

M.Sc Sem-3 Examination

503

Geology

Time : 2-30 Hours]

November-2024

[Max. Marks : 70

- Instructions:** (i) Draw neat diagrams whenever necessary.
(ii) Write proper answer number.

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- Q-1** Describe assimilation and syntaxis. (14)
- OR**
- Q-1** (a) Origin of magma. (07)
(b) General theory of heat conduction. (07)
- Q-2** Discuss the crystallization of granitic magma with its petrographic significance. (14)
- OR**
- Q-2** (a) Migmatites. (07)
(b) Niggli values. (07)
- Q-3** Explain the rocks associated with convergent plate boundaries. (14)
- OR**
- Q-3** (a) Chemistry and mineralogy of carbonatites. (07)
(b) Petrogenesis of lamprophyres. (07)
- Q-4** Write a note on phase equilibrium. (14)
- OR**
- Q-4** (a) Lever rule. (07)
(b) Binary silicate systems. (07)
- Q-5** **Attempt any seven questions out of twelve.** (14)
- (i) What is lava lake? Where they commonly found?
- (ii) Define vassiculation and liquid compressibility.
- (iii) State the density of acidic and basic magma.
- (iv) What is granite tectonics?
- (v) Name the classes of NORM.
- (vi) Define chemical analysis. How it is represented?
- (vii) What is spilite? State the composition of it.
- (viii) What is pulskite? Compare it with syenite.
- (ix) State the mineralogy of pegmatites.
- (x) Write any one application of thermodynamics in igneous petrology.
- (xi) What is diffusion? Give one example.
- (xii) Give examples of ternary silicate systems.
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