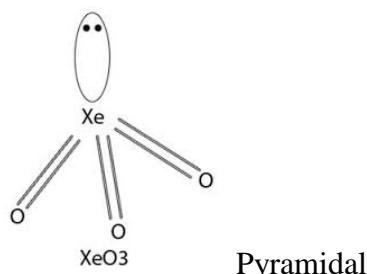


**INDIAN SCHOOL MUSCAT**  
**SECOND PERIODIC TEST**  
**SET - C**

Q.NO.

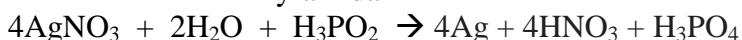
VALUE POINTS

1.



(1)

2.



(1/2+1/2)

3.

NH<sub>3</sub> forms Hydrogen bond in water while PH<sub>3</sub> does not.

(1)

4.

- a) A → NO<sub>2</sub> (nitrogen dioxide)    B → N<sub>2</sub>O<sub>4</sub> (dinitrogen tetra oxide)  
 b) NO<sub>2</sub> is dimerized and convert into stable N<sub>2</sub>O<sub>4</sub> molecule

(1/2+1/2)  
(1)

5.

When ozone reacts with an excess of potassium iodide solution buffered with a borate buffer, iodine is liberated, which can be titrated against a standard solution of sodium thiosulphate.

2

6.

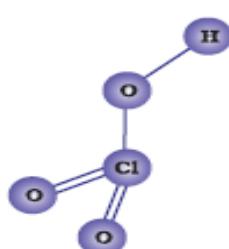
- a) 2XeF<sub>2</sub> + 2H<sub>2</sub>O → 2Xe + 4HF + O<sub>2</sub>  
 b) P<sub>4</sub> + 8SOCl<sub>2</sub> → 4PCl<sub>3</sub> + 4SO<sub>2</sub> + 2S<sub>2</sub>Cl<sub>2</sub>

(1)

(1)

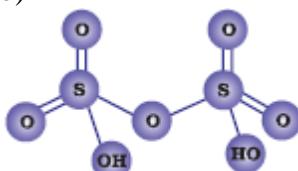
7.

a)



(1)

b)



(1)

8.

- a) SbH<sub>3</sub> < AsH<sub>3</sub> < PH<sub>3</sub> < NH<sub>3</sub>  
 b) I<sub>2</sub> < F<sub>2</sub> < Br<sub>2</sub> < Cl<sub>2</sub>  
 c) H<sub>2</sub>O < H<sub>2</sub>S < H<sub>2</sub>Se < H<sub>2</sub>Te

(1)

(1)

(1)

9.

- a) Nitrous acid undergoes disproportionation.  
 b) H<sub>2</sub> formed prevents the formation of Fe<sup>3+</sup>  
 c) I-Cl bond in ICl is weaker than I-I bond in I<sub>2</sub>

(1)

(1)

(1)

10.

- i. 2SO<sub>2</sub> + O<sub>2</sub> → 2SO<sub>3</sub>  
 ii. 2SO<sub>2</sub> + O<sub>2</sub> → 2SO<sub>3</sub> (at 2 bar pressure, 720K, catalyst V<sub>2</sub>O<sub>5</sub>)  
 iii. SO<sub>3</sub> + H<sub>2</sub>SO<sub>4</sub> → H<sub>2</sub>S<sub>2</sub>O<sub>7</sub>  
 iv. H<sub>2</sub>S<sub>2</sub>O<sub>7</sub> + H<sub>2</sub>O → 2H<sub>2</sub>SO<sub>4</sub>

(1/2)

(1 1/2)

(1/2)

(1/2)