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B.Tech. VII Semester (Main/Back) Examination - 2013
Civil Engg.
7CE5 Transportation Engineering - II

Time : 3 Hours   **Maximum Marks : 80**
                           Min. Passing Marks : 24

Instructions to Candidates:

*Attempt any **five** questions, selecting **one** question from each **unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.)*

Unit - I

1. a) Summarized in a table relative advantages and disadvantages of Rail Transport and Road Transport   **(8)**

   b) Summarize the strength & weakness of Indian Railway system. Also write in brief social obligation borne by Indian Railway   **(8)**

OR

1. a) Define the term 'Track Drainage" and need of proper track drainage   **(6)**

   b) Draw a neat sketch of Turn table also name two number places where it is used   **(6)**

   c) Explain creep of rails with causes & its effect on Rails   **(4)**

Unit - II

2. a) Differentiate between under ground system and light Railsystem of Railways   **(8)**

   b) What are the various features you will incorporate while modernizing a railway track   **(8)**

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OR

2. a) Draw a typical layout of a level crossing. **(6)**

   b) Draw a figure of right hand turn out showing various constituents of a turnout. **(6)**

   c) Enlist various types of crossing used in India. **(4)**

Unit - III

3. a) Write down the parameters which affect the geometry of a track **(6)**

   b) Find the steepest gradient on a 3^0 curve for a B.G line with a ruling gradient 1 in 150 rtuonline.com **(6)**

   c) Explain the Term cant deficiency & Negative cant **(4)**

OR

3. a) Explain the need of widening of gauge on curves **(4)**

   b) Calculate the cant, transition length and maximum permissible speed to a 2° curve on a B.G section with a maximum sanction-A speed of 110km/h. Assume the equilibrium speed to be 70km/h and booked speed of the goods train to be 45km/h **(12)**

Unit - IV

4. a) Draw a typical layout of airport terminal with unit terminal concept. **(6)**

   b) Describe various surveys to be conducted for site selection of airport **(10)**

OR

4. a) Draw type-II wind rose diagram and explain orientation procedure for runway **(8)**

   b) What do you understand by basic run way length? Explain factor influencing runway length. **(8)**

Unit - V

5. a) What are imaginary surface. Explain in detail (6)

   b) Explain ESWL method of designing of Rigid pavement (10)

OR

5. a) What are the various factors affecting pavement design. What are the main factors responsible for failures in rigid pavement. (10)

   b) Describe the CBR method of designing of flexible pavement in brief (6)

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