Roll No……..….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

B. Tech Civil (Semester 7th)
TRANSPORTATION ENGINEERING-II
Subject Code: BCIES1-721
Paper ID: [19110735]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) What are different gauges used in India and why?
b) Write significance of Ballast?
c) Draw a layout diagram of station?
d) Name the various types of Signals used.
e) Why Super elevation is required?
f) Name the components at an Airport?
g) What do you understand by Wind rose diagram?
h) Mention types of corrections applied for runway length?
i) Give the factors for selection of an airport site.
j) Illustrate use of IFR/IVR.

Section – B **(5 marks each)**

Q2. Name the various types of fixtures used by Indian Railways. Which one would you consider to be the best for modern tracks and why?
Q3. Discuss principles of Interlocking
Q4. Differentiate between Points and Crossings.
Q5. Define runway configuration? Mention the operations per hours in case of various cases.
Q6. Explain the function Land direction Indicator?

Section C **(10 marks each)**

Q7. (a) Draw the figure of a Permanent way showing its components.
(b)How High-Speed Tracks are different from Conventional tracks?
Q8. (a) What is creep? Discuss the causes and effects of creep?
(b) Do Coning, Tilting and Adazing is interrelated on Railway track, if so how?
Q9. a) State the requirements on which runway directions are fixed based on metrological conditions.
(b) Discuss different types of enroute and Landline aids in airway communication