



# ST. LAWRENCE HIGH SCHOOL

27, BALLYGUNGE CIRCULAR ROAD

**Class : 10****Subject : PHYSICAL  
SCIENCE****Term : FIRST TERM****Max Marks : 60****Q 1 :** The formula which represents the simple ratio of atoms in a compound is called:**Marks : 1**

1. Empirical formula
2. Molecular formula
3. Structural formula
4. Rational formula

 ( This Answer is Correct )**Q 2 :** Which of the following exists as monoatomic?**Marks : 1**

1. Sulphur
2. Helium
3. Fluorine
4. Phosphorous

 ( This Answer is Correct )**Q 3 :** Which of the following is protein?**Marks : 1**

1. Terry cotton
2. Natural silk
3. Nylon
4. Rayon

 ( This Answer is Correct )**Q 4 :** Electroplating was discovered by:**Marks : 1**

1. Faraday
2. Arrhenius
3. Newton
4. Dalton

 ( This Answer is Correct )**Q 5 :** . The value of absolute zero temperature in Celsius scale will be –  
1) –237°C      2) 0°C      3) 100°C      4) –273°C**Marks : 1**

1. 1
2. 2
3. 3

( This Answer is Correct )

4 . 4

**Q 6 :** If  $\alpha:\beta:\gamma = 1:2:3$  then which relation is correct?

- 1)  $\frac{\alpha}{3} = \frac{\beta}{2} = \gamma$     2)  $\alpha:\beta:\gamma = 1:\frac{1}{2}:\frac{1}{3}$     3)  $3\alpha = 2\beta$     4)  $3\beta = 2\gamma$

Marks : 1

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )

**Q 7 :** If refractive index of any medium is  $\sqrt{3}$ , then the speed of light in that medium is –

- 1)  $3\sqrt{3} \times 10^8 \text{ m/s}$     2)  $10^8 \text{ m/s}$     3)  $\frac{1}{\sqrt{3}} \times 10^8 \text{ m/s}$     4)  $\sqrt{3} \times 10^8 \text{ m/s}$

Marks : 1

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )

**Q 8 :** A monochromatic light suffers a deviation of  $60^\circ$  when passes through a prism of angle  $60^\circ$ . If the angle of incidence is  $65^\circ$ , then the measure of angle of emergence is –

- 1)  $120^\circ$     2)  $90^\circ$     3)  $65^\circ$     4)  $55^\circ$

Marks : 1

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )

**Q 9 :** Let the power rating of your laptop is 90w, 220v, 50Hz. If you keep it switched on unnecessarily for 2hrs every day, then what will be the amount of money you are wasting on it in one month (30 days)\_2 (per unit cost = Rs. 5.00)

- 1) Rs. 27.00    2) Rs. 35.00    3) Rs. 42.00    4) Rs. 270.00

Marks : 1

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )

**Q 10 :** Which molecule has tetrahedral geometry?

- 1 . Methane
- 2 . Ethylene
- 3 . Acetylene
- 4 . Carbon dioxide

Marks : 1

 ( This Answer is Correct )

**Q 11 :** Which of the following is protein?

**Marks :** 1

- 1 . Terry cotton
- 2 . Natural silk
- 3 . Nylon
- 4 . Rayon

( This Answer is Correct )

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**Q 12 :** Acidic hydrogen is present in:

**Marks :** 1

- 1 . Ethyne
- 2 . Ethene
- 3 . Benzene
- 4 . Ethane

( This Answer is Correct )

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**Q 13 :** The formula which represents the simple ration of atoms in a compound is called:

**Marks :** 1

- 1 . Empirical formula
- 2 . Molecular formula
- 3 . Structural formula
- 4 . Rational formula

( This Answer is Correct )

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**Q 14 :** A bimetallic strip bends on heating due to:

**Marks :** 1

- 1 . Uneven expansions
- 2 . Same expansion
- 3 . No expansions
- 4 . None of these

( This Answer is Correct )

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**Q 15 :** If an image is 30 cm away from a concave mirror of focal length 15 cm, the image will be:

**Marks :** 1

- 1 . Erect
- 2 . Virtual
- 3 . Diminished
- 4 . Of Same Size

( This Answer is Correct )

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**Q 16 :** Who put the Law of conservation of mass?

**Marks :** 1

- 1 . Cannizaro
- 2 . Lavoisier
- 3 . Dalton
- 4 . Ge Lusac

( This Answer is Correct )

**Q 17 :** Chemical bond is:

**Marks :** 1

- 1 . Electrical force
- 2 . Gravitational force
- 3 . Only magnetic force
- 4 . None of these

( This Answer is Correct )

**Q 18 :** The number of Covalent bonds present in ethane is:

**Marks :** 1

- 1 . 4
- 2 . 6
- 3 . 7
- 4 . 9

( This Answer is Correct )

**Q 19 :** The similarity between the subgroup A and B elements is with respect to their:

**Marks :** 1

- 1 . Physical properties
- 2 . Chemical properties
- 3 . Valency
- 4 . None of these

( This Answer is Correct )

**Q 20 :** For all ideal gasses at constant pressure –

1.  $\gamma$  is different for different gas
2.  $\gamma$  depends on the nature of gas container
3.  $\gamma$  is same for all the gas
4.  $\gamma$  is a fraction greater than one

**Marks :** 1

- 1 . 1
- 2 . 2
- 3 . 3
- 4 . 4

( This Answer is Correct )

**Q 21 :** The conductivity of any conductor depends on –

**Marks :** 1

1. length and area of cross section of the conducting material
2. Temperature difference between two ends of conductor
3. The time duration of flow of heat
4. None of these

- 1 . 1
- 2 . 2
- 3 . 3
- 4 . 4

( This Answer is Correct )

**Q 22 :** An incident ray falls on a concave mirror coming parallel to the principal axis. The angular position of the point of incidence w.r.t the centre of curvature is  $50^\circ$ . The angle of reflection in this case will be –

**Marks :** 1

- 1)  $40^\circ$
- 2)  $50^\circ$
- 3)  $100^\circ$
- 4) None of these

- 1 . 1
- 2 . 2

( This Answer is Correct )

3 . 3

4 . 4

**Q 23 :**

The lateral displacement of light rays in case of a parallel glass slab depends on –

1. Angle of incidence only
2. Refractive index of glass slab only
3. Width of the glass slab only
4. All of the above

**Marks : 1**

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )**Q 24 :**

The image formed by a convex lens of focal length 15cm is magnified in nature. Then the object distance  $u$  can be –

- 1) Greater than 30cm
- 2) Less than 30 cm
- 3) Equal to 30 cm
- 4) None of these

**Marks : 1**

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )**Q 25 :**

The image formed by a convex lens of focal length 15cm is magnified in nature. Then the object distance  $u$  can be –

- 1) Greater than 30cm
- 2) Less than 30 cm
- 3) Equal to 30 cm
- 4) None of these

**Marks : 1**

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )**Q 26 :**

What amount of charge will flow through a conductor of resistance 17  $\Omega$  during 5minutes if the potentials at the two ends of the conductor are 100volt and 49volts?

**Marks : 1**

- 1) 900 C      2) 100 C      3) 36 C      4) 15 C

1 . 1

2 . 2

3 . 3

4 . 4

 ( This Answer is Correct )**Q 27 :**

If temperature is increased, then the conductivity of a semi conductor –

- 1) Increases
- 2) Decreases
- 3) Remains same
- 4) First increases then decreases

**Marks : 1**

1 . 1

2 . 2

 ( This Answer is Correct )

3 . 3

4 . 4

**Q 28 :** The power appear across a 10 ohm resistance is 160 watt. The current through the resistance is –

- 1) 16 A      2) 6 A      3) 4 A      4) 1.6 A

**Marks : 1**

1 . 1

2 . 2

**3 . 3**

4 . 4

 ( This Answer is Correct )

**Q 29 :** The number of Covalent bonds present in ethane is:

1 . 4

2 . 6

**3 . 7**

4 . 9

**Marks : 1** ( This Answer is Correct )

**Q 30 :** For the electroplating of nickel, nickel sulphate is mixed with:

1 . Water

2 . Nitric acid

**3 . Boric acid**

4 . NaCl

**Marks : 1** ( This Answer is Correct )

**Q 31 :** Variable valency is shown by:

1 . Typical elements

2 . Inert element

**3 . Transition elements**

4 . None of these

**Marks : 1** ( This Answer is Correct )

**Q 32 :** Long form of periodic table bases on:

**1 . Atomic number**

2 . Atomic mass

3 . Number of Neutrons

4 . None of these

**Marks : 1** ( This Answer is Correct )

**Q 33 :** Saturated hydrocarbon mainly undergo:

**Marks : 1**

1. Addition reaction
2. Substitution reaction
3. Elimination reaction
4. Polymerisation

( This Answer is Correct )

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**Q 34 :** Long form of periodic table bases on:

**Marks :** 1

1. Atomic number
2. Atomic mass
3. Number of Neutrons
4. None of these

( This Answer is Correct )

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**Q 35 :** Molecular weight of Hydrogen Sulphide:

**Marks :** 1

1. 32
2. 34
3. 36
4. 38

( This Answer is Correct )

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**Q 36 :** The electron affinity of inert gases is likely to be:

**Marks :** 1

1. High
2. Negative
3. Positive
4. Zero

( This Answer is Correct )

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**Q 37 :** Flow of current in an electrolyte is due to:

**Marks :** 1

1. Atoms
2. Electrons
3. Ions
4. None of these

( This Answer is Correct )

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**Q 38 :** The similarity between the subgroup A and B elements is with respect to their:

**Marks :** 1

1. Physical properties
2. Chemical properties
3. Valency
4. None of these

( This Answer is Correct )

**Q 39 :** In the ideal gas equation the value of R depends on:

**Marks :** 1

- 1 . Unit of measurement
- 2 . Temperature of gas
- 3 . Pressure of gas
- 4 . Nature of gas

( This Answer is Correct )

**Q 40 :** Gas deviates from ideal gas nature because molecules:

**Marks :** 1

- 1 . are colourless
- 2 . attract each other
- 3 . contain covalent bond
- 4 . show Brownian movement

( This Answer is Correct )

**Q 41 :** How many grams of oxygen evolve when 122.5 g potassium chlorate is heated?

**Marks :** 1

- 1 . 45
- 2 . 46
- 3 . 47
- 4 . 48

( This Answer is Correct )

**Q 42 :** The formation of spectrum is due to:

**Marks :** 1

- 1 . Refelction
- 2 . Refraction
- 3 . Dispersion of Light
- 4 . None of these

( This Answer is Correct )

**Q 43 :** The terminal colours of pure spectrum of white light are:

**Marks :** 1

- 1 . Blue and Violet
- 2 . Red and Orange
- 3 . Red and Violet
- 4 . Red and Orange

( This Answer is Correct )

**Q 44 :** Which of the following colours suffers maximum deviation in a prism?

**Marks :** 1

- 1 . Yellow
- 2 . Blue
- 3 . Green
- 4 . Orange

( This Answer is Correct )



**Q 45 :** Unit of resistance is:

**Marks :** 1

- 1 . ampere
- 2 . ohm
- 3 . coulomb
- 4 . joule

( This Answer is Correct )

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**Q 46 :** Force between two charges separated by a certain distance in air is F. If each charge was doubled and distance between them also doubled, then force would be:

**Marks :** 1

- 1 . F
- 2 . 2F
- 3 . 4F
- 4 . F/4

( This Answer is Correct )

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**Q 47 :** Whcih of the following contains nitrogen?

**Marks :** 1

- 1 . Fats
- 2 . Proteins
- 3 . Carbohydrate
- 4 . None

( This Answer is Correct )

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**Q 48 :** The shortest carbon-carbon bond distance is found in:

**Marks :** 1

- 1 . Diamond
- 2 . Ethane
- 3 . Benzene
- 4 . Acetylene

( This Answer is Correct )

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**Q 49 :** Which among the following bonds shows the maximum bond strength?

**Marks :** 1

- 1 . Sigma bond
- 2 . Pi bond
- 3 . Co-ordinate Bond
- 4 . Hydrogen Bond

( This Answer is Correct )

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**Q 50 :** Pure water does not conduct electricty because it:

**Marks :** 1

- 1 . has low boiling point
- 2 . is neutral
- 3 . is almost ionised
- 4 . is readily decomposed

( This Answer is Correct )

Q 51 :

The expansion coefficients of different liquids are different because –

1. different liquids possess different intermolecular force of attraction
2. different liquids have different initial volume
3. different liquids have different free surface areas
4. none of these

Marks : 1

1 . 1

 ( This Answer is Correct )

2 . 2

3 . 3

4 . 4

Q 52 :

The work done to displace one electron through a potential difference of 1volt is –

- 1)  $\frac{10^{-18}}{1.6}$  Joule
- 2)  $\frac{10^{18}}{1.6}$  Joule
- 3)  $1.6 \times 10^{-19}$  Joule
- 4)  $1.6 \times 10^{19}$  Joule

Marks : 1

1 . 1

 ( This Answer is Correct )

2 . 2

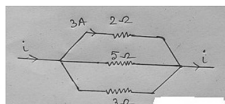
3 . 3

4 . 4

Q 53 :

What will be the current through 5Ω and 3Ω resistances?

- 1) 1.2 A, 2 A
- 2) 1 A, 1.2 A
- 3) 3.3 A, 2 A
- 4) 2 A, 3.3 A



Marks : 1

1 . 1

 ( This Answer is Correct )

2 . 2

3 . 3

4 . 4

Q 54 : Which does not react with metallic sodium?

Marks : 1

1 . Methyl Alcohol

2 . Ethyl Alcohol

3 . Acetic acid

4 . Dimethyl ether

 ( This Answer is Correct )

Q 55 : Which of the following contains nitrogen?

Marks : 1

1 . Fats

2 . Proteins

3 . Carbohydrate

4 . None

 ( This Answer is Correct )

Q 56 : Zero group was introduced by:

Marks : 1

- 1 . Lothar Meyer
- 2 . Mendeleev
- 3 . Ramsay**
- 4 . Locker

( This Answer is Correct )

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**Q 57 :** Pure water does not conduct electricity because it:

**Marks :** 1

- 1 . has low boiling point
- 2 . is neutral
- 3 . is almost ionised**
- 4 . is readily decomposed

( This Answer is Correct )

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**Q 58 :** 7.0 g of a gas at 300K and 1 atmospheric pressure occupies a volume of 4.1 litres. What is the molecular mass (approximately) of the gas?

**Marks :** 1

- 1 . 38
- 2 . 42**
- 3 . 46
- 4 . 52

( This Answer is Correct )

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**Q 59 :** The specific heat of a gas in an isothermal process is:

**Marks :** 1

- 1 . Infinite**
- 2 . Zero
- 3 . Negative
- 4 . Remains constant

( This Answer is Correct )

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**Q 60 :** A Convex lens will become less convergent in:

**Marks :** 1

- 1 . Oil
- 2 . Water**
- 3 . Both
- 4 . None

( This Answer is Correct )