

# PYQSide

## NEET P-BLOCK ELEMENTS (GROUP 15–18) — GROUP 18 ELEMENTS (NOBLE GAS FAMILY) — PYQS

Max. Marks: 24

Questions: 6

### Section A (MCQ)

**Q.1** Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R.  
**Assertion (A):** Helium is used to dilute oxygen in diving apparatus.

**Reason (R):** Helium has high solubility in  $O_2$ .

In the light of the above statements, choose the correct answer from the options given below:

[NEET (UG) 2023]

- (1) Both A and R are true but R is NOT the correct explanation of A.
- (2) A is true but R is false.
- (3) A is false but R is true.
- (4) Both A and R are true and R is the correct explanation of A.

Scan or tap for the full solution



**Q.2** Noble gases are named because of their inertness towards reactivity. Identify an incorrect statement about them.

[NEET (UG) 2021]

- (1) Noble gases have large positive values of electron gain enthalpy
- (2) Noble gases are sparingly soluble in water
- (3) Noble gases have very high melting and boiling points
- (4) Noble gases have weak dispersion forces

Scan or tap for the full solution



**Q.3** Match the Xenon compounds in **Column-I** with its structure in **Column-II** and assign the correct code :

[NEET (UG) 2019]

| Column-I |          | Column-II |                      |
|----------|----------|-----------|----------------------|
| a.       | $XeF_4$  | i.        | pyramidal            |
| b.       | $XeF_6$  | ii.       | square planar        |
| c.       | $XeOF_4$ | iii.      | distorted octahedral |
| d.       | $XeO_3$  | iv.       | square pyramidal     |

(1) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)

(2) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

(3) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)

(4) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)

Scan or tap for the full solution



**Q.4** Match the compounds given in **column I** with the hybridisation and shape given in **column II** and mark the correct option [NEET 2016 (Phase 1)]

| Column I |          | Column II |                      |
|----------|----------|-----------|----------------------|
| a.       | $XeF_6$  | i.        | distorted octahedral |
| b.       | $XeO_3$  | ii.       | square planar        |
| c.       | $XeOF_4$ | iii.      | pyramidal            |
| d.       | $XeF_4$  | iv.       | square pyramidal     |

(1) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

(2) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)

(3) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)

(4) (a)-(i), (b)-(ii), (c)-(iv), (d)-(iii)

Scan or tap for the full solution



**Q.5** Identify the incorrect statement, regarding the molecule  $XeO_4$ :

[NEET 2013 (Karnataka)]

- (1)  $XeO_4$  molecule is square planar.
- (2) There are four  $p\pi - d\pi$  bonds.
- (3) There are four  $sp^3 - p, \sigma$  bonds.
- (4)  $XeO_4$  molecule is tetrahedral.

Scan or tap for the full solution



**Q.6** Which compound has planar structure?

[AIPMT 2000]

- (1)  $XeF_4$     (2)  $XeOF_2$     (3)  $XeO_2F_2$     (4)  $XeO_4$

Scan or tap for the full solution



**ANSWER KEY**

|              |   |   |   |   |   |   |  |  |  |  |  |
|--------------|---|---|---|---|---|---|--|--|--|--|--|
| <b>Ques.</b> | 1 | 2 | 3 | 4 | 5 | 6 |  |  |  |  |  |
| <b>Ans.</b>  | 2 | 3 | 4 | 3 | 1 | 1 |  |  |  |  |  |