Chemistry

Carbon and Its Compounds

Q1 Which was the first organic compound prepared in the laboratory?
(A) NH_4Cl (B) $KCNO$
(C) NH_4CNO (D) NH_2CONH_2

Q2 What will be the total number of covalent bonds in hexane?
(A) 17 (B) 18
(C) 19 (D) 20

Q3 Identify the class of hydrocarbons in which the number of hydrogen atoms is twice the number of carbon atoms considering one double bond in that hydrocarbon?
(A) Alkane (B) Alkyl
(C) Alkene (D) Alkyne

Q4 Pentane has the molecular formula C_5H_{12}. It has_____
(A) 5 covalent bonds
(B) 12 covalent bonds
(C) 16 covalent bonds
(D) 17 covalent bonds

Q5 The first member of the alkane series is_____
(A) C_2H_6 (B) CH_4
(C) C_3H_8 (D) C_4H_{10}

Q6 In diamond, every carbon atom is bonded to_____ other carbon atoms.
(A) 3 (B) 2
(C) 4 (D) 5

Q7 Which of the following allotropes of carbon is used for cutting the glass?
(A) Graphite (B) Graphene
(C) Diamond (D) Coke

Q8 The core of the pencil is made from which of the following element?
(A) Silicon (B) Carbon
(C) Lead (D) Sodium

Q9 In graphite, carbon atoms are arranged in layers of
(A) pentagonal arrays
(B) hexagonal arrays
(C) heptagonal arrays
(D) octagonal arrays

Q10 Buckminsterfullerene is an allotropic form of:
(A) phosphorus (B) sulphur
(C) carbon (D) tin

Answer Key

Q1	D
Q2	C
Q3	C
Q4	C
Q5	B
Q6	C
Q7	C
Q8	B
Q9	B
Q10	C

Hints & Solutions

Note: scan the QR code to watch video solution

Q1 Text Solution:

The first organic compound prepared in the laboratory was urea (NH_2CONH_2).

Video Solution:

Q2 Text Solution:

The total number of covalent bonds in hexane is 19.

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Q3 Text Solution:

The class of hydrocarbons where the number of hydrogen atoms is twice the number of carbon atoms, considering one double bond, is Alkene. Alkenes have the general formula C_nH_{2n}, where the number of hydrogen atoms is twice the number of carbon atoms.

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Q4 Text Solution:

Pentane has 16 covalent bonds.

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Q5 Text Solution:

The first member of the alkane series is methane, which has the chemical formula CH_4.

Video Solution:

Q6 Text Solution:

In diamond, every carbon atom is bonded to four other carbon atoms. This forms a strong, rigid, three-dimensional tetrahedral lattice, which accounts for the diamond's exceptional hardness.

Video Solution:

Q7 Text Solution:

Diamond is used for cutting the glass.

Video Solution:

Q8 Text Solution:

The core of a pencil is made from carbon in the form of graphite.

Video Solution:

Q9 **Text Solution:**

In graphite, carbon atoms are arranged in layers of hexagonal arrays.

Video Solution:

Q10 **Text Solution:**

Buckminsterfullerene is an allotropic form of carbon, consisting of carbon atoms arranged in a spherical structure.

Video Solution: