***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*** $\frac{0.2x25}{1000}√½$ ***=0.005moles√½***

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

 ***c)mol of acids*** $\frac{0.005}{2}$ ***√½ = 0.0025mol-------------18 =***$\frac{0.0025X1000}{18}$ ***=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).***$\begin{matrix}0\\-1\end{matrix}$***e- b)***$\begin{matrix} 4\\2\end{matrix}$ ***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***

$\frac{14760}{96500}$ ***=0.1529F√½***

***b)***

***2.65g---------0.1529f*** $\frac{0.1529x52}{2.65}$ ***√½ =3F√½***

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

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