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2 SEM TDC GEOH (CBCS) C 4

2024

(May)

GEOLOGY

(Core)

Paper : C-4

**(Structural Geology and Tectonics
and Geodynamics)**

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

(Structural Geology)

(Marks : 36)

1. Fill in the blanks : 1×3=3

- (a) Lateral component of stress along plane of action is called ____.
- (b) In case of a stress ellipse the shortest axis is termed as ____.

(2)

(c) Ratio between deformed length by original length is called ____.

2. Define any *three* of the following :

1×3=3

- (a) Traction
- (b) Body force
- (c) Deviatoric stress
- (d) Simple shear

3. Write briefly on any *three* of the following :

3×3=9

- (a) Inflection point and hinge point
- (b) Anticline and antiformal syncline
- (c) Dip isogon
- (d) Flexural-slip folds

4. Write about the elements of a oblique slip fault with suitable diagram.

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5. Write descriptive notes on any *two* of the following :

7×2=14

- (a) Classification of fault based on dip and pitch
- (b) Types of joint

- (c) Non-conformity and paraconformity
- (d) Kinematic and dynamic aspects of structural geology

(Tectonics and Geodynamics)

(Marks : 17)

6. Fill in the blanks (any two) : 1×2=2
- (a) Cause of Turkey-Syria 2023 earthquake lies on _____ fault.
 - (b) Total number of major tectonic plates of the world is _____.
 - (c) Thickness of crust around Himalaya is about _____ km.
7. Write short notes on any two of the following : 3½×2=7
- (a) Features of convergent plate boundary
 - (b) Triple junction
 - (c) Rifting
8. Write briefly about the mechanism of plate movement. What are the tectonic elements of NE India? 4+4=8

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