classification of solids:-

Solids are broadly classified into two types :—
Crystalline solids and amorphous solids.

(I) Crystalline solids — A crystalline solid is a solid material whose constituents such as atoms, molecules or ions are arranged in a highly ordered microscopic structure forming a crystal lattice that extends in all directions.

or

Solids which have ordered arrangement of constituent particles and have sharp melting points are known as crystalline solids. It is also known as true solids. eg — Iron, Gold, Silver, Diamond, Graphite, common salt (NaCl), Ice etc

(II) Amorphous solids — An amorphous solid is any non-crystalline solid which the atoms and molecules are not organized in a definite lattice pattern. Such solids include glass, plastic and gel.

or

Solids which have random arrangement of of constituent particles and they don't have sharp melting point, are known as Amorphous solid. It is also known as pseudo solid or

Distinguish between crystalline and Amorphous solids

Crystalline solids	Amorphous solids
(I) crystalline solids have a regular arrangement of particles	(I) Amorphous solids have completely random particle arrangement.
(II) They have different Physical properties (Thermal Conductivity, electrical conductivity, Refractive index etc) in	(II) ~~Thy~~ They have same physical properties in all directions. ie isotropic.

different directions i.e Anisotropic

(iii) They have very sharp melting point.

e.g. Fe (Iron) melt on 1327°C.

(iii) They don't have sharp melting point. They melt over a range of temp.

e.g. As the temp. of glass is gradually raised. It ~~sto~~ softens and starts melting.

Isotropic and Anisotropic in nature

Isotropic — These have same value of physical ~~properties~~ properties in all directions.

* Amorphous solids are isotropic in nature

Anisotropic — These have different value of physical properties in different directions.

* crystalline solids are Anisotropic in nature.