REVISION CLASS TEST (p-BLOCK)

SECTION–I(i) : (Maximum Marks : 30)

- This section contains **TEN** questions.
- Each question has **FOUR** options (A), (B), (C) and (D). **ONLY ONE** of these four options is correct.
- For each question, darken the bubble corresponding to the correct option in the ORS.
- For each question, marks will be awarded in one of the following categories :

Full Marks : +3 If only the bubble corresponding to the correct option is darkened.
Zero Marks : 0 If none of the bubbles is darkened.
Negative Marks : –1 In all other cases

1. Hot conc. H_2SO_4 acts as moderately strong oxidising agent. It oxidises both metals and nonmetals. Which of the following element is oxidised by conc. H_2SO_4 into two gaseous products?
(A) Cu (B) C (C) P (D) Zn

2. A black compound of manganese reacts with a halogen acid to give greenish yellow gas. When this gas reacts with excess NH_3 a non-inflammable gas is formed. In this process the oxidation state of nitrogen changes from _____.
(A) – 3 to +3 (B) – 3 to 0 (C) – 3 to +5 (D) 0 to – 3

3. In the preparation of compounds of Xe, Bartlett had taken O_2^+ Pt F_6^- as a base compound. This is because
(A) both O_2 and Xe have same size.
(B) both O_2 and Xe have same electron gain enthalpy.
(C) both O_2 and Xe have almost same ionisation enthalpy.
(D) both Xe and O_2 are gases.

4. In which of the following option N_2O gas is formed
(A) $P_4 + HNO_3 \longrightarrow$ (B) $NH_4SO_4 \xrightarrow{\Delta}$
(C) $Zn + \text{dil.}HNO_3 \longrightarrow$ (D) $NaNO_2 + NH_4Cl \longrightarrow$

5. Metal 'M' + white phosphorus $\longrightarrow$ 'X'

'X' $\xrightarrow{H_2O}$ Z + 'Y'
(gas)

$CuSO_4$ + Y $\rightarrow$ black ppt.
(aq.)

Then choose **CORRECT** statement about gas 'Y'
(A) Gas 'Y' is more basic than NH_3 (B) Bond angle of 'Y' > NH_3
(C) 'Y' has rotten fish smell (D) Does not obey Lewis octet rule

6. $O_3 + NO_2 \longrightarrow O_2 + \text{'P'}$
(Oxide of nitrogen)

In above reaction NO_2 act as reducing agent then **CORRECT** statement about 'P' is :-
(A) All N–O bond lengths are identical (B) All $\widehat{ONO}$ angles are identical
(C) 'P' is anhydride of HNO_3 (D) Oxidation state of nitrogen in 'P' is +3

7. Product in which oxidation number of nitrogen is non-zero -
(A) $(NH_4)_2Cr_2O_7 \xrightarrow{\Delta}$ product (B) $(NH_4)NO_2 \xrightarrow{\Delta}$ product
(C) $NH_4NO_3 \xrightarrow{\Delta}$ product (D) All of the above

8. Which of the following metal is inert towards dil.HNO_3 (20%)
(A) Au (B) Cu (C) Zn (D) Ag

9. An atom have three electrons in outermost shell and $ns^2np^6nd^{10}$ configuration in penultimate shell. Select the **incorrect** about that atom -
(A) p-block element (B) 3^{rd} period element
(C) 13^{th} group element (D) Boron family element

10. Select correct order about the magnitude of energy which is associated with given change:
$X(g) + e^- \longrightarrow X^-(g)$ (X = halogen atom)

(A) F > Cl > Br > I (B) Cl > F > Br > I (C) Cl > Br > F > I (D) F > Br > Cl > I

SECTION-I(ii) : (Maximum Marks: 12)

- This section contains **THREE** questions.
- Each question has **FOUR** options for correct answer(s). **ONE OR MORE THAN ONE** of these four option(s) is (are) correct option(s).
- For each question, choose the correct option(s) to answer the question.
- Answer to each question will be evaluated according to the following marking scheme:

Full Marks : +4 If only (all) the correct option(s) is (are) chosen.
Partial Marks : +3 If all the four options are correct but ONLY three options are chosen.
Partial Marks : +2 If three or more options are correct but ONLY two options are chosen, both of which are correct options.
Partial Marks : +1 If two or more options are correct but ONLY one option is chosen and it is a correct option.
Zero Marks : 0 If none of the options is chosen (i.e. the question is unanswered).
Negative Marks : –2 In all other cases.

11. Which of the following compound is/are produced during heating borax ($Na_2B_4O_7 \cdot 10H_2O$)
(A) $Na_2B_4O_7$(Anhydrous) (B) $NaBO_3$
(C) $NaBO_2$ (D) B_2O_3

12. Select the correct statement about V group hydrides [NH_3, PH_3, SbH_3, BiH_3]
(A) The thermal stability of hydrides decreases from NH_3 to BiH_3
(B) The reducing character of hydrides increases from NH_3 to BiH_3
(C) Bond angle decreases from NH_3 to BiH_3
(D) Basicity also decreases from NH_3 to BiH_3

13. When PCl_3 undergoes in hydrolysis then X oxyacid of phosphorus is formed then select the corret statement about X
(A) Two P-OH bond (B) one P-H bond (C) one P = O bond (D) Three P-OH bond

SECTION–I(iii) : (Maximum Marks : 12)

- This section contains **TWO** paragraphs.
- Based on each paragraph, there are **TWO** questions.
- Each question has **FOUR** options (A), (B), (C) and (D) **ONLY ONE** of these four options is correct.
- For each question, darken the bubble corresponding to the correct option in the ORS.
- For each question, marks will be awarded in one of the following categories :

Full Marks : +3 If only the bubble corresponding to the correct answer is darkened.
Zero Marks : 0 In all other cases.

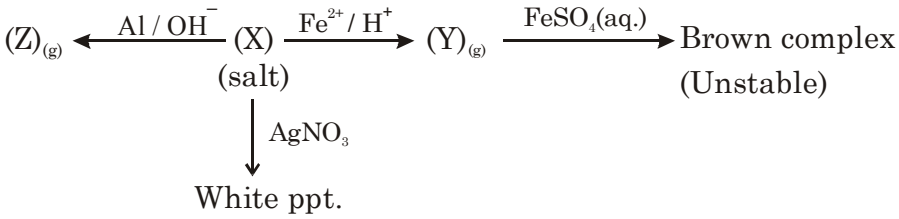
Paragraph for Question 14 to 15

NaOH is one of the most important reagent :

14. Which of the following element does not disproportinate when treated with NaOH :
(A) Br_2 (B) P_4 (C) S (D) Na

15. Which of the following does not dissolve in excess of NaOH :
(A) $FeCl_3$ (B) $AlCl_3$ (C) $CrCl_3$ (D) $2PbCO_3.Pb(OH)_2$

Paragraph for Q.16 to Q.17



16. Identify the 'Y' & 'Z'

(A) NO_2, NH_3 (B) NO, NH_3 (C) N_2O, NO_2 (D) NO, H_2

17. What is the oxidation no. of central metal in brown colour complex -

(A) +2 (B) +3 (C) +1 (D) zero

SECTION–I(iv) : (Maximum Marks : 03)

- This section contains **ONE** questions.
- **Each question has matching lists.** The codes for the lists have choices (A), (B), (C) and (D) out of which **ONLY ONE is correct**
- For each question, marks will be awarded in one of the following categories :

Full Marks : +3 If only the bubble corresponding to the correct option is darkened.

Zero Marks : 0 If none of the bubbles is darkened.

Negative Marks : –1 In all other cases

18.

List-I (Reaction)		**List-II (Product)**	
(P)	Sn + conc. HNO_3	(1)	H_2S
(Q)	Zn + dil.H_2SO_4	(2)	NH_3
(R)	S^{2-} + dil. HCl	(3)	NO_2
(S)	NO_2^- + Zn + NaOH	(4)	H_2

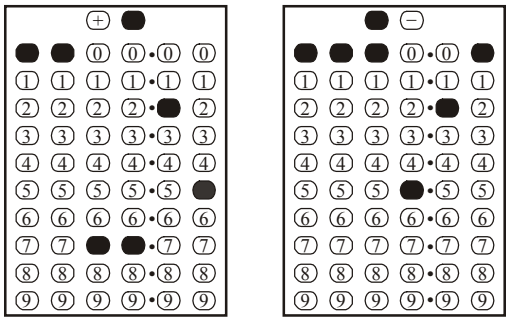
Code:

	P	**Q**	**R**	**S**
(A)	2	3	4	1
(B)	3	4	2	1
(C)	2	4	3	1
(D)	3	4	1	2

SECTION-II : (Maximum Marks: 06)

- This section contains **TWO** questions.
- The answer to each question is a **NUMERICAL VALUE**.
- For each question, enter the correct numerical value (in decimal notation, truncated/rounded-off to the **second decimal place**; e.g. 6.25, 7.00, –0.33, –.30, 30.27, –127.30, if answer is 11.36777..... then both 11.36 and 11.37 will be correct) by darken the corresponding bubbles in the ORS.

  For Example : If answer is –77.25, 5.2 then fill the bubbles as follows.



- Answer to each question will be evaluated according to the following marking scheme:

  Full Marks : +3 If ONLY the correct numerical value is entered as answer.

  Zero Marks : 0 In all other cases.

1. $(CH_3)_nSiCl_{4-n}$ are called methyl subtituted chlorosilanes. If n = one, find maximum number of Si–O linkages on each Si in product obtained by hydrolysis & condensation.

2. $(HPO_3)_n \xrightarrow{+xH_2O}$ 'Y' (Poly phosphoric acid)

If only 'Y' is from in above reaction and 'Y' have three P–O–P linkage then value of (x) will be :-