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**BOARD DIPLOMA EXAMINATION, (C-16)
AUGUST/SEPTEMBER—2021
DCE - FOURTH 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 any three functions of IRC.
2. Define gradient and mention different types of gradients.
3. List three stages of surveys required for fixing alignment of highways.
4. State the necessity of road drainage.
5. Define gauge and state the types of gauges.
6. State any three duties of permanent way inspector.
7. Define left hand turnout with neat sketch.
- * 8. Distinguish between deck and through bridge.
9. Define the terms (a) water way, (b) linear way and (c) scour depth.
10. List the various data required for preparation of bridge project.

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PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the component parts of road structure with a neat sketch.
12. State the factors influencing the alignment of a road in plain and hilly areas.
13. Explain various types of traffic signs with sketches.
14. Explain the method of construction of cement concrete road.
15. Describe the procedure for construction of Water Bound Macadam road.
16. Explain different types of rail joints used in Indian railways with sketches.
17. Describe the classification of railway track maintenance.
18. List the various factors in the selection of the site for a bridge.

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