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**Question Paper Code: 99102**

B.E. / B.Tech DEGREE EXAMINATION, NOV 2024

Professional Elective

Civil Engineering

19UCE902 – TRAFFIC ENGINEERING & MANAGEMENT  
(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer All questions

PART A - (5 x 1 = 5Marks)

1. Speed and Delay study is conducted by which of the following method /instrument? CO1 - U  
(a) Floating car method (b) Works pot interview method  
(c) Doppler Radar (d) Electronic Detector
  
2. Upper speed limit for regulation is CO1-U  
(a)15<sup>th</sup> percentile speed b)98<sup>th</sup> percentile speed  
(c)85<sup>th</sup> percentile speed D)60<sup>th</sup> percentile speed
  
3. The provision of traffic signals at inter-sections CO1- U  
(a) reduces right angled and rear end collisions  
(b) increase right angled and rear end collisions  
(c) reduces right angled collision but may increase rear end collision  
(d) reduces rear end collisions but may increase right angled collisions
  
4. The brake efficiency in the braking test is assumed as CO1- U  
(a) 95% (b) 96% (c) 99% (d) 100%
  
5. Traffic forecast is not influenced by \_\_\_\_\_ CO1-U  
(a) GDP (b) Industrial output (c) Population (d) Weather

PART – B (5 x 3= 15Marks)

6. Difference between Traffic volume & Density CO1- U

7. What are the various types of traffic signs? CO1- U
8. Give the conflict point sketch of one-way regulation on both roads CO2- App
9. What are the safety measures of accident taken related to education? CO2 -App
10. What is meant by PCU. Enlist the PCU value according to IRC. CO1- U

PART – C (5 x 16= 80 Marks)

11. (a) Discuss in detail about the relationship between of traffic Volume with Density. CO4 - Ana (16)
- Or
- (b) As a Traffic engineer, List the major difference between the various types of Daily Volume. CO4 - Ana (16)
12. (a) As a Traffic Engineer develop the suitable intersection for newly planned National Highway. CO3 - App (16)
- Or
- (b) For designing a 2 phase fixed type signal at an intersection having North-South and East-West road where only straight ahead traffic is permitted the following data is available. Total time lost per cycle is 12s. Calculate the cycle length (second) as per Webster's approach. CO3 - App (16)

Parameter	North	South	East	West
Design hour flow(PCU/h)	1000	700	900	550
Saturation flow(PCU/h)	2500	2500	3600	3000

13. (a) An the need for traffic signal co-ordination control and list the types of Coordination of signal system. CO1 - U (16)
- Or
- (b) Explain in detail with neat sketches about channelization. CO1 - U (16)
14. (a) Illustrate the necessity of Accident studies. Explain the various causes of Accidents. CO3 - App (16)
- Or
- (b) How to detect vehicles in a captured photo by normal digital camera? CO3 - App (16)

15. (a) Suggest the type of sensors suitable for road traffic intensity detection? CO3 - App (16)

Or

(b) Discuss the necessity of Transportation system management. CO3 - App (16)

