

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

GEOLSEM-126

M.Sc. (Ist Semester) Examination, Dec., 2022

GEOLOGY

Paper - GEOL-101

(Structural Geology)

Time : 3 Hours]

[Maximum Marks : 75

The question paper contains three Sections.

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 5 marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit 500 words). Each question carries 10 marks.

Section-A

1. (i) What are Normal Stress and Shear Stress ?
- (ii) Differentiate between Homogeneous and Heterogeneous deformation.
- (iii) Explain Antiformal syncline and Synformal anticline.

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- (iv) What are cylindrical and non-cylindrical folds ?
- (v) Explain Crenulation cleavage.
- (vi) What is Schistosity ?
- (vii) How we describe the shear zones ?
- (viii) Explain the significance of Joints.
- (ix) Draw labelled diagram of High angle fault with oblique net slip.
- (x) Differentiate between Step faults and Echelon faults.

Section–B

2. Describe the various types of stress on the rocks.

Or

Explain Mohr circle.

3. Discuss the classification of folds on the basis of Dip Isogons.

Or

Explain morphology of folds through labelled diagrams only.

4. Describe the types of cleavageages.

Or

Explain the fanning and refraction of cleavage.

5. Discuss the Kinematic classification of shear zones.

Or

Explain joints and discuss their origin.

6. Discuss the geometrical classification of faults.

Or

Discuss the Anderson's classification of faults.

Section-C

7. What is Strain Ellipsoid ? Describe strain in three dimensions.
8. Describe superimposed folding and interference patterns.
9. Discuss the types of linear structures. Write note on its tectonic significance.
10. Explain various shear zone indicators.
11. Discuss the effects of faulting on outcrop pattern.