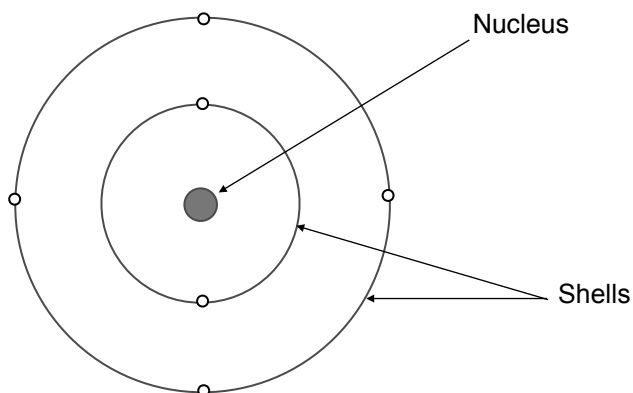


- 1 Methane gas is supplied to homes for the purpose of heating and cooking. Methane is a compound made of carbon and hydrogen.

The diagram shows an atom of carbon.



**Table 1** shows the sub atomic particles that are present in an atom of carbon.

**Table 1**

Particle	Location	Charge
Electron	Shells/orbitals/energy levels [1]	-1 [1]
Neutron	Nucleus	Neutral or no charge or 0 [1]
Proton	Nucleus [1]	+1

- 1 (a) (i) Complete the table.

[4 marks]

- 1 (a) (ii) Methane gas is made of molecules.

What is a molecule?

[2 marks]

Two or more atoms/elements [1]

Chemically joined/combined [1]

With covalent bonds [1]

Ionic compounds don't have molecules.

- 1 (a) (iii) Carbon and hydrogen atoms in methane are held together by bonds.

Complete the sentence below by choosing the correct word from the given list. [1 mark]

donating      sharing      gaining      losing

The bonds between carbon and hydrogen atoms in methane gas are created by

sharing [1] electrons.

(Total 7 marks)

End