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Roll No. :

320554(20)

B. E. (Fifth Semester) Examination, April-May 2021

(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 Rearing Rail?

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- (b) Draw a typical cross section of a double line B.G. track with electric traction. 7
- (c) What are the functions of rails? Name various types of rails in use. 7
- (d) Describe with neat sketches various types of rail. Compare their merits and demerits. 7

Unit-II

2. (a) What is Heel Divergent? 2
- (b) From a main line curve of 4° on a BG track, a branch line of 6° diverges in opposite direction. If the maximum speed permitted on main line is 70 km/h. Calculate the super elevation and maximum speed on branch line. 7
- (c) Draw a neat diagram of simple left hand turnout and show its various component parts. 7
- (d) Write short notes on : 7
- (i) Theoretical and actual nose of crossing
- (ii) Number of crossing and angle of crossing

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Unit-III

3. (a) Define approaches in a bridge. 2
- (b) What is the essential information required to be collected for the design of the bridge? 7
- (c) How would you estimate the maximum scour depth for any bridge pier? 7
- (d) Derive the condition for an economical span, stating clearly the assumption made in derivation. 7

Unit-IV

4. (a) Define Pilot Tunnel. 2
- (b) What is Tunnel Ventilation? Explain the methods of tunnel ventilation. 7
- (c) Describe the method of construction of tunnel in hard rock by full face method. 7
- (d) What is Drainage of Tunnels? What is its necessity? 7

Unit-V

5. (a) Define Beacons. 2

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- (b) Draw layout of a typical artificial harbour. 7
- (c) What is Break Water? Enumerate the types of break waters with construction of wound break water. 7
- (d) Write short notes on : 7
- (i) Fender
 - (ii) Transit shed
 - (iii) Light house