**Concept 4: Concept of Stage**

**“As the different erosional agencies act upon the earth’s surface there is produce a sequence of landforms, having distinctive characteristics at the successive stage of their development” ----------------------------------- W.D. Thurnburry**

**Davis: “Landscape is a function of Structure, Process and Time”.**

**‘Stage’- which is taken from cyclic time.**

**According to cycle of erosion by WM Davis:**

1. **Youth, 2. Mature and 3. Old stage**

Erosional Process

Old Stage

Mature Stage

Youth Stage

**Based on further variation in landform characteristics**

1.Youth stage= early youth stage, middle youth stage and Late youth stage

2. mature Stage= early mature, middle mature and late mature stage

3. old stage= early old stage, middle old stage and late old stage

**1. Youth Stage:**

* **High velocity of river water= high capacity of erosion, high capacity of transportation**
* **Steep slope= high capacity of transportation, High velocity of river water**
* **Vertical erosion= valley deepening- gorges/canyon**
* **River capturing= headword erosion**

**Landforms**- pot holes, V-shaped valley, gorges, canyon, water fall, rapids, alluvial fan, alluvial cane

1. **Mature Stage:**
* **Moderate velocity of river water**
* **Decreasing of slope**
* **Lateral erosion**
* **High load of sediment**
* **Valley widening**

**Landforms: Natural Levees, meanders, ox bow lake, alluvial cone and fan,**

1. **Old Stage:**
* **Low Velocity of river water**
* **Slope reduction**
* **Lack of erosional capacity**
* **Very high load of sediment**
* **High amount of water**
* **Highest width of river valley**

**Landscape: Delta,**

**Concept 5: Concept of Geomorphic Scale**

**“Geomorphic temporal and spatial scales are significant parameters in the interpretation of landform development and landform characteristics of geomorphic system”**

**Geomorphological process and landform = time/space**

**Geomorphological scale ----two --- 1. Time scale 2. Spatial scale**

Time Scale:

**Time Scale:**

**Classification of Time Scale:**

**Cyclic time:** 10,000,000 year---------------------30 cm =1 foot

**Graded Time:** 100-1000 year------------------1 cm /1 inch

**Steady time:** 10-100 year--------------------- 1mm /.1 inch

**Spatial Scale:**

**Geomorphic region:**

1. **Macro /2. Meso/ 3. Micro Scale**

**Macro region: equatorial region, tropical region**

**Meso region= Brazil, cango basin , south east asia, India**

**Micro region= Chhotanagpur plateau, ganga basin, Himalayan region**