TDC (CBCS) Even Semester Exam., 2019

GEOLOGY

(2nd Semester)

Course No. : GELHCC–201T

(Elements of Geochemistry)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

UNIT—I

1. Write briefly on any *two* of the following : 2×2=4

(a) Composition of the crust

(b) Geochemical cycle

(c) Mass balance

2. *(a)* Discuss briefly the cosmic abundance of elements. 6

Or

(b) Write explanatory note on chemical differentiation of the earth. 6

UNIT—II

3. Write short notes on any *two* of the following : 2×2=4

(a) Important fields of geochemistry

(b) Geochemical behaviour of Si

(c) Difference between Mendeleev's law and the modern periodic law

4. *(a)* Write on Goldschmidt geochemical classification of elements. 6

Or

(b) The increasing order of reactivity among group 1 elements is Li, Na, K, Rb, Cs, whereas, that among group 17 elements is F, Cl, Br, I. Explain. 6

UNIT—III

5. Write short notes on any *two* of the following : 2×2=4

(a) Mohorovicic and Wiechert-Gutenberg discontinuity

(b) Isotropic tracers

(c) Elemental fractionation

6. *(a)* Give an account of the layered structure of the earth. 6

Or

(b) Write an explanatory note on concept of radiogenic isotopes in geochemistry. 6

UNIT—IV

7. Write short notes on any *two* of the following : 2×2=4

(a) Advection

(b) Chromatography

(c) Sources of alkalinity in river water

8. *(a)* Define diagenesis. Discuss briefly the different chemical processes of diagenesis. 1+5=6

Or

(b) Write an explanatory note on elements of marine chemistry. 6

UNIT—V

9. Write short notes on any *two* of the following : 2×2=4

(a) Composition of magma

(b) Melting of the mantle

(c) Mantle convection

10. *(a)* Discuss briefly the composition of meteorites. 6

Or

(b) Write an explanatory note on the formation of solar system. 6

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