

Second Semester M. E. Civil (Transportation Engg. and Management) Examination

TRANSPORTATION ECONOMIC AND EVALUATION

2 SFTR 5 (1)

P. Pages : 2

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) All questions carry equal marks.
(2) Answer any **five** questions.
(3) Due credit will be given to neatness and adequate dimensions.
(4) Assume suitable data wherever necessary.
(5) Illustrate your answer wherever necessary with the help of neat sketches.
(6) Use pen of Blue/Black ink/refill only for writing the answer book.

1. (a) What is Economic Evaluation ? What is need of Economic Evaluation and state the considerations in Economic Evaluation. 8
(b) Explain Road user cost and its benefits. 8
2. (a) What is mean by cost ? What are the various benefits of transportation plan. 8
(b) Explain the following terms :—
(1) Vehicle operating cost
(2) Congestion cost. 8
3. (a) What are the methods of Economic Evaluation ? Explain any one in detail. 6
(b) A new bypass is to be constructed at a by town. The length of the bypass is 5.2 km and the length of road through the town is 5.4 km. The cost of project is likely to be Rs. 7,500,000. The speed of the traffic through the town is 4.6 KPH. The predicted traffic after completing bypass is 7000 V/day out of which 50% will use bypass. It is computed that if bypass is not constructed. The speed through town will further drop to 44.1 KPH.

due to increased traffic and the speed through the bypass is expected to be 77 KPH and that through town will be 50.4 KPH. The travel cost at the three speed are as

Speed (KPH)	Cost per veh. / km (Rs.)
44.1	1.14
50.4	1.02
77	0.90

It is expected that the construction of bypass will bring down the accident rate from 1.75 per million vehicle km an existing route to 0.60 million vehicle km on bypass. The cost of accident can be taken as Rs. 15,000. The maintenance cost per km is Rs. 10,000. Calculate the first year Rate of Return.

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4. (a) Explain the Economic Evaluation of null alternative. 8
- (b) Explain sensitivity Analysis in detail. 8
- 5 (a) Explain the following terms :—
 - (1) Depreciation cost.
 - (2) Salvage value estimation. 8
- (b) Explain the concept of supply and demand. 8
6. (a) State the basic principle of highway financing. 8
- (b). Explain in detail marginal cost and average cost of pricing. 8

