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3 (Sem-4/CBCS) GLG HG/RC

2023

GEOLOGY

(Honours Generic/Regular)

Paper : GLG-HG-4016 /GLG-RC-4016

(Stratigraphy and Paleontology)

Full Marks : 60

Time : Three hours

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

1. Choose the correct option : $1 \times 7 = 7$
- (a) Which of the following is the broadest unit of the lithostratigraphic classification ?
- (i) System
 - (ii) Supergroup
 - (iii) Group
 - (iv) Formation

Contd.

(b) Which of the following groups does not belong to Vindhya?

- (i) Semri group
- (ii) Kaimur group
- (iii) Bhandu group
- (iv) Barail group

(c) Earliest known occurrence of cephalopod is

- (i) Ordovician
- (ii) Cambrian
- (iii) Carboniferous
- (iv) Triassic

(d) The most favourable environment for the preservation of palynofossils is

- (i) marine
- (ii) lacustrine
- (iii) fluvial
- (iv) swampy

(e) Lophophore in brachiopods is used for

- (i) locomotion
- (ii) swimming
- (iii) gathering food
- (iv) None of the above

(f) Which of the following represents the longest duration of time in the geological time scale?

- (i) Palaeozoic
- (ii) Mesozoic
- (iii) Cenozoic

(g) Choose the correct sequence from the following showing elder to younger in age :

- (i) Surma → Tipam → Barail → Jaintia
- (ii) Jaintia → Barail → Surma → Tipam
- (iii) Tipam → Surma → Barail → Jaintia
- (iv) Barail → Surma → Jaintia → Tipam

2. Describe briefly the following : $2 \times 4 = 8$

- (a) Lophophore
- (b) Suture line in Cephalopod
- (c) Barail group
- (d) Neptunism

3. Write detailed notes on : **(any three)**
 $5 \times 3 = 15$

- (a) Lithostratigraphy
- (b) Types of fossil
- (c) Gondwana flora

- (d) Taxonomy
- (e) Shillong group

4. Answer the following questions : **(any three)**
10×3=30

- (a) Define 'fossil'. Write the processes associated with 'fossilization'. Describe three modes of preservation of fossil.
2+2+6=10
- (b) Discuss the detailed stratigraphy of 'Cretaceous of Trichinopoly'.
- (c) Discuss the lithology, tectonics and igneous activity associated with 'Deccan Trap'.
- (d) Write a detailed note on principles of stratigraphic correlation.
- (e) Define 'biostratigraphy'. Discuss different kinds of 'biozones' with suitable sketches.
2+8=10
- (f) Write the morphological characters of phylum 'Lamellibranchia' with neat sketch. Add a note on their geological distribution.
8+2=10