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Roll No. :

320554(20)

B. E. (Fifth Semester) Examination, April-May/

Nov.-Dec. 2020

(New Scheme)

(Civil Engg. Branch)

TRANSPORTATION ENGINEERING-II

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : All questions are compulsory. Part (a) of each question is compulsory & each carries 2 marks. Attempt any two parts from (b), (c) and (d) of each unit and each carries 7 marks.

Unit-I

1. (a) What is sleep of soil?

2

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- (b) Give short notes : 7
- (i) Coning of wheels
 - (ii) Wear of soils
- (c) Explain the necessity of sleeper in railway track.
What are the requirements of good sleepers? 7
- (d) Explain why periodic renewal of ballast is necessary? 7

Unit-II

2. (a) What is Cant Deficiency? 2
- (b) Explain the principles of interlocking. Differentiate between ATC and CTC systems. 7
- (c) Derive a relationship of super elevation with gauge speed and radius of the curve. 7
- (d) Give short notes : 7
- (i) Points & Crossings
 - (ii) Widening & gauge on curves

Unit-III

3. (a) What is free board of bridge? 2

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- (b) Give short notes : 7
- (i) Scour depth
 - (ii) Collection of bridge design data
- (c) What do you understand by the term economic span of a bridge? Give brief on it. 7
- (d) Explain the necessity of site investigation and planning of bridge. 7

Unit-IV

4. (a) What is Tunnelling? 2
- (b) Give short notes : 7
- (i) Ventilation of tunnels
 - (ii) Drainage of tunnel
- (c) Name the different methods of soft ground tunnelling and describe the American method in detail. 7
- (d) Give a brief account on size and shape of railway tunnels. 7

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Unit-V

5. (a) What is a natural harbour? 2
- (d) Give short notes : 7
- (i) Break water jetties
- (ii) Ware house
- (c) What are Dolphins? Describe various types. 7
- (d) Enumerate the key points to decide the layout of a harbour. 7