

MCQ TYPE

Q1. Strong heating of which of the following will not produce NO_2 gas?

- (a) $\text{Pb}(\text{NO}_3)_2$ (b) $\text{Ba}(\text{NO}_3)_2$
(c) KNO_3 (d) $\text{Hg}(\text{NO}_3)_2$

Q2. Which of the following oxide is coloured as well as gas at room temperature?

- (a) Barium Oxide (b) Sulphur dioxide
(c) Nitrogen (IV) oxide (d) Nitrogen (II) oxide

Q3. Which out of the following elements behaves as a typical non- metal?

- (a) O (b) S
(c) Se (d) Te

Q4. Oxygen exhibits +2 oxidation state in the compound

- (a) H_2O (b) Na_2O
(c) OF_2 (d) MgO

Q5. Which of the following elements shows only negative oxidation state?

- (a) Chlorine (b) Bromine
(c) Iodine (d) Flourine

VSA TYPE

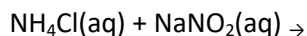
Q6. Out of white phosphorus and red phosphorus, which one is more reactive and why?

Q7. In aqueous solution , HCl is a stronger acid than HF, why ?

Q8. Write one chemical reaction which shows that SO_2 acts as a reducing agent?

Q9. What is the oxidation number of phosphorus in H_3PO_2 molecule?

Q10. Complete the following equations :



SA TYPE

Q11. Draw the structure of white phosphorus and red phosphorus. Which one of these two

Two types of phosphorus is more reactive and why?

Q12. Fluorine exhibits only -1 oxidation state whereas other halogens exhibit +1, +3, +5 and

+7 oxidation states also, why?

Q13. Nitric oxide becomes brown when released in air, why?

Q14. All the P- Cl bonds in PCl_5 molecule are not equivalent, explain.

Q15. Draw the structure and predict the shape of

(i) XeO_3 and (ii) BrF_3

LA TYPE

Q16(a). Describe the conditions for getting maximum yield of ammonia.

(b) (i) Why is H_2S more acidic than H_2O ?

(ii) Why NH_3 is more basic than PH_3 ?

(III) Why does sulphur show catenation to maximum extent?

Q17. Account for the following:

(i) Iron on reaction with HCl forms FeCl_2 and not FeCl_3 .

(ii) HClO_4 is stronger acid than HClO .

(iii) BiH_3 is the strongest reducing agent amongst all the hydrides of group 15.

Q18. Explain why;

(i) Sulphur in vapour state exhibits paramagnetism.

(ii) Unlike xenon, no distinct chemical compound of helium is known.

(iii) H_3PO_2 is a stronger reducing agent than H_3PO_3 .

Q19. (i) Which allotrope of phosphorus is more reactive and why?

(ii) How the supersonic jet aeroplanes are responsible for the depletion of ozone layers?

(iii) F_2 has lower bond dissociation enthalpy than Cl_2 , why?

Q20. Account for the following :

- (i) Bond angles in NH_4^+ is higher than NH_3 .
- (ii) H_2S has lower boiling point than H_2O .
- (III) Reducing character decreases from SO_2 to TeO_2 .