

## DPP

DAILY PRACTICE PROBLEMS

CLASS : XII<sup>th</sup>  
DATE :

**SOLUTIONS**

SUBJECT : CHEMISTRY  
DPP NO. : 3

### Topic :-HYDROCARBONS

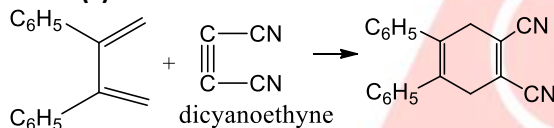
1 (d)

Compound  $\left[ \text{C}_8\text{H}_8 \right]^{2-}$  has  $8 + 2 = 10\pi$  electrons hence is aromatic.  $\square$  has  $4\pi e^-$ ,  $\text{C}_8\text{H}_8$  has  $8\pi e^-$ , while  $\left[ \text{C}_8\text{H}_8 \right]^-$  has  $8 + 1 = 9\pi e^-$ , hence all these species are not aromatic

2 (b)

It is a mixture of solid hydrocarbons.

3 (c)



2,3-diphenyl-  
1,3-butadiene

This reaction is an example of Diel's Alder reaction

4 (d)

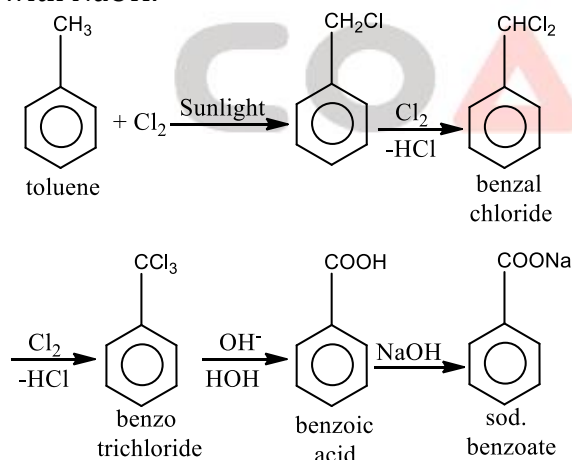
All of these can be used in cracking.

5 (b)

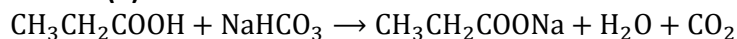
General formula of a cycloalkane is  $C_nH_{2n}$ .

6 (b)

Toluene reacts with excess of  $Cl_2$  in presence of sunlight, the last product of this reaction is benzotrichloride which on hydrolysis gives benzoic acid, and it gives sodium benzoate on reaction with  $NaOH$ .



8 (d)





9 (a)

$C_2H_2 + \frac{5}{2}O_2 \rightarrow 2CO_2 + H_2O$ ; 1 mole or 1 vol. of  $C_2H_2$  requires 2.5 mole or 2.5 vol. of  $O_2$ .

10 (a)

Conjugate dienes are more stable than the other dienes.

11 (c)

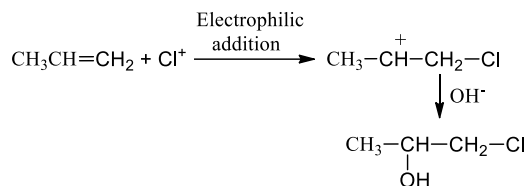
Branched chain alkanes give rise to increase in octane no.

12 (d)

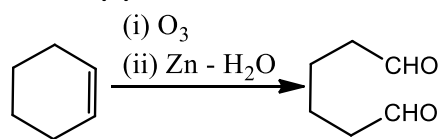
Follow Markownikoff's rule.

13 (b)

HOCl has  $Cl^+$  and  $OH^-$  ions



14 (b)



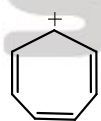
$Zn - H_2O$  is the reagent for reductive work up of ozonide.  $H_2O_2 - CH_3COOH$  would give  $HOOC - (CH_2)_4 - COOH$ .

15 (d)

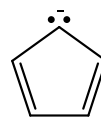
The  $\pi$ -bond is unshared in electromeric effect to give +ve and -ve centres on molecule.



16 (d)



Tropylium cation is planar and has  $6\pi$ -electrons according to Huckel rule, hence it is aromatic.



Cyclopentadienyl anion is planar and has  $6\pi$ -electrons, hence it is also an aromatic compound.

17 (a)

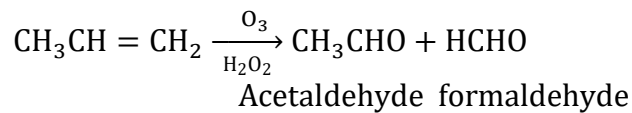
Follow peroxide effect.

18 (a)

In the laboratory, nitrobenzene is prepared by nitration of benzene with the mixture of nitric acid and sulphuric acid at a temperature below  $60^\circ C$ . In which  $HNO_3$  acts as a base

19 (d)

The reaction is ozonolysis. During the reaction  $C = C$  breaks to give carbonyl compounds.



20 (a)

Petrol or gasoline contains mainly C<sub>6</sub> to C<sub>11</sub> atoms liquid alkanes.

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	D	B	C	D	B	B	D	D	A	A
Q.	11	12	13	14	15	16	17	18	19	20
A.	C	D	B	B	D	D	A	A	D	A

SMARTLEARN  
COACHING