Chemistry ATP Notes

1) What is the purpose of ice or cold water? To cool down the gas so that it condenses and turns into a liquid.

2) when the gas collecting tube is upside down, give a property of this gas. It is less dense than air.

3) Why is a pencil used in drawing thenorigin line in chromatography? If pen was used, it ill dissolve giving collies and so, the experiment won't be accurate.

4) When using ethanol, give a better apparatus arrangement, and why? Cover apparatus wth a lid, because ethanol is volatile.

5) In the tests and observation tables, when in the first row, they tell you that upon heating condensation occured, there will be a question asking what does this show about the solid? It is hydrated.

6) when copper is used in the test, and the answer is four marks, the best answer is: light blue precipitate (ppt) which is soluble in excess to form dark blue solution.

7) Why is this experiment done in a fume cupboard? It releases harmful gases that are poisonous. It is toxic.

8) Which result appears to be inaccurate? It is the point not appearing on the drawn graph, you read it's x-axis and write it with a reason indicating that it doesn't occur in the graph.

9) Why should the solid be crushed? It increases surface area for a faster rate of reaction.

10) Why is the experiment made in a well-ventilated room? To prevent the burning of the substance.

11) explain the term (decant). Filter/Pour the liquid leaving the solid alone.

12) Why is concentrated sulpharic acid not used to dry ammonia? Because itnwill reach the base ammonia, which is neutralization reaction.

13) Why should samples be taken from different parts of the field? To get more accurate results.

14) Suggest why it is important to know the pH of the soil. To see which is the best place for growing, and wht kind of base to use for neutralizing it.

15) What is necessary for rusting? Water (humidity) and oxygen (air).

16) Suggest why in an experiment for rusting the water level increases. Oxygen is used up, and water is used to take its place.

17) For electrolysis, state the observations. The bulb will light - A metal is formed on the cathode - Fizz of gases produced.

18) Suggest a suitable material for electrodes. Graphite - Carbon - Steel.

19) when copper oxide is reacted with hydrogen, what is the colour change? Black to brown, because copper oxide is reduced to copper.

20) How can you distinguish between water and ethanol? Use cobalt chloride paper, it turns from pink to blue with water, but there will be no change with ethanol.

21) how can you distinguish between sulpharic acid and aqueous sodium sulphate? There are three tests, you can use a metal carbonate in which carbon dioxide will be produced with sulpharic acid but there'd will be no change with sodium sulphate. You can add a metal, in which hydrogen is produced with sulpharic acid, but no change in sodium sulphate. Finally, you could use an indicator like litmus paper, it will change to red with sulpharic acid, but there will be no change with sodium sulphate..

22) how can you distinguish between hydrochloric acid and nitric acid? Add silver nitrate, in which white ppt will be formed with hydrochloric acid, but there will be no reaction with nitric acid.

23) What is the purpose of the mineral wool? To absorb and hold the liquid.

24) When there is a delivery tube involved in a question, what precaution should be taken in the experiment when the heat is removed? Remove the delivery tube from water to prevent suck-back.

25) In rate of reactions, always include the word "collisions between particles".

26) How can you distinguish between aliens and alkane? Use bromine water, in which the alkene will decolourise it to colorless, but nothing happens with an alkane,

27) how can you distinguish between chlorine and sodium chloride? Add litmus paper, it will bleach with chlorine, but nothing happens to it with sodium chloride.

28) How can you distinguish between copper sulphate and copper carbonate? Acidify with hydrochloric acid, and add barium chloride, there will be white ppt with sulphate, but no white ppt with carbonate. OR just add hydrochloric acid, in which nothing happens with sulphate, but a fizz or effervescence of carbon dioxide will occur with carbonate.

29) When a measuring cylinder is used, and they ask for a change in apparatus to get more reliable results, you should say that a biuret can be used instead as it is more accurate.

30) volume of reagent used decreases if it is more concentrated.

31) in an experiment observation of pH value, and they ask what type of acid/base is used, your answer should be weather weak or strong. A strong acid lies between pH values of 0 and 2, and a weak one lies between 3 and 6. 7 is neutral. A weak base lies between 8 and 11, while a strong one lies between 12 and 14.

32) A concentrated acid is an acid that contains a large number of H+, hydrogen ions. Vice versa with dilute acid.

33) A concentrated base is a base that contains a large number of OH-' hydroxide ions. Vice versa with dilute base.

34) a strong acid is one that ionizes completely giving H+ in solutions. Vice versa with a weak one..

35) A strong base is one that ionizes completely giving OH- in solutions. Vice versa with a weak one..

36) Concentrated: is a solution that contains a large number of solute or little amount of water is involved.

37) How can you make crystals? 1)heat till point of crystallization. 2) leave to cool gradually. 3) filter, dry and collect the crystals!

38) How can you detect the point of crystallization? Place a stirring rod in the solution and see the formation of the first crystals on it.

39) When you crush, you use a pestle and mortar.

40) Grass is ground with ethanol rather than water because clorophyll is more soluble in ethanol.

41) Colour of rusty iron fillings is brown (orange and red are I think accepted)

42) If pure oxygen was used instead of air, rusting will be faster.

43) you can speed up the drying process by using a fan or by increasing temperature or by using a hair-drier if you have one) , NOT a catalyst.

44) The action of a lie big condenser is to change steam to water.

45) to check for the purity for a collected solvent, test it's melting or boiling point.

46) The chromatogram needs to be sprayed with locating agent is amino acids are investigated because they are colorless.

47) If water contained salt, this will have no effect on rusting, however if a bigger substance is being rusted, it will be slower.

48) Hydrated copper sulphate will turn from blue to white upon heating.

49) saturated: no mo solute can be dissolved in a solvent AT A CONSTANT TEMPERATURE..

50) An excess amount of reactant is used to make sure all the other reactant will be used.

51) Sometimes, crystals are dried using filter paper instead of heating to prevent the complete loss of water from crystals, and to prevent crystals from breaking.

52) how could you know which reactant is in excess? At the end of the reaction, the excess reactant will be visible.

53) excess means more than what is needed.

54) when lead bromide is used, you can use a fume cupboard or use goggles,lab coat,gloves,,, because it is toxic.

55) to separate two different solutions with different boiling point, use fractional distillation.

56) Physical test of water: heat, it will boil at 100 degrees Celsius, or heat ice and it will melt at 0 degrees Celsius.

57) chemical test of water: Add blue cobalt chloride paper, it turns pink OR add anhydrous copper sulphate, it turns blue.

58) fire will be produced if alcohol is touched with lighted splint, therefore a water bath should be used when heating it. Lagging or cloth can be used to control temperature for accurate results.

59) unreacted reactant is called excess.

60) As reactants are heated, the particles gain energy, move faster, and their kinetic energy increases therefore there will be more collisions and rate increases.

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