



ST. LAWRENCE HIGH SCHOOL

27, BALLYGUNGE CIRCULAR ROAD



Class : 10

**Subject : PHYSICAL
SCIENCE**

Term : SECOND TERM

Max Marks : 80

Q 1 :

According to the kinetic theory of the ideal gas

- Mass of the gas molecules can be neglected
- Volume of the gas molecules can be neglected
- Both volume and mass can be neglected
- None of these

Marks : 1

1 . a

2 . b

3 . c

4 . d

(This Answer is Correct)

Q 2 :

How many moles of any ideal gas will occupy 2.24lit at STP?

- It depends upon the nature of the gas
- 1mole
- 10 mole
- $\frac{1}{10}$ mole

Marks : 1

1 . a

2 . b

3 . c

4 . d

(This Answer is Correct)

Q 3 :

The graph of PV versus P at constant temperature for a fixed mass of ideal gas will be

- A straight line passing through origin
- A Rectangular hyperbola
- A Straight line parallel to P – axis
- A Straight line parallel to PV – axis

Marks : 1

1 . a

2 . b

3 . c

4 . d

(This Answer is Correct)

Q 4 :

In Celsius scale, the temperature corresponds to 280K is

- 7°C
- 17°C
- 80°C
- 20°C

Marks : 1

1 . a

2 . b

3 . c

4 . d

(This Answer is Correct)

Q 5 : 1

In how many gram of oxygen gas the number of oxygen molecules will be 6.023×10^{24}

Marks :

- a. 320g b. 32g c. 16g d. 64g

- 1 . a
2 . b
3 . c
4 . d

(This Answer is Correct)

Q 6 : The relation $\alpha: \beta: \gamma = 1: 2: 3$, is valid in case of –

a. only Solid
b. only Liquid
c. only Gas
d. solid, liquid and gas all.

Marks : 1

- 1 . a
2 . b
3 . c
4 . d

(This Answer is Correct)

Q 7 : The conductivity of any conductor depends on –

a. length and area of cross section of the conducting material
b. Temperature difference between two ends of conductor
c. The time duration of flow of heat
d. None of these

Marks : 1

- 1 . a
2 . b
3 . c
4 . d

(This Answer is Correct)

Q 8 : If an extended object is placed (perpendicularly on the principal axis) at the centre of curvature of a concave mirror, then image formed will be –

a. Magnified
b. Highly magnified
c. Diminished
d. Of same size of the object

Marks : 1

- 1 . a
2 . b
3 . c
4 . d

(This Answer is Correct)

Q 9 : If an extended object is placed (perpendicularly on the principal axis) at the centre of curvature of a concave mirror, then image formed will be –

a. Magnified
b. Highly magnified
c. Diminished
d. Of same size of the object

Marks : 1

- 1 . a
2 . b
3 . c

4 . d

 (This Answer is Correct)

Q 10 :

The absolute refractive index of any medium can never be less than 1. But the refractive index of any medium with respect to any other medium (except air or vacuum) –

- Can be less than 1
- Can never be less than 1
- Equal to 1 always
- Can't be determined.

Marks : 1

1 . a

 (This Answer is Correct)

2 . b

3 . c

4 . d

Q 11 :

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

- Angle of incidence
- Refractive index of glass slab
- Width of the glass slab
- All of the above

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 12 :

If any object is placed perpendicularly on the principal axis at a distance $2f$ (i.e. $u = 2f$, f being the focal length) from a convex lens, then the magnification will be –

- $m > 1$
- $m < 1$
- $m = 1$
- m can be anything

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 13 :

The resistivity of a material is $\rho = \frac{R}{L}$. If now, the length L is doubled and the area of cross section is made $\frac{1}{3}$ times (keeping temperature constant), then the resistivity will be –

- $\frac{1}{6}$ times
- 6 times
- $\frac{2}{3}$ times
- Will be unchanged

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 14 :

For parallel combination of resistances –

- The current through the largest resistance will be lowest
- The current through the largest resistance will be greatest
- The current through the smallest resistance will be lowest
- Current through all the resistances are same

Marks : 1

1 . a

 (This Answer is Correct)

2 . b

3 . c

4 . d

Q 15 : In Fleming's left hand rule, thumb of the left hand indicates –

- Magnetic field
- Direction of current
- Deflection of magnetic needle
- None of these.

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 16 :** The nuclear attractive force acts between
a. Proton and proton b. proton and neutron c. neutron and neutron d. all of these**Marks :** 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 17 :** When a β particle is emitted then the mass number is

- Decreased by 1
- Increased by 1
- Remains unchanged
- Decreased by 2

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 18 :** What will be atomic number of the product nucleus, if it is formed by the radioactive decay of one α , one β and one γ particle from ${}_{92}^{238}\text{Po}$?

- 89
- 90
- 91
- 92

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 19 :** How many gram of magnesium metal will give 1g hydrogen on complete reaction with dilute H_2SO_4 ? [$\text{Mg} = 24, \text{H} = 1, \text{Mg} + \text{H}_2\text{SO}_4 = \text{MgSO}_4 + \text{H}_2$]

- 24g
- 14.4g
- 12g
- 7g

Marks : 1

1 . a

2 . b

(This Answer is Correct)

3 . c

4 . d

Q 20 : Atomic radii of the elements**Marks :** 1

- a. Decrease while we move from left to right in a period
- b. Increase while we move from left to right in a period
- c. Decrease while we move down any group
- d. Remains constant in a group or period

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 21 :** Covalent bond is present in**Marks :** 1

- a. CaO
- b. $MgCl_2$
- c. NaF
- d. HF

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 22 :** Which material is used as cathode during extraction of aluminium by electrolysis?**Marks :** 1

- a. Iron
- b. Aluminium
- c. copper
- d. carbon

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 23 :** The chemical formula of chalcocite is**Marks :** 1

- a. Cu_2S
- b. Cu_2S, Fe_2S_3
- c. Cu_2S, Fe_2O_3
- d. ZnS

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 24 :** If molten aluminium oxide is electrolysed, then**Marks :** 1

- a. Pure aluminium is produced at anode
- b. O_2 gas is produced at cathode
- c. Both Aluminium and O_2 gas are produced at cathode
- d. None of these.

1 . a

2 . b

3 . c

 (This Answer is Correct)

4 . d

Q 25 :

If a copper surface is exposed to air for a prolonged period of time, then a green coloured coating is formed on it. The chemical formula of these coating is

- a. Cu_2S b. $CuSO_4$ c. mixture of Cu_2S and $Cu(OH)_2$ d. mixture of Cu_2CO_3 and $Cu(OH)_2$

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 26 :

Which one of the following can damage optic nerve?

- a. Methanol b. ethanol c. acetic acid d. ethyl alcohol

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 27 :

The IUPAC name of $CH_3 - \overset{H}{\underset{Cl}{C}} - CH_3$ is

- a. 2 propane b. 2 chloropropane c. propanol d. 2 chloropropene

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 28 :

The IUPAC name of $H - \overset{H}{\underset{H}{C}} - \overset{H}{C} = O$ is

- a. Ethanoic acid b. ethanal c. ethanol d. ethene

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 29 :

The absolute zero temperature is equal to

- a. 0K b. -273K c. 273K d. 27K

Marks : 1

1 . a

2 . b

3 . c

 (This Answer is Correct)

4 . d

Q 30 : The equation of state of 11g of CO_2 gas will be
a. $PV=4RT$ b. $PV=RT$ c. $PV=2RT$ d. $4PV=RT$

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 31 : If the temperature is doubled, the speed of the gas molecules of a given ideal gas will be
a. Halved b. doubled c. four times d. $\sqrt{2}$ times

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 32 : The volume of how much gram of hydrogen gas at STP is 224lit?
a. 10g b. 20g c. 1g d. 2g

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 33 : The constants of Charle's law are
a. Pressure and volume b. pressure and temperature
c. Volume and mass d. Pressure and mass

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 34 : The expansion coefficients of different liquids are different because –
a. different liquids posses different intermolecular force of attraction
b. different liquids have different initial volume
c. different liquids have different free surface areas
d. none of these

Marks : 1

1 . a

2 . b

3 . c

 (This Answer is Correct)

4 . d

Q 35 : The real expansion coefficient of liquid depends on –
a. Initial volume b. change of volume c. change of temperature d. nature of liquid

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 36 : For all ideal gasses at constant pressure -
a. $\gamma = 273$ b. $\gamma = 0$ c. $\gamma = -273$ d. $\gamma = \frac{1}{273}$

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 37 : The radius of curvature of a concave mirror is 21cm. if an extended object is placed at 11.5cm from the pole of the mirror perpendicularly on the principal axis, then the nature of the image will be –
a. Real, erect and magnified
b. Virtual, inverted and magnified
c. Real, erect and diminished
d. Real, inverted and highly magnified

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 38 : The parameter that remains unchanged during refraction of light is –
a. The velocity
b. The wave length
c. The frequency
d. The angle of incidence

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 39 : The refractive index of a particular medium (except air or vacuum) is –
a. Same for all colours of light
b. Maximum for red light and minimum for violet light
c. Maximum for violet light and minimum for red light
d. Depends on the angle of incidence

Marks : 1

1 . a

2 . b

3 . c

 (This Answer is Correct)

4 . d

- Q 40 :** For same angle of incidence, the colour that deviates most in a prism has –
- Highest wave length and lowest frequency
 - Highest wave length and highest frequency
 - Lowest wavelength and highest frequency
 - Lowest wavelength and lowest frequency

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

- Q 41 :** Angle of deviation in a prism for a particular colour of light, depends on –
- Incident angle
 - Refractive index of prism
 - Angle of prism
 - All of these

Marks : 1

1 . a

2 . b

3 . c

4 . d (This Answer is Correct)

- Q 42 :** The work done needed to bring one unit positive charge from infinity to a point near another charge, is known as
- Electrostatic potential energy
 - Electrostatic potential
 - Electric field intensity
 - None of these

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

- Q 43 :** If a conductor is heated to increase its temperature, then its resistance will –
- Increase
 - Decrease
 - Remain same as resistance does not depend on temperature
 - First increase and then decrease

Marks : 1**1 . a**

2 . b

3 . c

4 . d

 (This Answer is Correct)

- Q 44 :** If the potential difference is increased, then to maintain the current constant –
- Resistance of the conductor has to be increased
 - Resistance of the conductor has to be decreased
 - Resistance should be kept constant
 - The area of cross section of the conductor should be increased

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

- 2 . b
- 3 . c
- 4 . d

- Q 45 :** Lost volt is –
- a. Potential appear across the external load
 - b. Potential drop across its internal resistance
 - c. Difference of potential at two ends of cell
 - d. None of these

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

 (This Answer is Correct)

- Q 46 :** Magnetic lines of force around a straight current carrying wire will be –
- a. Straight and perpendicular to the wire
 - b. Straight and parallel to the wire
 - c. Circular and intersecting around the wire
 - d. Concentric circular around the wire

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

 (This Answer is Correct)

- Q 47 :** If S pole of a magnetic needle is attracted by a circular loop, then the current at that face of the loop can be –
- a. Clock wise only
 - b. Anti clockwise only
 - c. Both Clock wise or Anti clockwise
 - d. None of these

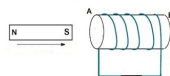
Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

 (This Answer is Correct)

- Q 48 :** If the south pole of a bar magnet approaches a solenoid as shown in the figure, then the current in the coil near point A will be –
- a. Clockwise
 - b. Anti Clockwise
 - c. There will be no current
 - d. Cannot be predicted

Marks : 1



- 1 . a
- 2 . b
- 3 . c
- 4 . d

 (This Answer is Correct)

- Q 49 :** Emission of which ray will not create a new element?
- a. α - ray
 - b. β - ray
 - c. γ - ray
 - d. all of these

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 50 : . The ray which is attracted by the negative electric field is
a. α - ray b. β - ray c. γ - ray d. none of these

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 51 : During chemical reaction, total mass of the system
a. May increase or decrease b. decrease always
c. Does not change d. changes for exothermic reaction

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 52 : During chemical reaction, energy is absorbed for
a. Endothermic process b. exothermic process
c. In both the processes d. energy is never absorbed

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 53 : If M be the molecular weight and D be the vapor density of any gas, then the correct relation between them is
a. $D = \frac{M}{2}$ b. $D=2M$ c. $D = M^2$ d. None of these

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 54 : Moseley's periodic table is based on
a. Atomic weights of the elements
b. Atomic numbers of the elements
c. Atomic volumes of the elements
d. None of these

Marks : 1

1. a
2. b
3. c
4. d

(This Answer is Correct)

Q 55 :

In Lothar Meyer's curve, each peak is occupied by

- a. Transition elements b. metals c. alkaline earth metals d. alkali metals

Marks : 1

1. a
2. b
3. c
4. d

(This Answer is Correct)

Q 56 :

Ionization energy of the elements

- a. Decreases along a period. b. Increases along a period
c. Increases along a group d. Is maximum for the metals

Marks : 1

1. a
2. b
3. c
4. d

(This Answer is Correct)

Q 57 :

Halogens belongs to

- a. Group - 1 b. group - 2 c. group - 13 d. group - 17

Marks : 1

1. a
2. b
3. c
4. d

(This Answer is Correct)

Q 58 :

Double bond is present in

- a. C_2H_2 b. CO_2 c. H_2O d. N_2

Marks : 1

1. a
2. b
3. c
4. d

(This Answer is Correct)

Q 59 :

A triple bond is present in

- f. LiH b. C_2H_4 c. N_2 d. CO_2

Marks : 1

1. a
2. b
3. c

(This Answer is Correct)

4 . d

Q 60 :

Which one of the following is not a covalent compound?

- a. CaO b. NaF c. $MgCl_2$ d. HCl

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 61 :**

. Ionic compounds have

- a. High melting point and low dielectric constant
b. Low melting point and high dielectric constant
c. Low melting point and low dielectric constant
d. High melting point and high dielectric constant

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 62 :**

Electrical conductance of electrolysis

- a. Varies with dilution
b. Are equal for all ionic compounds
c. Are equal for all covalent compounds
d. None of these

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 63 :**

Which material is used as cathode during extraction of aluminium by electrolysis?

- a. Iron b. Aluminium c. copper d. carbon

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 64 :**

Ammonia is dried by

- a. $CaCl_2$ b. H_2SO_4 c. $Ca(OH)_2$ d. CaO

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 65 :

Nessler's reagent is the alkaline solution of

- a. $K_4[HgI_2]$ b. $K_2[Hg_4I]$ c. $K[HgI_4]$ d. $K_2[HgI_4]$

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 66 :

 $Hg-O-Hg.(NH_2)I$ is known as

- a. Nessler's reagent b. Iodide of Milon's base c. Quicklime d. Nitrolim

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 67 :

Kipp's apparatus is used for preparation of

- a. NH_3 b. H_2S c. HCl d. H_2SO_4

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 68 :

The catalyst used during the industrial manufacturing of H_2SO_4 is

- a. MnO_2 b. P_2O_5 c. V_2O_5 d. Platinum gauze

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 69 :

Which acid is prepared by Ostwald process?

- a. HNO_3 b. HCl c. H_2SO_4 d. NH_3

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

Q 70 : The catalyst used during the industrial manufacturing of HNO_3 is
a. MnO_2 b. $Mg(OH)_2$ c. V_2O_5 d. Platinum gauze

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 71 : In industry, HCl is prepared by
a. Contact process b. Ostwald process c. Le Blanc process d. none of these

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 72 : One ore of zinc is
a. haematite b. calamine c. cryolite d. malachite

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 73 : Minerals are always
a. Inorganic b. organic c. can be both d. none of these

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 74 : When metal oxides are electrolyzed,
a. Pure metal is produced at cathode
b. Pure metal is produced at anode
c. O_2 gas is produced at cathode
d. All of these

Marks : 1

- 1 . a
- 2 . b
- 3 . c
- 4 . d

(This Answer is Correct)

Q 75 : The prefix/suffix used for the functional group 'ketone' is
a. ene b. ol c. ane d. one

Marks : 1

- 1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 76 :**

For unsaturated hydrocarbon containing a double bond we should use a suffix as

a. yne b. ene c. ane d. one

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 77 :**

Denatured spirit is the mixture of ethanol and

a. acetic acid b. acetone c. alcohol d. methanol

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 78 :**

Mixture of ethene and hydrogen gas, passed over nickel catalyst at 160°C, forms

a. Ethane b. ethene c. ethyne d. propane

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 79 :**

Which one of the following is a biodegradable polymer?

a. PVC b. Teflon c. Cellulose d. none

Marks : 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)**Q 80 :**

Ethanoic acid reacting with sodium hydroxide produces

a. CH_3CONa b. CH_3COONa c. $CH_3C \equiv Na$ d. none of these**Marks :** 1

1 . a

2 . b

3 . c

4 . d

 (This Answer is Correct)

