Roll No. .....

Total No. of Questions : 09] [Total No. of Pages : 02

Paper ID [A0618]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 6th/7th)

TRANSPORTATION ENGINEERING - II (CE - 302)

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

Instruction to Candidates:

1) Section - A is **Compulsory.**
2) Attempt any **Four** questions from Section - B.
3) Attempt any **Two** questions from Section - C.

Section - A

Q1) *(10 ×2 = 20)*

a) What do you understand by gauge? Mention the gauges used in India.

b) What do you understand by gradient? Define momentum gradient, pusher gradient and ruling gradient.

c) What do you understand by railway track and a permanent way?

d) Illustrate the various types of rail failures with sketches.

e) What are the possible causes of creep? What are the effects of creep?

f) A Broad gauge track has a sleeper density of (n + 6). If the track is laid with welded rails of 26 meter length. Find out the number of sleepers on rail length.

g) What do you understand by the term Visual aid in connection with airports?

h) List various factors controlling taxiway layout.

i) What do you understand by zoning laws?

j) What do you mean by creep in railway track?

Section - B

(4 × 5 = 20)

Q2) A 6 degrees curve branches off from a 3 degrees main curve in an opposite direction in the layout of a B.G. yard. If the speed on branch line is limited to 35.5 Km. p.h.. determine the speed restriction on the main line.

Q3) How signals are classified? Explain with neat sketches the working of the semaphore signals.

Q4) Discuss different types of rail joints with the help of neat sketches and give their merits and demerits.

Q5) Enumerate the various factors which would keep in view while selecting a suitable site for an airport.

Q6) Draw a typical layout of a locomotive yard and mention its chief requirements.

Section - C

(2 × 10 = 20)

Q7) Describe the working of "Absolute Block" system of signaling.

Q8) What do you understand by airport capacity? What are factors which affect the airport capacity?

Q9) Draw a neat diagram of simple left-hand turnout and show its various component parts. Explain the working principle of the turnout.

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