

Code No: Z – 130 – 2015

FACULTY OF ENGINEERING & TECHNOLOGY

T.E. (Civil) (Revised) Examination

MAY/JUNE, 2015

Transportation Engineering – I

Time: Three Hours

Max. Marks: 80

“Please check whether you have got the right the question paper”

- Note: i) *Q.No. 1 and Q.No. 6 are compulsory.*
ii) *Attempt any two questions from the remaining in each sections.*
iii) *Figures to the right indicate full marks.*
iv) *Assume suitable data if required.*

SECTION-A

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|-----|--|----|
| Q.1 | Solve any five | 10 |
| | (a) Define Abutments. | |
| | (b) Define coffer Dam. | |
| | (c) Define linear waterway. | |
| | (d) Define causeway. | |
| | (e) Define wing wall. | |
| | (f) State Scour depth. | |
| | (g) Define economic span. | |
| | (h) Define Runway. | |
| Q.2 | (a) Discuss briefly the available method of estimating the flood discharge and the methods determining the linear waterway for a bridge. | 10 |
| | (b) Discuss various factors that you will consider in the selection of site for a bridge on a major river. | 05 |
| Q.3 | (a) What do you understand by River Training? Explain the methods for river training in detail. | 08 |
| | (b) Draw the sketches of Deck, Semi through and through type bridges and explain in what situation each is used. | 07 |
| Q.4 | (a) How do you classify bridges? Give a complete scheme of their classification. | 05 |
| | (b) Describe with neat sketches the various types of wing walls with their advantages and disadvantages. | 10 |

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- Q.5 Write short note on (any three) 15
- (a) Runway orientation.
 - (b) Pile foundation for bridge.
 - (c) Location of piers and abutments
 - (d) Linear waterway
 - (e) IRC loading on bridges.

SECTION-B

- Q.6 Solve any five 10
- (a) Define permanent way.
 - (b) Enlist types of Rail-joints.
 - (c) Define turnout.
 - (d) State fixtures and fastening.
 - (e) Enlists types of sleeper
 - (f) Define Buckling of rail
 - (g) Define Dock and Harbour.
 - (h) Function of Ballast.
- Q.7 (a) What are the requirements of rails? Explain the advantages and disadvantages of flat footed rails. 08
- (b) What is cant deficiency? State the limits of cant deficiency on Indian Railways. 07
- Q.8 (a) What are the different gradients in station yard? Explain grade compensation. 05
- (b) Explain the function and requirements of rails in a railway track. 05
- (c) What are the requirements of an ideal rail joint? 05
- Q.9 (a) Enlist types of station yard and explain any one in details. 07
- (b) Define crossing. State and explain types of crossing. 08
- Q.10 Write short note on (Any three) : 15
- (a) Requirement of Railway Station.
 - (b) Coning of wheel
 - (c) Railway sleepers.
 - (d) Classification of Dock and Harbour.
 - (e) Creep of rails.
