Printed Pages : 3

ECE-603

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 100603

Roll No.

B. Tech.

(SEM. VI) THEORY EXAMINATION, 2014-15

TRANSPORTATION ENGINEERING - II

Time : 2 Hours] [Total Marks : 50

1 Attempt any four parts of the following : 3.5×4=14

(a) Draw the typical cross section of a double line permanent way (BG) on embankment and show the various components.

(b) What is sleeper density ? Using a sleeper density of n+5, find out the number of sleepers required for constructing a railway track (BG) 1000 m long.

Discuss the factors on which sleeper density depends and how the sleeper density is expressed ?

(c) What material as ballast you would suggest for high speed track and why ?

(d) What do you understand by the Gauge of a railway track ? Write a note on the "Uniformity of Gauge" in a country.

(e) Describe any three terms :
  (i) Adzing of sleeper
  (ii) Fish plate
  (iii) Coning of wheel
  (iv) Flat footed rail.

(f) Write specification / Tests required for ballast used in railway track.

2 Attempt any two parts of the following : **6×2=12**

(a) On a BG3^0 curve the equilibrium cant is provided for a speed of 70 kmph. Calculate the value of equilibrium cant and allowable cant deficiency. What would be the maximum permissible speed on the track ?

(b) How do you define the super-elevation ? What are the objects of providing super-elevation on curves of a railway track ?

(c) Draw a neat sketch showing a right hand turnout and name its components.

3 Attempt any two parts of the following : **6×2=12**

(a) What are the different types of station yards ? Explain the working of any one with the help of neat sketches.

(b) How signals are classified ? Explain with neat sketches the working of the semaphore signals.

(c) What are the different system of controlling the movement of train in India ? Give the advantages of CTC system.

4 Attempt any two parts of the following : **6×2=12**

(a) What are the various characteristics of aircraft to be studied for airport ? How orientation of airport is decided ?

(b) What is the role of following processes in harbor layout and suggest remedies
  (i) Wind wave
  (ii) Tidal current.

(c) Write a detailed note on various types of markings on airport. Draw them with neat sketch.
