III Year-II Semester
(20CE6647) River Management & Interlinking Of Rivers

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
30	70	100	3	-	-	3

Pre- Requisites: Fundamentals of Fluid Mechanics

UNIT-I:
River morphology, Plan form variations and river channel pattern, Characteristics of straight, braided and meandering rivers

UNIT-II:
River dynamics, River gauging, Analytical models of river morphology

UNIT-III:
Sediment transport in rivers, Bed load and suspended load transport for uniform and non-uniform bed material, Total load equations, sediment sampling, Alluvial streams and hydraulic design

UNIT-IV:
Reservoir planning, Reservoir sedimentation, River training works, Soil erosion and sediment yield

UNIT-V:
Principles of stabilization and rectification of rivers, River bank stability analysis, Interlinking of rivers issues, challenges and advantages, Design of river training works like groynes, guide banks, gabions, Hydraulic modelling of rivers.

Course Outcomes:

S.No	Course Outcomes	BTL
1	Basic concepts of River Morphology and Characteristics of Rivers	L2
2	Understanding the basic concepts of models of River Morphology and river gauging	L2
3	Knowledge about the various aspects related to flow of water and sediments through natural and artificial channels and design aspects thereof	L2
4	Analyze the Reservoir sedimentation and River training works	L4
5	Explain about the stabilization, rectification of rivers and design of river training works	L2

Reference Books:

1. Garde, R.J., (2006), “River Morphology”, New Age International Publishers
2. Garde, R.J. and RangaRaju, K.G., (2006), "Mechanics of Sediment Transportation and Alluvial Stream Problems", Wiley Eastern Limited
3. Julien, Pierre, Y., (2002), “River Mechanics”, Cambridge University Press Jansen, P.P.H., (1994), “Principals of River Engineering”, VSSD Publications