Geography · GS - I

Describe the characteristics and types of primary rocks.

EXAM YEAR	PAPER	SUBJECT
2022	GS - I	Geography

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Primary rocks, also called igneous rocks, are formed by the cooling and solidification of magma or lava. Their characteristics depend on the rate of cooling, mineral composition and place of formation. They form the foundation for the development of other rock types through the rock cycle.

Model Answer

Introduction

Primary rocks, commonly known as igneous rocks, are the oldest and fundamental rocks of the Earth's crust. They originate through the cooling and solidification of molten material.

Body

Characteristics of Primary Rocks

They are generally hard, compact and crystalline, with interlocking mineral grains. They usually lack fossils because of their formation at high temperatures. Their texture and mineral composition vary according to cooling conditions and magma composition.

Types of Primary Rocks

1. Intrusive Rocks: These form when magma cools slowly beneath the Earth's surface, producing coarse-grained crystals. Examples include granite and gabbro.

2. Extrusive Rocks: These develop when lava cools rapidly on the Earth's surface, resulting in fine-grained or glassy textures. Examples include basalt and obsidian.

3. Hypabyssal Rocks: These form when magma solidifies at shallow depths within the Earth's crust. They generally possess medium-grained textures. Examples include dolerite and porphyry.

Importance

Igneous rocks contribute to soil formation, provide minerals such as iron and copper, and serve as construction materials. They also help explain volcanic activity and Earth's geological history.

Conclusion

Primary rocks are essential components of the lithosphere. Their varied textures, compositions and modes of formation provide important insights into Earth's internal processes and geological evolution.

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