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C14-C-405

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BOARD DIPLOMA EXAMINATION, (C-14)  
MARCH/APRIL—2021  
DCE - FOURTH SEMESTER EXAMINATION  
TRANSPORTATION ENGINEERING

Time : 3 hours ]

[ Total Marks : 80

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PART—A

4×5=20

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **four** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Classify the roads as per Indian Road Congress.
2. Define ultimate bearing capacity of soil.
3. Draw a neat sketch of any one traffic signal.
4. State the need for joints in cement concrete roads.
5. State different types of sleepers.
6. Draw a neat sketch of any one type of turnout.
7. List any two maintenance measures of a railway track.
8. Classify bridges based on type of floor.
9. Define : (a) waterway and (b) free board.
10. Draw a neat sketch of any one type of causeway.

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**PART—B**

15×4=60

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

11. Briefly describe (a) ruling gradient, (b) limiting gradient and (c) exceptional gradient.
12. State the importance of traffic surveys.
13. State the types of pavement markings with neat sketches.
14. Write in detail about the final location survey.
15. Draw a neat sketch of clover leaf junction.
16. List out the functions of sleepers.
17. Sketch any three types of station yards.
18. Write in general how the bridges are useful.

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