

Roll No.

Total Pages : 3

BT-8/M-20

38223

RAILWAY AND AIRPORT ENGG.

Paper–CE-404-N

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT-I

1. Enumerate the various types of sleepers and its advantages and disadvantages with all the details.
15
2. What is meant by permanent way? Explain the basic requirements of an permanent way.

UNIT-II

3. Why signalling is required in Railway opeation?
Classify the signal based on :
 - (a) Operating Characteristics.
 - (b) Functional Characteristics.
 - (c) Locational Characteristics.
 - (d) Special Characteristics. 15

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P. T. O.

2. (a) Write short notes on working principle of turnout.

7½

(b) Define the following :

(i) Tongue rail.

(ii) Stock rail.

(iii) Heel divergence.

(iv) Guard rail.

7½

UNIT-III

5. (a) Write short notes on negative super elevation.

7½

(b) If branch curve of 8° diverge from main curve of 5° in an opposite direction in a layout of a B.G. tracks. Calculate the super elevation and the speed on the branch line, if the maximum speed permitted on main line is 45 kmph.

7½

6. (a) Define Marshalling yards. Describe in detail about, its type.

7½

(b) Define Railway Station. What are the prerequisite for choosing a site as Railway Station?

UNIT-IV

7. Describe the necessity, functions and tyeps of hangers. 15
8. Describe about the geonetric design standards of taxiway and also explain exit taxiway. 15