CHEMISTRY

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Board – CBSE	Class – 11th	Topic – Organic Chemistry Basic Principles & Techniques

1. Using curved – arrow notation, show the formation of reactive intermediates when the following covalent bond undergo heterolysis cleavage.
   (a) $CH_3 – SCH_3$, (b) $CH_3 – CN$, (c) $CH_3 – Cu$
2. Benzyl carbonation is more stable than ethyl carbonation. Justify.
3. Write resonance structures of (a) CH_3COO^- (b) $C_6H_5NH_2$
4. 0.395 g of an organic compound by Carius method for the estimation of sulphur gave 0.582 g of $BaSO_4$. Calculate the percentage of sculpture in the compound.
5. 0.40g of an organic compound gave 0.3g of AgBr by Carious method. Find the percentage of bromine in the compound.
6. 0.12g of organic compound containing phosphorus gave 0.22g of $Mg_2P_2O_7$ by the usual analysis. Calculate the percentage of phosphorus in the compound.
7. Write the expanded form of the following condensed formulas into their complete structural formulas. (a) $CH_3CH_2COCH_2CH_3$ (b) $CH_3CH{=}CH\,(CH_2)_3\,CH_3$.
8. Give two examples of aliphatic compounds.
9. Write an example of alicyclic compound.
10. Write the structural formula of
    (a) p – Nitro aniline (b) 2, 3 – Dibromo-1-phenylpentane.
11. Derive the structure of 3 – Nitro cyclohexene.
12. How many structural isomers and geometrical isomers are possible for a cyclohexane derivative having the molecular formula C_9H_{16}?
13. Which of the following shows geometrical isomerism?
    (a) CHCl = CHCl (b) $CH_2 = CCl_2$ (c) $CCl_2 = CHCl$.
14. How many isomers are possible for monosubstituted and disubstituted benzene?
15. Write resonance structures of $CH_2 = CH – CHO$. Indicate relative stability of the contributing structure.
16. Show how hyper conjugation occurs in propene molecule
17. What are the nucleophiles?