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UG/2nd Sem/Geolo/H/19

2019

B.Sc.

2nd Semester Examination

GEOLOGY (Honours)

Paper - C3T

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any *five* questions of the following : 5×2

1. What is lithophile element ? Give example.
2. Write the residence time of Si and Al.
3. Define the term chromatography.
4. What is assimilation process ?
5. What do you mean by delta notation of oxygen ?

[Turn Over]

6. Define the terms thermocline and pycnocline.
7. What is diagenesis ?
8. Write the behaviour of potassium in water.

Group - B

Answer any *four* questions of the following : 4×5

9. Write a short note on mantle composition of Earth.
10. Write a short note on U-Pb radiometric dating method.
11. Explain why Al concentration of basaltic rock is helpful for assessing the depth of differentiation.
12. Explain what happened if a limestone is incorporated within a basaltic magma.
13. Discuss about the dominance diagram to relate Eh and pH of a solution.
14. (i) Explain why the proportion of O^{16} is greater than O^{18} in the cloud above the seawater. 2+3
(ii) Write note on metamorphic reaction.

(3)

Group - C

Answer any *one* questions of the following : 1×10

15. (i) Describe properly about the magmatic differentiation process under closed system.
- (ii) Write the name of different types of reactions in aqueous geochemistry with example. 7+3
16. (i) The Mg-content of carbonates can be used as a thermometer of ancient marine environments Explain.
- (ii) Write a short note on geochemical classification of elements.
- (iii) Write the relation between density, salinity and temperature of marine water. 2+5+3
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