

BACHELOR OF SCIENCE EXAMINATION, 2019

(2nd Year, 2nd Semester)

GEOLOGICAL SCIENCES

**Principles of Stratigraphy and
Precambrian Stratigraphy of India**

Paper : CORE : 9

Time : Two hours

Full Marks : 50

Use separate Answer Script for each part.

PART - I (25 marks)

Answer *q.no. 5* and any *two* from the rest.

1. (a) How do you distinguish between conformable and unconformable stratigraphic contacts? What are their respective geological significances? How do you differentiate between diastem and unconformity? 2+2+1
- (b) How do you define Chronostratigraphic and Geochronologic Units? Define Eonothem, Erathem and System. 2+3

2. (a) What are the processes that help preservation of sediments in rock record? 5
- (b) Why is lithostratigraphic classification generally favoured over biostratigraphic and chronostratigraphic classification for stratigraphic

(Turn Over)

(2)

nomenclature? Does the Lithostratigraphic and Chronostratigraphic boundary always coincide? Explain. 3+2

3. (a) Define base level, with help of sketch. What are the factors that influence base level fluctuation? 2+3
- (b) Define law of superposition. Where lies the problem of using this law for developing a stratigraphic succession? 2+3
4. (a) What is stratigraphic correlation? How do you correlate between two stratigraphic sections located wide apart from each other? 1+4
- (b) Discuss the major criteria to identify aeolian depositional products within a stratigraphic succession. 5
5. Write short notes on : (any *two*) 2.5x2=5
- (a) Formation
- (b) Event stratigraphy
- (c) Correlative conformity
- (d) Uniformitarianism

(3)

PART - II (25 marks)
Answer any *five* questions.

6. Answer any *five* questions :
- (a) What is Eparchean unconformity? Write brief note on Vindhyan supergroup. 2+3
- (b) What are the characteristic features of Archean greenstone belt?
- (c) What are the basic differences between the Eastern and Western Dharwar Craton? 5
- (d) Write short notes on 'Closepet Granite' and 'Malani Igneous Suite'. 2.5+2.5
- (e) What are the major crustal scale shear zones in the Aravalli-Delhi Fold Belt and Southern granulite terrain. 21/2+21/2
- (f) Why is it difficult to reconstruct the geological history of Precambrian period? True komatities are rare and essentially restricted to rocks of Archean age – Justify. 2¹/₂+2¹/₂
- (g) Briefly discuss the tectonic evolution of the Bundelkhand Craton.