



c09-c-604

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**BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2017
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 functions of IRC.
2. Draw the sketch of cross-section of a road structure and label the components.
3. State the surveys required for fixing alignment.
4. Differentiate between expansion and construction joints.
5. Name the components of permanent way.
6. Distinguish between the following :
 - (a) Points and Crossings
 - (b) Acute crossing and Obtuse crossing
7. What are the main requirements of good crossing?

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8. Distinguish^{*} between three kinds of alignment for bridges.
9. List the types of piers with sketches.
10. Write any four circumstances where submersible bridges are constructed.

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 how transported soils by water and wind are formed.
12. (a) Define the term 'alignment'.
(b) State the factors influencing selection of alignment for road.
13. Explain how the alignment of a hill road is fixed.
14. (a) State the advantages of cement concrete roads.
(b) Explain the method of construction of cement concrete road.
15. (a) What is the necessity for sub-surface drainage?
(b) Explain clearly how the sub-surface drainage is provided in less permeable area.
16. (a) What is creep in rail? What is its effect? How is it concreted?
(b) Explain different types of rail joints with sketches.
17. (a) What is meant by plate laying? List two methods adopted.
(b) Explain how the telescopic method is adopted in plate laying.
18. Explain three types of culverts with neat sketches.

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