2018

2nd Semester

GEOLOGY

PAPER—C4T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group—A

Answer any *five* questions. 5×2

1. Define oblique-slip fault with suitable sketch.

2. What do you mean by bending? Give a geological example.

3. Write two differences between inlier and window.

4. How does a graben-horst-graben sequence form ?

5. Why a box fold is considered as single told and not two folds ?

6. Define the terms "True dip" and "Apparent dip".

7. What is the difference between crenulation and disjunctive cleavage ? Give proper diagram.

8. What is the difference between an antiformal anticline and a synformal anticline ?

Group—B

Answer any *four* questions. 4×5

1. How do you recognise faults in the field ? 5

2. (a) Classify folds based on orientation of axial plane.

   (b) Define with sketch, synformal anticline. 3+2

3. (a) How do you represent state of stress at a point ?

   (b) Define plane strain with suitable sketch. 3+2

4. Write about the relationship of foliations with major structures. 5

5. Differentiate between any *two* of the following :— 2·5×2

(i) Class 2 and Class 3 folds.

(ii) Kink band and Chevron fold.

(iii) Orthogonal flexure and flexural flow.

6. (a) What is cleavage refraction ?

(b) What types of primary sedimentary structures are used to determine the younging direction of a rock sequence ? 2+3

Group—C

Answer any *one* question. 1×10

1. (a) What do you mean by elastic, viscous, plastic and brittle deformation ? Explain with suitable curves and geological examples.

(b) Classify types of fractures with suitable sketches. 7+3

2. (a) How would you recognise buckle fold in field ?

(b) Name the types of fold in which the amount of plunge of fold axis is equal to the dip of the axial plane ?

(c) What are the principal structural features that enable us in distinguishing the brittle and ductile deformation of rocks? 3+2+5
