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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2017

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. Define (a) formation width, (b) right of way and (c) camber.
2. State any three types of gradients.
3. State any three surveys required for fixing the alignment of a highway.
4. State any three tests conducted on bitumen.
5. Define gauge and state any two gauges adopted in India.
6. Explain diamond crossing with the help of a sketch.
7. Draw neat sketch of a marshalling yard and label the components.
8. Distinguish between a deck bridge and a through bridge.

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9. Define (a) waterway, (b) linear waterway and (c) afflux.

10. Distinguish between a culvert and a 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 classification of roads as per IRC.

12. State different data required for the preparation of a highway project.

13. Draw a neat sketch of a clover leaf junction and explain.

14. Explain the methods of providing surface drainage and subsurface drainage.

15. Explain different types of joints used in the cement concrete roads.

16. What is ballast? State any nine characteristics of a good ballast.

17. (a) State any five duties of a permanent way inspector.

(b) State any five works carried out under maintenance of railway.

18. Draw a neat sketch of a pipe culvert and explain.

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