**VOLCANICITY**

Volcanicity is the process by which molten rock or magma is forced into the earth’s crust or onto the earth’s surface.

Volcanicity also involves all the processes through which igneous activities may occur at or near the earth’s surface. These are those processes in which molten rocks (magma), liquid,solid or gaseous materials move towards the earth’s surface or onto the earth’s crust.

**MODE OF FORMATION**

Volcanicity/Vulcanicity is formed when molten rock or magma forces its way into planes of weakness or vent of the earth’s crust to escape quietly or explosively to the surface.

Volcanoes are mountains or conical hills with craters from which molten rock, gasses and steam are blown out. Volcanoes are very different from ordinary mountains because they are not formed by folding and compression or by uplift or erosion. They are built up by the accumulation of their own eruptive product e.g. Lava bomb, ash and dust.

**THE INTRUSIVE LANDFORM OF VOLCANICITY**

These are features produced when magma solidifies within the earth’s crust without reaching the surface of the earth. Such rocks are called **Plutonic Rocks**.

**Features**

1. **Sill:** Sill results when an intrusion of magma is made horizontally along the bedding planes of sedimentary rocks.
2. **Dyke:** A vertical or steeply inclined igneous rock band which crosses across the bedding plane.
3. **Laccolith:** A massive dome-shaped intrusion of solidified magma with a level base.
4. **Batholith:** A very massive igneous rock mass that cuts across the bedding plane. It is the largest of all plutonic rocks. It usually occurs deep below but can be exposed by denudation.

Other features are Lopolith and Phacolith.

**EXTRUSIVE VOLCANIC FEATURES**

These are volcanic features built on the surface. They are

1. **Caldera:** This is a depression formed when the top of a volcano is blown up. Occasionally, it is occupied by a lake called Crater Lake.
2. **Acid lava dome:** It does not flow for a long distance before solidifying and it, therefore, builds up a dome-shaped volcano with steep convex slides.
3. **Lava plateau or Shield volcano:** These two features are similar because they do not form great height. They are formed by basic lava which flows for a long distance before solidifying.
4. **Ash and cinder cone:**  This is a volcano of moderate height built up by fragmented materials such as ash, cinder, dust and volcanic bombs. It is usually steep since these materials do not flow like lava.

**General evaluation**

1. What is vulcanicity?
2. Mention four intrusive landforms and three extrusive features of vulcanism.
3. What do you understand by Caldera and Lava plateau?
4. Mention the three types of rocks.
5. Explain the mode of formation of the three types of rocks.