Higher Technological Institute (CT 253) Transportation Planning and Traffic Engineering 10ᵀᴴ OF RAMADAN CITY
Civil Engineering Department   Spring (2019)
Dr. Mohamed Reda   Assignment No. (3)
                                              Modal Split

HIGHER
TECHNOLOGICAL
INSTITUTE

1. Given the following 2011 data for a hypothetical town composed of 3 traffic zones.

Calibrate a modal split model of the London Transportation Study type, to be used to split future bus/private car trips.

Zone	1	2	3
1	--	30	80
2	20	--	28
3	60	35	--

Bus Trip Matrix (x10³)

Zone	1	2	3
1	--	30	80
2	20	--	52
3	40	65	--

Car Trip Matrix (x103)

Zone	1	2	3
1	--	25	15
2	22	--	16
3	17	54	--

Bus Time Matrix (min.)

Zone	1	2	3
1	--	25	15
2	20	--	40
3	12	36	--

Car Time Matrix (min)

2. Given below is the base year data required to construct a modal split model to split trips between trips by public transport and private car.

You are asked to use this data to split a total of 150×10^3 trips in year 2030 between the two modes given that the time ratio (travel time by public transport / travel time by car) equals 0.5.

time (public transport)/ time (car)	1	1.5	2.0
Trips by public transport / trips by public transport and private	0.66	0.635	0.61