Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018

Course Code: CE 366
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)	Explain the traffic management measures adopted for restricting the turning movements.	(5)
	b)	What is tidal flow operation in traffic management system?	(5)
	c)	Write short notes on traffic calming measures.	(5)
2	a)	Explain how the points of traffic conflict are reduced by introducing one way streets.	(5)
	b)	Write short notes on traffic segregation methods.	(5)
	c)	What are the applications of ITS in traffic engineering?	(5)
3	a)	Write short notes on Motor Vehicle Act.	(5)
	b)	Explain the different aspects covered in the regulation of vehicles and drivers	(10)

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

4	a)	Differentiate between basic, practical and possible capacity of highways.	(5)
	b)	Explain the various Level of Services as per HCM and what are the factors affecting the capacity and LOS.	(10)
5	a)	Differentiate between at grade intersections and grade separated intersections with sketches.	(5)
	b)	Explain with a neat diagram, the various design elements of a rotary type intersections. How the capacity of a rotary is determined?	(10)
6	a)	Write short notes on Signal Coordination.	(5)
	b)	Explain the Webster's approach for the design of a fixed time traffic signal.	(10)

(Turn over)

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

7   a)   What are the significant uses of accident data?   (5)

    b)   Explain with neat sketches the collision and condition diagrams in accident   (5)
         analysis.

    c)   Explain the influence of various factors on road accidents.   (10)

8   a)   Explain the fundamental diagrams of traffic flow and derive a relationship   (10)
         between flow, speed and density.

    b)   On a two-lane carriage way, The maximum traffic flow per lane on the un   (5)
         obstructed carriage way is 2500 veh/hr and when stationary, vehicles are
         spaced at an average distance headway of 8m. Assuming a linear relationship
         between speed and density, calculate the free flow speed of the carriageway.

    c)   Explain car following theory. Discuss any 2 models.   (5)

9   a)   Explain in detail the basic concepts of Lighthill and Whitham's theory.   (10)

    b)   Explain various methods of collecting accident data. How the accident data is   (10)
         expressed?

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