BUILDING STONES

- Stone → One of the oldest building material.

- Rock : A large concreted mass of earthy or mineral matter or broken pieces of such a mass.

- Stone : Quarried or smaller pieces of rock for a specified function such as a building block

- Rocks are made up of minerals. Such as:

- Feldspars
- Quartz
- Micas
- Hornblende
- Kaolinite
- Calcite ($CaCO_3$)
- Dolomite ($MgCO_3$)

GEOLOGICAL CLASSES OF ROCKS

- Igneous: Formed by cooling and thus solidfying from a molten state. (Granite, Basalt)
- Sedimentary : Formed by a process of cementation of small particles that result from the disintegration of rocks. (Limestone, sandstone)
- Metamorphic Rocks : Formed by gradual changes in the structures of either igneous or sedimentary rocks caused by heat, water, pressure. (Marble, Slate)

COMMONLY USED BUILDING STONES

- Granite : Intrusive igneous rock
- Intrusive:crystallized slowly within the earth
- Granite is a strong, hard & non-porous rock
- It is a desirable foundation & building material.

- Basalt : Extrusive igneous rock
- Extrusive:rapidly crystallized on the surface of earth
- Basalt is hard & strong but it is porous & have fractures.

- Limestone : Sedimentary rock
- It is used as a concrete aggregate
- It is used in the production of cement & lime

- Marble : Metamorphosed limestone
- Harder than limestone
- Used for interior work or wall or column facing

- Slate : Metamorphosed clay
- Used for flooring, interior or exterior wall facing.

GRANITE

BASALT

LIMESTONE

MARBLE

SLATE

PRODUCTION STEPS

- Quarrying: Big chunks are cut at the side, loosened at the bottom by wedging & removed by cranes

- Shaping & Finishing: Taken to the factory & cut and finished to the desired shapes.

QUARRYING

PROPERTIES OF STONES

- Durability : mainly abrasion
- Strength
- Both strength & durability are affected by the texture & mineral composition, chemical charactersitics & physical characteristics.
- Porosity
- Water Absorption
- Coefficient of thermal expansion
- Fire resistance