

# ***CHEMISTRY***

***CLASS – XII\_A-STAR BATCH***

***Date :- 15-06-2025***

Q.1 The acid which exhibits stronger reducing agent:

- (A)  $\text{H}_4\text{P}_2\text{O}_5$                       (B)  $\text{H}_3\text{PO}_4$                       (C)  $\text{H}_3\text{PO}_2$                       (D)  $\text{H}_3\text{PO}_3$

Q.2 2s-2p mixing is present in LUMO (Lowest Unoccupied Molecular Orbital) of which molecular species:

- (A)  $\text{O}_2^{2+}$                       (B)  $\text{N}_2^{2-}$                       (C)  $\text{C}_2^-$                       (D)  $\text{Be}_2^+$

Q.3 First molecular species is stable while second one **does not** exist in which pair of molecular Species:

- (A)  $\text{PH}_5$ ,  $\text{SF}_2$       (B)  $\text{PH}_3$ ,  $\text{H}_4\text{P}_2\text{O}_4$       (C)  $\text{XeF}_3^-$ ,  $\text{XeF}_6$       (D)  $\text{XeF}_3^+$ ,  $\text{SH}_2$

Q.4 Choose **incorrect** order of given property:

- (A) Bond length:  $\text{Li}_2 > \text{B}_2 > \text{F}_2$       (B) Basicity:  $\text{H}_3\text{PO}_4 > \text{H}_4\text{P}_2\text{O}_5$   
(C) Dipole moment:  $\text{CF}_3 > \text{CH}_3$       (D) Bond order:  $\text{ClO}_2 > \text{SO}_2$

Q.5 Choose **incorrect** statement for halogens:

- (A) Their observed colour is due to transition of electron from HOMO to LUMO
- (B) Halogen molecules are diamagnetic.
- (C)  $\text{Cl}_2$  has smallest bond length among all halogens
- (D) Bond dissociation energy of  $\text{F}_2$  is very close to that of  $\text{I}_2$

Q.6 Choose planar and non-polar molecular species:

- (A)  $\text{ClF}_3$
- (B)  $\text{NO}_2$
- (C)  $\text{XeF}_5^-$
- (D)  $\text{HCO}_3^-$

Q.7 Choose the molecular species which **does not** dimerise :

(A)  $\text{NO}_2$

(B)  $\text{CF}_3$

(C)  $\text{ClO}_2$

(D)  $\text{NO}$

Q.8 When equimolar amounts of  $\text{NO(g)}$  and  $\text{NO}_2\text{(g)}$  are cooled then a blue coloured substance **X** is obtained. Find out number of lone pair(s) present in a molecule of **X**.

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# THANK YOU

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