

B.Sc. Semester-II Examination, 2022-23**GEOLOGY [Honours]**

Course ID : 22011 Course Code : SH/GEL/201/C-3(T)

Course Title : Elements of Geochemistry

Time : 1 Hour 15 Minutes Full Marks : 25

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** of the following questions:

1×5=5

a) Arrange the following elements in decreasing order of abundance (by volume) in the whole Earth.

Al, Si, O, Ca, Ni, Mg, Fe, S

b) Define camouflaged type of minor/trace element affinity in crystal lattice.

c) What is the coordination number of cations?

d) Name one mineral exclusively found in meteorite.

e) Define atmophile elements?

f) What is diadochy?

g) What is cosmic abundance of elements?

h) State the basic law of radiometric dating.

2. Answer any **two** of the following questions:

5×2=10

a) Briefly describe carbonaceous chondrite.

b) Briefly describe the geochemical behavior of iron and aluminium.

c) Write short notes on: $2\frac{1}{2}\times 2=5$

i) solid solution, and

ii) polymorphism

d) Briefly discuss the significance of distribution coefficient (K_d) in geochemistry.

3. Answer any **one** of the following questions:

10×1=10

a) Briefly describe different methods of element transport in the Earth.

b) Briefly discuss different types of meteorite with special emphasis on geochemistry.
