***CHEMISTRY PAPER 1(THEORY PAPER)-MARKING SCHEME-TERM II 2019***

***1.a)fractional distillation***

***b)funnel separation***

***c)chromatography***

***2.a)group II***

***b)element S***

***c)P2O***

***3.ZnO(s) +H2O(g) H2(g) +Zn(s)***

***b)A mixture of hydrogen and air explodes***

***c)Magnesium,Iron,Lead or Cupper***

***4.The metal darts around the water surface***

***Melts into a silvery ball***

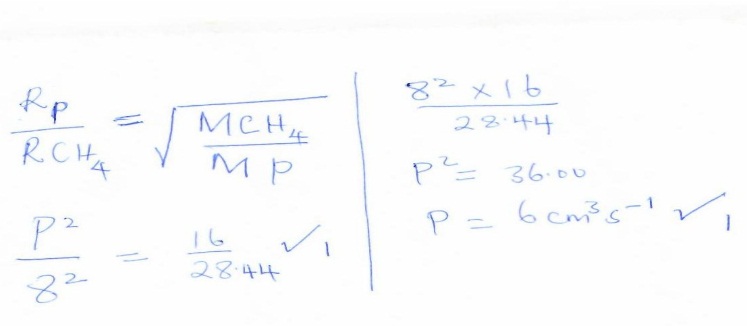
***Produces a hissing sound***

***5.mass of water= 27.8-20.6=7.2√1***

|  |  |
| --- | --- |
| ***Al2O3*** | ***H2O*** |
| ***Moles 20.6/102 =0.202*** | ***7.2/18 =0.4*** |
| ***Mole ratio 0.0202/0.202*** | ***0.4/0.202*** |
| ***1*** | ***2*** |
|  |  |

***√1  
X=2√1***

***6.Rate of a diffusion of a gas at constant pressure and temperature is inversely proportional to the square root of it’s density.***

***b)*** ******

***7.copper II Oxide (black) turns to brown (copper metal)***

***b) CO(g) +CuO (s) Cu(s) + CO2(g)***

***c)reducing nature***

***8.a)Oxygen***

***b)Turns red then bleached;√1HOCl releases Oxygen atom into the dye decolourizing it√***

***9.a)atomic radii decreases;√across the period due to increase in nuclear charge/proton number which   
 create more attration of electrons***

***b)13-14***

***10.a) 2NaOH(aq) + H2SO4(aq) Na2SO4(aq)+ 2H2O(l)***

***b) 0.2 moles--------1000 =0.005moles√½***

***? --------- 25***

***c)mol of acids √½ = 0.0025mol-------------18 = =0.139M√½***

***? -------------- 1000***

***11.a)blue copper II sulphate faded√***

***b)Cu2+√ they gained electrons√***

***12.HCl gas in methylbenzene does not dissociate√ but in water it does√***

***13.a)fractional crystallization***

***b)Nacl√½ ,Na2CO3 is more soluble at high temperature√½***

***c)Na2CO3;when the temperature is low,they it is less soluble***

***14.a)But-2-ene √***

***H H***

***H-C-C=C-C- H***

***H H H H***

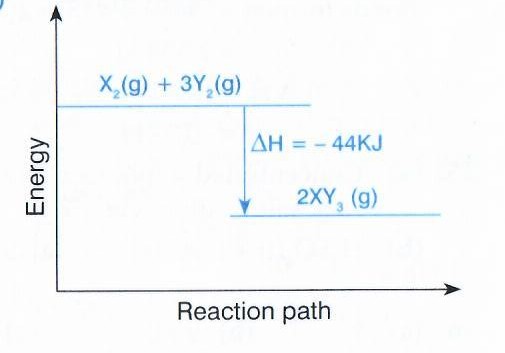
***b) 2,3-dichlorobutane***

***15***

***Axis-½ 2=1***

***Exothermic expression √1***

***Eqn and ∆H√1***

******

***b).increasing the pressure√1 or***

***Lowering the temperature***

***17a).e- b) He***

***18. brown sugar turns to black mass***

***b)Blue copper II sulphate turns white***

***c)dehydrating agent***

***19.lemon juice 5.0√½***

***Sodium chloride 7.0√½***

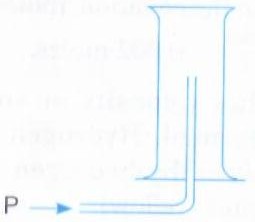
***Potassium chloride 14.0√½***

***Hydrochloric acid 1.0√½***

***b)addition of calcium oxide or calcium hydroxide to soil to improve ph.***

***20.Ammonia/NH3***

***b)Ca(OH)2(aq) + 2NH4Cl(s) CaCl2(s) + 2H2O(l) + 2NH3(g)***

***c) ***

***21.a)Zinc blende***

***b)reacts with the acidic impurities to form slag***

***c)galvanization***

***22.It contains sulphates of magnesium and calcium√;these form scum with soap leading to soap wastage.√***

***23.the reaction started but eventually stoped√;due to formation of an insoluble layer of lead sulphate   
 which prevents further reaction√***

***b).lead II nitrate***

***24.a).wearing out of Iron metal when it’s exposed to air and moisture/water or corrosion of Iron   
 metal√***

***Oxygen is used in both***

***Oxides are formed***

***There’s increase in mass***

***25.dissolve the mixture in water***

***Filter off the residue***

***Heat the filtrate to evaporate excess water***

***Cool to form crystals***

***26.a)32=16 +N***

***N=16 √½ P=16√½***

***b)Covalent***

***c) acidic***

***27.***

***White ash/solid is formed.√½***

***Black speck/solid/particles formed on the side of gas jar.√½***

***Magnesium burn to produce/release enough heat energy to decompose Carbon(IV) oxide gas to carbon√ and oxygen.Magnesium continues to burn in Oxygen forming white Magnesium Oxide solid/ash.√***

***28.When the air hole is open***

***b)It’s hotter than luminous***

***non smoky/sooty***

***29.***

***a)0.82 5 60 60 =14760√½***

***=0.1529F√½***

***b)***

***2.65g---------0.1529f √½ =3F√½***

***52g-----------?***

***c) P P3+ +3e-***