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Degree : B.E/B.Tech DEGREE EXAMINATION , NOV/DEC 2012
Branch : Civil Engineering
Regulation : 2009
Semester : Fifth Semester
Subject Code : CE9046
Subject Title : ENVIRONMENTAL IMPACT ASSESSMENT

14

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

PART—A (10x2=20marks)

1. What are the short term and long term objectives of EIA?
2. Define sustainable development. What type of development is sustainable?
3. List out the various techniques useful for EIA process.
4. What do you understand by "Terms of Reference"?
5. Mention the any 5 models used for prediction of air pollutant concentration.
6. What is the significance of post environmental audit.
7. Name any five plant species which control indoor air pollution.
8. Define LEED, TERI, GRIHA.
9. What is Life cycle assessment?
10. How to select a suitable site for Hazardous Waste Management Facility System?

PART-B (5X16=80 marks)

- 11.i) Draw a flow diagram of EIA process to get environmental clearance for Thermal Power Plant Project. (10marks)
- ii) Briefly explain about EIA notification. (3 marks)
- iii) what are the limitations in EIA project cycle. (3 marks)

12.a) What is checklist in the context of EIA? and arrive the checklist for Airport development project. (16marks)

(Or)

b) (i) Briefly discuss the responsibilities of different stakeholders in the EIA process. (10 marks)

(ii) How to categorize the project to get environmental clearance? Give examples of any five developmental projects. (6 marks)

13. a) i) Determine the emission height of stack with the following data:

Height of a stack=160m

Stack gas temperature=160°C

Inner diameter of the stack=0.85m

Wind velocity =2.5m/s

Stack gas velocity=12m/s.

Assume suitable data. (10 marks)

ii) Write short notes on HAZOP process (6 marks)

(Or)

13b) In an industry one machine emits a noise of about 100dBA for 10 minutes followed by another machine emits a noise of 65dBA for 50 minutes every hour. A hospital is located at 400m away from the industry with background noise level of 35dBA. Predict the equivalent noise level at the industry and at the hospital. (10 marks)

ii) What measures are required to control noise pollution? (6marks)

14.a) How to restore the degraded lake? Explain the different methods. (16 marks)

(Or)

b) What are the important issues to be addressed in developing an environmental monitoring programme and explain the same. (16marks)

15.a) Give the generic structure of EIA report for RAILWAY project. (16marks)

(Or)

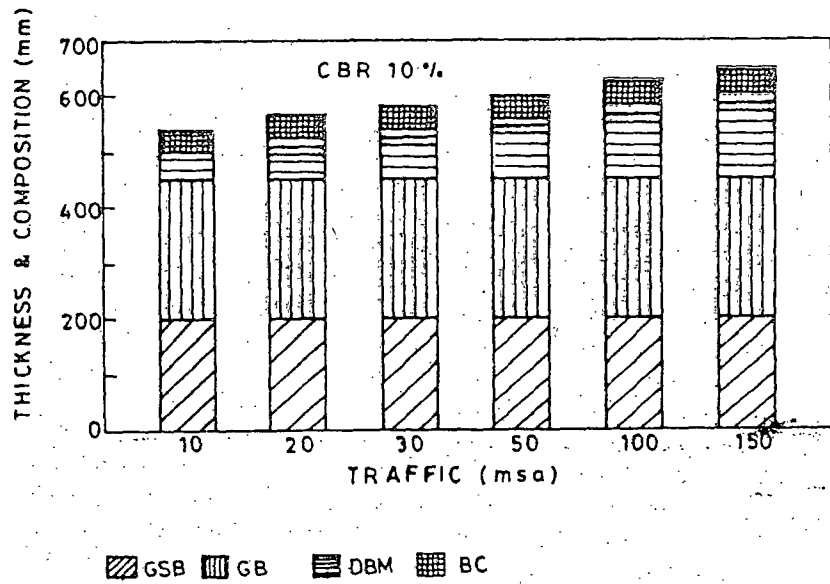
b) i) What are the primary reasons for poor quality EIA report? List the measures recommended to improve the quality of EIA report. (10 marks)

ii) What are the ethical principles for EIA practitioners set forth in the code? (6marks)

PAVEMENT DESIGN CATALOGUE

PLATE 2 - RECOMMENDED DESIGNS FOR TRAFFIC RANGE 10-150 msa

CBR 10%				
Cumulative Traffic (msa)	Total Pavement Thickness (mm)	PAVEMENT COMPOSITION		
		Bituminous Surfacing		Granular Base & Sub-base (mm)
		BC (mm)	DBM (mm)	
10	540	40	50	Base = 250 Sub-base = 200
20	565	40	75	
30	580	40	90	
50	600	40	110	
100	630	50	130	
150	650	50	150	



Contd.

Fig. 1. Pavement Thickness Design Chart for Traffic 1-10 msa

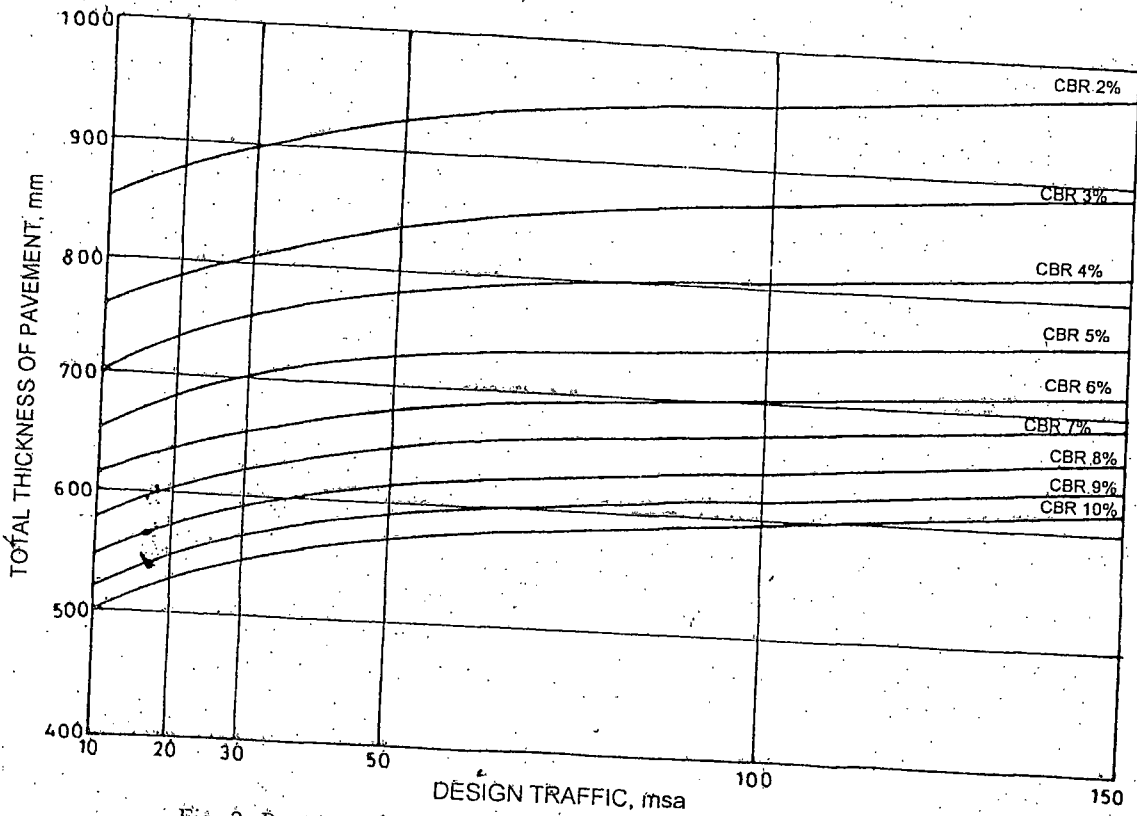


Fig. 2. Pavement Thickness Design Chart for Traffic 10-150 msa

IRC:37-2001