Con.

(REVISED COURSE)
`(3 Hours)   [Total Marks : 80**

Note: i. **Q. No. 1** is compulsory
        ii. Attempt **any 3** out of **remaining 5**
        iii. Support all **theory and numerical** with **neat sketch**

1. A. A section of road is 50km long to be widened to 2 lanes at cost of 8 lakhs / km. vehicle operating   (10 M)
        cost is Rs.1 and Rs1.2 per km for the existing and improved road respectively. Average traffic is
        2500V/day and design is for 20 yrs. Rate of interest is 8% and maintenance cost is Rs 5000 and Rs
        6000 per km on existing and improved road respectively. Is the investment worthwhile?
    B. Explain Land use transport models in detail.   (10 M)

2.   Apply Garin-Lowry model for 5 iterations for the following data and find predicted values.   (20 M)

Employment and population table for zones

Zone	Basic Employment	Service Employment	Total Employment	Total Population
1	2000	1000	3000	20000
2	5000	5000	10000	30000
3	10000	16000	26000	40000

Time Distance matrix

To From	1	2	3
1	2	7	5
2	7	3	4
3	5	4	3

3. A. Write detailed note on Multiple regression analysis, its features and conditions.   (08 M)
    B. Explain road pricing and its techniques.   (06 M)
    C. What are various methods of trip distribution   (06 M)

4.   Total trips produced in and attracted are tabulated as below. It is known that trips between 2 zones (20 M)
        are inversely propotional to second power of travel time between zones, which is uniformly 20 mins.
        If trip interchange between zones B and C is 600, calculate trip interchange between zones A and B,
        A and C, B and A, C and B

Zones	Trips produced	Trips attracted
A	2000	3000
B	3000	4000
C	4000	2000

5. A. Descibe the Traffic assignment techniques.   (10 M)
    B. Explain Factors affecting Modal Split.   (10 M)

6.   Write note on any four   (20 M)
    A. Classification of mass transit modes.
    B. Vehicle operation cost.
    C. Route development.
    D. B/C method.
    E. Factors affecting trip generation.