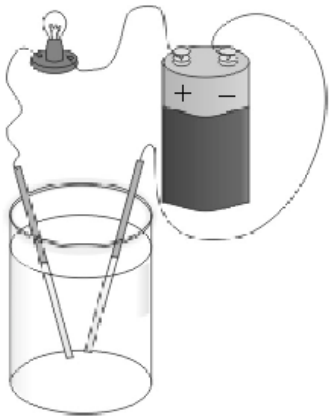
Question 1

(*a*) An ionic substance is dissolved in water and its ability to conduct electricity is tested, as in the diagram on the right.



(*i*) Name an ionic substance. _____

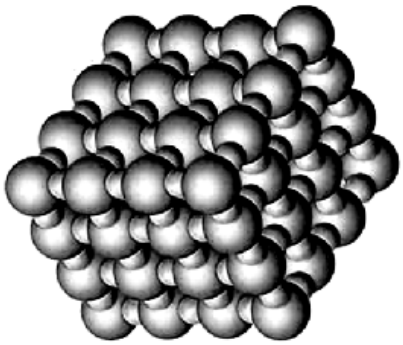
(*ii*) Why can an ionic substance conduct electricity when it is dissolved in water?

_____

_____

Question 2

(*e*) The diagram shows part of a crystal of sodium chloride. Name the type of bonding in sodium chloride. Describe this type of bonding.



Name _____

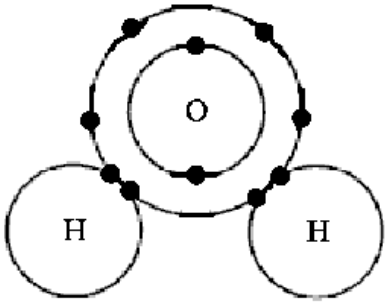
Describe _____

_____

(1) (2)

Question 3

(*a*) The diagram shows the way the atoms bond together in a molecule of water.



(*i*) What is a molecule? (3)

_____

_____

_____

(*ii*) Each hydrogen atom shares two electrons with the oxygen atom. What name is given to the type of bonding that involves the sharing of pairs of electrons? (3)

_____

(*iii*) In the space below, draw a diagram of a methane molecule, CH_4, showing the bonding between its atoms. (6)

(*iv*) Describe a second type of chemical bonding and name a compound which has this type of bonding. (9)

Describe _____

_____

_____

_____

Compound _____

(1) (2)

(*d*) Some atoms join together by *sharing pairs of electrons*.
This is called *covalent bonding*. Draw a ***diagram*** in the box below showing the ***covalent bonding in a molecule of water***.