Exam Seat No:

# C. U. SHAH UNIVERSITY Winter Examination-2021

## Subject Name : Urban Transportation System

Subject Code : 4TE	07UTS1	Branch: B.Tech (Civil)			
Semester: 7	Date: 17/12/2021	Time: 02:30 To 05:30	Marks: 70		

### Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1		Attempt the following questions	(14)
	a)	Draw a sketch showing relationship between mobility and accessibility	(1)
	<b>b</b> )	Write down the equation of gravity model.	(1)
	<b>c</b> )	What is the purpose of traffic assignment model?.	(1)
	<b>d</b> )	What is zone?	(1)
	<b>e</b> )	Define the term trip.	(1)
	<b>f</b> )	Define cordon line.	(1)
	<b>g</b> )	Define degree of urbanization.	(1)
	h)	What is route assignment?	(1)
	i)	Classification of urban roads as per IRC:	(1)
	<b>j</b> )	What is the full form of BRTS.	(1)
	<b>k</b> )	What do you mean by Travel Time Ratio?	(1)
	<b>l</b> )	Enlist the four steps of travel demand modeling.	(1)
	m)	What is segment?	(1)
	n)	Define expressway.	(1)

# Attempt any four questions from Q-2 to Q-8

Q-2	• >	Attempt all questions	(14)
	A)	Explain the procedure to conduct home interview with definition of study area and sampling technique.	(7)
	<b>B</b> )	Discuss the level of urban transport planning. Explain with sketch.	(7)
Q-3		Attempt all questions	(14)
	<b>A</b> )	Write short note on (1) all or nothing assignment (2) category analysis.	(7)
	<b>B</b> )	Explain average growth factor method with stepwise example.	(7)
Q-4		Attempt all questions	(14)
	A)	Explain by drawing curve accuracy is checked by screen line analysis of O&D studies data	(7)



Q-5 A) B) Q-6 A)	Attempt all Discuss abor Describe in Attempt all Write short r	ut capacity : brief corric <b>questions</b> note on: Me	lor identific etro Railwa	eation. y System			
<b>B</b> )	A study area is divided in to four zones 1,2,3 and 4 the present trip distribution and future trips are mentioned in matrix.						
	D	1	2	3	4	Total present	Future trips
	1	-	50	60	30	140	280
	2	40	_	70	20	130	390
	3	20	60	-	40	120	300
	4	50	70	30	-	150	220
	Total Present	110	180	160	90	-	
	Future Trips	200	500	340	150		1190
	Develop fut	ure trip dist	ribution ma	trix by Detr	oit method		
Q-7 A) B)	<b>Attempt all</b> What are ma What is tran	jor causes					
Q-8	Attempt all	questions					

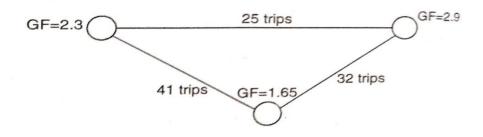
What is Zoning? Discuss the points to be kept in mind while doing

#### Q-8 Attempt all questions

B)

zoning.

- Write short notes on: (i) Screen line check (ii) Diversion curve method (7) A)
- Three zones with A, B and C are shown in Fig With trip interchanges. Using fartar B) (7) method compute the zonal interchanges for the forecast year .





(7)