

PART 1 - CHEMISTRY

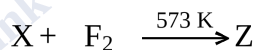
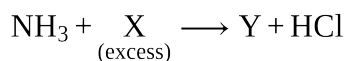
Topic : p-Block elements (group 15–18)

SECTION–A : (Maximum Marks : 40)

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

Full Marks	: +4	ONLY if (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;
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	: -1	In all other cases.
- For example, in a question, if **(A), (B) and (D)** are the ONLY three options corresponding to correct answers, then choosing ONLY (A), (B) and (D) will get +4 marks; choosing ONLY (A) and (B) will get +2 marks; choosing ONLY (A) and (D) will get +2 marks; choosing ONLY (B) and (D) will get +2 marks; choosing ONLY (A) will get +1 mark; choosing ONLY (B) will get +1 mark; choosing ONLY (D) will get +1 mark; choosing no option (i.e. the question is unanswered) will get 0 marks; and choosing any other combination of options will get -1 marks.

1. Correct statement(s) about the compounds X, Y and Z is(are)



[JEE Advanced 2026 Paper 1]

(A) ~~X~~ is used for sterilizing drinking water.

(B) Y has a planar structure.

(C) Z is used in the enrichment of ^{235}U .

(D) Y is a stronger Lewis base than ammonia.

Scan or tap for the full solution

2. Reaction of PtF_6 with oxygen (O_2) gas results in the formation of an ionic compound, X^+Y^- . Correct statement(s) is(are)

[JEE Advanced 2026 Paper 1]

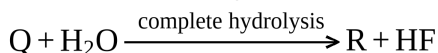
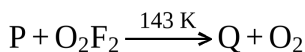
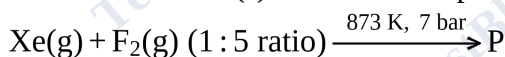
(A) The bond order of X^+ is 1.5.(B) Valence d-orbitals of the metal ion in X^+Y^- has 5 electrons.(C) PtF_6 acts as an oxidant in this reaction.(D) PtF_6 acts as a fluorinating agent in this reaction.

Scan or tap for the full solution



Space for Rough Work

3. Correct statement(s) about the compounds P, Q and R is(are)



[JEE Advanced 2026 Paper 2]

- (A) P has two lone pairs of electrons on the central atom.
 (B) Q has a perfect octahedral geometry.
 (C) Q can act as a fluorinating agent.
 (D) The molecular structure of R is trigonal pyramidal.

Scan or tap for the full solution



4. The heating of NH_4NO_2 at $60-70^\circ\text{C}$ and NH_4NO_3 at $200-250^\circ\text{C}$ is associated with the formation of nitrogen containing compounds X and Y, respectively. X and Y, respectively, are

[JEE Advanced 2025 Paper 1]

- (A) N_2 and N_2O (B) NH_3 and NO_2 (C) NO and N_2O (D) N_2 and NH_3

Scan or tap for the full solution



5. The complete hydrolysis of ICl , ClF_3 and BrF_5 , respectively, gives

[JEE Advanced 2025 Paper 2]

- (A) IO^- , ClO_2^- and BrO_3^- (B) IO_3^- , ClO_2^- and BrO_3^-
 (C) IO^- , ClO^- and BrO_2^- (D) IO_3^- , ClO_4^- and BrO_2^-

Scan or tap for the full solution



6. The compound(s) with P–H bond(s) is(are)

[JEE Advanced 2025 Paper 2]

- (A) H_3PO_4 (B) H_3PO_3 (C) $\text{H}_4\text{P}_2\text{O}_7$ (D) H_3PO_2

Scan or tap for the full solution



7. At room temperature, disproportionation of an aqueous solution of in situ generated nitrous acid (HNO_2) gives the species

[JEE Advanced 2024 Paper 1]

- (A) H_3O^+ , NO_3^- and NO (B) H_3O^+ , NO_3^- and NO_2 (C) H_3O^+ , NO^- and NO_2 (D) H_3O^+ , NO_3^- and N_2O

Scan or tap for the full solution



8. Based on VSEPR model, match the xenon compounds given in **List-I** with the corresponding geometries and the number of lone pairs on xenon given in **List-II** and choose the correct option.

[JEE Advanced 2024 Paper 1]

List-I		List-II	
P.	XeF_2	1.	Trigonal bipyramidal and two lone pair of electrons
Q.	XeF_4	2.	Tetrahedral and one lone pair of electrons
R.	XeO_3	3.	Octahedral and two lone pair of electrons

Space for Rough Work

PYQSide

List-I		List-II	
S.	XeO_3F_2	4.	Trigonal bipyramidal and no lone pair of electrons
		5.	Trigonal bipyramidal and three lone pair of electrons

(A) P-5, Q-2, R-3, S-1 (B) P-5, Q-3, R-2, S-4 (C) P-4, Q-3, R-2, S-1 (D) P-4, Q-2, R-5, S-3

Scan or tap for the full solution 

9. The species formed on fluorination of phosphorus pentachloride in a polar organic solvent are

[JEE Advanced 2024 Paper 2]

- (A) $[\text{PF}_4]^+[\text{PF}_6]^-$ and $[\text{PCl}_4]^+[\text{PF}_6]^-$ (B) $[\text{PCl}_4]^+[\text{PCl}_4\text{F}_2]^-$ and $[\text{PCl}_4]^+[\text{PF}_6]^-$
 (C) PF_3 and PCl_3 (D) PF_5 and PCl_3

Scan or tap for the full solution 

10. The compound(s) having peroxide linkage is(are)

[JEE Advanced 2024 Paper 2]

- (A) $\text{H}_2\text{S}_2\text{O}_7$ (B) $\text{H}_2\text{S}_2\text{O}_8$ (C) $\text{H}_2\text{S}_2\text{O}_5$ (D) H_2SO_5

Scan or tap for the full solution 

Space for Rough Work

**JEE ADVANCED P-BLOCK ELEMENTS (GROUP 15–18) —
PYQS**

Test Pattern : JEE (Advanced)

ANSWER KEY

SECTION–A

Ques.	1	2	3	4	5	6	7	8	9	10							
Ans.	A, C	B, C	A, C, D	A	A	B, D	A	B	B	B, D							