



c09-c-604

**3723**

**BOARD DIPLOMA EXAMINATION, (C-09)**

**OCT/NOV—2017**

**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 the classification of roads as per IRC.
2. Define the term :
  - (a) Water content
  - (b) Dry density of soils
3. State the factors influencing alignment of road.
4. Explain any one method of providing subsurface drainage for roads.
5. Illustrate with neat sketch the coning of wheels.
6. Draw a neat sketch of diamond crossing.
7. Write any four duties of permanent way inspector.

- \* 8. (a) What is afflux?  
(b) State any four reasons why the afflux should be kept as low as possible.
9. Define the terms :  
(a) Free board  
(b) Highest flood level  
(c) Water way
10. Distinguish between high-level causeway and low-level causeway.

**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 the difference between carriage width, formation width and right of way.
12. Explain how different engineering surveys are conducted for locating the alignment of road.
13. (a) Draw the sketches of (i) no parking and (ii) steep hill signals.  
(b) Explain the different junctions with a neat sketch.
14. Explain the following coats that are applied in bituminous roads :  
(a) Prime coat  
(b) Tack coat  
(c) Seal coat
15. Explain the different stages involved in the construction of cement concrete pavement.

- \* **16.** (a) Give a profile of section for broken stone as ballast and indicate on it the dimensions for B, G and MG.  
(b) What are advantages and disadvantages of cast iron sleepers?
- 17.** (a) Draw the sketch of right hand turn out and indicate salient features.  
(b) Draw the sketch of a way side station single-line and name different parts.
- 18.** (a) Differentiate between deck and through bridge.  
(b) Draw a neat sketch of suspension bridge.

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