

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2022 - 23 Examination

Semester: 7

Subject Code: 03104431

Subject Name: Advance Traffic Engineering

Date: 11/10/2022

Time: 10:30 am to 01:00 pm

Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions -(All are compulsory) (Each of one mark) **(15)**

1. HCV stands for _____?
2. _____ Percentile speed is considered as Geometric design speed in India?
3. Total conflict point at a junction on both two way road is _____?
4. _____ Method of traffic signal based on saturation flow?
5. The minimum Radius for rotary recommended by IRC is _____ times of entry radius?
6. Define traffic flow.
7. A wheel base of 6.5m negotiates a 35m curve. Find the off tracking.
8. Define running Speed.
9. Define Cycle length.
10. Define Space head way.
11. The "3-Es" of traffic engineering stand for?
 - a) Enforcement, empowerment and eradication
 - b) Engineering, education and expulsion
 - c) Engineering, education and enforcement
 - d) Engineering, education and enthusiasm
12. The brake efficiency in braking test is assumed as;
 - a) 95%
 - b) 96%
 - c) 99%
 - d) 100%
13. The hearing, visibility and reaction time are covered in which type of factors?
 - a) Physical
 - b) Mental
 - c) Psychological
 - d) Environmental
14. The width recommended by IRC for all type of vehicles is:
 - a) 1.5m
 - b) 2.0m
 - c) 2.5m
 - d) 3.0m
15. The traffic volume is usually expressed in:
 - a) LMV
 - b) PCU
 - c) LCV
 - d) HCV

Q.2 Answer the following questions. (Attempt any three) **(15)**

- A) What is PCU? Give factor affecting PCU.
- B) Define : 1)Time mean speed 2)Space mean speed 3)85th Percentile speed 4)Parking index 5) cycle
- C) Enlist method of off-street parking and Explain any two.
- D) Explain factor affecting capacity and level of service.

Q.3 A) Explain various Rotary intersection Design elements. **(07)**

- B) Explain Road user characteristics considered in traffic engineering. **(08)**

OR

- B) Enlist various method of traffic time and delay study. Describe Moving observer method. **(08)**

Q.4 A) Explain Collision and Condition diagram. List Preventive measure for road accidents. **(07)****OR**

- A) Enlist various type of traffic signal. Explain fixed time signal and Traffic actuated signal. **(07)**

- B) Explain various types of road marking as per IRC. **(08)**