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| **Name:**<br>**Enrolment No:** | |

**UPES**

**End Semester Examination, May 2025**

**Course:** Introduction to Structural Geology **Semester: IV**

**Program:** B.Sc. Mathematics **Time : 03 hrs.**

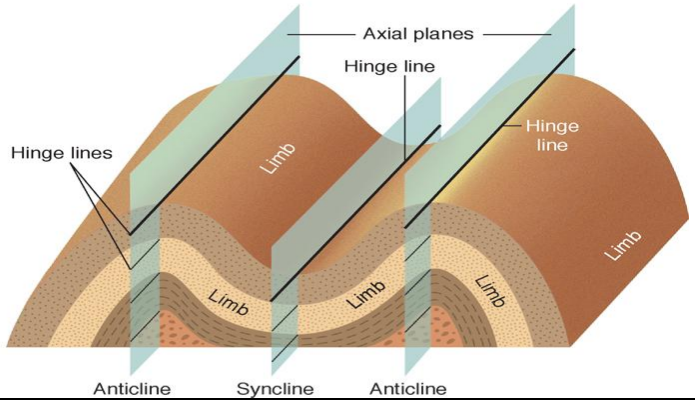
**Course Code: PEGS 2045** **Max. Marks: 100**

**Instructions: Answer all Questions.**

**SECTION A**
**(5Qx4M=20Marks)**

| S. No. | | Marks | CO |
|---|---|---|---|
| Q 1 | Define the term 'Rake' and 'Heave' | **4** | **CO1** |
| Q 2 | Distinguish between Hanging wall and footwall | **4** | **CO2** |
| Q 3 | Distinguish between apparent dip and true dip | **4** | **CO2** |
| Q 4 | Describe axial plane of a fold | **4** | **CO1** |
| Q 5 | Describe the Exfoliation joints | **4** | **CO2** |

**SECTION B**
**(4Qx10M= 40 Marks)**

| | | | |
|---|---|---|---|
| Q 6 | Explain the Ramsay classification of fold | **10** | **CO2** |
| Q 7 | Explain the term associated with fault. Explain the types of movements along faults and enumerate the criteria for recognizing faults in the field | **10** | **CO3** |
| Q 8 | Explain the genetic classification of lineation | **10** | **CO3** |
| Q 9 | Explain the morphology of fold structure and explain the components of fold from give diagram   | **10** | **CO3** |

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|---|---|---|---|
| | **OR**<br><br>Construct a rose diagram for bedding planes of given dip direction of $12^0$, $23^0$, $29^0$, $56^0$, $68^0$, $90^0$, $102^0$, $119^0$, $134^0$, $156^0$, $178^0$, $198^0$, $245^0$, $336^0$, $340^0$ considering an interval of $30^0$. | | |
| **SECTION-C**<br>**(2Qx20M=40 Marks)** | | | |
| Q 10 | Evaluate the steps of finding the attitude of fold axis, orientation of axial plane and interlimb angle of a fold on stereonet. Take a representational attitude of limbs. | **20** | **CO4** |
| Q 11 | Evaluate the effect of deformation of rock body due to stress applied using Flinn diagram. Discuss the L, S and LS-tectonics fabric because of deformation<br><br>**OR**<br>Evaluate the effect of topography on structural features and Importance representative factors of the map. | **20** | **CO4** |