

**5820**

**BOARD DIPLOMA EXAMINATION, (C-16S)**

**NOVEMBER - 2019**

**DCE - V 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) *Answer should be brief and straight to the point.*

1/ State any Three functions of I.R.C. (Indian Road Congress)  $3 \times 1 = 3$

2/ Define the terms (a) Camber (b) Formation width.  $1 \frac{1}{2} + 1 \frac{1}{2}$

3/ List any Three Surveys for fixing Highway alignment.  $3 \times 1 = 3$

4 List any Six traffic census conducted for collecting Traffic Data.  $6 \times \frac{1}{2} = 3$

5 State any Three different types of joints used in Cement Concrete Roads.  $3 \times 1 = 3$

**[ Contd...**

6 State any Three equipments and their purpose used in construction of different roads.  $3 \times 1 = 3$

7 (a) Define Gauge.  $1 \frac{1}{2}$

(b) State the classification of rails based on gauges.  $1 \frac{1}{2}$

8 Define (a) Left hand turnout.  $1 \frac{1}{2}$

(b) Right hand turnout.  $1 \frac{1}{2}$

9 State any Three types of Bridges based on materials.  $3 \times 1 = 3$

10 Define the Terms (a) Afflux (b) Free Board  $1 \frac{1}{2} + 1 \frac{1}{2}$

**PART - B**

**10 × 5 = 50**

**Instructions :**

(1) Answer any FIVE questions

(2) Each question carries TEN marks

(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11 Explain the components of road C/S (C/S means Cross Section) with a neat sketch.

12 (a) Define Gradient and list different types of Gradients used in Highways.  $2+3$

(b) State the necessity of Transition curves in Highways.  $3$

(c) List different types of Vertical Curves used in Highways.  $2$

[ Contd...

13/ Explain the factors influencing selection of alignment for road in Plain Areas.

14 Explain with a neat sketch :

(a) Diamond Intersection.

5

(b) Clover leaf intersection in Roads.

5

15 State the methods of providing surface and sub-surface Drainage system in Highways.

5+5

16 Explain the procedure for construction of Water Bound Macadam road.

17 (a) State any Five characteristics of Good Sleeper.

5

(b) State any Five characteristics of Good Ballast.

5

18 Explain with a neat sketch :

5+5

(a) High Level Causeway.

(b) Low Level Causeway.

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