

**M.A./M.Sc. Geography**  
**Third Semester**  
**Paper – IV (43364 A) Transport Geography**

Unit – I

- a) Meaning, scope and development of transportation geography
- b) Factors associated with the development of transport system: historical, technological, physical, economic, political and social
- c) Spatial interaction: ideas of Edward Ullman; functional approach of M. E. Hurst
- d) Concepts of distance: point to point distance and distance in a group of points; measures of distance

Unit – II

- a) The functional region, linkages and nodes, diagrammatic representation of hinterlands and hierarchies
- b) Transportation and spatial processes: regional specialisation and agglomeration economies
- c) Cost of overcoming distance: transportation cost, price and rate structure; transport costs as factor of production
- d) An idealised process of transport development

Unit – III

- a) Graph theoretic concepts; networks as models
- b) Types of connectivity: concept and indices of connectivity
- c) Measures of nodal accessibility: the network as a matrix; degree of connectivity: direct and indirect connectivity
- d) Indices of accessibility: accessibility matrix, matrix T, shortest path matrix and valued matrix; sinuosity

Unit – IV

- a) Spatial patterns of flow
- b) Gravity model: basic model and its modifications related to traffic and commodity flow
- c) Allocation model: transportation problem and optimum solution
- d) Flow in a capacitated network

Unit – V

- a) Negative impacts of transportation: social, accidents and other impairments
- b) Economic and environmental aspects of urban transport problems and their control
- c) Alternative transport systems in mega cities; transport systems in the developing countries
- d) Development of the Indian surface transport system

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