

## CEB613 TRANSPORTATION PLANNING - II

Pre-requisite: -Nil

L	T	P	Cr
2	1	0	3

### Module - 1 (11 Hours)

Demographic and Employment Forecasting Models: Demographic Models - Linear, Exponential and Logistic Models; Cohort Survival Models - Birth, Aging and Migration Models; Employment Forecasting Models - Economic base Mechanism; Population and Employment Multiplier Models- Input and Output Models - Dynamic Models of Population and Employment – Multiregional Extensions

### Module - 2 (11 Hours)

Theories of Regional Development & Delineation of Transportation Planning Regions: Concept of Region and Space – Types of Regions – Classification of Regions – Christaller's and Perouxian Theories of Regional Development - Delineation of Regions for Transportation Planning of a Nation.

### Module - 3 (12 Hours)

Estimating and Forecasting of Goods Demand: Growth Factor Models, Economic and Econometric Models, Gravity Models, Mode Specific and Mode Abstract models, Programming Model, Shift and Share Model, Excess Production, Consumption and Stock Piling Models, Models based on Behavioural Characteristic of Shippers, Demand Forecasting using Link Volume Modelling Philosophy

### Module -4 (11 Hours)

Urban Bus Transportation Planning and Evaluation: Introduction to Bus Network Design, Classification of Routes and their Alignment, Prediction of Transit Usage, Evaluation of Network, Accessibility Consideration in Route Frequency Analysis, Marginal Ridership for Despatching Buses on Route, Scheduling of Buses and Minimum Wait Schedule.

### References:

1. Mishra, R.P. etal, Regional Development Planning in India, Vikas publishing house, New Delhi.
2. Heggei, I.G., Transportation Engineering Economics, Mc-Graw Hill Book Company, New York.
3. ISTE Summer School Notes on Rural and Regional Transportation Planning (1985)- Arranged by Dept. of Civil Engg. - R.E.C.Calicut - for Demand modelling.
4. Nagaraj, B.N., Chandrasekhar B.P. and Chari S.Rr. (1981),Delineation of Regions for Transportation Planning, IRC Journal 42-3 (1981).
5. Potts and Oliver, Flow Through Transportation Networks.
6. IRC Journals 42-4, 44-1, 44-3, for Rural Road Network Planning.
7. Hutchinson, B.G., Principles of Urban Transportation System Planning, Mc-Graw Hill 1974.
8. NTPC, Report of National Transport Policy Committee