

**B.Tech. Civil Engineering
BTCLEVI**

Term-End Examination

June, 2014

BICE-019 : TRANSPORTATION ENGINEERING - I

Time : 3 Hours

Maximum Marks : 70

Note : Attempt any five questions. Use of scientific calculator is permitted.

1. Define following terms of Railway Engineering :
 - (a) Fouling Marks 2x7=14
 - (b) Good Yard
 - (c) Keys
 - (d) Level Crossing
 - (e) Locomotive
 - (f) MAGLEV
 - (g) Marshalling Yard

2.
 - (a) Write the requirements of Rails. 7
 - (b) Define the creep for a railway track. Write the effects of creep also. 7

3.
 - (a) Enumerate the important fittings used in a permanent way of Railway Transport system and their functions. 7
 - (b) Explain the functions of Ballast and requirements of good Ballast. 7

4. If a 8° curve track diverges from a main curve of 5° in an opposite direction in a layout of a BG Yard, calculate the super elevation and the speed on the branch line, if the maximum speed permitted on the main line is 45 kmph. 14
5. What is meant by a crossing ? What are the essential requirements of a good crossings ? Discuss various types of crossings in use on Indian Railways. 14
6. (a) Explain the factors that influence the selection of site for a Railway station. 7
- (b) What are the objectives of signalling ? Describe the principles of signalling. 7
7. (a) What are the two system of aircraft landing ? Explain the various facilities for navigation and traffic control provided in an airport ? 7
- (b) What are heliports ? Give a layout of a heliport. 7
8. (a) Give the details of a dry dock with the help of suitable sketch. 7
- (b) What are the advantages and disadvantages of Inland Water Transport ? 7
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