PRINT

Qn No. 1 *Chapter Name:Reactions of Organic Compounds*

Qn.

$CH_4 + Cl \xrightarrow{SUNLIGHT} A + HCl$

a. What is the name of the compound A?

b. To which type does this reaction belong?

(Addition reaction, Substitution reaction, Combustion, Polymerisation)

Hint.
a. CH_3Cl

b. Substitution reaction

Marks :(2)

Hide Answer

Qn No. 2 *Chapter Name:Reactions of Organic Compounds*

Qn.
Answer the question by analysing the equation given

1. **$CH_4 + Cl_2 \rightarrow A + HCl$**
2. **$CH_4 + 2O_2 \rightarrow B + C$+ heat**
3. **$nCH_2{=}CH_2 \rightarrow D$**

a) What are A, B, C and D

b)Name the product D formed during the third reaction

c)To which type of reaction does the first equation belong.?

Hint.
a) A – CH_3Cl

B – CO_2

C - H_2O

D –$[CH_2– CH_2]_n$-

b. polythene

c. Substitution reaction

Marks :(4)

Hide Answer

Qn No. 3 *Chapter Name:Reactions of Organic Compounds*

Qn.
Ethanol and Ester

A. CH_3–COOH

B. $CH_3–CH_2–OH$

C. Petrol

Answer the questions related with the given compounds

a) Choose the substances which can be used to make an ester

b) Which of the above substances are used to make power alcohol?

Hint.
a)CH_3-COOH, CH_3-CH_2OH

b)CH_3-CH_2OH, Petrol

Marks :(2)

Hide Answer

Qn No. 4 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Choose the suitable compounds from those given in brackets to make it undergo the following reaction

CH_4, C_2H_4, C_8H_{18} , CH_3Cl

1. **Thermal cracking**
2. **Polymerisation**

Hint.
1. **C_8H_{18}**
2. **C_2 H_4**

Marks :(2)

Hide Answer

Qn No. 5 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Why are hydrocarbons used as fuel ?

Hint.
During the combustion of hydrocarbons large amount of heat energy is released /Burning of hydrocarbon is highly exothermic

Marks :(1)

Hide Answer

Qn No. 6 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Uses of some organic compounds are given below.Choose the appropriate compound from the bracket according to each use.

(Teflon , Ester, Ethanoic acid, ethanol, power alcohol)

1. **Used as a solvent and in production of different organic compounds**
2. **Used in the production of artificial perfumes**
3. **Used as fuel in automobiles**
4. **Used in making non-stick cooking vessels**

Hint.

1. **ethanol,**
2. **Ester,**
3. **power alcohol**
4. **Teflon**

Marks :(4)

Hide Answer

Qn No. 7 ***Chapter Name:Reactions of Organic Compounds***

Qn.
a) What is power alcohol?

b) What is its use ?

Hint.
a)A mixture of absolute alcohol and petrol

b) It is used as fuel in automobiles

Marks :(2)

Hide Answer

Qn No. 8 ***Chapter Name:Reactions of Organic Compounds***

Qn.

$$CH_3 - OH + CO \xrightarrow{\text{Catalyst}} A$$

$$A + CH_3\text{-}CH_2OH \longrightarrow B + H_2O$$

1. **Write the structures of A and B**
2. **Name the catagory of compounds to which B belongs?**

Hint.

1. **A CH3 COOH**

   B $CH_3\ COOCH_2 - CH_3$

2. **ester**

.

Marks :(3)

Hide Answer

Qn No. 9 *Chapter Name:Reactions of Organic Compounds*

Qn.

$C_{12}H_{22}O_{11} + H_2O \xrightarrow{A} C_6H_{12}O_6 + C_6H_{12}O_6$

$C_6H_{12}O_6 \xrightarrow{Zymase} B + 2CO_2$

1. **what are A and B ?**
2. **How is rectified spirit produced from the mixture ?**

Hint.

1. **A – Invertase . B – C_2H_5-OH**
2. **Fractional distillation**

Marks :(3)

Hide Answer

Qn No. 10 *Chapter Name:Reactions of Organic Compounds*

Qn.

Ethanol is produced by the fermentation of diluted molasses. What is meant by molasses?

Hint.

Molasses is the concentrated solution of sugar left behind after separation of sugar crystals during the manufature of sugar

Marks :(1)

Hide Answer

Qn No. 11 *Chapter Name:Reactions of Organic Compounds*

Qn.

$C_3H_8 \rightarrow CH_4 +$ A

1. **Give the molecular formula of A**
2. **To which catagory does the compound A belong?**

(Alkane , Alkene ,Alkyne)

Hint.

1. **C_2H_4**
2. **Alkene**

Marks :(2)

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Hide Answer

Qn No. 12 *Chapter Name:Reactions of Organic Compounds*

Qn.

1. **What are the products formed by the complete burning of butane in air ?**
2. **Name this reaction.**

Hint.

1. **CO_2 , H_2O (carbon dioxide, water)**
2. **Combustion.**

Marks :(2)

Hide Answer

Qn No. 13 *Chapter Name:Reactions of Organic Compounds*

Qn.
Which among the following can undergo addition reaction?

(C_3H_8 , C_2H_4 , CH_4 , C_4H_{10})

Hint.
C_2 H_4

Marks :(1)

Hide Answer

Qn No. 14 *Chapter Name:Reactions of Organic Compounds*

Qn.
Match suitably

	Reactants	Products	Name of the reaction
1.	$CH_3–CH_3 + Cl_2$	$CH_2=CH_2 + Cl_2$	Addition reaction
2.	$2CH_3–CH_3 + 7O_2$	$CH_3–CH_3$	Substitution reaction
3.	$CH_2=CH_2 + H_2$	$4CO_2 + 6H_2O$	Thermal cracking
4.	$CH_3–CH_2–CH_3$	$CH_3–CH_2–Cl + HCl$	Combustion

Hint.

Reactants	Products	Name of the reaction

1. $CH_3–CH_3 + Cl_2$	$CH_3-CH_2Cl + HCl$	Substitution reaction
2. $2CH_3–CH_3 + 7O_2$	4CO2 + 6H2O	Combustion
3. $CH_2=CH_2 + H_2$	$CH_3–CH_3$	Addition reaction
4. $CH_3–CH_2–CH_3$	$CH_2=CH_2 + CH_4$	Thermal cracking

Marks :(4)

Hide Answer

Qn No. 15 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Give the products formed by the following reactions

1. $CH_2=CH_2 + HCl \rightarrow$ -------
2. $CH\equiv CH + 2H_2 \rightarrow$ ---------

Hint.
a) CH_3-CH_2Cl

b) CH_3-CH_3

Marks :(2)

Hide Answer

Qn No. 16 ***Chapter Name:Reactions of Organic Compounds***

Qn.
An organic reaction is given

$CH_2=CH_2 + A \rightarrow CH_3-CH_2Cl$

1. **What is A?**
2. **What is the name for this type of reaction?**

Hint.
1. **HCl**
2. **Addition reaction**

Marks :(2)

Hide Answer

Qn No. 17 ***Chapter Name:Reactions of Organic Compounds***

Qn.
An organic reaction is given.

A + Cl_2 → CH_3Cl + HCl

1. **What is the compound A ?**
2. **By which name is this reaction known?**

Hint.

1. **CH_4**
2. **Substitution reaction**

Marks :(2)

Hide Answer

Qn No. 18 ***Chapter Name:Reactions of Organic Compounds***

Qn.
An incomplete equation showing a polymerisation reaction is given

nCH_2=CHCl → ----------

1. **Draw the structrue of the product**
2. **Write any one use of the product**

Hint.

1. **PVC (structure).**
2. **It is used for the production of pipes(or any other use)**

Marks :(2)

Hide Answer

Qn No. 19 ***Chapter Name:Reactions of Organic Compounds***

Qn.
A polymerisation reaction is given

n CF2 = CF2 → -- [--CF_2- CF_2 --]-- $_n$

a)Name the monomer .

b)What is the name of the polymer?

c)Give any one use of the polymer

Hint.
a)Tetrafluoroethene

b)Teflon/ PTFE

c) It is used for coating on inner surface of non- stick cookware(Any other use)

Marks :(3)

Hide Answer

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Qn No. 20 *Chapter Name:Reactions of Organic Compounds*

Qn.
Examine the equation given

CH_2=CH–CH_3 + H_2 → CH_3–CH_2–CH_3

a) Choose the saturated hydrocarbon and unsaturated hydrocarbon in the above equation

b)By which name is this type of reactions are known?

Hint.
a) Unsaturated hydrocarbon CH_2=CH–CH_3

Saturated hydrocarbon CH_3–CH_2–CH_3

b) Addition reaction

Marks :(2)

Hide Answer

Qn No. 21 *Chapter Name:Reactions of Organic Compounds*

Qn.
See the equation given

CH_3–COOH + CH_3–OH → A + H_2O

a) Write the formula of A and complete the equation.

b)To which catagory of compounds does A belong ?

Hint.

a) CH_3-COO-CH_3

b) Esters

Marks :(2)

Hide Answer

Qn No. 22 *Chapter Name:Reactions of Organic Compounds*

Qn.
a)How is ethanol converted to denatured spirit ?

b) Why is it necessary? Explain

Hint.
a) By adding poisonous substance like methanol

b) For preventing the use of industrial alcohol as beverage .

Marks :(2)

Hide Answer

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Qn No. 23 *Chapter Name:Reactions of Organic Compounds*

Qn.
Name the polymer formed by the combination of vinylchloride molecules

Hint.
Poly vinylchloride/PvC

Marks :(1)

Hide Answer

Qn No. 24 *Chapter Name:Reactions of Organic Compounds*

Qn.
Structural formula of some compounds are given

1. $CH_3–CH_2–COO–CH_3$
2. $CH_3–CH_2–COOH$
3. $CH_3–CH_2–CO-CH_3$
4. $CH_3–OH$

a)Which of the above compunds represent an ester ?

b)Name the compounds needed to prepare this ester

c)Write the equation of the above reaction.

d)Write one use of ester.

Hint.
a)$CH_3–CH_2–COO–CH_3$

b)Methanol and Propanoic acid or ($CH_3–OH$, $CH_3–CH_2–COOH$)

c)$CH_3–CH_2–COOH + CH_3–OH \rightarrow CH_3-CH_2-COO-CH_3 + H_2O$

d) To make sweet smell of flowers and fruits

Marks :(3)

Hide Answer

Qn No. 25 *Chapter Name:Reactions of Organic Compounds*

Qn.
Some equations are given

$CH_2 = CH_2 + A \rightarrow CH_3 – CH_3$

$CH_3 – CH_3 + Cl_2 \rightarrow B + HCl$

1. **Fiind out A and B**
2. **Write the name of the second reaction**

Hint.
1. **A - H_2 B - $CH_3–CH_2-Cl$**

.

2. Substitution reaction

Marks :(3)

Hide Answer

Qn No. 26 ***Chapter Name:Reactions of Organic Compounds***

Qn.
PVC is a polymer used for the preparation of pipes. What is the name of its monomer?

Hint.
Vinyl chloride / CH_2 = CHCl

Marks :(1)

Hide Answer

Qn No. 27 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Choose the two products formed by the thermal cracking of $CH_3–CH_2–CH_3$ from the box given below and write them.

CH_4	$CH_3–CH_2–CH=CH_2$
$CH_2=CH_2$	$CH_3–CH_2-CH_3$

Hint.
CH_4 ,$CH_2=CH_2$

Marks :(2)

Hide Answer

Qn No. 28 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Choose Grape spirit and Wood spirit from the following

(CH_3-CH_2-OH, CH_3-COOH, CH_3-OH,)

Hint.
Grape spirit - CH_3-CH_2-OH

Wood spirit - CH_3-OH

Marks :(2)

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Hide Answer

Qn No. 29 *Chapter Name:Reactions of Organic Compounds*

Qn.
Formula of a compound is CH_3–OH

1. **Write the IUPAC name of the compound? 1**
2. **Write two uses of this compound**

Hint.

1. **Methanol**
2. **Manufacture of many compounds such as formalin,antifreeze,denaturant e.t.c (Any two)**

Marks :(3)

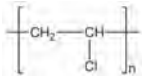
Hide Answer

Qn No. 30 *Chapter Name:Reactions of Organic Compounds*

Qn.

1. **Complete the following equation**
   nCH_2=CHCl → ------
2. **Write the name of the reaction**

Hint.
a)



b) Polymerisation

Marks :(2)

Hide Answer

Qn No. 31 *Chapter Name:Reactions of Organic Compounds*

Qn.
Some compounds are given

A. $CH_2 = CH – CH_2 – CH_3$

B. $CH_3 – CH_2 – CH_3$

C. $CH_3 – CH = CH_2$

D. CH_4

E. $CH_3 – CH_2 – CH_2 \_ CH_3$

1. **Which of these compounds can form polymer?**
2. **What are the products obtained by thermal cracking of B?**

.

Hint.

1. $CH_2=CH–CH_2-CH_3$, $CH_3-CH=CH_2$
2. $CH_2=CH_2$, CH_4

Marks :(4)

Hide Answer

Qn No. 32 ***Chapter Name:Reactions of Organic Compounds***

Qn.
a) How is ethanoic acid prepared industrially?

b)Write any two uses of ethanoic acid.

Hint.
a) Ethanoic acid can be manufactured by reacting methanol with carbon monoxide in the presence of catalyst

$CH_3-OH + CO \rightarrow CH_3-COOH$

b) In rayon,rubber and silk industries,for manufacture of vinegar.

Marks :(3)

Hide Answer

Qn No. 33 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Ethanol is prepared from sugar solution by adding yeast.

a) What is the name of the process by which ethanol is produced ?

b) Which enzymes present in yeast are used in this process?

Hint.

1. **Fermentation**
2. **Invertase, Zymase**

Marks :(3)

Hide Answer

Qn No. 34 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Explain the following

1. **Wash**
2. **Rectified spirit**
3. **Absolute alcohol**

Hint.
a) 8-10% ethanol is known as wash

b)Wash is subjected to fractional distillation to get 95.6% ethanol , known as

rectified spirit

c) Ethanol of purity above 99% is known as absolute alcohol

Marks :(3)

Hide Answer

Qn No. 35 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Write any two uses of ethanol

Hint.

1. **As preservative**
2. **As fuel (any two uses)**

Marks :(2)

Hide Answer

Qn No. 36 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Match the following

A		B	
1.	$CH_2 = CH_2 + H_2 \rightarrow CH_3 \_ CH_3$	1.	Polymerisation
2.	$CH_3 - CH_2 - CH_3 \rightarrow CH_2 = CH_2 + CH_4$	2.	Substitution
3.	$CH_4 + Cl_2 \rightarrow CH_3Cl + HCl$	3.	Additon reaction
4.	$n\ CH_2 = CH_2 \rightarrow [CH_2 - CH_2]_n$	4.	Thermal cracking

Hint.

1. **Addition reaction**
2. **Thermal cracking**
3. **Substitution**
4. **Polymerisation**

Marks :(4)

Hide Answer

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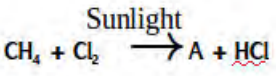
Qn No. 37 *Chapter Name:Reactions of Organic Compounds*

Qn.



a. What is the name of the compound A?

b. To which type does this reaction belong?

(Addition reaction, Substitution reaction, Combustion, Polymerisation) (1)

Hint.
a. CH_3Cl

b. Substitution reaction

Marks :(2)

Hide Answer

Qn No. 38 *Chapter Name:Reactions of Organic Compounds*

Qn.
CH_3 -CH = CH_2 + Cl_2 → A

a which is the reactant hydrocarbon?

b. Write the name or structure of the product A

c. Write the name of the reaction

Hint.
a. CH_3 – CH = CH_2 / Propene

b. CH_3 – CHCl– CH_2Cl / 1,2-dichloro propane.

c. Addition reaction

Marks :(3)

Hide Answer

Qn No. 39 *Chapter Name:Reactions of Organic Compounds*

Qn.
A CH ≡ CH + H_2 →X

B X + H_2 →Y

C Y + Cl_2 →Z + HCl

a. Write the molecular formula of the compounds X, Y and Z

b. By which name the reaction B is known?

Hint.
a) X. $CH_2 = CH_2$

Y. $CH_3 – CH_3$

Z. $CH_3 – CH_2Cl$

b) Addition reaction

Marks :(3)

Hide Answer

Qn No. 40 ***Chapter Name:Reactions of Organic Compounds***

Qn.
Different types of reactions are given in brackets

(Addition reaction, Polymerisation, Substitution, Combustion)

a. $CH_4 + 2O_2 \rightarrow CO_2 + 2\ H_2O$

b. $CH_3 – CH_3 + Cl_2 \rightarrow CH_3 – CH_2 – Cl + HCl$

c. $n\ CH_2 = CH_2 \rightarrow -[-CH_2-CH_2-]-_n$

d. $CH_2 = CH_2 + H_2 \rightarrow CH_3 – CH_3$

Find the type of reaction to which each of the above ones belong and write them.

Hint.
a. Combustion

b. Substitution

c. Polymerisation

d. Addition reaction

Marks :(4)

Hide Answer

Qn No. 41 ***Chapter Name:Reactions of Organic Compounds***

Qn.
$CH_2 = CH_2 + HCl \rightarrow X$

a. Write the chemical formula of the product X formed during the reaction

b. Write the IUPAC name of the product

Hint.
a.CH_3-CH_2Cl

b. Chloroethane

Marks :(2)

Hide Answer

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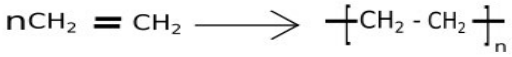
Qn No. 42 *Chapter Name:Reactions of Organic Compounds*

Qn.



a. Which is the monomer of this reaction?

b. Write the name of the polymer.

c. Which type of chemical reaction is this?

Hint.

a. Ethene/CH_2 =CH_2

b. Polythene

c. Polymerisation

Marks :(3)

Hide Answer