

(Compulsory Question)

Roll No.

Total Pages : 04

9. Write short notes on the following :

- (i) Creep of rails
- (ii) Coning of wheels
- (iii) Yard
- (iv) Wind rose diagram
- (v) Airport capacity
- (vi) Sleepers
- (vii) Cant deficiency in a railway track
- (viii) Intelligent Transport System benefits
- (ix) Purpose of hanger at an Airport
- (x) Runway sight distance. $1\frac{1}{2} \times 10 = 15$

J-21-0071

B. Tech. EXAMINATION, 2021

Semester VI (CBCS)

TRANSPORTATION ENGINEERING-II

CE-602

Time : 2 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D. Q. No. **9** is compulsory.

Section A

1. (a) What are the various types of stresses induced in a rail section ? 7½
- (b) What are the functions of rails ? Name the various types of rails in use. 7½

2. (a) Describe the various types of fittings used for wooden sleepers and steel trough sleepers. $7\frac{1}{2}$
- (b) Explain the functions of ballast in a railway tracks. $7\frac{1}{2}$

Section B

3. (a) What are the functions of a railway station ? Explain briefly the various requirements of a railway station at an important city. $7\frac{1}{2}$
- (b) Describe the main constituents of a crossing. $7\frac{1}{2}$
4. (a) What are the essential features of an underground railway ? What do you understand by the cut and cover method of construction of an underground railway ? $7\frac{1}{2}$
- (b) Explain briefly about the interlocking in a railway system. $7\frac{1}{2}$

Section C

5. (a) Explain, how the basic runway length is determined on the basis of the performance characteristics of the aircrafts. $7\frac{1}{2}$

- (b) Write short notes on the following : $7\frac{1}{2}$
- (i) Wind rose
- (ii) Runway orientation.

6. (a) Explain the various factors which affect the locations of exit taxiway. What do you understand by optimum location of exit taxiway ? $7\frac{1}{2}$
- (b) Write short notes on the following :
- (i) Wind direction indicator
- (ii) Landing direction indicator. $7\frac{1}{2}$

Section D

7. (a) Discuss in brief how the analytical method is different from the other empirical and semi-empirical methods for design of flexible airfield pavements. $7\frac{1}{2}$
- (b) Explain the various design factors considered for thickness determination in airport pavements. $7\frac{1}{2}$
8. Write a brief note on the intelligent transport system.

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