RUHS

RUHS Entrance Examination 2021
Question Paper

BD Pharmacy 2021

Q. No. 1 0042001	A student performs an experiment to determine Young's modulus of wire, exactly 2 m long, by Searle's method. In a particular reading, the student measures the extension in the length of the wire to be in 0.8 mm with an uncertainty of $\pm$0.05 mm at a load of exactly 1.0 Kg. The student also measures the diameter of the wire to be 0.4 mm with an uncertainty of $\pm$0.01 mm. Take g=9.8 m^2/s (exact). The young's modulus obtained from the reading is:
Option A	$(2.0\pm0.3)\times10^{11}$N/m^2
Option B	$(2.0\pm0.2)\times10^{11}$N/m^2
Option C	$(2.0\pm0.1)\times10^{11}$N/m^2
Option D	$(2.0\pm0.05)\times10^{11}$N/m^2
Correct Option	**B**

Q. No. 2 0042002	Two full of circular scales of a screw gauge cover a distance of 1 mm on its main scale. The total number of divisions on the circular scale is 50. Further, it is found that the screw gauge has a zero error of -0.03 mm. While measuring the diameter of the wire, a student notes the main scale reading of 3 mm and the number of circular scale divisions in line with the main scale as 35. The diameter of the wire is:
Option A	3.67 mm
Option B	3.38 mm
Option C	3.32 mm
Option D	3.73 mm
Correct Option	**B**
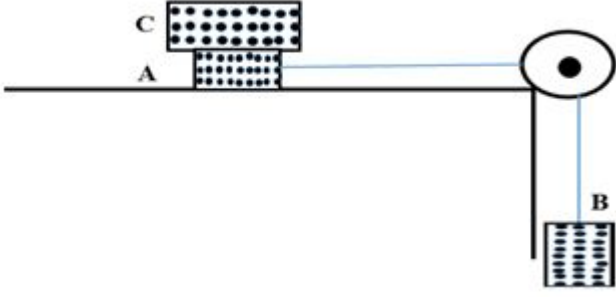
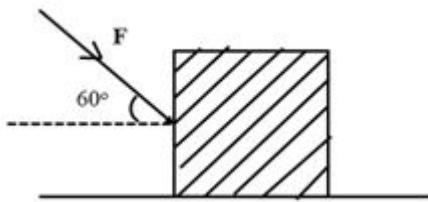| Q. No. 3 0042003	The dimensional formula of angular momentum is:
Option A	ML^2T^{-3}
Option B	ML^2T^{-2}
Option C	ML^2T^{-1}
Option D	MLT^{-1}
Correct Option	**C**

Q. No. 4 0042004	A particle is projected to at 60° to the horizontal with a kinetic energy K. The kinetic energy at the highest point is:
Option A	Zero
Option B	K/4
Option C	K/2
Option D	K
Correct Option	**B**

Q. No. 5	The range of a projectile fired at an angle of 15° is 50 m. If it is fired with the same

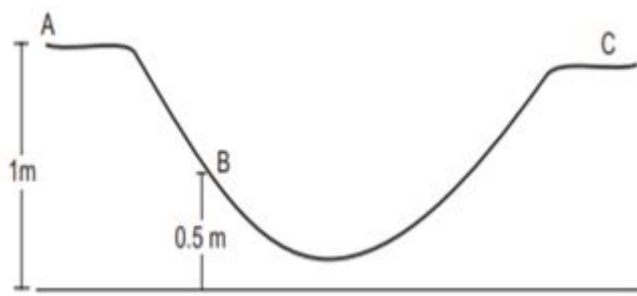| 0042005	**speed at an angle of 45⁰, its range will be**
Option A	25 m
Option B	37 m
Option C	50 m
Option D	100 m
Correct Option	**D**

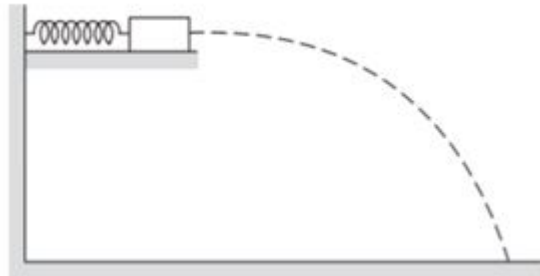| Q. No. 6 0042006	**A driver takes 0. 20 s to apply the brakes after he sees a need for it. This is called the reaction time of the driver. If he is driving a car at a speed of 54 km/h and the brakes cause a deceleration of 6.0 m/s², find the distance travelled by car after he sees the need to put the brakes on.**
Option A	243 m
Option B	18.75 m
Option C	21.75 m
Option D	259.2 m
Correct Option	**C**

Q. No. 7 0042007	**In the adjoining diagram, the masses of A and B are 10 kg and 5 kg respectively. Calculate the minimum mass of C which may stop A from slipping. The coefficient of static friction between A and the table is μ_s=0.2**
Option A	15 Kg
Option B	14 Kg
Option C	12 Kg
Option D	13 Kg
Correct Option	**A**

Q. No. 8 0042008	**What is the maximum value of the force F so that the block (mass m = $\sqrt{3}$ Kg) shown in the arrangement does not move? The coefficient of static friction between the two surfaces is $\mu_s = \dfrac{1}{2\sqrt{3}}$ and g = 10 N/Kg**
Option A	15 N
Option B	10 N
Option C	12 N

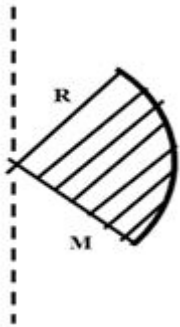| Option D	20 N
Correct Option	**D**

Q. No. 9 0042009	**A stone of mass m is tied to one end of a string and is rotated in a vertical plane. The tension in the string at the highest point of the path of the stone is zero. What will be the tension in the string at the lowest point**
Option A	6 mg
Option B	3 mg
Option C	4 mg
Option D	2 mg
Correct Option	**A**

Q. No. 10 0042010	**A particle is placed at point A of a frictionless track ABC as shown in the figure below. It is pushed slightly towards the right. What will be the speed of the particle when it reaches point B. (Given g = 10 m/s^2)**
Option A	$\sqrt{11}$
Option B	100
Option C	$\sqrt{10}$
Option D	121
Correct Option	**C**

Q. No. 11 0042011	**A small block of mass 100 g is pressed against a horizontal spring fixed at one end to compress the spring through 5.0 cm as shown in the figure below. The spring constant is 1000 N/m. When released, the block moves horizontally till it leaves the spring. Where will it hit the ground 10 cm below the spring**
Option A	0.85 m
Option B	0.80 m
Option C	0.90 m
Option D	0.70 m

Correct Option	D

| Q. No. 12
0042012	**The center of mass of a system:**
Option A	is always at its geometric center
Option B	is always anywhere inside it
Option C	is always outside it
Option D	maybe inside or outside it
Correct Option	**D**

| Q. No. 13
0042013	**One-quarter sector is cut from a uniform circular disc of radius R. This sector has a mass M. It is made to rotate about a line perpendicular to its plane and pass through the center of the original disc. Its moment of inertia about the axis of rotation is**
Option A	$\frac{1}{2}MR^2$
Option B	$\frac{1}{4}MR^2$
Option C	$\frac{1}{8}MR^2$
Option D	$\sqrt{2}MR^2$
Correct Option	**A**

| Q. No. 14
0042014	**A solid sphere of mass M slides with a velocity v without rotating in the first case and in the second case it rolls without slipping with the same speed. What will be the ratio of kinetic energy in two cases**
Option A	7/2
Option B	5/7
Option C	2/7
Option D	4/7
Correct Option	**B**

| Q. No. 15
0042015	**In a ring, disc, solid sphere, and spherical shell of the same mass and same radius, in which case the moment of inertia about the axis passing through the center will be maximum**
Option A	Ring
Option B	Solid sphere

Option C	Disc
Option D	Spherical Shell
Correct Option	**A**

Q. No. 16 0042016	**As we go from the equator to the poles, the value of g**
Option A	Increases
Option B	Decreases
Option C	Remains constant
Option D	Slightly less than at the equator
Correct Option	**B**

Q. No. 17 0042017	**The Physical quantity on the conservation of which, Kepler's second law is based**
Option A	Energy
Option B	Linear momentum
Option C	Mass
Option D	Angular momentum
Correct Option	**D**

Q. No. 18 0042018	**The escape velocity from the earth's surface is 11 km/s. If the radius of a planet is double to that of the earth but the average density is the same as that of earth, then escape velocity from the planet would be**
Option A	22 Km/s
Option B	11 Km/s
Option C	5.5 Km/s
Option D	15.5 Km/s
Correct Option	**A**

Q. No. 19 0042019	**The time period of the second's pendulum in a satellite is**
Option A	zero
Option B	2 s
Option C	∞
Option D	Depends on the mass of the pendulum
Correct Option	**B**

Q. No. 20 0042020	**The dimension of modulus of rigidity η are:**
Option A	$ML^{-1}T^{-2}$
Option B	MLT^{-1}
Option C	MLT^{-2}
Option D	$ML^{-1}T^{-1}$
Correct Option	**A**

Q. No. 21 0042021	A spherical liquid drop of radius R is sprayed up into 8 spherical droplets of equal radii. The surface tension of liquids is T, Work done in this process will be
Option A	$2\pi R^2 T$
Option B	$3\pi R^2 T$
Option C	$4\pi R^2 T$
Option D	$8\pi R^2 T$
Correct Option	**C**

Q. No. 22 0042022	The height of a liquid column in a capillary tube on earth is h. On the moon, where the acceleration due to the gravity is (1/6)th that of the earth, it will be
Option A	h
Option B	6h
Option C	h/6
Option D	The liquid will not rise
Correct Option	**B**

Q. No. 23 0042023	The neutral temperature of a thermocouple thermometer is 270 °C. Its temperature of inversion will be
Option A	270 °C
Option B	540 °C
Option C	135 °C
Option D	0 °C
Correct Option	**B**

Q. No. 24 0042024	A faulty thermometer has its fixed points marked 5° and 95 °C. This thermometer reads the temperature of a body as 50 °C. The correct temperature on the Celsius scale is
Option A	59 °C
Option B	48.6 °C
Option C	60 °C
Option D	50 °C
Correct Option	**C**

Q. No. 25 0042025	In the cyclic process
Option A	Work done is zero
Option B	Work done by the system is equal to the quantity of heat given to the system
Option C	Work done does not depend upon the quantity of heat given to the system
Option D	The internal energy of the system increases
Correct Option	**B**

Q. No. 26 0042026	For an ideal gas, in adiabatic expansion, the value of $\Delta P/P$ is equal to
Option A	$-\gamma^{1/2}\dfrac{\Delta V}{V}$
Option B	$-\dfrac{\Delta V}{V}$
Option C	$-\gamma\dfrac{\Delta V}{V}$
Option D	$-\gamma^2\dfrac{\Delta V}{V}$
Correct Option	C

Q. No. 27 0042027	Two cylinders A and B fitted with pistons contain equal amounts of an ideal diatomic gas at 300 K. The piston of A is free to move, while that of B is held fixed. The same amount of heat is given to the gas in each cylinder. If the rise in temperature of the gas in A is 30 K, then the rise in temperature of the gas in B is
Option A	30 K
Option B	18 K
Option C	50 K
Option D	42 K
Correct Option	D

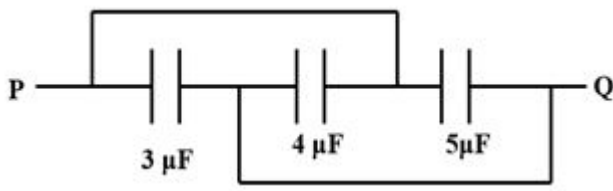| Q. No. 28 0042028	If the mass of gas molecules be m, then the root-mean-square speed (v_{rms}) of the gas molecules at temperature T will be
Option A	$\sqrt{\dfrac{3kT}{m}}$
Option B	$\sqrt{\dfrac{2kT}{\pi m}}$
Option C	$\sqrt{\dfrac{8kT}{m}}$
Option D	$\sqrt{\dfrac{8kT}{\pi m}}$
Correct Option	A

Q. No. 29 0042029	A tuning fork of frequency 345 Hz is vibrated just above a tube of height 100 cm. Water is filling slowly in the tube. What minimum height of water will be necessary for the resonance (Velocity of sound in air = 345 m/s)
Option A	20 cm
Option B	25 cm
Option C	30 cm

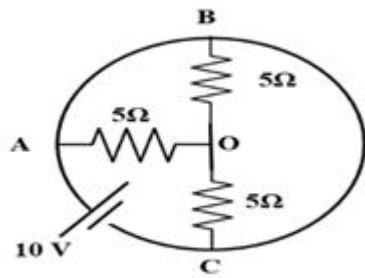| Option D	28 cm
Correct Option	**B**

Q. No. 30 0042030	**A tuning fork when vibrating with a sonometer produces 6 beats per second when the length of the sonometer wire is either 20 cm or 21 cm. What will be the frequency of the tuning fork**
Option A	246 Hz
Option B	220 Hz
Option C	346 Hz
Option D	200 Hz
Correct Option	**A**

Q. No. 31 0042031	**The force between two electric dipoles separated by a distance r is directly proportional to**
Option A	r^2
Option B	r^4
Option C	r^{-2}
Option D	r^{-4}
Correct Option	**D**

Q. No. 32 0042032	**The unit of intensity of electric field**
Option A	Newton/meter
Option B	Colomb/newton
Option C	Newton/Colomb
Option D	Joule/newton
Correct Option	**C**

Q. No. 33 0042033	**What will be the equivalent capacitance between the point P and Q**
Option A	12 μF
Option B	1.27 μF
Option C	2.25 μF
Option D	6.71 μF
Correct Option	**A**

Q. No. 34 0042034	**What will be the power loss in the given circuit**

Option A	38 W
Option B	42 W
Option C	40 W
Option D	45 W
Correct Option	**C**

Q. No. 35 0042035	When an external resistance of 75 Ω is connected to the terminal of a battery, a current of 0.5 ampere flows in it. When the resistance is increased to 135Ω, the current decreases to 0.3 amperes. Determine the emf and the internal resistance of the battery
Option A	42 V
Option B	50 V
Option C	68 V
Option D	45 V
Correct Option	**D**

Q. No. 36 0042036	A current of 4.8 A flows in a wire. The number of electrons flowing per second through the wire
Option A	3×10^{19}
Option B	3×10^{20}
Option C	7.68×10^{20}
Option D	76.8×10^{20}
Correct Option	**A**

Q. No. 37 0042037	What will be the magnetic field due to a long straight current-carrying wire
Option A	$B = \dfrac{\mu_o}{4\pi}\dfrac{i}{r}$
Option B	$B = \dfrac{\mu_o}{2\pi}\dfrac{i}{r}$
Option C	$B = \dfrac{\mu_o}{4}\dfrac{i}{r}$
Option D	$B = \dfrac{\mu_o}{2}\dfrac{i}{r}$
Correct Option	**B**

Q. No. 38 0042038	**Those substances in which the magnetic moment of the molecules are zero are,**
Option A	Paramagnetic
Option B	Diamagnetic
Option C	Ferromagnetic
Option D	Paramagnetic or ferromagnetic depending on temperature
Correct Option	**B**

Q. No. 39 0042039	**A bar magnet of magnetic moment 2.5 ampere-meter^{2}is placed in a magnetic field of 0.2 tesla. Find the work done to rotate the magnet from parallel to antiparallel direction relative to the magnetic field.**
Option A	2 J
Option B	0 J
Option C	1 J
Option D	3 J
Correct Option	**C**

Q. No. 40 0042040	**The self-inductance of a current-carrying coil is 40 mH. What will be the induced emf when the current increase from 1A to 11A in 4 millisecond**
Option A	-90 V
Option B	-103 V
Option C	-91 V
Option D	-100 V
Correct Option	**D**

Q. No. 41 0042041	**Power factor is maximum in alternating current when circuit is**
Option A	Inductive only
Option B	Capacitive only
Option C	L-C
Option D	Resistive only
Correct Option	**D**

Q. No. 42 0042042	**The output voltage of an ideal transformer connected to a 240 V a.c. mains is 24 V. The current in the secondary coil of the transformer is 1A. What will be the current flowing in the primary coil of the circuit**
Option A	0
Option B	0.1 A
Option C	0.2 A
Option D	0.4 A
Correct Option	**B**

Q. No. 43 0042043	**The distance of an object from the first focus of a thin lens is x_1 and that of the image from the second focus is x_2. If f_1 and f_2 are the focal lengths of the two sides of the lens respectively, then**

Option A	$\dfrac{x_1}{x_2} = \dfrac{f_1}{f_2}$
Option B	$\dfrac{x_1}{x_2} = -\dfrac{f_1}{f_2}$
Option C	$x_1 x_2 = f_1 f_2$
Option D	$x_1 x_2 = -f_1 f_2$
Correct Option	**C**

Q. No. 44 0042044	**When a light ray is an incident at an angle 50° on the refracting surface of a 60° prism, it suffers minimum deviation. The angle deviation is**
Option A	40°
Option B	45°
Option C	50°
Option D	60°
Correct Option	**A**

Q. No. 45 0042045	**If f_1 and f_2 are focal lengths of two plano-convex lenses and d is the distance between them, the defect of spherical aberration will be minimum in this lens combination if**
Option A	d=$f_1 f_2$
Option B	d=f_1+f_2
Option C	d=f_1-f_2
Option D	d=f_1/f_2
Correct Option	**C**

Q. No. 46 0042046	**The resolving power of a telescope depends upon**
Option A	The focal length of the objective
Option B	The focal length of the eyepiece
Option C	The length of the telescope
Option D	The aperture of the objective
Correct Option	**D**

Q. No. 47 0042047	**At what temperature will the speed of sound in hydrogen be the same as in oxygen at 100 ^{o}C. The densities of oxygen and hydrogen are in the ratio 16:1**
Option A	23.3 ^{o}C
Option B	249.7 K
Option C	-249.7 ^{o}C
Option D	250 K
Correct Option	**C**

Q. No. 48 0042048	**What will be the de-Broglie wavelength of an electron having a kinetic energy of 100 eV**
Option A	1.227 A⁰
Option B	0.1227 A⁰
Option C	12.227 A⁰
Option D	122.7 A⁰
Correct Option	**A**

Q. No. 49 0042049	**The minimum energy of a γ photon for pair production is**
Option A	931 eV
Option B	9.31 eV
Option C	102 MeV
Option D	1.02 MeV
Correct Option	**D**

Q. No. 50 0042050	**The mutual conductance of triode valve is**
Option A	$\dfrac{\Delta i_p}{\Delta V_g}$
Option B	$\Delta i_p \times \Delta V_g$
Option C	$\dfrac{\Delta i_p}{\Delta i_g}$
Option D	$\Delta i_p \times \Delta i_g$
Correct Option	**A**

Q. No. 51 0072051	**The number of moles present in 6 gms of carbon is:**
Option A	2
Option B	0.5
Option C	5
Option D	1
Correct Option	**B**

Q. No. 52 0072052	**In the ground state, an element has 13 electrons in its M-shell. The element is_____.**
Option A	Copper
Option B	Chromium
Option C	Nickel
Option D	Iron
Correct Option	**B**

Q. No. 53 0072053	**Which of the following statements does not form a part of Bohr's model of hydrogen atom?**
Option A	Energy of the electrons in the orbit is quantised
Option B	The electron in the orbit nearest the nucleus has the lowest energy
Option C	Electrons revolve in different orbits around the nucleus
Option D	The position and velocity of the electrons in the orbit cannot be determined simultaneously
Correct Option	**D**

Q. No. 54 0072054	**The element with atomic number 35 belongs to**
Option A	d - Block
Option B	f - Block
Option C	p - Block
Option D	s - Block
Correct Option	**C**

Q. No. 55 0072055	**The maximum number of hydrogen bonds that a molecule of water can have is**
Option A	1
Option B	2
Option C	3
Option D	4
Correct Option	**D**

Q. No. 56 0072056	**When you heat a sample of gas, what happens to the particles that make up the gas?**
Option A	The particles move faster
Option B	The particles break apart
Option C	The particles get smaller
Option D	The particles become more dense
Correct Option	**A**

Q. No. 57 0072057	**One mole of which of the following has the highest entropy?**
Option A	Liquid Nitrogen
Option B	Hydrogen Gas
Option C	Mercury
Option D	Diamond
Correct Option	**B**

Q. No. 58 0072058	**In a reversible chemical reaction at equilibrium, if the concentration of any one of the reactants is doubled, then the equilibrium constant will**
Option A	Also be Doubled

Option B	Be Halved
Option C	Remain the Same
Option D	Become One-Fourth
Correct Option	**C**

Q. No. 59 0072059	**Loss of electron is termed as -**
Option A	Oxidation
Option B	Reduction
Option C	Combustion
Option D	Neutralization
Correct Option	**A**

Q. No. 60 0072060	**The structure of H_2O is-**
Option A	Planar
Option B	Non-planar
Option C	Spherical
Option D	Linear
Correct Option	**B**

Q. No. 61 0072061	**Which of the following alkali metals has the least melting point?**
Option A	Na
Option B	K
Option C	Rb
Option D	Cs
Correct Option	**D**

Q. No. 62 0072062	**Which of the following will not produce hydrogen gas?**
Option A	Reaction between Fe and dil. HCl
Option B	Reaction between Zn and NaOH
Option C	Reaction between Zn and conc. H_2SO_4
Option D	Electrolysis of NaCl in Nelsons cell
Correct Option	**C**

Q. No. 63 0072063	**Who is known as the father of chemistry ?**
Option A	Lavoisier
Option B	Priestley
Option C	Faraday
Option D	Rutherford
Correct Option	**C**

Q. No. 64 0072064	The Number of structural isomers for C_6H_{14} is
Option A	3
Option B	4
Option C	5
Option D	6
Correct Option	**C**

Q. No. 65 0072065	LPG mainly contain-
Option A	Methane
Option B	Ethane
Option C	Propane
Option D	Butane
Correct Option	**D**

Q. No. 66 0072066	Which of the following gas is found in coal mines and marshy places?
Option A	Methane
Option B	Ethane
Option C	Propane
Option D	Benzene
Correct Option	**A**

Q. No. 67 0072067	Which of the following is the coldest region?
Option A	Troposphere
Option B	Mesosphere
Option C	Stratosphere
Option D	Thermosphere
Correct Option	**B**

Q. No. 68 0072068	Depletion of ozone layer causes
Option A	Blood cancer
Option B	Lung cancer
Option C	Skin cancer
Option D	Breast cancer
Correct Option	**C**

Q. No. 69 0072069	Who proposed the atomic theory?
Option A	John Dalton

Option B	Robert Millikan
Option C	J. J. Thomson
Option D	Neils Bohr
Correct Option	**A**

Q. No. 70 0072070	**Which of the following aqueous solution will be the best conductor of electricity?**
Option A	NH_3
Option B	CH_3COOH
Option C	HCl
Option D	$C_6H_{12}O_6$
Correct Option	**C**

Q. No. 71 0072071	**Which of the following is not a crystalline solid?**
Option A	KCl
Option B	CsCl
Option C	Glass
Option D	Rhombic S
Correct Option	**C**

Q. No. 72 0072072	**A crystalline solid -**
Option A	changes abruptly from solid to liquid when heated
Option B	has no definite melting point
Option C	undergoes deformation of its geometry easily
Option D	has an irregular 3-dimensional arrangements
Correct Option	**A**

Q. No. 73 0072073	**What is the co-ordination number of sodium in Na_2O?**
Option A	6
Option B	4
Option C	8
Option D	2
Correct Option	**B**

Q. No. 74 0072074	**Mole fraction of glycerine$C_3H_5(OH)_3$ in solution containing 36 g of water and 46 g of glycerine is**
Option A	0.46
Option B	0.40
Option C	0.20
Option D	0.36

Correct Option	C

Q. No. 75 0072075	**A plant cell shrinks when it is kept in a**
Option A	hypotonic solution
Option B	hypertonic solution
Option C	isotonic solution
Option D	pure water
Correct Option	**B**

Q. No. 76 0072076	**Which of the following is a quantitative description of the solution?**
Option A	Dilute
Option B	Concentrated
Option C	Saturated
Option D	Molar
Correct Option	**D**

Q. No. 77 0072077	**The cell reaction of the galvanic cell.** $Cu(s) / Cu^{2+} (aq) // Hg^{2+} (aq) / Hg (l)$ **is**
Option A	$Hg + Cu^{2+} \longrightarrow Hg^{2+} + Cu$
Option B	$Hg + Cu^{2+} \longrightarrow Cu^+ + Hg^+$
Option C	$Cu + Hg \longrightarrow CuHg$
Option D	$Cu + Hg^{2+} \longrightarrow Cu^{2+} + Hg$
Correct Option	**D**

Q. No. 78 0072078	**Fused NaCl on electrolysis gives .... on cathode.**
Option A	Chlroine
Option B	Sodium
Option C	Sodium amalgam
Option D	Hydrogen
Correct Option	**B**

Q. No. 79 0072079	**Faraday's law of electrolysis is related to**
Option A	Atomic number of cation
Option B	Speed of cation
Option C	Speed of anion
Option D	Equivalent weight of electrolyte
Correct Option	**D**

Q. No. 80	**In chemical equation $H_2 (g) + I_2 (g) \rightleftharpoons 2HI (g)$ the equilibrium constant K_p depends**

0072080	**on**
Option A	total pressure
Option B	catalyst used
Option C	amount of H_2 and I_2
Option D	temperature
Correct Option	**B**

Q. No. 81 0072081	**The overall rate of a reaction is governed by**
Option A	the rate of fastest intermediate step
Option B	the sum total of the rates of all intermediate steps
Option C	the average of the rates of all the intermediate steps
Option D	the rate of slowest intermediate step
Correct Option	**D**

Q. No. 82 0072082	**The order of reaction is decided by**
Option A	temperature
Option B	mechanism of reaction as well as relative concentration of reactants
Option C	molecularity
Option D	pressure
Correct Option	**B**

Q. No. 83 0072083	**Volume of one mole of any gas at NTP is**
Option A	11.2 litre
Option B	22.4 litre
Option C	10.2 litre
Option D	22.8 litre
Correct Option	**B**

Q. No. 84 0072084	**The process of separating a crystalloid from a colloid by filtration is called**
Option A	Emulsification
Option B	Dialysis
Option C	Coagulation
Option D	Peptization
Correct Option	**B**

Q. No. 85 0072085	**A colloidal system in which liquid is dispersed phase and solid is dispersion medium is classified as**
Option A	gel
Option B	sol
Option C	emulsion

Option D	aerosol
Correct Option	**A**

Q. No. 86 0072086	**Malachite is an ore of**
Option A	iron
Option B	copper
Option C	zinc
Option D	silver
Correct Option	**B**

Q. No. 87 0072087	**Malachite is an ore of**
Option A	iron
Option B	copper
Option C	zinc
Option D	silver
Correct Option	**A**

Q. No. 88 0072088	**Sulphide ore of zinc/copper is concentrated by**
Option A	floatation process
Option B	electromagnetic process
Option C	gravity separation
Option D	distillation
Correct Option	**A**

Q. No. 89 0072089	**H_2S is more acidic than H_2O because**
Option A	oxygen is more electronegative than sulphur.
Option B	atomic number of sulphur is higher than oxygen.
Option C	H - S bond dissociation energy is less as compared to H - O bond.
Option D	H - O bond dissociation energy is less as compared to H - S bond.
Correct Option	**B**

Q. No. 90 0072090	**The set with correct order of acidity is**
Option A	$HClO < HClO_2 < HClO_3 < HClO_4$
Option B	$HClO_4 < HClO_3 < HClO_2 < HClO$
Option C	$HClO < HClO_4 < HClO_3 < HClO_2$
Option D	$HClO_4 < HClO_2 < HClO_3 < HClO$
Correct Option	**B**

Q. No. 91 0072091	**Which one of the following elements is most metallic ?**
Option A	P
Option B	As
Option C	Sb
Option D	Bi
Correct Option	**D**

Q. No. 92 0072092	**Which of the following are d-block elements but not regarded as transition elements?**
Option A	Cu, Ag, Au
Option B	Zn, Cd, Hg
Option C	Fe, Co, Ni
Option D	Ru, Rh, Pd
Correct Option	**B**

Q. No. 93 0072093	**Which of the following has the maximum number of unpaired electrons?**
Option A	Mg^{2+}
Option B	Ti^{3+}
Option C	V^{3+}
Option D	Fe^{2+}
Correct Option	**D**

Q. No. 94 0072094	**Zinc and mercury do not show variable valency like d-block elements because**
Option A	They are soft
Option B	Their d-shells are complete
Option C	They have only two electrons in the outermost subshell
Option D	Their d-shells are incomplete
Correct Option	**B**

Q. No. 95 0072095	**According to Werner's theory of co-ordination compounds**
Option A	Primary valency is ionisable
Option B	Secondary valency is ionisable
Option C	Primary and secondary valencies are ionisable
Option D	Neither primary nor secondary valency is ionisable
Correct Option	**A**

Q. No. 96 0072096	**Which of the following has magnesium?**
Option A	Chlorophyll
Option B	Haemocyanin

Option C	Carbonic anhydrate
Option D	Vitamin B_{12}
Correct Option	**A**

Q. No. 97 0072097	**Mohr's salt is**
Option A	$Fe_2(SO_4) . 3 (NH_4)_2SO_4 .6H_2O$
Option B	$FeSO_4 . (NH_4)_2 .SO_4 . 6H_2O$
Option C	$MgSO_4 .7H_2O$
Option D	$FeSO_4 . 7H_2O$
Correct Option	**B**

Q. No. 98 0072098	**The hybridisation of carbon in diamond is**
Option A	sp^3
Option B	sp^2
Option C	sp
Option D	dsp^2
Correct Option	**A**

Q. No. 99 0072099	**Organic compound must contain an element**
Option A	oxygen
Option B	carbon
Option C	hydrogen
Option D	nitrogen
Correct Option	**B**

Q. No. 100 0072100	**Single bond length between carbon-carbon is**
Option A	1.34 $\overset{\circ}{A}$
Option B	1.20 $\overset{\circ}{A}$
Option C	1.54 $\overset{\circ}{A}$
Option D	1.31 $\overset{\circ}{A}$
Correct Option	**C**