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Rocks and Water-the Components of Weathering; Materials Subject to Weathering; Composition of Rain and Snow in Relation to Weathering; Mineral-Water Reactions
Products of Chemical Weathering and Some Determining FactorsProducts of Weathering-Clay Minerals; Effects of Removal by Erosion; Effects of Weathering Sequence; Effects of Transport of Materials; Effects of Precipitation and Temperature; Organic Matter; Processes of Physical Weathering; Products of Physical Weathering; Rates of Weathering; Soils-Introduction; Factors That Affect Soil Formation; Precipitation; Parent Material; Topography; Biologic Factors; REFERENCES; Chapter 5 - The Drainage Basin as a Geomorphic Unit; Numbers, Lengths, and Orders of Stream Channels
Drainage Density and TextureDescription of the Drainage Basin in Cross Section; REFERENCES; Chapter 6 - Water and Sediment in Channels; Introduction; Forces Acting in Channels; Velocity and Its Distribution; Factors Controlling Flow Velocity; Energy Losses in Streamflow; Measurement of Velocity and Discharge; The Debris Load of Rivers: Introduction; The Nature of Fluid Force and Its Relation to Debris Movement; Bed Load and Suspended Load; Computation of Sediment Load; Measurement of Sediment Load; The Stream Bed and Its Description; REFERENCES; Chapter 7 - Channel Form and Process Shape of the ChannelRiffles and Bars; Variation of Hydraulic Characteristics at a Given Cross Section; River-bed Scour During Floods; Variation of Hydraulic Characteristics in a Downstream Direction; Longitudinal Profile of the River Channel; Observations on Introduced Base Level; Equilibrium, River Profiles, and Channel Geometry; Channel Pattern: Introduction; Straight Channels; Braided Channels; Geometry of Meanders; Flow in Meanders; Initiation and Development of Meanders; Meandering Valleys; The River Flood Plain: Introduction; Floods and the Flood Plain; Flood Plain Formation; REFERENCES
Chapter 8 - Hillslope Characteristics and Processes

Sommario/riassunto

This excellent text is a pioneering work in the study of landform development under processes associated with running water. Its primary emphasis is on subjects that were the focus of the authors' studies in both field and laboratory. Part I deals with the process of change in the evolving landscape. Part II explores process and form, and Part III, the effects of time.In Part I, the relation of geomorphology to field problems is analyzed in studies of a mountain block in a semiarid climate, a meandering river cut into bedrock, and benches along a sea coast. Part Two contains studies of weat