Code No. 2661/ CBCS

FACULTY OF ENGINEERING

B.E. (Civil) VI – Semester (CBCS) (Suppl.) Examination, January 2020

Subject: Transportation Engineering – II

Time: 3 Hours **Max.Marks: 70**

Note: Answer all questions form Part-A and any five questions from Part-B

PART – A (10x2 = 20 Marks)

1 How are BG and MG railway lines classified in India?
2 What are the advantages of Flat footed rails?
3 Differentiate between pusher gradient and momentum gradient.
4 What is the difference between A.N.C and T.N.C?
5 List the various stages in the construction of railway track.
6 What is Directed Track Maintenance (DTM)?
7 Differentiate between minimum circle radius and minimum turning radius of an aircraft.
8 Differentiate between an apron and a hanger.
9 For the hottest month of the year at the proposed airport site, the mean of the average daily temperature is 40° C and the mean of the maximum daily temperature is 51° C. Calculate the airport reference temperature.
10 What is wind coverage and cross wind component?

PART – B (5x10 = 50 Marks)

11 a) What are the requirements of an ideal track alignment? Explain briefly. [5]
b) With the help a neat sketch discuss briefly the functions of different components of permanent way. [5]

12 a) Draw a neat sketch of a left hand turnout showing its various parts. [5]
b) What would be the equilibrium cant on a M.G. curved track of 3° for an average speed of 65 kmph? Also calculate the maximum permissible speed after allowing the maximum cant deficiency. [5]

13 a) State the various methods of plate laying and explain the method of plate laying widely used in India. [5]
b) Explain the necessity of maintaining the railway track. List the various items of maintenance. [5]

14 a) Write the types of aircrafts and their characteristics used for various components of airport. [5]
b) Define terminal areas and state the activities that are generally involved in the terminal area. [5]

15 a) Enumerate the factors affecting site selection for an airport. [5]
b) The basic runway length of an airport at an altitude of 500 m above MSL is 2800m. The airport reference temperature is 43° C and the effective gradient is 1.5%. Compute the corrected runway length as per FAA standards.

16 a) What are the various functions of sleepers? What are the materials used for sleepers? Describe them in detail. [5]
b) What is meant by the basic runway length? Discuss the three cases to be considered. [5]

17 Write short notes on any ***four*** of the following: [10]
a) Coning of wheels
b) Negative super elevation
c) Track drainage
d) Typical airport layout
e) Orientation of runway.

****