

**PRACTICE TEST**  
**Level 3**  
**CLASS: XII**  
**Unit 7: The p-Block Elements**

**Full marks: 20**

**Time: 40 Min**

Q.No	Questions	M
1	The single N–N bond is weaker than the single P–P bond. True/False?	1
2	The oxides of the type $E_2O_3$ of arsenic and antimony are amphoteric. True/False?	1
3	Complete the reaction: $Ca_3P_2 + H_2O \rightarrow$	1
4	$PH_3$ has lower boiling point than $NH_3$ . Why?	1
5	Though nitrogen exhibits +5 oxidation state, it does not form pentahalide. Give reason.	2
6	Why is $BiH_3$ the strongest reducing agent amongst all the hydrides of Group 15 elements?	2
7	Provide chemical evidence to prove that- i. $PH_3$ is basic in nature? ii. All the five P-Cl bonds in $PCl_5$ are not of same strength. OR i. Discuss the molecular shape of $BrF_3$ on the basis of VSEPR theory. ii. Why is $ICl$ more reactive than $I_2$ ?	2
8	Give two examples to show the anomalous behaviour of fluorine. OR Arrange the following in the order of property indicated for each set: (i) HF, HCl, HBr, HI - increasing acid strength. iii) $NH_3$ , $PH_3$ , $AsH_3$ , $SbH_3$ , $BiH_3$ – increasing base strength.	2
9	1. Considering the parameters such as bond dissociation enthalpy, electron gain enthalpy and hydration enthalpy, compare the oxidising power of $F_2$ and $Cl_2$ . 2. Write balanced chemical equation for the reaction of $Cl_2$ with hot and concentrated NaOH.	2
10	a. Give the reason for bleaching action of $Cl_2$ . b. Name two poisonous gases which can be prepared from chlorine gas. c. When HCl reacts with finely powdered iron, it forms ferrous chloride and not ferric chloride. Why?	3
11	On heating compound (A) gives a gas (B) which is a constituent of air. This gas when treated with 3 mol of hydrogen ( $H_2$ ) in the presence of a catalyst gives another gas (C) which is basic in nature. Gas C on further oxidation in moist condition gives a compound (D) which is a part of acid rain. Identify compounds (A) to (D) and also give necessary equations of all the steps involved.	3