Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree Regular and Supplementary Examination July 2021

Course Code: CE366
Course Name: TRAFFIC ENGINEERING AND MANAGEMENT

Max. Marks: 100   Duration: 3 Hours

PART A
Answer any two full questions, each carries 15 marks.   Marks

1	a)	What is meant by traffic segregation?	(2)
	b)	Explain the various methods for traffic segregation.	(7)
	c)	What is meant by tidal flow operation? Under what circumstances tidal flow operations are preferred.	(6)
2	a)	List the advantages and disadvantages of providing one-way streets.	(6)
	b)	Explain the role of ITS in traffic management.	(9)
3	a)	State the need for traffic regulations.	(5)
	b)	Explain the various regulations concerning vehicle.	(10)

PART B
Answer any two full questions, each carries 15 marks.

4   a)   The design speed of traffic lane is 80kmph. Calculate the theoretical capacity. (6)
Assume the reaction time of driver as 2 secs. Coefficient of friction as 0.36.
Length of vehicle = 6m.

   b)   Explain the concept of level of service with a neat sketch. (9)

5   a)   Calculate the capacity of rotary intersection from the following data. (12)

Assume the length weaving section = 55 m, average entry width = 10 m   ,
width of weaving section = 13.5m. Assume any other data if required.

Traffic volume in PCU/hr is given below.

Approach	Left turning	Straight	Right turning
N	415	643	350
E	408	450	402
S	549	358	424
W	450	423	493

   b)   State any three advantages of grade separated intersection. (3)

6   a)   State the need for coordinated control of signals.   (3)

      b)   Explain the various types of signals, clearly stating the advantages of each type   (7)

          of signal.

      c)   Define optimum cycle time. How will you calculate optimum cycle time?   (5)

PART C
Answer any two full questions, each carries20 marks.

7   a)   Explain the various measures for reduction of accidents.   (12)

      b)   What is meant by condition diagram? Draw a neat sketch of condition diagram.   (8)

8   a)   State the uses of collecting accident data.   (6)

      b)   Explain the role of queuing theory in traffic engineering.   (6)

      c)   List the characteristics of road which may lead to accidents.   (8)

9   a)   State the principle behind car following theory.   (10)

      b)   List the assumptions and draw backs of Lighthill and Whitham's theory.   (10)

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