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**BOARD DIPLOMA EXAMINATION, (C-09)**  
**MARCH/APRIL—2014**  
**DCE—SIXTH SEMESTER EXAMINATION**

TRANSPORTATION ENGINEERING

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

3×10=30

**Instructions** : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. State any three characteristics of road transport. 1×3=3

2. State any six desirable properties of the highway materials. ½×6=3

3. What are plans and documents required for a road project? 3

4. Briefly write the purpose of highway drainage. 3

5. Draw the cross-section of permanent way and name the parts. 3

6. Define 'turnout and 'left-hand turnout'. 1½×2=3

7. State any three works to be taken up in the daily maintenance of railway track. 1×3=3

8. Define 'bridge' and 'wing walls'. 1½×2=3

\* 9. Sketch different types of abutments. 3

10. Draw cross-section of a pipe-culvert and label the parts.  $1\frac{1}{2}\times 2=3$

**PART—B** 10×5=50

**Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **ten** marks.  
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. State any ten main advantages of roads.  $1\times 10=10$

12. Write any ten points to be kept in mind in alignment of a road.  $1\times 10=10$

13. (a) What is meant by grade separators? 2

(b) Sketch 'clover leaf interchange'. 8

14. Explain how the drainage is provided for roads. 10

15. Explain the steps involved in construction of cement-concrete roads. 10

16. Write any ten main advantages of railways.  $1\times 10=10$

\* 17. Sketch the left-hand turnout and name the parts. 10

18. State and explain the classification of bridges as per the IRC. 10

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