FBQ1: Numerical value of the universal gas constant in J/K/mol is ----------
Answer: 8.314

FBQ2: The reaction between an organic acid and an alcohol to yield an ester is known as__
Answer: Esterification

FBQ3: An ester that is capable of exerting a banana aroma is likely to be _____
Answer: isoamyl acetate

FBQ4: The product of further oxidation of aldehyde is___
Answer: Carboxylic acid

FBQ5: The product of oxidation of secondary alcohol in the presence of acidic K2Cr2O7 is__
Answer: Ketone

FBQ6: Forensic and drug analysis can be effectively carried out using appropriate choice of _____ instrument
Answer: Chromatography

FBQ7: In order to convert temperature values from Celsius to Kelvin unit, the necessary equation is _____
Answer: K = °C + 273

FBQ8: A body of mass, m absorbed Q J amount of heat. If the change in temperature is DT, the equation for calculating the specific heat capacity, C of the mass is _____
Answer: C = Q/mDT

FBQ9: The relationship between the unit of energy in Calories and in Joule is _____
Answer: 1 cal = 4. 184 J

FBQ10: The heat of neutralization of strong acid by strong base is approximately constants for all acids and bases because strong base and strong acids undergoes _____
Answer: Complete ionization

FBQ11: An equation that can be used to calculate the number of degree of freedom (i.e F) of a phase system having C component and P number of phase can be written as _____
Answer: F = C-P + 1

FBQ12: The volume occupy by 1 mole of a gas at stp is called _____
Answer: Molar volume

FBQ13: The results of calculation of the volume (in dm3) occupy by 16 g of oxygen gas at stp is _____
Answer: 22.4 dm3

FBQ14: Chemical reactions that generates poisonous gases can best be prepared under a _____
Answer: Fume cupboard

FBQ15: As the molecular weight of organic compounds increases, the boiling point _____
Answer: Increases

FBQ16: The function of wearing hand cloves during laboratory experiment is to prevent direct contact with _____
Answer: Chemicals

FBQ17: The pka of an acid whose ionization constant (ka) is 0.001 is numerically

equal to ____
Answer: 3

FBQ18: An equation that related depression of freezing point to molecular mass can be written as _____
Answer: DT = kfm

FBQ19: Tollen’s reagent consist of a basic (OH-) solution of _____
Answer: Copper (II) citrate

FBQ20: Tetraoxosulphate (VI) acid is a very corrosive acid and can better be stored in a ____ container
Answer: Bottle

FBQ21: An ester characterised by pineapple odour can best be prepared by combining ethyl alcohol and ___ in the presence of a mineral acid
Answer: Butyric acid

FBQ22: The chemical formula of the product generated from the interaction of RCOH with oxygen from air is _____
Answer: RCOOH

FBQ23: In the course of carrying out titration analysis to determined percentage vinegar in a fruit juice, colourless vinegar preferably yields better endpoint because less _____ in the observation of the endpoint
Answer: Interference

FBQ24: It is better to repeat a titration analysis upto _____because error will be reduced when average value is taken
Answer: Three time

FBQ25: Prior to measuring pH, the pH meter should be calibrated using ____ solutions
Answer: Buffer

FBQ26: Rf value is a response parameter to thin layer chromatography while _____ is a response value to gas chromatography
Answer: retention time

FBQ27: The basic reagent that can be used to test for the presence of double bond is ____ solution
Answer: Potassium permanganate

FBQ28: ____ reagent will essentially oxidized aldehyde to carboxylic acid and copper (I) oxide
Answer: Benedict

FBQ29: If the negative logarithm of hydroxyl concentration of a solution is y, the pH of that solution can be expressed as _____
Answer: 14-y

FBQ30: Column chromatography can be applied by chemist to _____ substances
Answer: purify impure

FBQ31: The pump in a high performance liquid chromatography functions in _____
Answer: pumping solvent

FBQ32: Peak area and peak height in chromatogram are commonly applied to _____
Answer: estimate concentration

FBQ33: In paper and thin layer chromatography, the ratio of the distant

travelled by the solute to the distant the solvent moves is called _____
Answer: Rf value

FBQ34: Titration analysis to determine the concentration of acetic acid in a solution can be achieved by titrating the solution with standardised ____
Answer: NaOH

FBQ35: [H+] [OH^-] = 1.0 x 10 -14 pH + pOH = Y. What is the missing term in the equation
Answer: 14

MCQ1: The commonest method of introducing unsaturation into an organic compound is __
Answer: Dehydration

MCQ2: Which of the following compounds (of comparable molecular weight) will be most soluble in water
Answer: Carbohydrate

MCQ3: Which of the following factor will limit the solubility of primary, secondary and tertiary amines
Answer: The presence of more than more phenyl group on the amine nitrogen

MCQ4: One of the following may not be necessary to be observed in the laboratory
Answer: Do not talk or ask question when carrying out experiment

MCQ5: Solubility of organic compounds can be affected by all except one of the following
Answer: None of the options

MCQ6: Which of the following organic compound is expected to have the highest boiling point
Answer: C4H10

MCQ7: Which of the following reagent is not best for use in testing for the presence of phenol
Answer: Potassium permanganate

MCQ8: Which of the following is not unique reagent for the presence of alcohol test?
Answer: Millions reagent

MCQ9: 2,4-dinitrophenylhydrazine test is best suitable to test for the presence of ..
Answer: Ketones

MCQ10: Benedict test is not suitable reagent for the presence of …. test
Answer: Aldehyde

MCQ11: Which of the following pH value signifies a very strong base
Answer: 14

MCQ12: The hydrogen ion concentration of a solution is 0.0001 M. calculate the pH of the solution
Answer: 4

MCQ13: The concentration of hydrogen ion of a solution is 0.001 M. Calculate the pOH of the solution
Answer: 11

MCQ14: The pH of unripe fruit may likely assume a value of___
Answer: 5

MCQ15: The freezing point of a non-volatile electrolyte is depressed by 4 K. If

the molar mass of the solute is 16 g/mol, calculate the freezing point depression constant
Answer: 0.25 K/mol

MCQ16: The concentration of a solute in solvent A is 0.2 M while its concentration in solvent B is 0.4 M. Calculate the partition function of the system
Answer: 0.50

MCQ17: Convert 5 °C to °F
Answer: 41 °F

MCQ18: Convert 9 °F to °C
Answer: 21 °C

MCQ19: Convert 0.5 Cal of energy to energy in Joules unit
Answer: 2.092 J

MCQ20: Why does the heat of neutralization of a strong acid by a strong base always assume a constant value, irrespective of the acid
Answer: They undergo complete neutralization

MCQ21: If the amount of heat absorbed by a substance is 546 J at a temperature of 273 K, calculate the heat capacity of the substance
Answer: 2 J/K

MCQ22: A three component system has two phases, calculate the number of degree of freedom for the system
Answer: 1

MCQ23: The temperature of one mole of an ideal gas was measured as 100 K. calculate the product of pressure and volume of the gas
Answer: 831 J/mol/K

MCQ24: The pressure of 10 m3 of a gas was measured as 21 Pa. calculate the value of the gas constant.
Answer: 21

MCQ25: Which of the following parameters cannot be experimentally estimated through Boyle’s law
Answer: Temperature

MCQ26: In an experiment, the temperature of a fixed mass of a gas was measured as 100 K. If the volume of the gas was 10 m3, calculate the constant of proportionality
Answer: 0.10

MCQ27: Aluminium metal melts at 660.37°C.What is the temperature in Kelvin?
Answer: 933.52

MCQ28: Aldehydes and ketones have all the under listed features except;
Answer: Aldehyde and ketone are non-polar compounds

MCQ29: Ketones differ from aldehydes because _____
Answer: Ketones always has two alkyl group attached to the carbonyl group but aldehyde has a hydrogen atom in addition to one alkyl group

MCQ30: Acetone has all these applications except;
Answer: Used as a preservative for wine

MCQ31: Aldehydes are easily oxidized probably because of one of these reasons.
Answer: Due to the presence of the hydrogen attached to the carbonyl group

MCQ32: One of these is not an important application of chromatographic

techniques
Answer: Cannot be used in forensic work

MCQ33: Which of these is not a basic chemical reaction in organic chemistry?
Answer: Carbocation reaction

MCQ34: Which of these elements can be determined by Lassaigne's fusion test?
Answer: Na

MCQ35: Which colour of precipitate is formed when highly conjugated aromatic aldehydes reacts with 2, 4-Dinitrophenylhydrazine?
Answer: Red