DPP-2 (Solutions)

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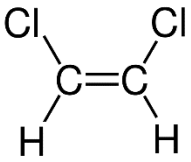
1 **(A)**

Increased number of electrons, enhance the polarisability of the molecules.

2 **(D)**

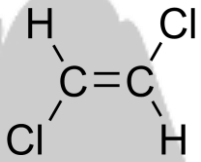
⇒ 1,2-dichloroethene



Cis

$\mu \neq 0$ Polar

Dipole-dipole



Trans

$\mu = 0$ Non-polar

London dispersion Force

cis > trans (B.P.)

⇒ In option(B)

M. P. depends on packing. So, packing is more in trans.

⇒ In option (C) water is polar

$\underset{\text{Dipole}}{\overset{HO^- - H^+}{}}$ cis is also dipole

So greater attraction

3 **(D)**

$H^+ \rightarrow$ Single does not exist.

$H^+(H_2O)_n$ $n = 3$ $H_7O_3^+$

Ion-dipole

$(H_2O)_n \rightarrow \underset{\text{H- Bonding}}{\overset{\text{dipole-dipole}}{}}$

$H^{+\delta} - - - OH^{-\delta} - - - H^{+\delta} - - - OH^{-\delta}$

4 **(D)**

Clathrates formation in noble gas takes place when water is allowed to freeze in presence of Ar, Kr or Xe under pressure, atoms of noble gas trapped in crystal lattice of ice giving clathrates.

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5 **(D)**

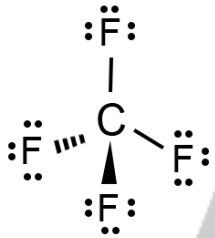
I_3^-

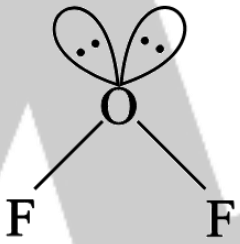
$I^- - I_2$

Ion- induced dipole

6 **(A)**

CF_4 dipole moment $= 0$

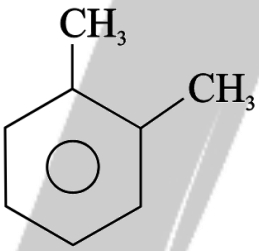


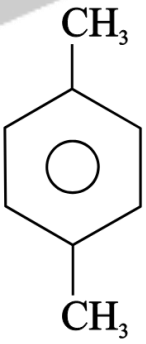


$\mu = 0$ Non-Polar

$\mu \neq 0$ Polar

7 **(ABCD)**





Ortho-xylene

$\mu \neq 0$

polar

para-xylene

$\mu = 0$

non-polar

For option (B)

$R - NO_2$ (B.P. is higher) Polar

For option (C)

London force present in every molecule.

For option (D)

London force present is purely attractive.

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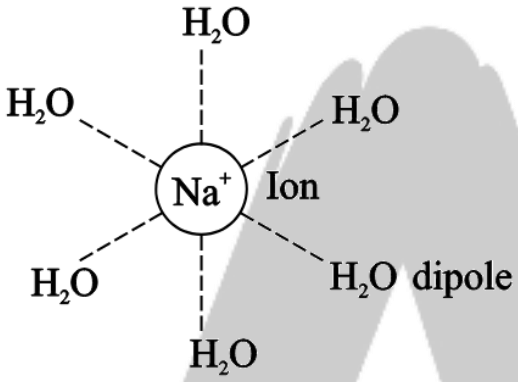
8 (B&D)

For option (A)

London force applies in non-polar and H_2O, NH_3 and HF are polar.

For option (B)



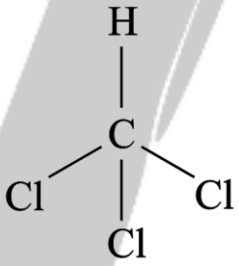
For option (C)

non-polar (LDF) electric attraction.

9 (ABCD)

For option (A)

$CHCl_3$ polar

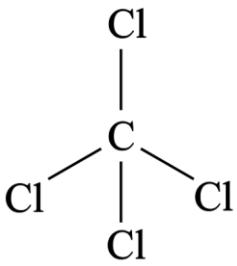


Dipole forces as well as London force

For option (B)

H_2O both hydrogen bond as well as London force present.

For option (C)



$\mu = 0$

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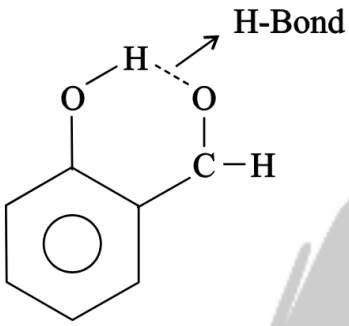
London dispersion force

For option (D)



London dispersion force in each molecule.

10 (AB)

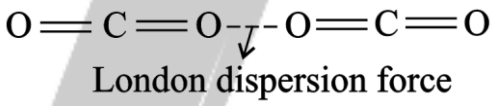
Statement:-1

Dispersion force exist among all.

Statement:- 2

Depends in charge as well as size of ion.

Statement:- 3



Network not present

Statement:-

Boiling point order,

$H_2O > HF > NH_3 > CH_4$

Extent of H-Bonding.