**FOR T.D.C PART- I (GEOGRAPHY (Hon’s)**

 **Paper – 1st (Physical Geography)**

 **BY**

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**GEOSYNCLINE ¼HkwlUufr½**

* **The geological history of continents and ocean basins initially denotes only two features-**

 **(i) Ancient rigid landmass ( izkphu n`<+ LFkyh; Hkw[k.M) that represents the stable ancient nuclei of present continents and (ii) Geosyncline- the mobile watermass that surrounded the ancient rigid landmass. (izkphu n`<+ LFky[k.Mksa ls f?kjk xfr”khy ty {ks= )**

* **The mobile zones of water is known as Geosyncline . (xfr”khy tyh; {ks= HkwlUufr dgykrh gSA)**
* **Geosyncline means a water depression (tyiq.kZ xrZ) characterised by sedimentation (volknhdj.k).**
* **Majority of the Geologists and Geographers agree to the point that all the mountains have come out of the Geosynclines.**
* **The height and thickness of sediments of young fold mountains of Tertiary period (Rockies, Andes, Alps, Himalayas etc.) appears that the geosynclines should have been very deep water bodies but marine fossils found in the sedimentary rocks of these folded mountains belong to the category of marine organisms of shallow seas.**

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* **Geosyncline have been long and relatively narrow depressions which seem to have subsided during accumulation of sediments in them.--------J.A. Steers, 1932**
* **Geosyncline is a long, narrow and shallow water depression characterised by (HkwlUufr ,d yEch] ladjh ,oa fNNyh tyiw.kZ xrZ gksrh gS ftldh fo”ks’krk gksrh gS&)**

 **(a) Regular Sedimentation( yxkrkj volknhdj.k )**

**(b) Subsidence (/kWalko)**

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1. **Geosynclines are long , narrow and shallow water depressions.**
2. **There becomes a regular and gradual sedimentations.**
3. **Geosynclines are characterised by consequent subsidence.**
4. **Nature and patterns of geosynclines never remained similar through out the geologic history.**
5. **Location, shape, dimensions and extent of geosynclines changed considerably due to (i) earth-movement and (ii) geological process.**
6. **Geosynclines are mobile zones of water.**
7. **Geosynclines are generally bordered by two rigid landmasses which are called forelands.**

 **FORELAND (vxzns”k )**

 **FORELAND (vxzns”k )**

**EVOLUTION OF THE CONCEPT**

 **The concept of Geosyncline was given by James Hall and Dana. (gkWy vkSj Mkuk dh nsu gS&HkwlUufr)**

* **The concept was elaborated / developed later on by E.Haug.(gkWx us HkwlUufr fl|kUr dks fodflr fd;k )**
* **“While the theory of geosynclines is due to Haug, the concept of idea belongs to Hall and Dana. (HkwlUufr fl|kUr )**

**EVOLUTION OF THE CONCEPT**

1. **Concept of Hall (1859) & Dana (1873) (gkWy ,oa Mkuk dh ladYiuk)**
2. **Concept of Haug (gkWx dh ladYiuk)**
3. **Concept of J.W.Evans (ts0 MCY;q bokUl dh ladYiuk)**
4. **Concept of Schuchert ( “kw”kVZ dh ladYiuk)**
5. **Concept of Arther Holmes, (vkFkZj gksEl dh ladYiuk)**
6. **Concept of Dustar (MLVj dh ladYiuk)**
7. **Concept of Stille (fLVys dh ladYiuk)**
8. **Plate Tectonic Concept (IysV foorZfudh ladYiuk)**

**THE CONCEPT OF DANA**

* **Dana studied the folded mountains and postulated that the sediments of the rocks of folded mountains were of marine origin.**
* **Dana postulated that these rocks are deposited in long, narrow and shallow seas.**
* **Dana at first, coined the term ‘geosyncline’ for such water depressions.**
* **Dana defined that “Geosyncline is a long, narrow, shallow and sinking beds of seas (HkwlUufr ,d yEch] ladjh] fNNyh ,oa /kWalrh leqnzh ryh gSA ).**

**THE CONCEPT OF HALL (gkWy dk er)**

* **Hall elaborated the concept of geosynclines as advanced by Dana. (ladYiuk dk izfriknu Mkuk us fd;k )**
* **Hall presented ample evidences to show the relationship between geosyncline and folded mountains. (gkWy us ladYiuk ds i{k esa cgqr izek.k fn;k )**
* **According to Hall the beds of geosynclines are subjected to subsidence due to continuous sedimentation but depth of water in geosyncline remains the same.**
* **Geosynclines are much longer than their widths.**

**THE CONCEPT OF E. HAUG (gkWx dk er)**

* **If the idea of geosyncline is due to Hall & Dana, the theory of their development is really due to Haug.**
* **Haug defined geosyncline as ‘long and deep water bodies’. Geosynclines are relatively deep water areas and they are much longer than they are wide.(HkwlfUufr;kWa vis{kkd`r xgjs leqnzh Hkkx gksrs gSa ftudh yEckbZ vf/kd ,oa PkkSM+kbZ de gksrh gS vkSj tks n`<+ Hkw[k.Mksa ds e/; vfLFkj Hkkx ds :i esa gksrh gSA)**
* **Geosynclines existed as mobile zones of water between rigid masses.**
* **gkWx us Palaeozoic Era dk ekufp= rS;kj dj yEcs] ladjs lkxjh; Hkkx dks iznf”Zkr fd;k vkSj cryk;k fd orZeku le; esa tgkWa ij ioZrh; Hkkx ik, tkrs gSa ogkWa ij igys lkxjh; Hkkx dk foLrkj FkkA**
* **gkWx us eslkstksbd dYi ds 5 n`<+ Hkw[k.M vkSj 4 HkwlUufr;ksa dks iznf”Zkr fd;kA**
* **gkWx us eslkstksbd dYi ds 5 n`<+ Hkw[k.M&&&&**

**1½ mrjh ,VykWafVd Hkw[k.M ¼North Atlantic Mass½**

**2½ fluks&lkbcsfj;u Hkw[k.M ¼ Sino-Siberian Mass½**

**3½ vfQzdk&czkthy Hkw[k.M ¼ Africa-Brazil Mass½**

**4½ vkLVªsfy;k-&bf.M;k&eMkxkLdj Hkw[k.M¼Austrelia-Indo-Madagaskar Mass½**

**5½ iz”kkUr Hkw[k.M ¼Pacific Mass½**

**Haug located 4 geosynclines between these 5 ancient rigid masses---**

1. **Rocky geosyncline (jkWdh HkwLkUufr)**
2. **Ural geosyncline (;qjky HkwLkUufr)**
3. **Tethys geosyncline ( VsfFkl HkwLkUufr)**
4. **Circum-Pacific geosyncline ( ifj&iz”kkUr HkwLkUufr)**

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