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BOARD DIPLOMA EXAMINATION, (C–09)
APRIL/MAY—2015
DCE—SIXTH SEMESTER EXAMINATION

TRANSPORTATION ENGINEERING

Time : 3 hours]   [*Total Marks* : 80

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 the disadvantages of camber.   3

2. Define 'void ratio' and 'porosity'.   1½+1½=3

3. What are the factors influencing the alignment of roads?   ½×6=3

4. What is the purpose of providing highway drainage?   1×3=3

5. State any three advantages and disadvantages of cement-concrete roads.   ½×6=3

6. Sketch the 'wayside station—single line' and name the parts.   3

7. Define 'station yards' and write the types. 1½+1½=3

8. Define 'abutments' and 'piers'. 1½+1½=3

9. Write the Lacey's formula to be used to find the 'depth of scour'. 3

10. Briefly explain the 'low-level cause way' with a neat figure. 3

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PART—B 10×5=50

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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. Explain the classification of roads as per IRC. 10

12. What are different types of surveys to conducted before finalizing the alignment of highway project? 10

13. *(a)* What are the points to be considered in planning the 'junctions'? 5

(b) Sketch the 'diamond interchange'. 5

14. Explain the construction procedure of WBM roads. 10

15. *(a)* Explain the types of joints in construction of CC roads. 5

(b) What are the properties of joint sealers? 5

16. *(a)* State the different types of gauges in India. 3

(b) What are the requirements of good sleepers? 7

17. What are the duties of chief permanent way inspector? 10

18. State and explain ten factors to be considered for selection of site for a bridge. 10

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