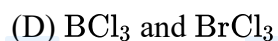
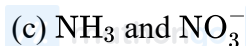
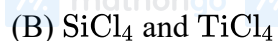
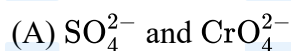


## Questions with Answer Keys

MathonGo

## Q1: 24 Feb (Shift 1) - Single Correct

Which of the following are isostructural pairs?



(1) A and C only

(2) A and B only

(3) B and C only

(4) C and D only

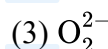
## Q2: 24 Feb (Shift 2) - Single Correct

The correct shape and I-I-I bond angles respectively in  $\text{I}_3^-$  ion are :

(1) Trigonal planar;  $120^\circ$ (2) Distorted trigonal planar;  $135^\circ$  and  $90^\circ$ (3) Linear;  $180^\circ$ (4) T-shaped;  $180^\circ$  and  $90^\circ$ 

## Q3: 25 Feb (Shift 1) - Single Correct

According to molecular orbital theory, the species among the following that does not exist is:

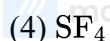
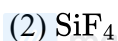


## Q4: 25 Feb (Shift 2) - Single Correct

Which among the following species has unequal bond lengths ?

## Questions with Answer Keys

MathonGo



## Q5: 26 Feb (Shift 1) - Single Correct

Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Dipole-dipole interactions are the only non-covalent interactions, resulting in hydrogen bond formation

Reason R : Fluorine is the most electronegative element and hydrogen bonds in HF are symmetrical In the

light of the above statements, choose the most appropriate answer from the options given below :

(1) A is false but R is true

(2) Both A and R are true and R is the correct explanation of A

(3) A is true but R is false

(4) Both A and R are true and R is not the correct explanation of A

## Q6: 26 Feb (Shift 2) - Single Correct

Match List-I with List-II.

## List-I

## (Molecule)

(a)  $\text{Ne}_2$

(b)  $\text{N}_2$

(c)  $\text{F}_2$

(d)  $\text{O}_2$

## List-II

## (Bond order)

(i) 1

(ii) 2

(iii) 0

(iv) 3

Choose the correct answer from the options given below:

(1) (a) – (iii), (b) – (iv), (c) – (i), (d) – (iii)

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

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



Questions with Answer Keys

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# Answer Key

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**Q1 (2)**

**Q2 (3)**

**Q3 (4)**

**Q4 (4)**

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**Q5 (3)**

**Q6 (1)**

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