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C09–C–**604**

3723

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2016

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. Define gradient and mention three types of gradients. 1+2=3

2. Define camber and list types of camber. 3

3. State any three objects of carrying out traffic surveys. 3

4. Distinguish between rigid pavement and flexible pavement. 3

5. Write any three functions of providing railway sleepers. 3

6. State any three types of station yards and state their purpose. 3

7. Draw a neat sketch of diamond crossing. 3

8. Distinguish between cut water and ease water. 3

9. State any three advantages of through-type bridge. 3

10. Define the terms with respect to bridges—*(a)* free board, *(b)* highest flood level and *(c)* length of bridge. 1+1+1=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. Explain with a neat sketch, the functions of component parts of road structure. 10

12. What are the various factors that should be kept in mind while selecting the alignment of highway? 10

13. *(a)* What is grade separator?

(b) Draw a neat sketch of clover leaf interchange. 3+7=10

14. Explain different stages involved in the construction of cement-concrete roads. 10

15. Explain with sketches, how the contraction and expansion joints are provided in cement-concrete roads. 5+5=10

16. *(a)* Draw a neat sketch of permanent way along with parts.

(b) Write any six functions of ballast. 5+5=10

17. *(a)* What are the duties of permanent way inspector?

(b) Explain the marshalling yard with a neat sketch. 5+5=10

18. Explain the following with sketches : 5+5=10

(a) Cause way

(b) Pipe culvert

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