

[This question paper contains 2 printed pages.]

Sr. No. of Question Paper : 1782 **GC-3** **Your Roll No.....**

Unique Paper Code : 32191101

Name of the Paper : Earth System Science

Name of the Course : **B.Sc. (H) Geology, (CBCS)**

Semester : I

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. Write one line answer to the following :

- (a) Write the name of Boundary between Crust and Mantle of the Earth.
- (b) Where does the effect of Coriolis force become zero ?
- (c) What is composition of oceanic crust ?
- (d) Where will you get the youngest ocean crust ?
- (e) What is the age of Lower Vindhyan Stromatolites ?
- (f) What is the average density of the earth crust ?
- (g) What is thermocline ?
- (h) Write the name of India's active volcano.
- (i) What is adiabatic lapse rate ?
- (j) What is the average depth of CCD in the ocean water ?

2. Give an outline of Nebular hypothesis on the origin of the solar system. What were the drawbacks of this hypothesis ?
3. What are P and S waves ? Describe their shadow zones with a neat diagram and discuss their roles in locating epicentre of an earthquake.
4. Write short answers for **any two** of the following :
 - (a) How do we infer that outer core is of liquidus in nature ?
 - (b) Why are all planetary bodies roughly spherical in shape ?
 - (c) What are Mechanical layers of the earth ?
5. Describe **any two** of the following with neat diagram.
 - (a) Coriolis Effect
 - (b) Thermohaline circulation
 - (c) Upwelling
6. How are atmosphere, biosphere, lithosphere, cryosphere and hydrosphere related to each other ? Give examples.
7. Discuss the concept of sea floor spreading and plate tectonics.
8. Describe **any two** in brief :
 - (a) Stratosphere
 - (b) Trenches
 - (c) Epicentre