typical structure of an EIA Report and discuss a framework for the review of EIA Reports. [10]
- 15 (a) (i) Describe the importance of environmental monitoring at different stages of EIA. [8]
- (ii) Explain the different considerations in the development of Green buildings. [8]

(OR)

- 15 (b) (i) Present the Terms of Reference for the conduct of EIA of a Highways and Bridges Project [8]
- (ii) What are the significant environmental issues to be considered while planning to develop a New Township. [8]