Single correct

1. Which of the following does not give metal oxide on heating

(A) $NaCO_3$ (B) K_2CO_3 (C) Rb_2CO_3 (D) All of these

2. Which of the following metal bicarbonate will give metal oxide and CO_2 on heating

(A) $NaHCO_3$ (B) $Mg(HCO_3)_2$ (C) $KHCO_3$ (D) Rb_2CO_3

3. Which of the following metal nitrate will give metal and oxygen on heating :

(A) KNO_3 (B) $NaNO_3$ (C) $AgNO_3$ (D) $RbNO_3$

4. Which of the following nitrate will give N_2O on heating :

(A) NH_4NO_3 (B) NH_4NO_2 (C) $NaNO_3$ (D) $AgNO_3$

5. Which of the following ammonium salt will not give acid on heating :

(A) $(NH_4)_2HPO_4$ (B) $(NH_4)_2MoO_4$ (C) $(NH_4)_2SO_4$ (D) NH_4Cl

6. Which of the following halide will not give halogen gas on heating :

(A) $PbCl_4$ (B) $PbBr_4$ (C) Hg_2Cl_2 (D) All of these

7. Select the correct statements

(A) Hydrated Co^{+2} salt is pink (B) Anhydrous Co^{+2} salt is of blue colour

(C) Hybridisation of $CoCl_2.6H_2O$ is sp^3d^2 (D) All of these

8. Which of the following metal sulphate will give SO_2 and SO_3 both gaseous product on heating :

(A) $CuSO_4$ (B) $FeSO_4$ (C) $Fe_2(SO_4)_3$ (D) $CaSO_4$

9. Which of the following compound is called dead burnt plaster :

(A) $CaSO_4.\frac{1}{2}H_2O$ (B) $CaSO_4.2H_2O$ (C) $CaSO_4$ (anhy.) (D) None of these

10. When NaH_2PO_4 is heated then which of the following compound is formed :

(A) $Na_4P_2O_7$ (B) Na_3PO_4 (C) HPO_3 (D) $NaPO_3$

11. When $KMnO_4$ is heated then which of the following compound is formed :

(A) $K_2MnO_4 + MnO_2$ (B) $K_2MnO_4 + MnO$ (C) $MnO_2 + MnO$ (D) No change

12. When CrO_3 is heated then ..... + ... are formed :

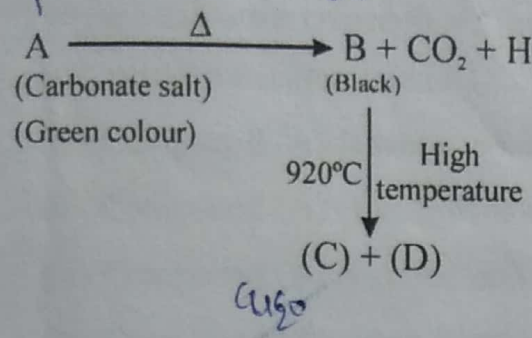
(A) Cr_2O_3, O_2 (B) CrO_2, O_2 (C) $Cr_2O_7^{-2}$, O_2 (D) None of these

More than one may be correct

13. Which of the following metal carbonate will give of metal and oxyen on heating-

(A) Ag_2CO_3 (B) $HgCO_3$ (C) $(NH_4)_2CO_3$ (D) $PbCO_3$

14.



Select the correct statements -

(A) Compound (A) is basic copper carbonate

(B) Compound (B) CuO

(C) Compound (C) is Cu_2O

(D) Compound (D) is paramagnetic in naturue

15. When Ag_2CO_3 is heated then product will be -

(A) Ag_2O (B) Ag (C) O_2 (D) CO_2

16. When compound A (orange red) is heated then green colour oxide of (B) is formed and inert gas (C) is formed then select the correct statements :

(A) Compound (A) is $(NH_4)_2 Cr_2O_7$

(B) Compound (B) is used in fire works

(C) Gas C is N_2

(D) Heating effect of (A) is a type of intra molecular redox reaction

17. Which of the following hydrated salts will not become anhydrous on heating :

(A) $MgCl_2.6H_2O$ (B) $FeCl_3.6H_2O$ (C) $AlCl_3.6H_2O$ (D) $CoCl_2.6H_2O$

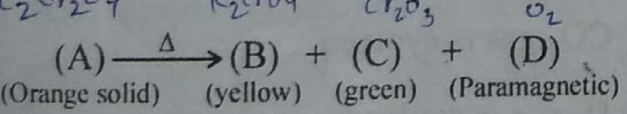
18. Which of the following metal nitrate produce NO_2 on heating

(A) $Hg(NO_3)_2$ (B) $RbNO_3$ (C) $Pb(NO_3)_2$ (D) $Cu(NO_3)_2$

19. Which of the following oxides turns yellow on heating and becomes white on cooling :

(A) ZnO (B) K_2O (C) PbO (D) Ag_2O

Paragraph for Q. No. 20 to Q. No. 21



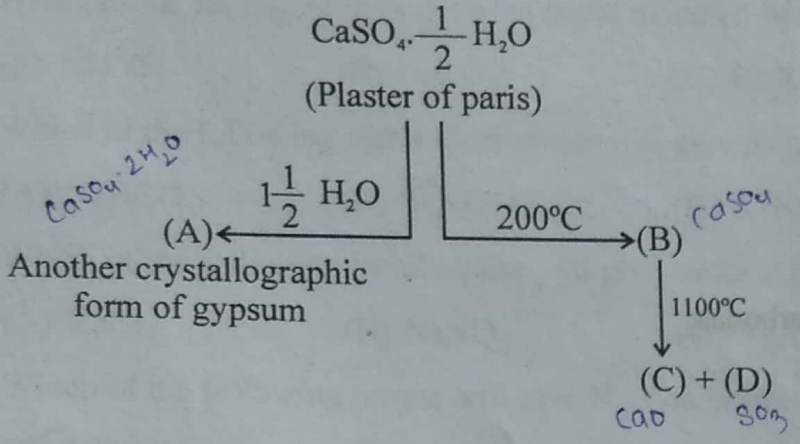
20. Compound (A) is :

(A) $K_2Cr_2O_7$ (B) K_2CrO_4 (C) Cr_2O_3 (D) O_2

21. Compound (C) is also obtained on heating of :

(A) $(NH_4)_2Cr_2O_7$ (B) NH_4ClO_4 (C) NH_4NO_3 (D) None of these

Paragarph for Q. No. 22 & 23



22. Compound "A" is :

(A) $CaSO_4.2H_2O$ (B) $2CaSO_4.H_2O$ (C) $CaSO_4.3H_2O$ (D) $CaSO_4.5H_2O$

23. Compound "C" and "D" are respectivelly :

(A) $CaO + CaSO_4$ (B) $CaSO_4 + SO_2$ (C) $CaSO_4 + SO_3$ (D) $CaO + SO_3$

Matrix match

24. Match the column

Column-I	**Column-II**
(A) $Be(NO_3)_2 \xrightarrow{\Delta}$	(P) Gives H_2O
(B) $HNO_2 \xrightarrow{\Delta}$	(Q) Oxyacid is obtained
(C) $NaH_2PO_4 \xrightarrow{\Delta}$	(R) Gives disproportionation reaction
(D) $H_3PO_3 \xrightarrow{\Delta}$	(S) Oxygen gas is evolved

25.

Column-I (Compound)	**Column-II (Products on heating)**
(A) NH_4ClO_4	(P) CO_2 gas is evolved
(B) $Mg(OAc)_2$	(Q) H_2 gas is evolved
(C) HCOONa (above 350°C)	(R) N_2 gas is evolved
(D) $(NH_4)_2CO_3$	(S) Same gas is evolved which is obtained by heating $(NH_4)_2SO_4$
	(T) Intra molecular redox reaction

Integer

26. When calamine is heated then a product (A) is formed then find the total number of following options are correct for compound (A) -

ZnO $\underset{\text{cold}}{\overset{\text{Hot}}{\rightleftharpoons}}$ ZnO
white yellow

(i) Compound (A) is white in cold conditions

(ii) Compound (A) is yellow in hot conditions

(iii) Compound (A) is called phillosopher's wool

(iv) Compound (A) when combined with CoO, then compound (B) is formed & colour of new compound (B) is green

(v) Compound (B) is called Rinmann's green

27. $NaNO_3 \xrightarrow{500°C} (A) + (B)$
$NaNO_2 + \frac{1}{2}O_2$

$(A) \xrightarrow{800°C} (C) + (D) + (E)$
$Na_2O \quad N_2 \quad O_2$

Find the number of correct statements

(1) Compound (B) is paramagnetic in nature

(2) Compound (B) when undergoes dimerisation then dimer product is diamagnetic in nature

(3) Bond order of compound (B) is two

(4) D is N_2 gas

(5) Compound B and E are same gas

28. $(A) \xrightarrow{\Delta} (B) + (C) + (D)$
$MnO_2 \quad O_2$
(dark purple almost black) (green) (black)

Find the number of correct statements

(1) Compound B is K_2MnO_4

(2) Compound C is MnO_2

(3) Compound D is O_2

(4) Compound B is paramagnetic in nature

(5) Compound D has two unpaired electron in bonding molecular orbital

29. Total number of compounds undergoes dispropornation redox reaction on heating

MnO_2, $HOCl$, H_3PO_3, HNO_2, CrO_5, $HClO_3$

30. On strong heating of H_3PO_4 and H_3BO_3, sum of oxidation number of P & B in the final product obtained is

$B_2O_3 + H_2O$