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320456(20)

B. E. (Fourth Semester) Examination, April-May 2020

(New Scheme)

(Civil Engg. Branch)

TRANSPORTATION ENGINEERING-I

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : *Attempt all questions. Part (a) of each question is compulsory. Attempt any* ***one*** *part from (b) and (c).*

Unit-I

1. (a) Define Alignment. 2

(b) What are the salient features of early Roman Roads? How do these differ from the present day road construction? 14

(c) Enumerate the steps for practical design of super elevation. 14

Unit-II

2. (a) What is Rotary Intersection? 2

(b) What are the different causes of traffic accidents? 14

(c) Explain the relationship between speed, time, volume, density and capacity. 14

Unit-III

3. (a) Define Flexible Pavement. 2

(b) Explain the CBR method of pavement design. How is this method useful to determine thickness of component layers? 14

(c) Discuss the design details of dowel bars and tie bar. 14

Unit-IV

4. (a) Define seal coat. 2

(b) Explain : 14

(i) What are the general cases of pavement failures?

(ii) Write a note on Maintenance Management System.

(c) Explain the various types of failures in cement concrete pavements and their causes. 7

Unit-V

5. (a) Define Taxiway. 2

(b) Give a brief account of zoning laws associated with airport planning and designing. 14

(c) Explain : 14

(i) Site selection of airport

(ii) Hanger

(iii) Runway

(iv) Wind effect on runway