



C14-C-405

4423

BOARD DIPLOMA EXAMINATION, (C-14)  
MARCH/APRIL—2018  
DCE—FOURTH 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.

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1. State any two functions of IRC.  
2. List three physical properties of soil.  
3. List the surveys required for fixing alignment of road.  
4. State three methods of providing subsurface drainage.  
5. State any three requirements of good rail joint.  
6. Define station and yard. 1½+1½  
7. Draw a neat sketch of diamond crossing.

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8. Define water way and free board.
9. Write any three functions of an abutment of a bridge.
10. State three types of culvert.

**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. Define superelevation. State the necessity of providing superelevation and write the formula. 3+4+3
12. (a) State any five factors influencing alignment of road in plain areas. 5  
(b) Explain clover leaf junction with a neat sketch. 5
13. (a) Explain briefly about reconnaissance survey. 5  
(b) State any five traffic studies that are generally carried out. 5
14. (a) List out machinery to be used in the construction of WBM roads giving the purpose for which it is used. 5  
(b) Explain how maintenance of WBM road is done. 5
15. Explain the following interface treatments of bituminous roads : 3+3+4  
(a) Prime coat  
(b) Tack coat  
(c) Seal coat

- 16.** (a) <sup>\*</sup> Write any five functions of sleepers. 5  
(b) Draw a neat sketch of double-headed rails and bull-headed rails. 5
- 17.** (a) State the duties of permanent way inspector. 5  
(b) Draw a neat sketch of locoyard and name the component parts.
- 18.** (a) State at least five factors influencing selection of site for a bridge. 5  
(b) Draw a neat sketch of low-level causeway and name the component parts. 5

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