***6CE151 River Hydraulics and Sediment Transport***

**L-T-P-Cr: 3-0-0-4**

**Theory:**

1. River morphology, types and stages of river, Flow instability. **7 Lectures**

2. Phenomenon of floods, Flood Analysis and Flood Control **7 Lectures**

3. Soil Erosion **7 Lectures**

4. River training works, groynes and spurs, embankments, cut-offs and river control structures. **7 Lectures**

5. Sediment transport principle, mechanics of aggradation and degradation of riverbeds and bank erosion. Bed load, suspended load and total load, **7Lectures**

6. River measurement gauge discharge and sediment **7 Lectures**

**Texts/Reference Books:**

1. R.J. Garde and K.G. Rangaraju, Mechanics of Sediment Transport and Alluvium Stream Problems,Wiley Eastern Ltd., New Delhi.

2. D.V. Joglekar, Manual of River Behaviors, Control and Training, CBIP Pub. No. 60, 1971.

3. G.L. Aswa, Irrigation Engg, New Agro Int. (P) Ltd. Pub., New Delhi.

4. M.S. Peterson, River Engg., PHI, New Delhi.