

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) H_3PO_4 (C) H_3PO_2 (D) H_3PO_3

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

- (A) O_2^{2+} (B) N_2^{2-} (C) C_2^- (D) Be_2^+

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

- (A) PH_5 , SF_2 (B) PH_3 , $\text{H}_4\text{P}_2\text{O}_4$ (C) XeF_3^- , XeF_6 (D) XeF_3^+ , 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) Cl_2 has smallest bond length among all halogens
- (D) Bond dissociation energy of F_2 is very close to that of I_2

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

- (A) ClF_3
- (B) NO_2
- (C) XeF_5^-
- (D) HCO_3^-

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

- (A) NO_2 (B) CF_3 (C) ClO_2 (D) NO

Q.8 When equimolar amounts of 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**.

THANK YOU
