

GANPAT UNIVERSITY**B.TECH- SEMESTER-VIII CIVIL ENGINEERING**

REGULAR EXAMINATION | April - June 2015 |

SUBJECT: 2CI: 811- TRANSPORTATION ENGINEERING -II

Time: 3 Hours

Max Marks: 70

Instructions: - (1) Answer to the two sections must be written in separate answer books.

(2) Figures to the right indicate full marks.

(3) Assume suitable data if required.

SECTION – I**Que 1** Answer the following Questions.

- (A) Explain the following: (6)
- (i) Present value of uniform series
 - (ii) Sinking fund factor
 - (iii) Capital recovery factor
 - (iv) Annuity
- (B) What is cost benefit analysis? Why do you need to use cost benefit analysis technique for arriving any investment decision? (6)

OR**Que 1** Answer the following Questions.

- (A) Discuss the different functions an FIMS should be designed to perform. (6)
- (B) Describe the four basic components of a traffic surveillance system (6)

Que 2 Answer the following Questions.

- (A) Discuss the importance of highway economic studies. (5)
- (B) Calculate the annual cost of a stretch of highway from the following particulars: The average cost of maintenance of the road is Rs. 1.5 lakhs per year. (6)

Item	Total cost Rs. In Lakhs	Estimated life years	Rate of Interest %
Land	12	100	6
Earthwork	9	40	8
Bridges & Culverts	7.5	60	8
Pavement	14	15	10

OR

- Que 2** **Answer the following Questions.**
- (A) Explain the various factors affecting the vehicle operation cost. (5)
 - (B) The annual cost of maintenance of a new expressway which is open to traffic is Rs. 5, 00,000. What would be the future worth of the expenditure of this expressway at the end of 15 years when the rate of interest is 12 % per annum? (6)

- Que 3** **Answer the following questions.**
- (A) Give some examples for real-world transit tracking systems and transit information systems. (6)
 - (B) How can ITS contribute to the traditional transportation system? (6)

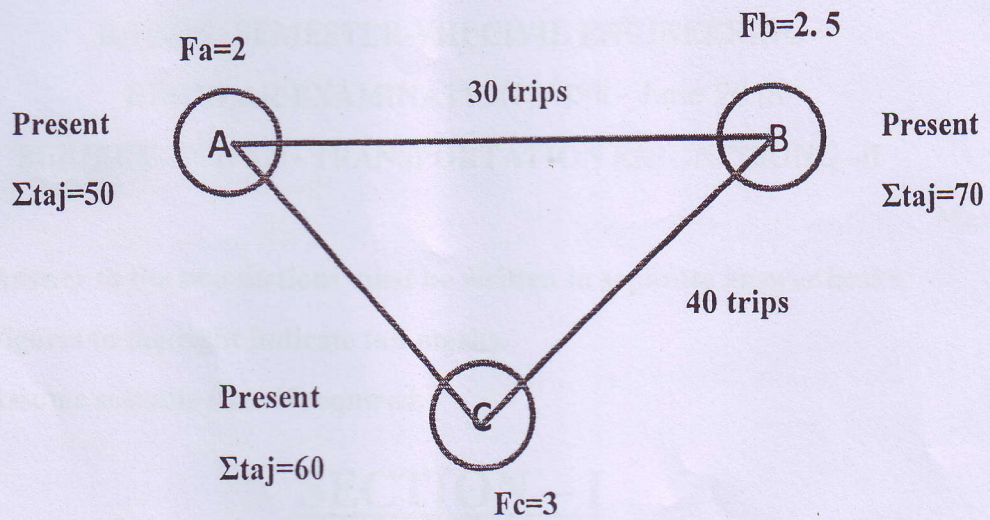
SECTION – II

- Que 4** **Answer the following Questions.**
- (A) Draw the neat chart of transportation planning process and give description of each step. (6)
 - (B) Write down advantages of co-ordination of transportation and also describe limitation of co-ordination. (6)

OR

- Que 4** **Answer the following Questions.**
- (A) What do you mean by trip generation model? What are the factors affecting trip generations? (6)
 - (B) Discuss the advantages and disadvantages of BRTS in Ahmedabad city? Give your suggestions for improving it? (6)

- Que 5** **Answer the following Questions.**
- (A) Three zones A, B, C are shown in figure with interchanges between A and B=30, between B and C=40 and between C and A=20. These are non-directional interchanges. Growth factors of 2, 2.5 and 3 are forecasts for the zones A, B and C respectively. Using the fratar method computes the zonal interchanges in the forecast year. (6)



Figure

- (B) Enlist methods of trip distribution and explain comments of growth factor methods. (5)

OR

Que 5 Answer the following Questions.

- (A) Difference between trip end models and trip interchanges model. (6)
 (B) Define route assignments. What are the factor affecting route choices? (5)

Que 6 Answer the following Questions.

- (A) What are the main objectives and purposes of intermediate public transport survey? (6)
 (B) Why do you need citizen's participation? Explain in briefly. (6)

End of Paper