

[This question paper contains 2 printed pages.]

Sr. No. of Question Paper : 1723

C

Roll No.....

Unique Paper Code : 219609

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

Name of the Paper : Quaternary Geology and Palaeoclimate (ET-6)

Semester : VI

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. Attempt any **five** questions.
3. **All** questions carry equal marks.

1. Discuss the late Quaternary records of the Alaknanda Basin. What do these records suggest about the response of the Alaknanda river to the climatic changes ?
2. What is Savanna hypothesis of Human evolution ? Discuss in detail the evidences in favour of and against this hypothesis ?
3. What factors will determine the amount of CO₂ added to the atmosphere in the future by the anthropogenic activities ? Where will all the excess carbon eventually go ?
4. Write detailed notes on the following :
 - (a) Luminescence dating
 - (b) Amino acid racemisation
5. *Discuss the mechanism of Indian Monsoon. What are the factors that influenced the intensity of Indian monsoon in the geological past ?*

P.T.O.

6. Explain briefly any **three** of the following :
- (a) Which latitudes are most affected by changes in the tilt of earth axis ?
 - (b) Why do seasons occur ?
 - (c) How does Plate tectonic process control the atmospheric CO₂ level ?
 - (d) Why are northern ice sheets more responsive to insolation changes than Antarctic ice ?
7. Answer briefly any **three** of the following :
- (i) Marine Isotopic Stages
 - (ii) Ekman transport and Upwelling
 - (iii) Walker circulation
 - (iv) Application of pollen and spore in Quaternary Stratigraphy
8. Discuss the mechanism of El Nino. What are the major characteristics of El Nino years in comparison with the years La nina ?