EH-195

B.E. IV Semester (CGPA) Civil Engg. Exam. 2014

TRANSPORT ENGINEERING - I

Paper : CE - 404

Time Allowed : Three Hours

Maximum Marks : 60

Note: i) Attempt all five questions.
ii) Solve any two part out of (a,b and c) of question no 1,2,4 and 5. Each part carry equal marks.
iii) Solve both parts of Q.No.3 each part carry equal marks
iv) Missing data may be suitably assumed.
v) Answer must be brief and to the point.

Q.1. a) Describe factors assumed for deciding basic runway length?
b) Define break water and give their classification.
c) Write functions of ballast and formation?

Q.2. a) Define sleeper density and write advantages of concrete sleepers?
b) What is wind rose?
c) Differentiate between dry and wet docks.

Q.3. a) Find out the length of transition curve and shift for a 4°B.G. Circular curved track having a count of 150mm the maximum permissible speed on the curve is 90 KMPH assume maximum permissible cant deficiency as 75mm.
b) What is negative super elevation? A 5° curve diverges from a 3° main curve in a opposite direction in layout of a B.G yard if the speed on the branch is restricted to 30 KMPH find out the speed on main line assume maximum permissible C_d = 76mm.

Q.4. a) Drive expression $e = \frac{GV^2}{127R}$.
b) What are the items considered in geometric design of runway.
c) What are the requirements of following types of harbours.
i) Harbour of refuge ii) fishery harbour

Q.5. a) Sketch
i) Diamond Crossing
ii) Gauntlet track
iii) Right hand turn out
b) Why grade compensated on curves? Find the steepest - gradient - permissible on 2° curve for B.G line having ruling gradient of 1:200.
c) Write essential principles on which the working of Interlocking is based?

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