**QUIZ**

What does the acid that lemons contain by its name go by?

Citric acid

Do you know what an atom's atomic number is?

Number of protons

Is it accurate to represent p/q as 0?

YES (0/4 =0)

What other name does Thomson's model of the atom go by?

Watermelon Model

Which of the organelles below is also referred to as the "suicide bag" of the cell?

Lysosome

What is the man's speed in the event that he covers a distance of 5 meters in 10 seconds?

½ m/s (speed = distance / time)

How many laws of motion are given by father of law and motion?

3 (Newton)

A silicon controlled rectifier is turned on in the event that the anode current is more noteworthy than

Cathode current

On the off chance that the amount of two numbers is considered as 'x' and their product is considered as 'y', then, at that point, what will be the amount of their reciprocals?

x/y

Extremely durable hardness of H2O might be taken out by the addition of

sodium carbonate

If beryllium is the second lightest metal, then what is lighter that beryllium.

Lithium

Ribosomes are small organelles found in cells that read the ­­­ genetic code from the \_\_\_\_\_\_\_ and responsible for protein synthesis.

DNA

If speed of light traveling through a vacuum is exactly 299,792,458 meters per second, then what happens when it travels from vacuum to water

Decreases

A person sitting in a moving car suddenly moves forward when the car stops at a time due to

Inertia

Which orbitals are responsible for the variable valency of transition elements?

Partially filled d-orbitals

The response of a plant to heat is called?

Thermotropism

If study of fruits is called Pomology then Botany is the study of

Plant life

If metals react with oxygen they are known as metal oxides then what metal forms when it reacts with water along with metal hydraoxide

Hydrogen

Name the gas that is evolved when metals react with water that causes calcium and magnesium float over water even they are heavier than water.

Hydrogen gas

Carbon in the form of non-metal can conduct electricity what is it

Graphite

Name the sub-component of metal which is stronger than metal and have more resistance to corrosion

Alloys

Radius of an atom is known as atomic size and it decreases on moving from left to right in a period due to

Nuclear charge increases

The vertical columns of modern periodic table is known as groups, so how many vertical columns are present in the periodic table

18 groups.

Horizontal rows in the mendeleev’s periodic table is known as periods and vertical columns are known as

Groups

Ability of the eye lens to adjust its focal length according to distance is known as

Power of accommodation

A person in a colourful city is unable to distinguish between the different colours. Name the defect that he is suffering with

Colour Blindness

The lens that is used to correct the short sightedness and has an ability to diverge incoming rays is known as

Concave lens

Long sightedness is known as hypermetropia by using which lens it can be corrected

Convex lens

Dispersion of white light through a glass prism gives seven constituent colours what are they known as

VIBGYOR

A light consisting of single colour is known as monochromatic light if it has more than two colours then it is known as

Polychromatic light

Compounds having same molecular formula but different structural formula are known as isomers.

Then this phenomenon is known as

Isomerism

Existence of an element in two or more forms which have different physical properties but similar chemical properties is known as

Allotropy.

How can carbon attain noble gas configuration

gain 4 electrons

loss 4 electrons

share 4 electrons

All of the above

Electrons contributed by the atoms for mutual sharing in order to

Acquire the stable noble gas configuration

Is any alkene or alkyne is possible with single carbon atom

No

A reaction in which a CH4 (substance) burns in the presence of O2 (air) is known as

Combusition reaction

In the presence of acid or base esters react to give back alcohol and carboxylic acid , This type of reaction is known as

Saponification

Flow of electric charge is known as electric current and it is carried by moving \_\_\_\_\_\_\_\_\_\_ through a conductor.

Electrons

Which law states the potential difference between two points is directly proportional to the electric current at a constant temperature.

Ohm’s Law

The property of conductor which withstands the flow of electric charge through it. Name the property and it is denoted by

Resistance ‘Q’

A free suspended magnet always points towards which direction.

North and South

On which the direction of magnetic field through a current carrying conductor depends

Direction of flow of electric current.

A set which does not contain any element is known as void set, what’s the other name for the set and how it is represented.

Null set representation-🡪 {}

If there presents two set namely X and Y, all the elements of set Y are present in X ,then Y is known as

Subset of X

Equations involving the functions like sin, cos, tan, cosec, … of unknown angles are said to be

Trigonometric Equations

Name the technique that is used to prove a variety of mathematical statements which are formulated in terms of n, where n is a positive integer

Mathematical Induction

√-2, √-5, ... (Square root of a negative number) These type of numbers are known as

Imaginary Number

The quadratic equation ax2 + bx + c = 0 with real coefficients has two roots and it is known as the discriminant of the equation, can you identify the roots of the equation

−b+√D/2a and −b−√D/2a, where D = b2 – 4ac

Name the expression consisting of two terms, connected by + or – sign

Binomial Expression

If the product of two lines scope is equal to -1, then the two lines are said to be

Perpendicular

If slopes of two lines are equal then the lines are said to be

Parallel

What makes an obtuse angle with a positive x-axis when measured in the anti-clockwise direction.

Line with a negative slope

If the three dimensional space is given, How many octants can be divided by the coordinate plane

8 octants

Identify the relation between mean, median and mode

Mode = 3 Median – 2 Mean

If the standard deviation of the data is 11 then what is the variance of the data

121 (Variance = S.D2)

Sum of Observation / Number of Observations is equal to

Mean

When coin is tossed 5 times what is its sample space

32

Can mutually exclusive events occur simultaneously?

No (If one event occurs, the other event cannot occur, and thus P(A ∩ B) = 0.)

A relation R defined on a set A is said to be\_\_\_\_\_\_\_\_\_\_, if  
 (a, b) ∈ R and (b, c) ∈ R ⇒ (a, c) ∈ R, ∀ a, b, c ∈ A.

Transitive

If the function is both one-one and onto, then the function f:X🡪Y is known as

Bijective Function

The matrix has m rows and n columns, then the order of the matrix is said to be\_\_\_\_\_\_\_\_\_ and how many elements it contains.

Order =  m × n , mn elements.

A matrix whose diagonal elements are same and remaining elements are zeroes is known as

Scalar Matrix.

Given a square matrix A, if |A| = 0 (determinant of A = 0 ) , then it is said to be

Singular Matrix

Which quantities have magnitude as well as direction

Vector quantities.

Scalar quantities have

Only Magnitude

Vectors having the same initial points are said to be

Coinitial Vectors

If θ is the angle between two vectors a⃗ and b⃗ , then the scalar product is denoted by   is given by

a⃗ . b⃗

What is the dielectric constant of the metal?

Infinite

The dielectric constant of metal is infinite, because of the net electric field inside the metal is

zero

Identify the property that can differentiate two kinds of charges

Polarity of charge

Electric field gives the information on direction, nature of charge and

Field strength

Name the process in which a region is made free from any electric field is

Electrostatic shielding

Work done / charge is equal to

Electrostatic Potential

What happens to the capacity of parallel plate capacitor when area of the plate is increased?

Increases

A resistance that does not obey the ohm’s law is known as

Non-ohmic resistance

Resistivity of certain metals drops to zero when cooled below certain temperature.

superconductivity

Tesla is a S.I unit of

Magnetic Field

Name the device that is used to accelerate positively charged particles

Cyclotron

Displacement current is introduced by

Maxwell

Identify the man-made magnets from the following

Horse-shoe Magnet

Ferromagnetic substances can only be attracted using

Permanent Magnet

In Fleming’s Right Hand Rule what does the forefinger points

Direction of magnetic field

What does the thumb finger points in the Flemings right hand rule

Direction of magnetic force

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Which finger points the direction of induced current, according to Flemings right hand rule

Middle finger

What is the principle followed in the construction of the generator.

Electromagnetic Induction

Flemings left hand rule is used to

Identify the direction of the current induced in a wire.

When two light sources are emitting light of same wavelength and constant phase difference, then the light sources are said to be

coherent

Does intensity is conserved when light waves interface?

No

Device that converts light energy into electricity

Photoelectric Cell

Which effect is based on the law of conservation of energy.

Photoelectric Effect.

One quantum of light radiation is known as

Quanta

The existence of the nucleus was proved using which experiment.

Rutherford’s alpha particle experiment

Identify the series of lines in the electromagnetic spectrum that lies in the visible region.

Balmer series

Identify the hydrogen spectrum that get dark lines on the bright background.

Absorption Spectrum

In which reactions there occur only conservation of momentum

Nuclear reactions

Which law describes which chemical element and isotope is created during the particular type of radioactive decay.

Radioactive displacement law

Name the semiconductor that is electrically neutral (Uncharged).

P-type semiconductor.

Which device converts an electrical signal to a sound signal.

Transducer

Is microphone being a transducer?

No

Device that converts electrical signals into sound signals.

Loudspeaker

Carbon mixes with nitrogen and oxygen to make

Producer gas

Elements that belongs to d-block are also known as

Transition elements.

Elements lying between group 2 and 13 are

d-block elements

Which block of elements are also known as inner-transition elements.

F-block elements.

Elements beyond uranium are

Man-made

The compounds that are having the same molecular formula but differ in their structural arrangements are

Isomers

Halo-alkanes are classified as fluoro, chloro, bromo or iodo compounds according to the type of

Halogen present

Name the massive molecules that are made up of a large number of simple units.

Polymers.

Polymers derived from the plants and animals are known as

Natural polymers.

What can make an amine from amino acid

Elimination of a molecule of carbon dioxide

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Cardinality of the empty set is

Zero

Find the Number of elements present in the power set P(A) of the set A = {1,2,3,4,5}.

power set P(A) will have 2^5 = 32 elements.

When the two sets are said to be equal

If they have same number of elements.

If they both have same elements.

If tan A = 1/3 and tan B = 2/4, then the value of tan(A+B) is derived using which formula.

tan(A + B) = (tan A + tan B)/(1 – tan A tan B)

If cos(30) is √3/2, then what is the value of sin(60)

√3/2

What is the value of tan(90)

Not-defined

Identify the formula for finding the sum infinite geometric series

S = a/(1-r)

Sn = n/2[2a + (n-1)d] is the formula for the sum of

first n terms of an arithmetic sequence

Value of sin (π/3) is

√3/2.

What is the value of 5!

120

Value of tan (45) is

1

Name the law that states that energy cannot be created or destroyed, only transferred from one form to another.

Law of conservation of energy.

As speed is the rate at which an object covers the distance, then what’s meant by Velocity.

Speed in a specific direction

Index of Refraction is calculated from the ratio of

Speed of the light in a vacuum to that in a second medium of greater density.

We know that mass is the amount of matter in the object and acceleration is the rate of change of velocity of object, then mass x acceleration equals to

Force

Mass x gravity x height is equal to

Potential energy

Which of the following correctly defines the density?

Density is the amount of mass per unit volume

Formula for calculating the distance travelled by an object with constant velocity’s

Velocity x time

What is the full form of EPROM?

Erasable Programmable Read-Only Memory.

Is Byte a smallest unit in a digital system.

No

Which is the permanent memory of computer system.

ROM

RAM stands for

Random access Memory

A statements that are executed repeatedly until a certain condition is met is known as

Looping statements

There are two types of loops in computer language what are they

For loop and While loop

What is meant by DBMS?

Database management system.

In DBMS what is known as a unique identifier?

Primary Key.

Why is foreign key used in the DBMS?

It refers the primary key of other table.

What is the special method that is used to initialize the objects?

Constructor.

Which translates the entire source code to the machine code before execution?

Compiler

What does interpreter do with the source code?

Translate source code to machine code line by line.

The data structure in which each element contains a link or a reference to the next element is known as

Linked List

A function that calls itself to solve the problem is known as

Recursion

Which data structure that uses last-in-first-out method

Stack

Which method does the queue data structure uses

First-In-First-Out

Which generation computers uses vacuum tubes

First generation Computers

Which generation computers has started to use integrated circuits.

Third generation Computers

One byte consists of how many bits?

8 bits

Which algorithm uses divide and conquer method

Binary search

ASCII Value of NAL is

78 + 65 + 76 = 219

Is Time () a maths function

No