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**UNIT - IV : Drainage Basin as a Fundamental
Geomorphic Unit**

- 4.1 : Linear, Areal and Relief aspects of a Basin.
- 4.2 : Inter-Basin Water Transfer.
- 4.3 : Major change in river courses of Bengal.
- 4.4 : Integrated River Basin Management.

Paper - IX

Special Paper (Practical)

(Full Marks : 100)

Module - 17 : Fluvial Geomorphology

(Marks : 50)

UNIT - I : Analysis of Channel Forms

- 1.1 : Computation of Brading Index, Sinuosity Index, Meander Wave length and Radius of Curvature.
- 1.2 : Computation of Long and Cross-Profiles of a River together with the calculation of Cross-Sectional Area, Wetted Perimetre, Hydraulic Radius and their comparison.
- 1.3 : Measurement of Velocity and Discharge with the help of (a) Float method and (b) Current Metre.
- 1.4 : Measurement of Depth of a river Cross-section and drawing of Cross-Profiles with the help of Eco-sounder.

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UNIT - II : Geomorphic Mapping

- 2.1 : Preparation of Geomorphic Maps from Field Data.
- 2.2 : Preparation of Overlays from Topographical map.
- 2.3 : Geomorphological Mapping with the help of R.S. and GIS techniques.
- 2.4 : Extraction of Relative height of geomorphic features from Aerial photo pairs.

UNIT - III : Hazard Mapping

- 3.1 : Landslides : Zonation by BIS method.
- 3.2 : Floods : Inundation and Risk Zones.
- 3.3 : River bank erosion : Quantification and Vulnerability Zonation.
- 3.4 : Coastal erosion : Quantification and Vulnerability Zonation.

UNIT - IV : Practical Note-book and Viva-Voce

Module - 16 : Environmental Geography

(Marks : 50)

UNIT - I : Anthropogenic Aspects

- 1.1 : Utilisation and Conservation of Renewable Resources: Renewable Energy, Recycling of Materials, Afforestation.