

[This question paper contains 2 printed pages.]

Sr. No. of Question Paper : 1697 C Roll No.....

Unique Paper Code : 219203

Name of the Course : B.Sc. (Hons.) Geology

Name of the Paper : Palaeontology : GEHT-202

Semester : II

Duration : 3 Hours Maximum Marks : 75

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **five** questions.
3. **All** questions carry equal marks.

1. Discuss the various taphonomic processes that lead to the fossilization of organisms.
2. Write short notes on any **three** of the following :
  - (i) Binomial system of nomenclature
  - (ii) Burgess shale fauna
  - (iii) Shell-microstructure in brachiopods
  - (iv) Carbonization
3. Describe the shell morphology of brachiopods with neat sketches.
4. Differentiate between any **two** of the following :
  - (a) Paedomorphosis and peramorphosis
  - (b) Schizochroal and Holochroal
  - (c) Brachiopod shell and Bivalve shell

*P.T.O.*

5. What do you understand by Adaptation & Functional morphology ? Discuss the ecological/functional significance of any three of the following :
- (a) Presence of spines in Brachiopoda
  - (b) Pallial sinus in Bivalvia
  - (c) Crinkled septa in Cephalopoda
  - (d) Shells cemented to substrate
6. Describe the Gondwana flora and its palaeoclimatic implications.
7. Write notes on any **two** of the following :
- (a) Trace fossils and their utility in palaeoenvironmental reconstructions
  - (b) Sutures in ammonoids
  - (c) Adaptive radiation of mammals in the Tertiary
  - (d) Application of palynology in hydrocarbon exploration
8. Give an account of any **two** of the following :
- (i) Hyracotherium
  - (ii) Dinosaur extinction
  - (iii) Transition from reptiles to birds
  - (iv) Role of climate in evolution of horse