

**27th Aug Morning Shift 2021**

**Q.3 Match List - I with List - II :**

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| <b>List - I</b><br><b>(Species)</b> | <b>List - II</b><br><b>(No. of lone pairs of electrons<br/>on the central atom)</b> |
|-------------------------------------|---|
| (a) $\text{XeF}_2$                  | (i) 0   |
| (b) $\text{XeO}_2\text{F}_2$        | (ii) 1  |
| (c) $\text{XeO}_3\text{F}_2$        | (iii) 2   |
| (d) $\text{XeF}_4$                  | (iv) 3  |

Choose the most appropriate answer from the options given below :

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


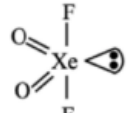
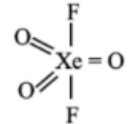

**B** (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)

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

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

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**Ans 3.**

| Species    | (Number of lone pairs of electrons on the central atom) |   |
|------------|---|---|
| $XeF_2$    | 3   |  <p>The diagram shows a central Xenon (Xe) atom bonded to two Fluorine (F) atoms. The Xe atom has three lone pairs of electrons, represented by three pairs of dots. One lone pair is positioned above the Xe atom, and the other two are positioned to the left and right of the Xe atom. The Xe atom is also bonded to two F atoms, one above and one below, with single bonds.</p>  |
| $XeO_3F_2$ | 1   |  <p>The diagram shows a central Xenon (Xe) atom bonded to three Oxygen (O) atoms and one Fluorine (F) atom. The Xe atom has one lone pair of electrons, represented by a pair of dots to the right of the Xe atom. The Xe atom is also bonded to three O atoms and one F atom. Two O atoms are double-bonded to the Xe atom (one to the left and one to the bottom-left), and one O atom is single-bonded to the Xe atom (bottom). The F atom is single-bonded to the Xe atom (top).</p> |
| $XeO_2F_2$ | 0   |  <p>The diagram shows a central Xenon (Xe) atom bonded to two Oxygen (O) atoms and two Fluorine (F) atoms. The Xe atom has no lone pairs of electrons. The Xe atom is also bonded to two O atoms and two F atoms. Two O atoms are double-bonded to the Xe atom (left and right), and two F atoms are single-bonded to the Xe atom (top and bottom).</p>  |
| $XeF_4$    | 2   |  <p>The diagram shows a central Xenon (Xe) atom bonded to four Fluorine (F) atoms. The Xe atom has two lone pairs of electrons, represented by two pairs of dots, one above and one below the Xe atom. The Xe atom is also bonded to four F atoms, one to the left, one to the right, one to the top-left, and one to the bottom-right.</p>  |