

ANALYSIS OF TRANSPORTATION SYSTEMS

F.M:70
Duration: 3 hours

Answer any SIX questions including Q.No.1 which is compulsory
Figures in the right-hand margin indicate marks

1.

[2*10=20]

- [a] List the impacts that lead to generate social integration by transportation? *Better accessibility, Employment*
- [b] Present the concept of entropy in framing the utility enhancement?
- [c] Present the principles to be addressed in generating transportation network?
- [d] What are the different models conventionally used to predict travel demand?
- [e] What are the different economic measures to assess the transportation project viability?
- [f] How do you frame decision making platform on assessing the transportation facilities?
- [g] What are the different supply characteristics that are essential for generation the equilibrium modeling? *Price, Quantity*
- [h] Present the travel demand functional elements essential to frame in modelling for assessing the travel demand? *Origin, Destination, Mode, Time, Cost*
- [i] How do you conceptualize the location models for facilitating the supply analysis? *Stephens / Down*
- [k] Present the conceptual view behind maximization, minimization, equalization and optimization issues in travel demand analysis? *Cost, Supply, Demand, Route*

2.[a] Generate the equilibrium condition in an equation form between demand and supply? [5]

[b] How do you relate the travel demand, transport supply and transportation systems? Explain with commonality characteristics for planning? [5]

3.[a] classify the different types of transportation systems and present the need based planning from transportation systems point of view? [5]

[b] What are the recent research innovations on transportation in reference to traffic management? [5]

4.[a] What are the different characteristic of transportation network? Present in reference to indices covering accessibility, connectivity and functionality perspectives? [5]

[b] Present on urban transportation economic policy with system owner perspective? [5]

5.[a] frame the urban transportation economic policy in attaining the uniform road functionality? [5]

[b] What are the different models to attain optimal urban networks and their operational issues? [5]

6.[a] Present the demand modelling from sequential, sequential recursive and simultaneous perspectives for predicting travel demand? [5]

[b] Present the equation forms for generating the utility maximization point of view of transport systems? [5]

7. Present with case studies on demand modelling, supply analysis and system utility based planning. [10]

8.[a] Generate the travel demand nature from fundamental theories of social and economic theories? [5]

[b] What are the surveys to be organized to plan city as case example for transport planning at integration level? [5]