Question FBQ1 : The bending of a ray of light when it travels through a medium is called_____.
Answer: refraction

Question FBQ2 : <p style="text-align:justify">A prism has _____ plane surface(s) which is/are called refracting face(s)
Answer: two

Question FBQ3 : <p style="text-align:justify">The angle between the two refracting faces of a prism is called angle of ____
Answer: prism

Question FBQ4 : When seeking the “null” point, the key K should be closed before contact is made at the point of balance. This is done to avoid deflections due to ____.
Answer: induction effects

Question FBQ5 : Convex mirrors are mostly used as _____.
Answer: driving mirrors

Question FBQ6 : The angle between the incident and the emergent rays in a prism is called the angle of _____.
Answer: deviation

Question FBQ7 : In an experiment, derived values such as those obtained from four figure tables should be recorded to at least ____ decimal places
Answer: 3

Question FBQ8 : Which of the following remains unchanged when refraction occurs?
Answer: Frequency

Question FBQ9 : The slide wire of the figure shown is balanced when the uniform slide wire AB is divided as shown. The value of the resistance X is _____ .
Answer: 2

Question FBQ10 : _____ is the apparent motion between an object and its image, situated along the line of sight, relative to each other.
Answer: Parallax

Question FBQ11 : In the minimum deviation position of the prism, the refracted ray passes parallel to the base of the ____.
Answer: prism

Question FBQ12 : The advantage of potentiometer over voltmeter in measurements of emf is that it does not draw _____from the circuit under test.
Answer: Current

Question FBQ13 : A glass prism of refracting angle 60 degrees gives a minimum deviation of 47degrees. What is the refractive index of the glass?
Answer: 1.61

Question FBQ14 : Obtaining a rough value for the focal length of a concave mirror can achieved by focusing the ____of a distant window on to a sheet of paper
Answer: image

Question FBQ15 : The _____ of the eye plays an equivalent role of the screen in optical experiments
Answer: Retina

Question FBQ16 : The distance between the sharpest image on the paper or on thewall gives the approximate focal length of the mirror
Answer: length

Question FBQ17 : Which mirror is used as a dentist mirror?
Answer: concave

Question FBQ18 : If an object is placed at the principal focus of a concave mirror, its image will be formed at:
Answer: Infinity

Question FBQ19 : An image that can be formed on a screen is said to be _____.
Answer: Real

Question FBQ20 : For a concave mirror to form a real diminished image, the object must be placed at a distance greater than the_____.
Answer: radius of curvature

Question FBQ21 : A virtual image is always :
Answer: upright

Question FBQ22 : No parallax tells us that the two objects are_____.
Answer: Coincident

Question FBQ23 : _____is the apparent motion between an object and its image, situated along the line of sight, relative to each other in an experiment.
Answer: Parallax

Question FBQ24 : A 10 ohm and a 20 ohm resistor are connected in parallel to a current source. What fraction of the current flows through the 20 ohm resistor?
Answer: 1/3

Question FBQ25 : An object is placed 15 cm in front of a convex mirror of focal length 7.5 cm. The image position behind the mirror is ____.
Answer: minus5 cm

Question FBQ26 : A glass prism is made from transparent refracting medium with two refracting faces and a refracting edge of the prism. The two refracting faces give _____.
Answer: angle of prism

Question FBQ27 : <p style="text-align:justify">A ray of light experiences a minimum deviation when passing symmetrically through an equilateral triangle. The angle of incidence of the ray for a glass of 1.5 refractive index is____
Answer: 490

Question FBQ28 : A resistor of value R/2 is connected in parallel with a resistor of value R/3. The voltage drop across the parallel combination is V. The total current supplied by the voltage source is____.
Answer: 5 V/R

Question FBQ29 : Resistivity of iron is 10- 7 Ω-m. The resistance of an iron wire is 1 Ω. If its diameter is halved and length doubled, the resistivity in Ω-m will be equal to ____.
Answer: 10- 7

Question FBQ30 : To get three images of a single object, one should have two plane mirrors at an angle of ___.
Answer: 90°

Question FBQ31 : How many images will be formed when two plane mirrors are placed parallel to each other?
Answer: One

Question FBQ32 : The minimum deviation (dmin) is unique and can be found from the graph of deviation against __
Answer: incidence

Question FBQ33 : Every material offers some resistance to the flow of _____.
Answer: current

Question FBQ34 : The ratio of voltage V to current I is equal to a quantity which gives the measure of _____ offered by the conductor to the flow of charge
Answer: resistance

Question FBQ35 : The relationship between the voltage V, the current I and the resistance R is known as ___ law.
Answer: Ohm

Question MCQ1 : Which of the following experiments can be suitably used to practically verify the laws of refraction?
Answer: Refraction through the glass block experiment

Question MCQ2 : Which of the following is not a right precaution in experiment to determine the refractive index of glass?
Answer: The two pins erected should NOT be straight.

Question MCQ3 : Which of the following experiments can be suitably used to practically determine the angle of minimum deviation?
Answer: Refraction experiment by triangular glass prism

Question MCQ4 : Which of these quantities remains unchanged when light passes from a vacuum into a block of glass_____.
Answer: Frequency

Question MCQ5 : All the following are required as apparatus in refraction using glass block experiment EXCEPT ___.
Answer: G-Clamp

Question MCQ6 : A beam of light is incident on a perfectly smooth body of water. The angle that the REFLECTED ray makes with the normal is _____.
Answer: the same as the angle the incident ray makes with the normal

Question MCQ8 : A five ohm and a ten ohm resistor are connected in parallel, the single resistance "equivalent" to this combination is _____
Answer: 3.33 Ohms

Question MCQ9 : A current of 6 amperes flows through a 2 ohm resistor for 30 seconds. How many coulombs of charge have passed through the resistor?
Answer: 180C

Question MCQ10 : Snell's law is the ratio of sine of angle of incidence to the sine of angle of ___
Answer: diffraction

Question MCQ11 : Which of the following is required in an experiment to determine the focal length of a mirror?
Answer: All the options

Question MCQ12 : In an experiment to verify Snell's law, one must ensure that_____.
Answer: the pins are in line before removing the glass block

Question MCQ13 : Concave mirror is a curved mirror which is silvered___.
Answer: in its outer side

Question MCQ14 : Convex mirror is a curved mirror which is silvered___ .
Answer: from inside

Question MCQ15 : A 10 ohm and a 20 ohm resistor are connected in parallel to a current source. What fraction of the current flows through the 20 ohm resistor?

Answer: 1/3

Question MCQ16 : A steady current flows in a metallic conductor of non-uniform cross-section. Which of the following quantity is constant along the conductor?
Answer: current

Question MCQ17 : A galvanometer of resistance 100 Ω is converted to an ammeter using resistance of 0.1Ω. It gives full scale deflection at 100 μA. The minimum current in the circuit for maximum deflection is
Answer: 100.1 mA

Question MCQ18 : A rigid container with thermally insulated walls contains a coil f resistance 100 Ω carrying current 1 A. Change in internal energy after 5 minutes is
Answer: 30 kJ

Question MCQ19 : Which is NOT a characteristic of a series circuit?
Answer: The total resistance is the sum of the reciprocals of the individual resistances.

Question MCQ20 : A charge of 3 C experiences a force of 3000 N when it is moved in a uniform electric field. What is the potential difference between two points separated by a distance cm?
Answer: 10 V

Question MCQ21 : A 20 ohm resistor and a 60 ohm resistor are connected in parallel to a voltage source. If the current in the 60 ohm resistor is one ampere, the current in the 20 ohm resistor will be:
Answer: 3A

Question MCQ22 : A virtual image always appears:
Answer: Erect

Question MCQ23 : You want to put up a mirror at a blind corner in a building. Which of the following will give you the largest field of view?
Answer: convex mirror

Question MCQ24 : A small hole in a sheet of aluminum foil is used to diffract yellow light both under water and in a vacuum. Which is true?
Answer: light diffracts less in the water because its wavelength is smaller.

Question MCQ25 : Which one of the following is the advantage of connecting two dry cells in parallel instead of in series? It is because the parallel arrangement:
Answer: has half the internal resistance of a single cell

Question MCQ26 : By which one of the following can a real image be produced? Can it be produced by a:
Answer: concave mirror

Question MCQ27 : When white light passes through a red plate of glass and then through a green plate of glass which one of the following things occur?
Answer: the light is totally absorbed

Question MCQ28 : The number of free electrons per unit volume in copper is n. The electrons each of charge q flowing with velocity v constitute current I. If A is the cross-sectional area of the wire, the current density in the wire is
Answer: n q v/A

Question MCQ29 : If the change in resistance of a copper wire on stretching is 0.4 %, then its length is stretched by
Answer: 0.2 %

Question MCQ30 : If an electron makes 25 × 10¹⁵ rev / s around the

nucleus of an atom in an orbit of radius 1 A , the equivalent current is nearly _____.
Answer: 4 × 10^{- 3} A

Question MCQ31 : A light ray traveling from glass into air strikes the glass-air surface at an angle 50 degrees to the normal. If the critical angle for the glass-air combination is 42 degrees, the percentage of light reflected from the surface is
Answer: 100

Question MCQ32 : Which of the following is not a right precaution in an experiment to verify lens formula?
Answer: Images of the first two pins should be in the straight line with the other two pins.

Question MCQ33 : When an object is placed in front of a Convex lens between F' and 2F', the nature of the image formed is_____.
Answer: real and inverted

Question MCQ34 : When a prism is placed in minimum deviation position, the prism ___
Answer: lies symmetrically with respect to incident ray and emergent ray

Question MCQ35 : Which of the following is true for a prism placed at minimum deviation?
Answer: the angle of incidence is equal to angle of emergence

Question MCQ35 : Which of these quantities remains unchanged when light passes from a vacuum into a block of glass_____.
Answer: Frequency

Question MCQ7 : Three resistors which have different values are connected in series. The correct statement is _____.
Answer: The same current passes through all three resistors

Question MCQ35 : Which of these quantities remains unchanged when light passes from a vacuum into a block of glass_____.
Answer: Frequency