



‘সমানো মন্ত্র: সমিতি: সমানী’

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 1st Semester Examination, 2021

**CC1-GEOLOGY**

**EARTH SYSTEM SCIENCE**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

1. Answer any **five** questions of the following: 1×5 = 5
  - (a) Differentiate absolute and relative dating of geological events.
  - (b) Mention the age of the oldest dated rock.
  - (c) What is super-continent cycles?
  - (d) Explain absolute zero.
  - (e) Differentiate P-wave from S-wave of earthquake.
  - (f) Explain epicenter and focus of an earthquake.
  - (g) What is dwarf planet?
  - (h) What is Island arc?
  
2. Answer any **three** questions from the following: 5×3 = 15
  - (a) Describe the process of locating epicenter of earthquake from seismograph data. 5
  - (b)  $^{87}\text{Sr} / ^{86}\text{Sr}$  values increase with regression — Explain. 5
  - (c) What are the major types of spheres of the earth? How they interact to each other? 5
  - (d) Explain the violent and mild eruption of volcanos. 5
  - (e) What is Continental drift theory and state its supporting evidences.
  
3. Answer any **two** questions from the following: 10×2 = 20
  - (a) With the help of a suitable diagram, describe the internal structure of the Earth and its seismic discontinuities.
  - (b) Compare the inner planet and outer planet on the basis of size, composition and angular momentum. Discuss any conventional theory of solar system formation with proper sketches. 5+5
  - (c) Discuss about the role of Argon isotopes for knowing atmospheric composition through time. Explain the concentration of Oxygen peak at around 300 ma. 5+5
  - (d) Differentiate glacio-eustasy from tectono-eustasy. Discuss the role of hydrothermal vent in the origin of life. 5+5

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