

Question 1

Methane (CH_4) has a boiling point of -161°C , while water has a boiling point of 100°C . Explain the huge different in boiling point of both substance. You may relate your explanation with bonding between molecules.

Question 2

By using periodic table, determine the possible number of covalent bonds that can be formed from atom of the following elements

- i. Nitrogen
- ii. Silicon
- iii. Sulfur
- iv. Neon

Question 3

Determine what type of atomic bonding that is present in diamond and graphite. Describe why diamond is extremely hard material compared to graphite. You may use graphical depiction to assist your explanation.