



UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 2nd Semester Examination, 2021

CC3-GEOLOGY

ELEMENTS OF GEOCHEMISTRY

Full Marks: 40

ASSIGNMENT

The figures in the margin indicate full marks.

Answer any four from the following

10×4 = 40

1. What is cosmic nucleosynthesis? Discuss various nucleosynthesis processes using the appropriate equations. 3+7
2. Describe various types of meteorites. 'Most meteorites arriving on Earth are coming from the Apollo asteroids' —Justify this statement. 5+5
3. Discuss the fractionation factor using appropriate example. Why does the fractionation of isotopes more pronounced at lower temperatures? 5+5
4. How samples are analysed in Electron Probe Micro-Analyzer (EPMA)? Write a note on the operating principle of Scanning Electron Microscope (SEM). 6+4
5. Write down a short note on Isochron method. What is Depleted mantle and Bulk Silicate Earth? 6+4
6. State Pauling's principles for ionic substitution. Discuss the relationship between $\delta^{18}\text{O}$ and mean annual temperature for meteoric precipitation. 5+5

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