DPP
DAILY PRACTICE PROBLEMS

CLASS : XIth
DATE :

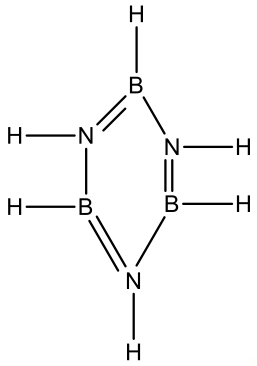
Solutions

SUBJECT : CHEMISTRY
DPP No. : 3

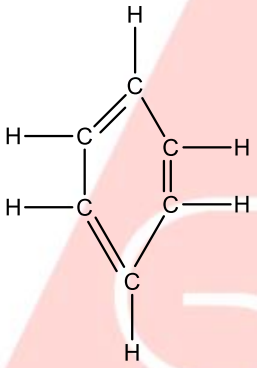
Topic :- THE P-BLOCK ELEMENTS-1

1 **(c)**

Borazine, $B_3N_3H_6$ is also known as inorganic benzene due to its resemblance in structure and properties with benzene.



borazole or borazine



benzene

2 **(a)**

$Na_2B_4O_7 + 2HCl + 5H_2O \longrightarrow 2NaCl + 4H_3BO_3$

3 **(c)**

Ruby is mineral of aluminium *ie*, Al_2O_3.
It does not contain silicon.

4 **(d)**

Zeolites are aluminosilicates having three dimensional open structure in which four or six membered rings predominates.
Thus, due to open chain structure, they have cavities and can take up water and other small molecules.

5 **(b)**

The stability and basic character of hydrides decreases down the group.

6 **(c)**

The m.p. are B 2300°C, Al 660°C, Ga 29.8°C, Tl 303°C

7 **(b)**

It is a fact.

8 **(d)**

$PbSO_4$ is insoluble compound.

9 **(b)**

Solid CO_2 sublimes directly to the vapour state (without converting into liquid) at $-78°C$ under atmospheric pressure, hence used as a refrigerant and called dry ice or cardice. It is used to freeze metals, ice-cream and in laboratory as a coolant.

11 **(c)**

Froth-floatation is used to concentrate sulphide ores [Galena (PbS)].

12 **(d)**

It is an use of Al which on coating prevents corrosion of surface coated.

13 **(b)**

Due to hydrolysis of Al^{3+} ions.

14 **(a)**

In alumino thermic process, aluminium is used as reducing agent.

$e.g., Fe_2O_3 + 2Al \xrightarrow{3000°C} Al_2O_3 + 2Fe + 185\text{kcal}$

15 **(b)**

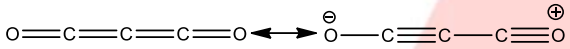
It is a fact.

16 **(d)**

Pb^{4+} is strong oxidant and I^- is strong reductant and thus, PbI_4 does not exist.

17 **(a)**

Carbon suboxide (C_3O_2) is anhydride of malonic acid. It has linear structure. $C-C$ bond length is 130 Å and $C-O$ bond length is 120 Å.



18 **(d)**

$$Pb(NO_3)_2 \longrightarrow PbO + 2NO_2 + \frac{1}{2}O_2$$

19 **(a)**

AlI_3, on reaction with CCl_4, gives the $AlCl_3$

$4AlI_3 + 3CCl_4 \longrightarrow 4AlCl_3 + 3CI_4$

20 **(a)**

General formula of alum is, $M_2'SO_4 \cdot M_2'''(SO_4)_3 \cdot 24H_2O$

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