8. Define an alloy.

B. *Answer the following in not more than 40 words.*

1. Mention five physical characteristics of metals.
2. What are the physical properties of nonmetals?
3. Name a nonmetal which when red-hot reacts with steam. What happens as a result of the reaction?
4. Mention three uses of metals, giving reasons.
5. Describe the uses of carbon.

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30.04.2020 6. Metals and Nonmetals

See - B:-

B1. Five physical characteristics of metals are:-

(i) They have high tensile strength; therefore, they cannot be broken down easily.

(ii) They are malleable, ie, they can be beaten into thin sheets.

(iii) They are ductile; i.e., they can be stretched into thin wires.

(iv) Metals are sonorous. They produce a sound called metallic clink.

(v) They are good conductor of heat and electricity.

B2. The physical properties of non metals are:-

(i) They are brittle if solid, ie, they break when bent.

(ii) Non sonorous, ie; they do not produce a metallic clink.

(iii) They are non lustrous except graphite and iodine.

(iv) They are bad conductor of heat.

(v) They are bad conductor of electricity except graphite.

B3. Carbon is a non-metal which when red-hot reacts with steam. This reaction forms a gaseous mixture of Carbon monoxide (CO) and Hydrogen (H_2) which is called water gas.

$$\underset{\text{Carbon (red-hot)}}{C} + \underset{\text{Steam}}{H_2O} \longrightarrow \underbrace{CO + H_2}_{\text{water gas}}$$

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B4. Three uses of metals are:-

(i) Magnesium burns in air with air with a dazzling white light when ignited. Therefore, it is used in fireworks.

(ii) Mercury is a good conductor of heat and does not stick to glass. Because of this, it is used in thermometers.

(iii) Aluminium foil, which is very light, is used to pack food, medicines etc.

B5. Carbon is found in two crystalline forms - diamond and graphite, which have the following uses -

(i) Diamond is used as gem as also for cutting rocks or glass.

(ii) Graphite is a good conductor of electricity, therefore it is used as an electrode.

(iii) Graphite is also used in the manufacture of pencils.

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