

Department of Civil Engineering
Government Engineering College – Dahod.

Semester: 7th Sub: Traffic Engineering Subject Code: 2170613
Academic Year (2019-20)

ASSIGNMENT – Module- I (Traffic Characteristics)

Date of Submission: July 04, 2019

1. Define Traffic Engineering. Enlighten the scope of it.
2. State the objectives of traffic engineering.
3. Discuss briefly the road user's characteristics
4. Enlist the factors affecting reaction time of driver. Explain any three factors in detail.
5. Describe the static vehicular characteristics.
6. Describe the dynamic vehicular characteristics.
7. Explain normal resistances encountered by a vehicle on uphill with sketch.
8. The driver of a vehicle travelling at 80km per hour requires 8.5m less to stop after applying the brakes up a grade, than when travelling down the same grade.

If the coefficient of friction is 0.55, calculate: a) The percent of the gradient. b) The braking distance on the down grade.

ASSIGNMENT – Module- II (Traffic Studies)

Date of Submission: August 01, 2019

1. Enlist traffic surveys and use of each traffic survey.
2. Explain objectives of classified volume count (traffic volume study).
3. Prepare Format for conducting Traffic Volume Count Survey.
4. State methods of traffic volume study. Also Explain Manual Counts for traffic volume count.
5. Explain with sketch presentation of Traffic volume data.
6. State the objectives of speed survey.
7. Define: journey speed, running speed, space mean speed, time mean speed, delay, 85th Percentile speed.
8. Twenty-five spot speed observation were taken on a particular highway stretch and were as under: 50,40,60,54,45,31,72,58,43,52,46,56,43,65,33,69,34,51,47,41,62,43,55,40,49.

Calculate: (1) Time Mean Speed (2) Space mean speed.

9. The vehicle passes 1 km length of road in 1 min., 2 min. and 3 min. time respectively. Calculate the time mean speed and space mean speed.
10. Explain briefly the causes of accidents.
11. Give causes of Accident and its Preventive measures.
12. Show the conflict points on cross roads with two way traffic on both roads & one way traffic on both roads.
13. Explain with neat sketch Condition and Collision diagram.
14. Discuss importance of 3E's for road safety.
15. What is the purpose of O & D survey. Enlist its various methods and discuss any two most commonly used methods.
16. Prepare questionnaire format for Home Interview Method of O-D Survey.
17. Enlist methods of travel time and delay study. Describe moving observer method.
18. What is necessity of parking studies? Explain briefly.
19. Write short note on Off-street parking system.
20. Define: Parking load, Parking accumulation, Parking Volume, Parking Index, Parking duration and Parking turnover.
21. List out various parking survey method and Explain any one method of it.
22. Explain parking usage survey by patrol.

ASSIGNMENT – Module- III (Traffic Regulation)

Date of Submission: August 15, 2019

1. Discuss in detail: Importance and Necessity of various Traffic Signs.
2. Write the name of IRC Code for a) 'Practice for road signs b) 'Guidelines on Design and Installation of Road Traffic Signals' c) 'Practice for road markings'.
3. Explain General Principles of Traffic Signing.
4. Prepare list of signs for each category of signs.
5. Draw the sketch of Warning or Cautionary signs.
6. Explain Mandatory signs as per IRC Standard and requirement.
7. What are the various types of road marking commonly used ? What are the uses of each.
8. What are the general Principles of longitudinal Pavement Marking.
9. Which types of Materials and colour used for Pavement and curb Marking.
10. With neat sketch explain "Stop Line".
11. Draw pedestrian crossing and pedestrian marking at signalized junction.

12. Write short note on Object Markings.
13. Define: Cycle length, Interval, Phase and Lost time.
14. Give Advantages & Disadvantages of Traffic Signal.
15. Enlist various types of traffic signals? Explain fixed time signals with its advantages and disadvantages.
16. Enumerate the various types of coordinate signal system and explain any one.
17. Explain IRC guideline for traffic signal cycle design.
18. The average normal flow of traffic on cross roads P, Q and R,S during design period are 440, 345,310 and 265 PCU per hour, the saturations flow values on these roads are estimated at 1250,1120,1040 and 950 PCU per hour respectively. Design two phase traffic signal by Webster's method and Draw Phase Plan (Take Amber time = 3 sec., Inter green time =8 sec and Starting delay 2sec per phase.)

ASSIGNMENT – Module- IV (Street Lighting)

Date of Submission: August 29, 2019

1. Define: Luminous flux, Lumen, Candela, foot candle, Luminaire
2. What are the objects of highway lighting? Explain silhouette & reverse silhouette.
3. Explain the various design factors in road lighting.
4. Write short note on different types of light sources used for street lighting.
5. Write short note on fundamental factors of night vision.
6. Draw a sketches on lighting layout for a) Horizontal curves of highway and b) Intersections.

ASSIGNMENT – Module- V (Traffic Geometrics)

Date of Submission: September 26, 2019

1. What is Traffic island? Describe it functions, advantages and disadvantages.
2. Write short note on Rotary intersection.
3. Write short note on Grade separated intersection.
4. What are interchange ramps? With sketches show different types of interchanges and mention their advantages.
5. Draw a neat sketch of Diamond interchange and show the movement of traffic.
6. Draw a neat sketch of a full cloverleaf & partial cloverleaf and show the movement of traffic.
7. Explain various terminal facilities require along the highways.

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