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GEOLOGY

(Major)

Paper : 5.2

(Indian Stratigraphy)

Full Marks : 60

Time : 3 hours

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

1. (a) Choose the correct answer from the following : 1×3=3

(i) The Barakar Sandstones are feldspathic (arkosic) in composition.

(1) True

(2) False

(ii) 'Gondite' is found in

(1) Dharwar Craton

(2) Central Indian Province

(3) Himalayas

(4) Aravalli Craton

(iii) The Proterozoic Shillong Group has general trend along

- (1) NW-SE
- (2) E-W
- (3) NE-SW
- (4) NNW-SSE

(b) Answer the following : 1×4=4

- (i) Which sandstone formation of Assam tertiary rocks shows salt and pepper texture?
- (ii) Name the formations of the Barail Group in the Schuppen Belt.
- (iii) Name any two Upper Gondwana plant fossils.
- (iv) Name any one of the stratigraphic sequences from India where 'Dinosaur' fossils are found.

2. Give brief answers to the following : 2×4=8

- (a) Explain why the Cuddapah Basin is crescent shaped.
- (b) Write briefly on the lithological composition of the Mahadek Formation.
- (c) Name the important Palaeozoic fossils of the Salt Range.
- (d) Write briefly on the Precambrian igneous activities in Shillong Plateau.

3. Answer any *three* of the following questions :

5×3=15

- (a) Write briefly on the broad characteristic of the Palaeozoic Era and also on the Palaeozoic palaeogeography of India.
 - (b) Write on the age of Deccan Traps with reference to the methods used in age dating of the traps.
 - (c) Discuss in stratigraphic terms the logics considered for saying Shillong Plateau as a detached block of the Peninsular India.
 - (d) Write briefly on the broad lithological characteristics of the Quaternary deposits of NE India.
 - (e) Write on the Precambrian igneous activities of the Eastern Ghats.
4. (a) Give the stratigraphic account of the Vindhyan Supergroup on the basis of its broad lithology, igneous activities and basin tectonics. 5+2+3=10

Or

Discuss the Precambrian stratigraphy of Singhbhum-Orissa Province with reference to its tectonic evolution and lithostratigraphy. 4+6=10

- (b) Give the stratigraphic succession of the Cretaceous rocks occurring in South India. Discuss their lithology and palaeontology. $4+2+4=10$

Or

Give the stratigraphic succession of the Triassic rocks of Spiti and discuss its palaeontological importance. $4+6=10$

- (c) Give the stratigraphic account of the Dharwar Craton's Precambrian rocks with reference to stratigraphy and lithology. Also discuss the important differences in terms of lithology and tectonics between Eastern and Western Dharwars. $7+3=10$

Or

Discuss the lithology and palaeogeography of the Siwaliks. Apply lithological and palaeontological evidences in support of palaeogeographic reconstructions. $6+4=10$

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