UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
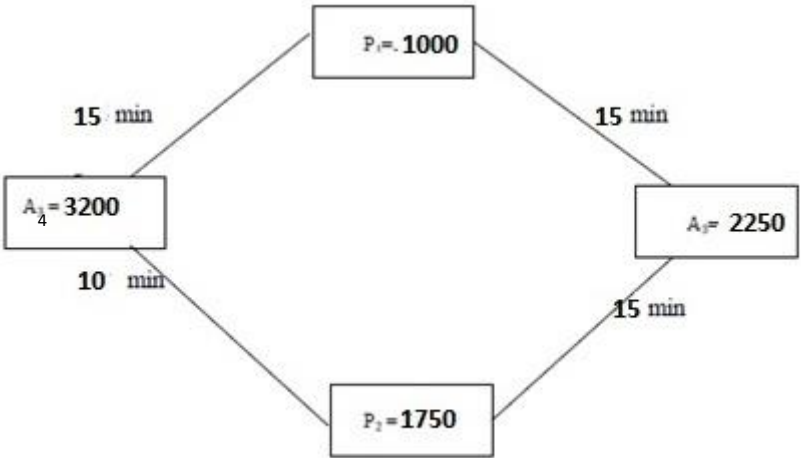### End Semester Examination, May 2023

Course: Urban Transport Planning   Semester: VI
Program: B. Tech Civil, Elective-4   Time   : 03 hrs.
Course Code: CIVL 3043   Max. Marks: 100

Instructions: Attempt all the questions. Except in case of <u>OR</u>, answer anyone.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Explain the application of land use model with respect to a metropolitan city.	5	CO1
Q 2	Write the full form of the following: 1. A.D.T. 2. R.O.W. 3. O.D. 4. L.O.S. 5. M.R.T.S.	5	CO2

Q 3	Explain the following terms.
	  i. Zoning
	  ii. Trip Origin
	  iii. Trip Purpose
	  iv. Survey
		5	CO3

Q 4	Explain the concept of modal split between Trip Generation and Trip Distribution via a flow diagram.	5	CO4

SECTION B
(4Qx10M= 40 Marks)

Q 5	Define the types of urban road with their standard cross-sections?	10	CO3
Q 6	What is the 'home interview survey', explain with the help of a sample survey form?	10	CO1
Q 7	What is MRTS? Discuss its challenges with the help of an example(s).	10	CO2
Q 8	A. Write about a few urban transportation challenges and how can you resolve it? **<u>OR</u>** B. Explain the requirements of travel data pattern (E-E, E-I, I-E, I-I).	10	CO4

SECTION-C
(2Qx20M=40 Marks)

Q 9	A. Calculate the inter-zonal trips using Fratar growth factor method as first approximation:	20	CO4

A. Calculate the inter-zonal trips using Fratar growth factor method as first approximation:

OD	A	B	C	D
A	-	5	10	12
B	12	-	14	18
C	10	14	-	4
D	12	10	8	-
Growth factor	2	3	1.5	1

OR

B. A self-contained town having 4 residential areas P_1, P_2, A_3, A_4 and an industrial area provides 3700 jobs. The generation equation shows that, for the design year in question, the trips from home to work generated by each residential area per 24 hours day are as show in the diagram. Calculate and tabulate the inter-zonal trips for journeys from home to work using the suitable model.

20 CO4

Q 10	Explain economic evaluation of transport planning and discuss the implication of transportation on economic development.	20	CO4