

**B.Tech. Civil (Construction Management)/  
B.Tech. Civil (Water Resources Engineering)**

**Term-End Examination**

00715

June, 2017

**ET-505 : TRANSPORTATION AND TRAFFIC  
ENGINEERING**

*Time : 3 hours*

*Maximum Marks : 70*

**Note :** Attempt *all* questions. All questions carry equal marks.

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1. Answer any *two* of the following :  $2 \times 5 = 10$
- (a) Explain the functions of the base components of a transport system.
  - (b) Describe the role of transport in tourism development, defence needs, social development and disaster management.
  - (c) How is photogrammetry used in highway location and design ?
2. Answer any *two* of the following :  $2 \times 5 = 10$
- (a) Sketch a typical road cross-section. Label it and explain — carriage way, shoulder, camber and median.
  - (b) Why is extra widening on curves necessary ?
  - (c) What is meant by soil classification ? What is the use of soil classification ?

3. Answer any *two* of the following :  $2 \times 5 = 10$

- (a) Explain the basic differences between Wet mix macadam and Dry bound macadam.
- (b) Describe briefly various factors attributable to a road user that cause road accidents.
- (c) Describe the Plate bearing test with a sketch.

4. Answer any *two* of the following :  $2 \times 5 = 10$

- (a) Discuss concrete mix design for use in pavement construction.
- (b) Derive the formulae for determining the stopping sight distance and overtaking sight distance.
- (c) Draw advance direction signboards and destination signboards for 4 towns on a highway. Further draw each of Danger sign, Prohibitory sign and Mandatory sign for a road.

5. Answer any *two* of the following :  $2 \times 5 = 10$

- (a) What are the functions of sleepers ? Compare the advantages of using Wooden sleepers vs Prestressed sleepers.
- (b) What are the causes of railway accidents and derailments ?
- (c) Describe briefly a marshalling yard.

6. Answer any *two* of the following : 2×5=10

- (a) Explain various factors that govern the selection of site for an Airport.
- (b) Discuss the design requirements for a passenger terminal building.
- (c) Describe briefly the features of Transit sheds and Warehouses.

7. Answer any *two* of the following : 2×5=10

- (a) Describe briefly the role of pipelines for transportation of materials.
  - (b) What engineering investigations are needed in the design of a port ?
  - (c) Discuss Ropeway Transport System.
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The first of these is the  
fact that the population  
of the country has  
increased very rapidly  
since the year 1850.  
This is due to the  
fact that the country  
has been very fertile  
and the people have  
been very industrious  
and have been able to  
produce a great deal of  
wealth. This has led to  
the fact that the  
country has become  
one of the most  
prosperous in the  
world.

