

01022

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

Term-End Examination

December, 2011

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

Time : 3 hours

Maximum Marks : 70

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

1. Answer *any two* of the following :

2x5=10

- (a) How is photogrammetry used in Highway location and design ?
- (b) Explain the function of the basic components of a transportation system.
- (c) Why are Transition curves provided ? How is the length of transition curve determined ?

2. Answer *any two* of the following : 2x5=10

- (a) What constitutes a detailed project report of a Highway project ?
- (b) Write a short note on California bearing ratio test.
- (c) Explain any two tests to be conducted on aggregates relevant to highway construction.

3. Answer *any two* of the following : 2x5=10

- (a) Describe briefly various factors attributable to a road user that cause road accidents.
- (b) Write a short note on surface dressing.
- (c) Explain lime-flyash stabilisation.

4. Answer *any two* of the following : 2x5=10

- (a) Determine the length of a summit curve at the junction of + 2% and - 1% for.
 - (i) Stopping sight distance of 160 m and
 - (ii) Overtaking sight distance of 450m.
- (b) Draw advance direction sign boards and destination signboards for 3 towns on a highway. Further draw each of danger sign, prohibitory sign and mandatory sign for a Road.
- (c) Discuss concrete mix design for use in pavement construction.

5. Answer *any two* of the following : 2x5=10
- (a) What factors determine the selection of site for a Railway station ? What are the facilities to be provided at a Railway station ?
 - (b) Describe briefly a marshalling yard.
 - (c) What are the functions of track ballast ? What are the requirements of a good ballast material ?
6. Answer *any two* of the following : 2x5=10
- (a) Compare the merits and demerits of Air Transport System.
 - (b) Write briefly on 'Lock gate' with a suitable sketch.
 - (c) Briefly explain :
 - (i) STOL
 - (ii) VASI
 - (iii) LCN
 - (iv) WHARF
 - (v) QUAY
7. Answer *any two* of the following :
- (a) What are typical types of Breakwaters ? Explain their function with neat sketches.
 - (b) What are the specific locations ? Where aerial ropeways are useful ? State the factors affecting the design of the trestle. 2x5=10
 - (c) What are belt conveyors ? Discuss in brief their various configuration.
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