

CE - 302

Roll No

B.E. III Semester Examination, December 2014**Transportation Bridges and Tunnels****Time : Three Hours****Maximum Marks : 70**

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
 ii) All parts of each question are to be attempted at one place.
 iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
 iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) What is railway alignment?
 b) How railway alignment is related?
 c) How reconnaissance survey is carried out?
 d) How other engineering surveys are carried out for railway alignment?

Or

Explain different types of rails used on railway track in India and abroad.

Unit - II

2. a) What is Marshalling Yard?
 b) Explain the purpose of Marshalling Yard.
 c) Discuss the function of different parts of Marshalling Yard.
 d) Discuss different types of signals provided on railway track.

Or

Determine the length of transition curve having 6 degree curvature. The speed of the curve is 60 KMPH and cart is 12 cm. Assume the track to be meter gauge.

Unit-III

3. a) What is importance of Bridge Site Selection?
 b) How it is done?
 c) Explain the factors affecting Bridge Alignment.
 d) Explain Scouring, Afflux and clearance of bridge.

Or

Discuss different types of highway bridges.

Unit-IV

4. a) What is bridge failure?
 b) Explain causes of bridge failure.
 c) How strengthening of bridge is carried out?
 d) Discuss different types of bridge foundations.

Or

How erection of steel girders is carried out?

Unit-V

5. a) What are advantages of tunnels?
 b) Explain disadvantages of tunnels.
 c) Explain factors affecting tunnel alignment.
 d) Discuss the various shapes adopted for tunnels.

Or

Explain the different types of linings used for tunnel.