



**NAVVRACHANA
UNIVERSITY**
a UGC recognized University

School: School of Engineering and Technology
Program/s: B.Tech Civil Engineering
Year: 2nd **Semester:** 4th
Examination: End Semester Examination
Examination year: May 2023

Course Code: CE304

Course Name: Transportation Engineering - I

Date: 18/05/2023

Time: 10:00 am to 12:00pm

Total Marks: 40

Total Pages: 01

Instructions:

- Write each answer on a new page.
- Use of a calculator is permitted.
- *COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs*	BTL#
Q.1	<p>Answer the following: (Attempt any five)</p> <ol style="list-style-type: none"> 1. Explain relationship between traffic flow characteristics with sketch. 2. Make neat sketch of Railway Track and explain function of all components in brief. 3. What are the types of rail failures occurring in rail? Explain each in brief. 4. Enlist types of horizontal alignment and explain with neat sketch. 5. State the significance of tunnel construction with brief explanation. 6. A bus is moving with speed of 60kmph on a two lane two-way highway. It wants to overtake a slow moving vehicle having a speed of 45kmph. Calculate the OSD. Assume driver perception time is 4 secs, speed of opposite vehicle is 50kmph, length of vehicle is 8m, acceleration of overtaking vehicle is 1m/s^2. Safe distance between passing vehicles is 15m. 	30	CO1, CO2, CO3	BT1, BT2, BT4
Q.2	<p>Write a short note: (Any two)</p> <ol style="list-style-type: none"> 1. Types of Rail Gauge 2. Coning of wheel 3. Classification of Tunnel 	10	CO3, CO4	BT1, BT3, BT6

*****End of Question Paper*****