

Ex/SC/GEOL/UG/CORE/TH/09/2022

**B. SC. (GEOLOGICAL SCIENCES) EXAMINATION, 2022**

( 2nd Year, 2nd Semester )

**PRINCIPLES OF STRATIGRAPHY AND PRECAMBRIAN**

**STRATIGRAPHY OF INDIA**

**PAPER – CORE/TH/09**

Time : Two hours

Full Marks : 40

(Use a separate Answer script for each Part)

**PART – I**

Answer question no. **1** and *any three* from the rest.

1. Write short notes on (any **two**):  $2\frac{1}{2} \times 2 = 5$ 
  - a) Event stratigraphy
  - b) Uniformitarianism
  - c) Formation
2.
  - a) How do you explain Law of Superposition? Is it applicable to every sequence? Explain.
  - b) What difference do the gradational and sharp stratigraphic contacts imply?  $3+2=5$
3.
  - a) Why is Lithostratigraphy generally preferred over Bio- and Chronostratigraphy?
  - b) “Chronostratigraphic units do not necessarily coincide with lithostratigraphic units always” – Justify the statement.  $2+3=5$

[ Turn over

[ 2 ]

4. Why are unconformities better developed at basin-margins? How does a basin-margin unconformity pass into a basin-interior conformity? 3+2=5
5. How do you correlate two spatially detached stratigraphic sections of a single Formation? 5
6. Define onlap and offlap. Illustrate the difference in stratal relationship developed in case of an onlap and offlap? 2+3=5

#### PART – II

1. Answer *any three* questions. 3×5=15
- a) Why is it difficult to interpret the geologic past of the Precambrian period? “True komatiites are rare and essentially restricted to rocks of Archean age” – Justify. 3+2
- b) What are the characteristics of an Archean greenstone belt? 5
- c) What are the differences between the Eastern and Western Dharwar Craton? 5
- d) What are the major crustal scale shear zones in the Aravalli-Delhi Fold Belt. What is ‘Fermor line’? 4+1
- e) What are the characteristics of ‘Purana basins’? 5

[ 3 ]

2. Match the followings: 5×1=5
- |                       |                  |
|-----------------------|------------------|
| Singhbhum Craton      | Closepet granite |
| Purana basin          | IOG              |
| Dharwar Craton        | Dalma volcanics  |
| Singhbhum Mobile belt | Vindhya          |
| CITZ                  | Mahakosal group  |