

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

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- Q-1 Describe pyrogenetic minerals along with types, origin and composition of magma. (14)
- OR
- Q-1 (a) Crystallization of uni-component magma. (07)
(b) Influence of gas and pressure on crystallization. (07)
- Q-2 State the bases of classification of igneous rocks and explain CIPW classification and Hatch scheme of classification. (14)
- OR
- Q-2 (a) Intergrowth textures. (07)
(b) Under saturated volcanic rocks with examples. (07)
- Q-3 Write note on dislocation and thermal metamorphism of pelitic sediments. (14)
- OR
- Q-3 (a) Plutonic metamorphism. (07)
(b) Dynamo thermal metamorphism of mafic rocks. (07)
- Q-4 Explain projective analysis along with abukama and blue schist facies. (14)
- OR
- Q-4 (a) Univariant metamorphic reactions. (07)
(b) Zones of metamorphic rocks with suitable examples. (07)
- Q-5 **Attempt any seven questions out of twelve.** (14)
- (i) Define the terms anhedral and euhedral crystals.
(ii) Name three factors influencing the grain size of the igneous rocks.
(iii) Give tabular form of Bowen reaction series.
(iv) Draw a labelled sketch of poikilitic texture.
(v) Give Brogger's colour code classification of igneous rocks.
(vi) Name two ultramafic volcanic rocks with locality.
(vii) Explain genesis and composition of mylonite.
(viii) What is shock and pyro metamorphism?
(ix) What is hornfels?
(x) Give the name of composition in 'AKF' and 'AFM' diagrams.
(xi) Define stylolite and give its rock association.
(xii) How will you distinguish between metamorphism and deformation?