FBQ1: _____ is worn in the laboratory to avoid chemicals splashing into the eyes.
Answer: Safety googles

FBQ2: _____ glassware is used to heat and evaporate liquids.
Answer: Evaporating dish

FBQ3: _____ is the most precise and accurate method of transferring and delivering liquids.
Answer: Volumetric glassware

FBQ4: Any chemical spilled onto the skin should be washed off immediately with _____.
Answer: Soap and water

FBQ5: Flammable solvents should be boiled away in a _____.
Answer: Fume hood

FBQ6: The method of separating liquids from solids that involves allowing the solid to settle in a beaker, then transferring the liquid, or supernatant with the aid of a stirring rod to a receiver is called _____.
Answer: Decanting

FBQ7: To prevent bumping of a hot liquid out of the container, _____ is added.
Answer: boiling chip

FBQ8: Reaction requiring low temperature of 00C can be carried out in the laboratory by employing _____.
Answer: Ice–water bath

FBQ9: In distillation the resultant hot vapour passes into a _____ and is converted to the liquid.
Answer: Condenser

FBQ10: Vaporisation-condensation cycles is known as _____.
Answer: Theoretical plates

FBQ11: The apparatus below is called _____.
Answer: Flat bottom flask

FBQ12: Compounds which are _____ crystallise first in recrystallization/crystallization technique
Answer: Less soluble

FBQ13: A suitable recrystallization solvent should be partially _____ in order to be easily removed from the purified crystals.
Answer: Volatile

FBQ14: _____ is the recovery of a substance from a mixture by bringing it into contact with a solvent which dissolves the desired material.
Answer: Extraction

FBQ15: Distillation technique is applicable or suitable for substances that are _____ in nature.
Answer: Liquid

FBQ16: _____ is a technique based on the principle of the equilibrium distribution of a substance (solute) between two immiscible phases, one of which is usually a solvent.
Answer: Extraction

FBQ17: Extraction is carried out by shaking the solution in a _____-.
Answer: Separatory funnel

FBQ18: Solvents used to extract organic compounds from aqueous mixture or solution must be _____ in water
Answer: Virtually insoluble

FBQ19: Boiling point is a _____ property often used to identify substances or to check the purity of the compound
Answer: Physical

FBQ20: The apparatus here presented is called _____.
Answer: Buchner funnel

FBQ21: The _____ cools vapour causing it to reliquify and direct the condensate to the receiving flasks.
Answer: Lie–big condenser

FBQ22: _____ are used to crush solids into powders for experiments.
Answer: Mortar and pestle

FBQ23: _____ are used to hold many different things such as flasks, crucibles and evaporating dishes when they are hot.
Answer: Tong

FBQ24: Burettes are used to deliver accurate _____ .
Answer: Volumes

FBQ25: This apparatus is used for _____.
Answer: Measuring liquids by volume

FBQ26: The instrumental set up above is used for _____.
Answer: Filtration

FBQ27: The difference between a simple distillation apparatus and a fractional distillation apparatus is that, between the distillation flask and the distillation head is inserted _____ column.
Answer: Fractionating column

FBQ28: A _____ is defined as the temperature range over which a small amount of solid in a thin walled capillary tube first visibly softens and then completely liquefies.
Answer: Capillary melting point

FBQ29: This apparatus is used for _____.
Answer: Measuring liquids by volume

FBQ30: The presence of a _____ in a crystal lattice interrupts its uniform structure and the forces of attraction are weakened.
Answer: Foreign particle

FBQ31: To avoid the errors in mass due to the use of balances that are not calibrated, one should weigh by a method called _____.
Answer: Weighing by difference

FBQ32: The function of stirring when carrying out a chemical reaction in the laboratory is to _____ the reagents or to aid heat transfer.
Answer: Mix

FBQ33: The process of boiling reactants while continually cooling the vapour returning it back to the flask as a liquid is known as _____.
Answer: Reflux

FBQ34: _____ is often used to heat solutions that boil below about 900C or to heat a mixture to approximately 1000C.
Answer: Steam bath

FBQ35: The most basic technique for the purification of organic solids is _____.
Answer: Recrystallization

MCQ1: In preparing a standard solution, two factors must be considered, namely:
Answer: 1.The solute must be pure 2. The suitable solvent should be measure to a definite volume

MCQ2: A solution contains 1.2 Molar concentration, what volume of it must be diluted with water to give 600 mls of 0.5 Molar solution?
Answer: 25 mls

MCQ3: In a chemistry laboratory a stoke bottle of acid solution reads, “1.25 specific gravity”; what does that mean?
Answer: 1 cm3 of that solution weight 1.25 g

MCQ4: If 2 cm3 of a stoke solution contains 1 mole of an acid how would you prepare 1 molar concentration of that acid in 250 cm3 of water?
Answer: Dissolve 2 cm3 of the stoke solution in 248 cm3 of water

MCQ5: A substance which loses water of hydration upon exposure to atmosphere is called?
Answer: Efflorescence substance

MCQ6: A substance which takes in only moisture upon exposure to atmosphere is referred to as?
Answer: Deliquescent substance

MCQ7: A table of requirement for laboratory experiment contains the following except?
Answer: List of weight of each reagents

MCQ8: Give reason why water should not be added to acid during carrying out acid-base titration?
Answer: The dissolution of acid in water is exothermic which may cause explosion

MCQ9: The concentration of pure HCl 11.7 Molar if 20 cm3 of the acid is diluted to 250 cm3 to give concentration of 0.936 mol.dm3 substitute this values on this equation; CIVI=C2V2?
Answer: 11.7 X 20 = 0.936 X 250

MCQ10: The point at which stoicheometrically equivalent quantities of substance have been brought together is known as?
Answer: Equivalence point of titration

MCQ11: Which of the following options is an indicator used for acid-base titration?
Answer: Methyl orange

MCQ12: In an acid base titration conducted by a student, the colour of the solution in the beaker changed from colourless to pink when phenolphthalein was used as an indicator, what went wrong?
Answer: The beaker was occupied by acid solution instead of base.

MCQ13: What is a PH of a solution?
Answer: It is the measure of hydrogen ions concentration in the solution

MCQ14: At neutralization point, the PH value is?
Answer: Seven

MCQ15: At complete neutralization point, the litmus paper colour turns?
Answer: Purple

MCQ16: Predict the colour of methyl orange when pH is 8?

Answer: Yellow

MCQ17: What is the colour of bromothymol when added to an acid solution?
Answer: Yellow

MCQ18: An indicator X was added to an acid solution in a beaker but no colour change was observed give the name of the indicator X?
Answer: Phenolphthalein

MCQ19: What is a strong acid?
Answer: Any acid that ionizes completely in solution

MCQ20: An example of a strong acid is?
Answer: H_2SO_4

MCQ21: What type of indicator will be suitable for use in a titration involving $H_2SO_4 + NH_3(ag)$?
Answer: Methyl orange

MCQ22: Which of these indicators will be suitable for use in a titration involving a weak acid and a strong base?
Answer: Phenolphthalein

MCQ23: What is the implication of adding a phenolphthalein as an indicator during the titration of HCl against Na_2CO_3?
Answer: The end point will appear when only half of Na_2CO_3 has been used

MCQ24: What is the importance of back titration?
Answer: To determine the concentration of a substance that is in excess after a chemical reaction.

MCQ25: A 25 ml solution of 0.5 M NaOH is titrated until neutralized into a 50 ml sample of HCl?
Answer: 0.25 mol

MCQ26: A student used a hard tap water and performed and acid base titration. In few lines explain what would happen to his result?
Answer: the starting solution would be more alkaline therefore it would require more volume of acid than expected

MCQ27: Choose the most suitable water for use in acid base titration?
Answer: Deionised water

MCQ28: Both molarity and normality are measures of concentration. True or false?
Answer: True

MCQ29: During acid-base titration sulphuric acid would be dissociated into what ions?
Answer: $2H^+ + SO_4^-$

MCQ30: What is a titrand in titration analysis?
Answer: Unknown concentration of an analyte

MCQ31: What is a titrant in titration analysis?
Answer: Known concentration and volume of an analyte

MCQ32: Which of these is a method of finding the equivalence point?
Answer: All of the options

MCQ33: When performing acid-base titration, one should first?
Answer: Rinse the burette twice with acid solution

MCQ34: The equation $NaOH + HCl \rightarrow NaCl + H_2O$ is a _____?
Answer: Neutralization reaction

MCQ35: The following are advantages of acid base titration except?
Answer: Less accuracy and precision

MCQ1: Amongst the glassware listed below _____ is the most precise and accurate method of transferring and delivering liquids.
Answer: Graduated cylinders

MCQ2: _____ is not a separation technique frequently employed in the laboratory to isolate one or more components from a mixture?
Answer: Crystallography

MCQ3: Which of these statements is true?
Answer: Simple distillation involves one cycle of vaporisation - condensation

MCQ4: A graduated cylinder is filled to the 40.00 ml mark with mineral oil. The masses of the cylinder before and after the addition of mineral oil are 124.966 g and 159.446 g. Determine the density of the mineral oil.
Answer: 0.8620 g/ml

MCQ5: A suitable recrystallization solvent is one that _____.
Answer: Does not react with the compound being purified

MCQ6: An extraction solvent is usually a _____.
Answer: Volatile organic liquid

MCQ7: _____ amongst the options is not used in gravity filtration?
Answer: Test tube

MCQ8: Reagents can be agitated/ mixed during a chemical reaction by the use of _____.
Answer: Magnetic stirrer

MCQ9: The function of placing wire gauze between a vessel containing a substance to be heated and a burner is _____.
Answer: To provide support and disperse heat

MCQ10: When acid is spilled in the laboratory it should be _____.
Answer: Neutralised with sodium bicarbonate

MCQ11: _____ does not yield a pure product.
Answer: Extraction

MCQ12: _____ bonds are broken during a change from the liquid phase to the gas phase.
Answer: Dipole - dipole interactions

MCQ13: One of the disadvantages of wearing loose sleeves to the laboratory during a practical class is _____.
Answer: They can sweep flasks from the laboratory bench

MCQ14: _____ provides a large surface area in which the initial distillate is redistilled and condensed again.
Answer: Fractionating column

MCQ15: Amongst the various means/method of heating _____ is used to heat a mixture for extended periods and at certain temperatures.
Answer: Refluxing

MCQ16: Separatory funnel is used to separate _____
Answer: Two immiscible liquids

MCQ17: _____ will not provide heat of over 1000C ?
Answer: Heating mantle

MCQ18: _____ is ideal for measuring liquids by volume.
Answer: Graduated cylinder

MCQ19: _____ is not a volumetric glassware.
Answer: Round bottom flask

MCQ20: Darkened brown or amber glass is used to _____.
Answer: Keep out much of UV and IR radiation

MCQ21: Reactions requiring low temperatures can be achieved using all of the options provided to maintain low temperature except _____.
Answer: Liquid helium

MCQ22: Glassware are used for experiments in the Chemistry laboratory because _____.
Answer: They are relatively inert, transparent and more heat-resistant

MCQ23: Which of these is/are more accurate and precise in taking weight measurements?
Answer: Digital balance

MCQ24: The principle of separation of insoluble solid from a liquid by filtration is based on _____
Answer: Gravity

MCQ25: All of the following can be used to separate liquids from solids except _____.
Answer: Distillation

MCQ26: Extraction is used for the separation of materials that are _____ in nature.
Answer: Liquid and solid

MCQ27: Using an unclean volumetric glassware during experiment will _____.
Answer: Reduce precision

MCQ28: What does the symbol below represent in the Chemistry laboratory.
Answer: Toxic

MCQ29: Which of the following is not employed in heating ?
Answer: Drying agent

MCQ30: Extraction is carried out by shaking the solution with a second solvent that is _____ with the one in which the compound is dissolved.
Answer: Immiscible

MCQ31: Amongst the options listed below _____ is a better choice for the heating of flammable substances.
Answer: Steambath

MCQ32: Substances that absorb water if left exposed to the air are kept dry in the laboratory by placing them in _____.
Answer: A dessicator

MCQ33: _____ is used to hold solids when being weighed.
Answer: Watch glass

MCQ34: A chemist would determine several physical and chemical properties of a compound because _____.
Answer: It is possible for two different compounds to have a few identical physical and chemical properties.

MCQ35: _____ is the most common extraction solvent.

Answer: Ethyl ether