

Total No. of Questions : 10] [Total No. of Printed Pages : 3

Roll No.

CE-404

B. E. (Fourth Semester) EXAMINATION, June, 2009

(Old Scheme)

(Civil Engg. Branch)

TRANSPORTATION ENGINEERING – I

(CE – 404)

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt *five* questions in all selecting *one* question from each Unit. All questions carry equal marks. Assume suitable data if found missing.

Unit – I

1. (a) Explain the importance of Railway Transportation. 10
- (b) Discuss the different types of Railway Surveys briefly. 10

Or

2. (a) Explain the different methods of Plate Laying giving advantages of each. 10
- (b) Write notes on the following : 10
 - (i) Fish plates
 - (ii) Flat footed rail

Unit – II

3. (a) If theoretical cant on a M. G. track is 15 cm, determine the average speed of train. Also calculate the maximum permissible speed. The degree of curvature of curve is 4° . 10
- (b) Write notes on the following : 10
- (i) Superelevation
- (ii) Cant deficiency

Or

4. (a) Explain the various factors affecting selection of suitable site of Railway Station. 10
- (b) Discuss the principles of Signalling and Interlocking. 10

Unit – III

5. (a) How bridge design data are collected ? 10
- (b) Explain the importance of Clearance of Bridges. How economical span is found ? 10

Or

6. (a) Discuss the different types of loads and forces considered in a proper bridge design. 10
- (b) How choice of Bridge Superstructure is done ? 10

Unit – IV

7. (a) Explain the different Bridge Foundations briefly. 10
- (b) Write notes on the following : 10
- (i) Sheet Piles
- (ii) Cofferdam

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Or

8. (a) Discuss the different modes of failure of bridges. 10
(b) Explain the different methods of strengthening of bridges. 10

Unit – V

9. (a) Discuss the different geometrical shapes and sizes given to tunnels for proper design. Give neat sketches. 10
(b) Explain the advantages and disadvantages of tunneling. 10

Or

10. (a) Explain American method of construction of tunnel in soft soil with the help of a neat sketch. 10
(b) How tunneling in hard rock is carried out using Drift method ? Give neat figure in support of your answer. 10

