

**SET A**

**Unique Paper Code : 32191301**  
**Name of the Paper : Igneous Petrology**  
**Name of the Course : B.Sc. (Hons.) Geology (CBCS)**  
**Semester : III**  
**Duration: 3 hours**

**Maximum Marks: 75**

**Attempt any four questions. All questions carry equal marks.**

Q. no. 1. Discuss generation of different magmatic rocks along the three major tectono-magmatic settings with the help of suitable diagram/s.

Q no. 2 Discuss various classification schemes adopted for the volcanic igneous rocks. What are spidergrams? Briefly discuss its utility in petrogenetic inferences.

Q no. 3 Describe magma in terms of its physical and chemical characteristics and discuss the factors responsible for magma generation.

Q no. 4. What property of magma controls shape of intrusive bodies? Describe different types of igneous bodies.

Q no. 5. What are the different factors that control the texture of igneous rocks? Describe textures of volcanic igneous rocks.

Q no. 6. What are the sources of heat in the Earth? Explain geothermal gradient and its variation in the crust and the mantle, with suitable examples and diagrams.