**Printed Pages : 1** **Roll No.** | | | | | | | | | | | **ECE603**

**B. TECH.**

**THEORY EXAMINATION (SEM–VI) 2016-17**

**TRANSPORTATION ENGINEERING-II**

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

***Note :*** *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

## SECTION A

**1 Attempt all parts: (10X2=20)**

a. What do you understand by sub grade?
b. Differentiate between steel and cast iron.
c. Explain A.N.C. and T.N.C.
d. What is bearing plate? Explain.
e. Explain track drainage.
f. What do you mean by marshalling yard?
g. Define absolute block system.
h. What is interlocking?
i. Define track resistance.
j. Define cant deficiency.

## SECTION B

**2 Attempt any FIVE parts: (10X5=50)**

a. Discuss the various issues in rail fastenings in detail.
b. Write a note on the concrete and pre-stressed concrete sleepers.
c. What do you mean by super elevation and negative super elevation? How are these calculated? Discuss with suitable example.
d. Describe the various types of yards with suitable example.
e. What are the aircraft characteristics that affect the designing of airport? Discuss with example.
f. What is the method for mechanical interlocking of a two line railway station? Explain with an example.
g. Write a note on the points and crossings with an example.
h. What is ballast? Discuss size and specification of ballast and the screeming of ballast with the help of an appropriate example.

## SECTION C

**Attempt any TWO questions: (15X2=30)**

3 The runaway length required for landing at sea level in standard atmospheric condition is 3000 m. Runaway length required for takeoff at a level site at sea level in standard atmospheric conditions is 2500 m. Aerodrome reference temperature is 25o C and that of the standard atmosphere at aerodrome elevation of 150 m is 14.025oC. If the effective runaway gradient is 0.5%, determine the runaway length to be provided.

4 What do meant by Harbour? Discuss various factors which are considered for the designing of a Harbour in detail with example.

5 What criteria are used for classification of signals? Discuss. Explain various types of Signals? Also describe with nest block diagram the working of the semaphore signals