[Total No. of Questions - 9] [Total No. of Prin Pages - 2]
(2066)

16109(J) June-16

B. Tech 6th Semester Examination

Transportation Engineering-II (NS)

CE-324

Time : 3 Hours **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all selecting one question from each of the section A, B, C & D of the question paper and all the subparts of the questions in section E. Section E is compulsory.

SECTION - A

1. What do you understand by the term "'Trip generation"? Discuss advantages and disadvantages of various methods of trip generation. (20)

OR

2. What is "Modal split"? Explain in detail factors affecting modal split. (20)

SECTION - B

3. Discuss the role of civil engineering in planning and design of airports. Describe how turning radius and wheel load configuration of aircrafts affect the planning and designing of airport. (20)

OR

4. Explain what do you understand by basic runway length. Also explain various corrections to be applied in basic runway length to determine actual runway length to be provided at an airport site. (20)

[P.T.O.]

SECTION - C

5. Briefly explain the functions of sleepers and ballast in railway track.

   A 5 degree curve diverges from a main curve of 4 degree in an opposite direction in a B.G. track. Determine the speed restriction on the main track assuming the following data: (i) Speed on branch line = 72 kmph (ii) Permissible cant deficiency = 7.5 cms. (20)

OR

6. Discuss different types of gauges on railway track. What are the different types of rails? Which type of rail is most commonly used in Indian railway track? (20)

SECTION - D

7. What are the various shapes used for tunnel construction? What is the importance of lightning and ventilation in tunneling? (20)

OR

8. What are the safety measures to be adopted in tunneling? Explain how tunneling through hard strata is carried out. (20)

SECTION - E

9. Explain the following in brief:
   (i) Differentiate between growth factor methods and synthetic methods of trip distribution.
   (ii) Assumptions in multiple linear regression analysis for trip generation.
   (iii) Airport capacity.
   (iv) Purpose of Hanger at an airport.
   (v) Hauling capacity of a railway engine.
   (vi) Creep of rails.
   (vii) Cant deficiency in a railway track.
   (viii) Purpose of drainage in tunneling.
   (ix) Purpose of shaft tunnels.
   (x) Importance of zoning in airport planning. (2×10=20)