Or

Describe the various top and bottom criteria to recognise the geological succession in deformed area.

2. Discuss the Geometric classification of fold on the various basis (any three basis).

Or

Explain the mechanics and causes of folding.

3. Describe the geometric classification of fault.

Or

Explain the causes and mechanics of faulting.

4. Define the joints and its significance. Describe the geometric classification of joint.

Or

Define lineation. Describe the types of lineation and its relation to major structure.

5. What is the concept of Petrofabric analysis ? Describe its types, elements and interpretation.

Or

Write a note on stereographic projection and describe its use in structural geology.

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G-1/122/21 **Roll No.……**

I Semester Examination, April-2021

M.Sc.

GEOLOGY

Paper II

(Structural Geology)

Time : 3 Hours] [Maximum Marks : 80

Note: *All questions are compulsory. Question Paper comprises of 3 sections.* ***Section A*** *is objective type/Multiple Choice questions with no internal Choice.* ***Section B*** *is short answer type with internal choice.* ***Section C*** *is long answer type with internal choice.*

SECTION 'A'

(Multiple Choice Questions)

Choose the correct answer : **1×10 = 10**

1. Forces acting on a rock of per unit area and consequence deformation is known as respectively :

(a) Strain and stress (b) Stress and tension

(c) Stress and compression

(d) Stress and strain

2. In which unconformity older rocks are of plutonic origin :

(a) Angular unconformity

(b) Non uncorformity

(c) Disconformity

(d) Local unconformity

3. Which fold has got two hinges :

(a) fan fold (b) chevron fold

(c) Isoclinal fold (d) Box fold

4. In which type of fold syncline becomes broader and anticlime became sharper with depth :

(a) Box fold (b) Parallel fold

(c) Similar fold (d) Recumbent fold

5. In whch fault one block appears to have rotated about a point on the fault plane :

(a) Arcute fault (b) Bedding fault

(c) Enechelon fault (d) Pivot or hinge fault

6. Klippe is a :

(a) Nappe outlier (b) Nappe inlier

(c) Window (d) Hog back

7. How many sets are found in mural joints :

(a) One set of joint (b) Two set of joint

(c) Three set of joint (d) Four set of joint

8. Slaty cleavage is best developed in rocks which are rich in :

(a) Chlorite minerals (b) Arcnaceous minerals

(c) Micaceous minerals (d) Ferruginous minerals

9. Which can be used in analysis of fold :

(a) Beta diagram only

(b) Pi diagram only

(c) Both beta and pi diagram

(d) None of these

10. Pi diagram is stereographic projection of :

(a) Planes (b) Poles

(c) Planes and poles (d) None of the above

SECTION 'B' **4 × 5 = 20**

(Short Answer Type Questions)

Note : *Answer the following questions in 250 words.*

1. Define stress strain diagram with the explanation of type of deformation.

Or

Write notes on outlier and inlier.

2. Discuss about effects of folds on out crop of strata.

Or

How do you recognise folds on field and geological maps.

3. What is the difference between fault and unconformity and how do you differentiate in field and geological map ?

Or

Discuss Nappe, Klippe and Tectonic windows.

4. Discuss the relation of rock cleavage and schistosity to major structure.

Or

Describe the types of lineation.

5. Write a note on tectonites.

Or

Discuss the significance and limitations of pie and beta diagram.

SECTION'C' **10 × 5 = 50**

(Long Answer Type Questions)

Note : *Answer the following questions in 500 words.*

1. Describe the different types of unconformity with the help of suitable diagram.