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BOARD DIPLOMA EXAMINATION, (C-20)

MAY—2023

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 I.R.C.
2. State the need for providing super elevation in highways.
3. List any three physical properties of soil.
4. State the objectives of traffic signs.
- * 5. List the different types of tests on bitumen.
6. Write short notes on seal coat.
7. Draw a neat sketch of a permanent way and name the components.
8. List different types of fixtures and fastenings used in a permanent way.
9. Distinguish between nose of crossing and angle of crossing.
10. Write short notes on passenger yard.

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PART—B

8×5=40

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

- 11.** (a) Define alignment and state the factors influencing selection of alignment for a road in plain areas.

(OR)

- (b) Draw a neat sketch of a full cloverleaf and show the movement of traffic.

- 12.** (a) Explain the method of construction of cement concrete road.

(OR)

- (b) Explain the steps in construction of bituminous road by semi-grout method.

- 13.** (a) Explain different types of rail joints with neat sketches.

(OR)

- (b) State any four functions of Railway sleepers and any four characteristics of a good sleeper.

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- 14.** (a) Explain various types of crossings with neat sketches.

(OR)

- (b) Explain in detail various types of track maintenance.

- 15.** (a) (i) Define afflux and waterway and (ii) draw a neat sketch of high level causeway.

(OR)

- (b) Explain any two types of culverts with neat sketches.

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PART—C

10×1=10

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

- 16.** Explain the necessity of road drainage and explain different methods of subsurface drainage with neat sketches.

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