

C 18230

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Name.....

Reg. No.....



SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2011

CE 04 605—TRANSPORTATION ENGINEERING—II

(2004 admissions)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Any missing data, may suitably be assumed.

- I. (a) What are the functions of rails ?
(b) Explain the term "Negative cant".
(c) Explain the methods of "dust control" in tunnelling operations.
(d) Explain centralized traffic control system.
(e) Distinguish between a jetty and a pier in harbours.
(f) Write a note on buoys.
(g) Explain the term "capital recovery" in highways.
(h) Explain briefly the principles of economic evaluation.

(8 × 5 = 40 marks)

- II. (a) Calculate the superelevation to be provided for a 2° B.G. transitional curve having a maximum sectional speed of 100 kmph. Also calculate maximum speed permitted over the curve.
(7 marks)
(b) What are the components of a permanent way ? Draw a cross-section of a double track in embankment and show therein all components of the track. Also give the functions of each component.
(8 marks)

Or

- (c) What is the necessity of geometric design of railway track ? Enumerate the importance and significance of geometric features of a railway track.
(7 marks)
(d) What would be the equilibrium cant on a B.G. track with a curve of 8 degrees for an average train speed of 65 kmph. Also calculate the maximum permissible speed considering the maximum cant deficiency.
(8 marks)

- III. (a) Explain absolute block system in train traffic control system.
(7 marks)
(b) Draw a neat diagram of left hand turn out and show all the parts in that turn out.
(8 marks)

Or

Turn over

- IV. a) Give the classification of navigational aids and briefly explain their functions. (7 marks)
- b) With the help of a neat sketch explain the working of a floating dock. (8 marks)
- OR**
- c) Write a note on :
i) Transit sheds.
ii) Quay walls. (6 marks)
- d) What is a dry dock ? Explain the construction and uses of a dry dock. (9marks)
- V. a) Briefly discuss the role of transportation in society. Compare Nagpur road plan and the second twenty year road plan (9 marks)
- b) Explain the economic analysis of a highway project by rate of return method with an example. (6 marks)
- OR**
- c) Explain the engineering surveys needed for locating a new highway. (8 marks)
- d) Write a note on economics of highway pavements. (7 marks)
- (4 X 15 = 60 marks)