

This question paper contains 2 printed pages]

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S. No. of Question Paper : 6166

Unique Paper Code : 219301

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Name of the Paper : GEHT 301 : Structural Geology

Name of the Course : B.Sc. (Hons.) Geology

Semester : III

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any five questions.

All questions carry equal marks.

1. Discuss the concept of strain ellipse in two dimensional homogeneous deformations. Describe the fundamental types of strain ellipsoids using Flinn diagram, assuming no volume change during deformation.
2. Give the geometric elements of the fold. Also give the classification based on their hinge line and the axial surface.
3. How the primary sedimentary structure are useful in top-bottom identification criteria ? Discuss their importance of these structure in a folded terrain.
4. What is unconformity ? Discuss different types of unconformities and discuss their significance in Geological studies.

P.T.O.

5. Write short notes on any *three* of the following :
- (i) Normal and Shear Stress
 - (ii) Recumbent fold
 - (iii) Joints in folded region
 - (iv) Thrust faults
6. Define bedding and slaty cleavage. How would you identify these structure in the field ? Discuss the cleavage-bedding relationship in the folded terrain.
7. Distinguish between the following :
- (i) Upright fold and Overtuned fold
 - (ii) Crenulation cleavage and Mylonitic foliation
 - (iii) Angular unconformity and Thrust
8. What do you understand by linear fabric in tectonites ? Give their types. Discuss their significance in deformed terrain.