

**B.Tech. Civil Engineering
BTCLEVI**

Term-End Examination

June, 2013

BICE-019 : TRANSPORTATION ENGINEERING - I

Time : 3 Hours

Maximum Marks : 70

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

1. Explain the advantages of uniformity in gauge in Railways. 10
2. What do you understand by the term "Permanent Way" ? What are its component part's ? 10
3. Using a sleeper density of $M+5$, find out the number of sleepers required for constructing a railway track 640 m long (Broad Gauge). 10
4. What are the requirements of first plates ? Discuss with suitable sketches the different types of fish plates and their uses. 10
5. What is 'Crossing' ? What are the component parts of crossing ? Explain with neat sketches. 10

6. Explain the classification of stations in India. 10
7. What is the purpose of providing the "turning zone" of airport. Explain with a neat sketches. 10
8. Explain the procedure adopted to plot a wind rose diagram. 10
9. What are the factors to be considered in selecting the site for a harbour ? Explain in brief. 10
10. Write short notes on **any four** of the following :
- (a) Points and Crossing 2½x4=10
 - (b) Check and guard rails
 - (c) Airport lightening
 - (d) Cargo handling equipment
 - (e) Docks
 - (f) Runway length
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