Name: **Enrolment No:**	UPES UNIVERSITY OF TOMORROW

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Term Examination, December 2022

Programme Name: M.Sc. Petroleum Geoscience **Semester: I**
Course Name : Structural Geology **Time : 3 Hr**
Course Code : PEGS 7003 **Max. Marks : 100**
Nos. of page(s) : 2
Instructions: Draw sketches if necessary.

SECTION A (5x4=20)

Attempt all questions

S. No.		Marks	CO
Q1	Distinguish between Normal and reverse fault	**4**	**CO1**
Q2	List the geological structure formed by Ductile and Brittle deformation	**4**	**CO1**
Q3	Distinguish between Horst and Graben structure	**4**	**CO1**
Q4	Define the term 'Angular Unconformity	**4**	**CO1**
Q5	Define Flexural slip	**4**	**CO1**

SECTION B (10x4=40)

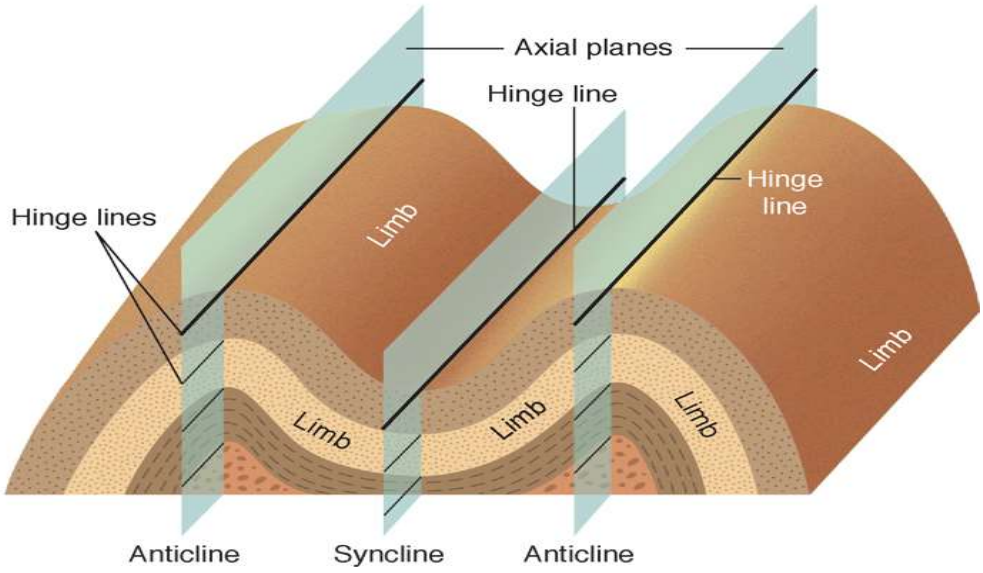
Attempt all questions

Q6	Describe the Law of cross cutting and principal of inclusion	**10**	**CO1**
Q7	Explain the significance of i) hinge axis ii) Drag, and iii) plunge in fold analysis.	**10**	**CO2**
Q8	Explain the classification of fractures with suitable sketch diagram	**10**	**CO3**
Q9	Explain in brief the classification of tectonic plates, types of plate movements and their role in structural analysis. OR Explain the Joint classification with focus on; i) joint number ii) joint systems, and iii) Joint genesis	**10**	**CO3**

SECTION C (20x2=40)

Attempt all questions

Q10	Describe in brief the parts of faults, criteria of faulting and classification of faults in context with structural analysis.	**20**	**CO3**
Q11	Evaluate the morphology of fold structure and explain the components of fold from give diagram	**20**	**CO4**



OR

a) Calculate the true dip amount of the Limestone whose one apparent dip value and strike value has been noted in the field. Using Geometric method and verify the answer with trigonometric method. The values are App. Dip $N49^0W\ 35^0$, Strike EW [10]

b) Calculate the true dip amount of Sill (intrusion) whose apparent dip value and strike values has been noted in the field. Using Geometric method and verify the answer with trigonometric method. The values are App. Dip $N45^0W\ 30^0$, Strike NE-SW [10]