

MCQ1: One of the following pair cannot constitute suitable pair for n-type conductor?

Answer: Antimony: Arsenic

MCQ2: One of the following is not true about n-type conductor

Answer: There is no chemical but physical interaction between the impurity and the semi conductor

MCQ3: One of the following is not a right pair for p-type semi conductor

Answer: Aluminium: indium

MCQ4: One of the following is not associated with the conductivity of semi conductors due to doping

Answer: o-type

MCQ5: One of the following is not a class of crystal solids

Answer: Hydrogen bonded

MCQ6: One of the following does not describe the crystal structure of metallic solid

Answer: Trigonal-close packing

MCQ7: The unit of one of the following quantity is a derived unit

Answer: Momentum of electron

MCQ8: When iron metal corrodes, its colour changes to _____

Answer: Brown

MCQ9: One of the following is not a chemical instrument

Answer: Filter paper

MCQ10: The pressure exerted by 0.5 cm³ of gas is 1 Pa at 273 K. If the temperature of the gas changes to 546 K and its pressure to 3 Pa, what will be the new volume of the gas

Answer: 0.3 cm³

MCQ11: One of the following combination does not match for gas law

Answer: Gay-Lussac law : Constant volume

MCQ12: If 3.00 litre sample of gas at 1.00 atm is compressed to 0.600 litre at constant temperature. Calculate the final pressure of the gas

Answer: 5.0 atm

MCQ13: Calculate the volume which 6.00 litres of gas at 0 °C will occupy at 125 °C at constant pressure

Answer: 8.75 litres

MCQ14: Calculate the volume occupy by 32 g of oxygen at stp

Answer: 44.8 dm³

MCQ15: One of the following is not correct

Answer: $1 \text{ atm} = 101325 \text{ Pa}$

MCQ16: Calculate the volume occupied by 0.0660 kg of carbon (IV) oxide gas at a temperature of 300.2 K and a pressure of $9.41 \times 10^5 \text{ Pa}$ assuming ideal behaviour

Answer: 0.0398 m^3

MCQ17: Hydrogen bonding may not affect the physical properties of one of the following molecules

Answer: CsF

MCQ18: Which of the following pair does not agree with the kinetic theory of gases

Answer: Temperature = Average collision

MCQ19: The length of one axis of a cubic crystal is 0.05 cm. What is the length of the next minimum axis?

Answer: 0.05 cm

MCQ20: Which of the following is not true about Graham's law

Answer: Diffusion rate is proportional to density

MCQ21: Use Dalton's law to calculate the total vapour pressure exerted by a mixture of A and B if the following data were obtained; $X_A = 0.40$, $X_B = 0.60$, $P_A^0 = 1710 \text{ mm/Hg}$ and $P_B^0 = 127 \text{ mm/Hg}$

Answer: 760 mm/Hg

MCQ22: Which of the following pair does not match?

Answer: Hexagonal: K_2O

MCQ23: Which of the following pair does not match?

Answer: Hexagonal: $a=b=c$

MCQ24: Which of the following salts can form precipitate

Answer: AgCl

MCQ25: The value of the gas constant R is often expressed as $1.987 \text{ cal mol}^{-1} \text{ K}^{-1}$. Obtain its value in SI units (Given $1 \text{ cal} = 4.184 \text{ J}$)

Answer: 8.314 J/mol/K

MCQ26: 16 g of oxygen gas occupies a volume of 22.4 dm^3 . Calculate the density of the gas

Answer: 0.000714 g/dm^3

MCQ27: The concentration of an acid in a sample can be estimated by _____

Answer: Titration

MCQ28: Consider four gases whose densities are (i) 0.2, (ii) 0.4, (iii) 0.6 and (iv) 0.8 g/cm^3 . The order of diffusion will be

Answer: i > ii > iii > iv

MCQ29: The pressure of air in a system is 10 Pa and the volume occupied is 4 m³. If the the volume is increased to 16 m³, what will be the new pressure
Answer: 2.5 pa

MCQ30: The order of intermolecular distance among the three state of matter is ____
Answer: Gas>liquid>solid

MCQ31: The product of pressure and volume of a gas at 300 K is 500 Pa·m³. Calculate the number of moles of the gas
Answer: 0.2

MCQ32: 2 moles of water was mixed with 3 moles of ethanol. The ratio of the mole fraction of ethanol to that of water is ____
Answer: 1.5

MCQ33: An ideal gas will not obey one of the following law
Answer: Van der waal

MCQ34: A real gas will obey one of the following law
Answer: Van der waal law

MCQ35: A solute was dissolved in two separate immiscible solvent. If 2.0g of the salt dissolve in the first solvent and 4.0g dissolved in the second solvent. Calculate the partition coefficient if the two solution are combined together
Answer: 0.5

FBQ1: Modern approach to chemistry deals with equilibrium properties, ability to change and ____
Answer: Structure

FBQ2: Physical Chemistry is concern with two major aspects, namely ability to change and ____
Answer: Equilibrium properties

FBQ3: International system of unit or systeme internatwnale can be written as an acronym ____
Answer: SI unit

FBQ4: Temperature, length, time and mass are examples of ____
Answer: basic quantities

FBQ5: Meter, kelvin, second and kilogram are examples of ____
Answer: Basic units

FBQ6: A skilful process of identifying. substituting and using correct apparatus appropriately in the laboratory is called ____
Answer: Instrumentation

FBQ7: Apparatus that arc basically used for determining the melting points of

substances are called _____

Answer: melting point tubes

FBQ8: The Beckman thermometer is used in the Beckman's apparatus for determining _____ of a substance

Answer: Freezing point

FBQ9: _____ is an instrument that can be used to measure the strength of an acid or a base

Answer: pH meter

FBQ10: A homogeneous material that contains only one substance is called a _____

Answer: pure substance

FBQ11: Constituents in a solution can be separated by applying the principle of _____

Answer: Equilibrium

Fill in the Blank (FBQs) 11: The process of separating a pure substance from a solution is called _____

Answer: crystallization

FBQ13: In a gas, the molecules on the average are separated by large _____ distances

Answer: Intermolecular

FBQ14: - _____ is a state of matter that does not have a definite shape nor volume

Answer: Gas

FBQ15: At constant temperature, the gas law that is most suitable is called _____ law

Answer: Boyle's

FBQ16: At constant pressure, properties of gases that undergo changes are _____

Answer: volume and temperature

FBQ17: A gas that obeys all the gas laws is called an _____

Answer: ideal gas

FBQ18: At high temperature and low pressure, gases tend to undergo phenomena that is called _____

Answer: Expansion

FBQ19: At low temperature and high pressure, gases tend to _____

Answer: Contract

FBQ20: The temperature, above which a substance can exist only in gaseous state is called _____

Answer: Critical temperature

FBQ21: The mathematical equation for Boyle's law can be written as _____
Answer: $PV = \text{constant}$

FBQ22: The mathematical equation for Charles law can be written as _____
Answer: $V/T = \text{constant}$

FBQ23: A plot showing the variation of volume with temperature at constant pressure is called _____
Answer: An isobar

FBQ24: An expression for the combined gas law can be expressed as _____
Answer: $PV/T = \text{constant}$

FBQ25: The equation of ideal gas can be expressed as _____
Answer: $PV = nRT$

FBQ26: Numerical value of the universal gas constant is _____ J/K/mol
Answer: 8.314

FBQ27: The volume occupied by 1 mole of oxygen gas at s.t.p. is _____ dm³
Answer: 22.4

FBQ28: The individual pressure of a gas in a mixture of gases is called _____
Answer: Partial pressure

FBQ29: The gas law that consider the total pressure of a gas as a function of the pressures exerted by the individual gases that make up the mixture is _____
Answer: Dalton law of partial pressure

FBQ30: For 1 mole of an ideal gas, a plot of PV against T will give a straight line whose slope is equal to _____
Answer: 8.314

FBQ31: The rate at which gases diffuse is inversely proportional to the Square root of their _____
Answer: Densities

FBQ32: The gas law that explain the effusion of gas is _____
Answer: Graham law

FBQ33: Gas molecules confined to a container are in a state of _____ motion
Answer: Constant

FBQ34: At relatively low pressure, there are no _____ forces between gas molecules
Answer: Intermolecular

FBQ35: _____ of a gas is proportional to the mean kinetic energy of the molecules

in a gas

Answer: Absolute temperature

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