C.U. SHAH UNIVERSITY Winter Examination-2018

Subject Name: Urban Transportation System

Subject Code: 4TE0	7UTS1	Branch: B.Tech (Civil)	
Semester :7	Date :06/12/2018	Time: 10:30 To 1:30	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 que	estions			(1	(4)	
	a)	What is transportation planning process?						1)	
	b)	Write down the drawbacks of uniform growth factor model.						1)	
	c)	What is the fu	Ill form of CB	D?			(1)	
	d)	Define diversion curves.						1)	
	e)	Define object	Define objectives of UTS. (
	f)	What is the purpose of traffic assignment model?							
	g)	What is zone?	What is zone?						
	h)	What is the fu	What is the full form of JNNURM?						
	i)	Define the ter	m home-base	d trip.			(1)	
	j)	Define cordor	n line.				(1)	
	k)	Classification	Classification of urban road is based on IRC:						
	l)	What is urban	What is urbanization? (1						
	m)	Write the gen	Write the general form of Detroit model. (1)						
	n)	Define Modal	split model.				(1)	
		Attempt any	four question	ns from Q-2 t	to Q-8				
Q-2		Attempt all questions (14						14)	
	A)	A study area has been divided into four zones 1,2,3,4 the present trips and growth (7						7)	
		factor is given and total trip produce and attracted develop future trip distribution							
		matrix using fratar method.							
		OD	1	2	3	4	GF		
		1	-	100	200	100	3		
		2	100	-	600	300	4		
		3	200	600	-	800	2		
		4	100	300	800	-	2		
		GF	3	4	2	2			
	B)	Which are the methods of O-D Survey? Describe any two in detail (7)		
Q-3		Attempt all questions (14					14)		
	A)	Discuss about capacity restrain method for route assignment analysis.					7)		
	B)	What is trip generation? Explain factors governing trip generation and trip (7					7)		
		attraction rates.							



Q-4		Attempt all questions					
	A)	Develop regression equation.					
		Population in zone (in 1000)	10	15	20	22	25
		Trips (in 100)	8	10	13	12	15
	B)	Explain aggregate and disaggregat	te approa	ch for tr	avel dema	and.	
Q-5		Attempt all questions					
	A)	Explain various steps involved in Transportation Planning Process with flow					
		charts					
	B)	Explain by drawing curve accuracy is checked by screen line analysis of O&D					
		studies data.					
)-6		Attempt all questions					
	A)	Describe in brief corridor identification and corridor screen line analysis.					
	B)	Explain factors affecting the choices of travel mode.					
-7		Attempt all questions					
	A)	While travel forecasting is necessary? Explain average growth factor method and					
		Furness method					
	B)	Explain problems in urban transpo	ortation ir	the pre	esent scena	ario.	
-8		Attempt all questions					
	A)	Write a note on Ahmedabad BRTS	S project	with its	operation	and wor	king.
	B)	A self-contained city having four residential zones A,B,C and D, two industrial					
		estates X and Y, the generation equation shows that trips from home to work					
	from each residential area are given below during 24 hours per day. There are						
		3690 jobs in X zone and 4495 job	in Y zon	e. It is a	lso knowi	n that attr	raction
	between zones is inversely proportional to square of journey times between				tween		
		zones. The journey time is mentio	ned below	<i>v</i> :			
		Zones	Х		Y		
		A	14		19		

Zones	Λ	1
А	14	19
В	16	11
С	9	11
D	14	21

Calculate the interzonal trips for home to work by gravity model. A=1,000, B=2245, C=1750, D=3190

