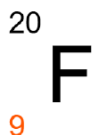


Name:

Class:



State the mass number of this fluorine atom.

Mass number: **20**

Give the electronic configuration of this fluorine atom.

2, 7

Describe what you would see if damp, blue litmus paper is placed into chlorine gas.

Observation: the damp blue litmus paper will turn red and then be bleached white.**Both changes must be stated correctly.**

A student investigates the decomposition of calcium carbonate by heating it strongly. The balanced chemical equation is:

Calculate the volume of carbon dioxide gas (CO_2) produced in this reaction.Give your answer in dm^3 .Calculate Mr of CaCO_3

$$40 + 12 + (16 \times 3) = 40 + 12 + 48 = 100$$

Calculate moles of CaCO_3

$$\text{Moles} = \text{Mass} \div \text{Mr} = 5.0 \div 100 = 0.05 \text{ (mol)}$$

Calculate volume of CO_2

$$\text{Volume} = \text{Moles} \times \text{Molar Volume}$$

$$\text{Volume} = 0.05 \times 24$$

$$\text{Volume} = 1.2 \text{ dm}^3$$

Graphite conducts electricity. Explain why.

Graphite has delocalised electrons which can move and carry charge.

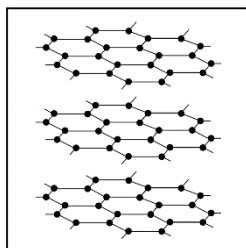
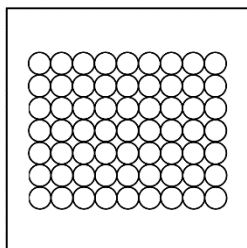
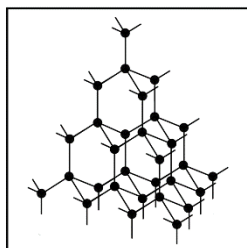
State the ion which causes a solution to be acidic.

 H^+ or hydrogen ion

Calcium phosphate is used in fertilisers. The bonding in calcium phosphate is ionic.

Calcium phosphate contains the phosphate ion, PO_4^{3-} . What is ionic bonding?**Ionic bonding is the electrostatic attraction between oppositely charged ions.**

Which diagram, A, B or C, shows the structure of graphite? Circle the correct letter.

**A****B****C**

What type of bonding is present in graphite and diamond?

Covalent (bonding)