EXERCISE

Q1. Select the right answer from the choices given with each question.

1) **The major portion of natural gas is:**

a) Ethane b) Propane c) Butane d) Methane

2) **In organic compounds carbon atoms form;**

a) Ionic bond b) Metallic bond c) Covalent bond d) None of these

3) **Which of the following is an aromatic compound?**

a) Propanol b) Cyclohexane c) Acetone d) Benzene

4) **There are few homologous series of compounds. The existence of homologous series is due to;**

a) Functional group b) Cracking

c) Isomerism d) Polymerization

5) **Which of the following compound is heterocyclic?**

a) Pyridine b) Pyrole c) Thiphene d) All of the above

6) **Select from the following the one, which is alcohol;**

a) $CH_3 - CH_2 - OH$ b) CH_3-O-CH_3

c) $CH_3\ COOH$ d) CH_3-CH_2-Br

7) **Lassaignes' solution is prepared in the detection of elements of organic compound. Which metal is used for the reaction with organic compound?**

a) Aluminium b) Sodium c) Iron d) Copper

8) When AgN03 is added to the Lassaignes' solution which colour is formed for Iodine:

a) Blue b) Violet c) Green d) Deep yellow

9) When water vapours are passed over, white anhydrous copper sulphate, which colour is formed?

a) White b) Deep blue c) Yellow d) Brown

10) The Simplest molecule of Bucky Ball contain carbon atoms;

a) 20 b) 8 c) 60 d) IOO

11) If a molecule contains more than one functional group it is known as:

a) Derivative b) Poly functional

c) Heterocyclic d) Isomer

Answers

I)	a	**2)**	C	**3)**	d	**4)**	a	**5)**	d
6)	a	**7)**	b	**8)**	d	**9)**	b	**10)**	c
11)	b								

Q2. Give brief answers for the following questions.

Q1: What is functional group?

Answer

Please see Answer of QI 7 of Chapter Notes.

Q2: What is the Difference between partial and total synthesis of organic compounds?

Answer

Total Synthesis

In an organic chemistry a total synthesis is in principle, the complete chemical synthesis of complex organic mole cubes from simpler pieces, usually without the aid of biological processes. In practice these simpler pieces are commercially available in bulk and semi — bulk quantities and are often petrochemicals precursors.

Sometimes bulk natural products (e.g sugar) are used as starting materials and it assumed that these have been or can be synthesized from constituent elements. The target molecules can be natural products, medicinally important active ingredients or organic compounds of the oratical in chemistry or biology. A new route for synthesis is developed in the course of the investigation, and the route may be the first one to developed for the substance.

Examples:

Cholesterol, cortisone, strychnine, lysergic acid, chlorophyll, vitamin B and quinine etc.

Partial Synthesis

Partial synthesis is a type of chemical synthesis that uses compounds isolated from natural sources (e.g plant material or bacterial or cell cultures) as a starting material. These natural biomolecules ore usually large and complex molecules.

This is opposed to a total synthesis where large molecules are synthesized from a stepwise combination of small and cheap (Usually petrochemicals) building blocks.

Partial synthesis is usually used when precursor molecule is too structurally complex. For example, artemether.

Q3: How organic compounds are derived by fermentation process?

Answer

In fermentation process some enzymes are used to decompose naturally occurring substances into some other useful substances.

For example, to get ethyl alcohol there are added diastase, invertase and zymase enzymes in starch. Reactions involving process of fermentation of starch are as follows

Q4: What is coal? How is coal used as a source of organic compound?

Answer

Please see Answer ofQ9 of Chapter Notes.

Q5: What is the name of new allotropic from of carbon? Give is definition?

Answer

Please see Answer of Q 14 of Chapter Notes.

Q6: What is Homologous series?

Answer

Please see Answer of QI 5 of Chapter Notes.

Q7: How metals can be detected in organic compounds?

Answer

The substance in a crucible preferably of platinum, till all reaction ceases. An incombustible residue indicated the presence of a metal in a substance. The residue is extracted with dilute acid and the solution is test for the presence of metallic radical by the usual scheme employed for inorganic salts.

Q3. Give detailed answers for the following questions.

QI. What are the main sources of organic compounds? Also give the fractions of petroleum.

Answer

Please see Answer of QI and Q2 of Chapter Notes.

Q2: Write down the characteristics of organic compounds from inorganic compounds.

Answer

Please see Answer of Q 1 0 of Chapter Notes.

Q3: How organic compounds are used in our daily life?

Answer

Food, vitamins, clothes etc are all organic compounds.

Q4: Write down any ten functional groups of organic compounds? Give reasons for the importance of organic chemistry.

Answer

Please see Answer of Q1 7 of Chapter Notes.

Q5: Give the chemical tests for the detection of elements in organic compounds?

Answer

Please see Answer ofQ20 of Chapter Notes.