

RGPVONLINE.COM**CE - 302****B.E. III Semester**

Examination, December 2013

Transportation Bridges and Tunnels**Time : Three Hours****RGPVONLINE.COM****Maximum Marks : 70**

- Note:** 1. All questions carry equal marks.
 2. Attempt any five questions selecting one from each unit.
 3. Assume suitable data if found necessary.

Unit - I

1. a) Discuss the various Tractive Resistances which a locomotive has to overcome while running on railway track.
- b) How will you fix Alignment of railway track? 7+7

Or

2. a) Explain the different types of Rails with the help of neat sketches.
- b) Write a note on
 - i) Ballast
 - ii) Fish plate
 7+7

Unit-II

3. a) Determine the length of Transition Curve having 7 degree curvature. The speed on curve is 60 KMPH and cart is 13cm. Assume the track to be M.G.
- b) Derive an expression for determining Super Elevation on a railway track. 7+7

Or

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4. a) Explain the various considerations kept in mind while selecting a suitable Site of Railway Station.
- b) Discuss the salient features of Marshalling Yard through neat sketches. 7+7

Unit-III

5. a) How will you select a suitable Site of Bridge?
 - b) Write a note on
 - i) Scour Depth
 - ii) Economical Span
 7+7
- Or**
6. a) Discuss the various Loads and Forces acting on a bridge.
 - b) Draw a neat sketch of Abutment. Explain function of different parts. 7+7

RGPVONLINE.COM**Unit-IV**

7. a) Explain Pile and Well foundation with the help of neat sketches.
 - b) What is function of Cofferdam? Explain through neat diagram. 7+7
- Or**
8. a) How Erection of Bridge is carried out?
 - b) How Strengthening of Bridge is done? 7+7

Unit-V

9. a) How selection of route is done for Tunnel?
 - b) Explain the various shapes and size of Tunnel. 7+7
- Or**
10. Discuss the various methods of construction of Tunnel in soft soil. Explain in detail through neat sketches. 14
