



Max. Marks: 100

Date: 20.11.2022

ABHIMANYU BATCH

PHYSICS : REVISION TEST-3 (SET A)

Topic: Ray Optics + Circular Motion + Gravitation + Wave Optics + Rotational Motion + Elasticity

1. When light wave suffers reflection at the interface from air to glass, then the change in phase of the reflected wave is equal to
(a) zero (b) $\frac{\pi}{2}$ (c) π (d) 2π
2. Two identical glass ($\mu_g = 3/2$) equi-convex lenses of focal length f each are kept in contact. The space between the two lenses is filled with water ($\mu_w = 4/3$). The focal length of the combination is
(a) $f/3$ (b) f (c) $\frac{4f}{3}$ (d) $\frac{3f}{4}$
3. An air bubble in a glass slab with refractive index 1.5 (near normal incidence) is 5 cm deep when viewed from one surface and 3 cm deep when viewed from the opposite face. The thickness (in cm) of the slab is
(a) 8 (b) 10 (c) 12 (d) 16
4. An person can see objects clearly only when they lie between 50 cm and 400 cm from his eyes. In order to increase the maximum distance of distinct vision to infinity, the type and power of the correcting lens, the person has to use, will be
(a) convex, +2.25 D (b) concave, -0.25 D (c) concave, -0.2 D (d) convex, +0.15 D
5. An astronomical telescope has objective and eye-piece of focal lengths 40 cm, 4 cm, respectively. To view an object 200 cm away from the objective, the lenses must be separated by a distance
(a) 46.0 cm (b) 50.0 cm (c) 54.0 cm (d) 37.3 cm

Space for Rough Work



6. Match the corresponding entries of column I with column II. [Where, m is the magnification produced by the mirror]

	Column I		Column II
A.	$m = -2$	1.	Convex mirror
B.	$m = -1/2$	2.	Concave mirror
C.	$m = +2$	3.	Real image
D.	$m = +1/2$	4.	Virtual image

- (a) $A \rightarrow 1$ and 3, $B \rightarrow 1$ and 4, $C \rightarrow 1$ and 2, $D \rightarrow 3$ and 4
 (b) $A \rightarrow 1$ and 4, $B \rightarrow 2$ and 3, $C \rightarrow 2$ and 4, $D \rightarrow 2$ and 3
 (c) $A \rightarrow 3$ and 4, $B \rightarrow 2$ and 4, $C \rightarrow 2$ and 3, $D \rightarrow 1$ and 4
 (d) $A \rightarrow 2$ and 3, $B \rightarrow 2$ and 3, $C \rightarrow 2$ and 4, $D \rightarrow 1$ and 4
7. Calculate the focal length of a reading glass of a person, if the distance of distinct vision is 75 cm.
 (a) 75.2 cm (b) 25.6 cm (c) 100.4 cm (d) 37.5 cm
8. Rainbow is observed when the sun is
 (a) in front of the observer (b) behind the observer
 (c) vertically above the observer (d) in any of these positions
9. Sun is visible a little before the actual sunrise and until a little after the actual sunset. This is due to
 (a) total internal reflection (b) reflection
 (c) refraction (d) polarisation
10. A mark at the bottom of a liquid appears to rise by 0.1 m. The depth of the liquid is 1 m. The refractive index of the liquid is
 (a) 1.33 (b) 9/10 (c) $\frac{10}{9}$ (d) 1.5
11. A prism can have a maximum refracting angle of (C = critical angle for the material of the prism)
 (a) 60° (b) C
 (c) $2C$ (d) slightly less than 180°

Space for Rough Work



12. You are given four sources of light each one providing a light of a single colour-red, blue, green and yellow. Suppose the angle of refraction for a beam of yellow light corresponding to a particular angle of incidence at the interface of two media is 90° . Which of the following statement is correct, if the source of yellow light is replaced with that of other lights without changing the angle of incidence?
- The beam of red light would undergo total internal reflection
 - The beam of red light would bend towards normal while it gets refracted through the second medium
 - The beam of blue light would undergo total internal reflection
 - The beam of green light would bend away from the normal as it gets refracted through the second medium
13. When a lens of refractive index μ_1 is placed in a liquid of refractive index μ_2 , then the lens looks to be disappeared only, if
- $\mu_1 = \mu_2/2$
 - $\mu_1 = 3\mu_2/2$
 - $\mu_1 = \mu_2$
 - $\mu_1 = 5\mu_2/2$
14. When sun light is scattered by minute particles of atmosphere, then the intensity of light scattered away is proportional to
- (wavelength of light)⁴
 - (frequency of light)⁴
 - (wavelength of light)²
 - (frequency of light)²
15. If KE of the particle of mass m performing UCM in a circle of radius r is E . Find the acceleration of the particle
- $\frac{2E}{mr}$
 - $\left(\frac{2E}{mr}\right)^2$
 - $2mr$
 - $\frac{4E}{mr}$
16. If α is angular acceleration, ω is angular velocity and a is the centripetal acceleration then, which of the following is true?
- $\alpha = \frac{\omega a}{v}$
 - $\alpha = \frac{v}{\omega a}$
 - $\alpha = \frac{av}{\omega}$
 - $\alpha = \frac{a}{\omega v}$
17. A car is moving with speed 30 ms^{-1} on a circular path of radius 500 m . Its speed is increasing at a rate of 2 ms^{-2} , what is the acceleration of the car?
- 2 ms^{-2}
 - 2.7 ms^{-2}
 - 1.82 ms^{-2}
 - 9.82 ms^{-2}

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18. A particle of mass m is rotating in a plane in circular path of radius r . Its angular momentum is L . The centripetal force acting on the particle is
- (a) $\frac{L^2}{mr}$ (b) $\frac{L^2 m}{r}$ (c) $\frac{L^2}{m^2 r^2}$ (d) $\frac{L^2}{mr^3}$
19. When a ceiling fan is switched off, angular velocity falls to half while it makes 36 rotations. How many more rotations will make before coming to rest?
- (a) 24 (b) 36 (c) 18 (d) 12
20. An electric fan has blades of length 30 cm as measured from the axis of rotation. If the fan is rotating at 1200 rpm, the acceleration of a point on the tip of the blade is about
- (a) 1600 ms^{-2} (b) 4737.4 ms^{-2} (c) 2370 ms^{-2} (d) 5055 ms^{-2}
21. A body is just being revolved in a vertical circle of radius R with a uniform speed. The string breaks when the body is at the highest point. The horizontal distance covered by the body after the string breaks is
- (a) $2R$ (b) R (c) $R\sqrt{2}$ (d) $4R$
22. The angle of banking is independent of
- (a) speed of vehicle (b) radius of curvature of road
(c) height of inclination (d) None of the above
23. 320 km above the surface of earth, the value of acceleration due to gravity is nearly 90% of its value on the surface of the earth. Its value will be 95% of the value on the earth's surface
- (a) nearly 160 km below the earth's surface (b) nearly 800 km below the earth's surface
(c) nearly 640 km below the earth's surface (d) nearly 320 km below the earth's surface
24. The acceleration due to gravity at a height $1/20^{\text{th}}$ of the radius of the earth above the earth surface is 9 ms^{-2} . Its value at a point at an equal distance below the surface of the earth (in ms^{-2}) is about
- (a) 8.5 (b) 9.5 (c) 9.8 (d) 11.5

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25. A solid sphere of mass M and radius R has a spherical cavity of radius $R/2$ such that the centre of cavity is at a distance $R/2$ from the centre of the sphere. A point mass m is placed inside the cavity at a distance $R/4$ from the centre of sphere. The gravitational pull between the sphere and the point mass m is
- (a) $\frac{11GMm}{R^2}$ (b) $\frac{14GMm}{R^2}$ (c) $\frac{GMm}{2R^2}$ (d) $\frac{GMm}{R^2}$
26. A disc of radius R and thickness $\frac{R}{6}$ has moment inertia/about an axis passing through its centre perpendicular to its plane. Disc is melted and reduced into a solid sphere. The moment of inertia of a sphere about its diameter is
- (a) $\frac{1}{5}$ (b) $\frac{1}{6}$ (c) $\frac{1}{32}$ (d) $\frac{1}{64}$
27. Let M be the mass and L be the length of a thin uniform rod. In first case, axis of rotation is passing through centre and perpendicular to the length of the rod. In second case, axis of rotation is passing through one end and perpendicular to the length of the rod. The ratio of radius of gyration in first case to second case is
- (a) 1 (b) $\frac{1}{2}$ (c) $\frac{1}{4}$ (d) $\frac{1}{8}$
28. A cord is wound around the circumference of wheel of radius r . The axis of the wheel is horizontal and moment of inertia about it is I . The weight mg is attached to the end of the cord and falls from rest. After falling through a distance h , the angular velocity of the wheel will be
- (a) $[mgh]^{1/2}$ (b) $\left[\frac{2mgh}{1 + 2mr^2} \right]^{1/2}$ (c) $\left[\frac{2mgh}{1 + mr^2} \right]^{1/2}$ (d) $\left[\frac{mgh}{1 + mr^2} \right]^{1/2}$
29. A satellite of mass m is revolving in circular orbit of radius r round the earth. Its angular momentum w.r.t the centre of its orbit is (M = mass of earth, G = universal gravitational constant)
- (a) $(GMmr)^{1/2}$ (b) $(GMm^2r)^{1/2}$ (c) $(GMm^2r^2)^{1/2}$ (d) $(GM^2m^2r)^{1/2}$
30. A ring and a disc roll on the horizontal surface without slipping with same linear velocity. If both have same mass and total kinetic energy of the ring is 4 J then total kinetic energy of the disc is
- (a) 3J (b) 4J (c) 5J (d) 6J

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31. A disc of radius 'R' and thickness $\frac{R}{6}$ has moment of inertia 'I' about an axis passing through its centre and perpendicular to its plane. Disc is melted and recast into a solid sphere. The moment of inertia of a sphere about its diameter is
- (a) $\frac{I}{5}$ (b) $\frac{I}{6}$ (c) $\frac{I}{32}$ (d) $\frac{I}{64}$
32. Let 'M' be the mass and 'L' be the length of a thin uniform rod. In first case, axis of rotation is passing through centre and perpendicular to the length of the rod. In second case axis of rotation is passing through one end and perpendicular to the length of the rod. The ratio of radius of gyration in first case to second case is
- (a) 1 (b) $\frac{1}{2}$ (c) $\frac{1}{4}$ (d) $\frac{1}{8}$
33. An object of radius R and mass M is rolling horizontally without slipping with speed v. It then rolls up the hill to a maximum height $h = 3v^2/4g$. The moment of inertia of the object is (where, g = acceleration due to gravity)
- (a) $\frac{2}{5}MR^2$ (b) $\frac{MR^2}{2}$ (c) MR^2 (d) $\frac{3}{2}MR^2$
34. The moment of inertia of a thin uniform rod rotating about the perpendicular axis passing through one end is I. The same rod is bent into a ring and its moment of inertia about the diameter is I_1 . The ratio I/I_1 is
- (a) $\frac{4\pi}{3}$ (b) $\frac{8\pi^2}{3}$ (c) $\frac{5\pi}{3}$ (d) $\frac{8\pi^2}{5}$
35. Three identical spheres each of mass 1 kg are placed touching one another with their centres in a straight line. Their centres are marked as A, B, C respectively. The distance of centre of mass of the system from A is
- (a) $\frac{AB + AC}{2}$ (b) $\frac{AB + BC}{2}$ (c) $\frac{AC - AB}{3}$ (d) $\frac{AB + AC}{3}$

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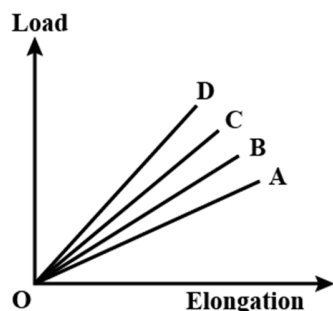


36. From Brewster's law, except for polished metallic surface, the polarising angle
- depends on wavelength and is different for different colours
 - independent of wavelength and is different for different colours
 - independent of wavelength and is same for different colours
 - depends on wavelength and is same for different colours
37. For the same angle of incidence, the angles of refraction in media P, Q, R and S are 50° , 40° , 30° and 20° respectively. The speed of light is minimum in medium
- P
 - Q
 - R
 - S
38. Light is incident at an angle i on a glass slab. The reflected ray is completely polarised. The angle of refraction is
- $90^\circ - i$
 - $180^\circ - i$
 - $90^\circ + i$
 - i
39. When an unpolarised light of intensity I_0 is incident on a polarising sheet, the intensity of the light which does not get transmitted is
- $\frac{1}{2} I_0$
 - $\frac{1}{4} I_0$
 - zero
 - I_0
40. Two wires having same length and material are stretched by same force. Their diameters are in the ratio 1 : 3. The ratio of strain energy per unit volume for these two wires (smaller to larger diameter) when stretched is
- 3 : 1
 - 9 : 1
 - 27 : 1
 - 81 : 1
41. Let a steel bar of length l , breadth b and depth d be loaded at the centre by a load W . Then the sag of bending of beam is (Y = Young's modulus of material of steel)
- $\frac{Wl^2}{2bd^2Y}$
 - $\frac{Wl^3}{4bd^3Y}$
 - $\frac{Wl^2}{2bd^3Y}$
 - $\frac{Wl^3}{4bd^2Y}$
42. A string of length L and force constant K is stretched to obtain extension l . It is further stretched to obtain extension l_1 . The work done in second stretching is
- $\frac{1}{2} Kl_1(2l + l_1)$
 - $\frac{1}{2} Kl_1^2$
 - $\frac{1}{2} K(l^2 + l_1^2)$
 - $\frac{1}{2} K(l_1^2 - l^2)$

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43. The load V elongation graph for four wires of the same materials shown in the figure. The thinnest wire is represented by the line.



- (a) OC (b) OD (c) OA (d) OB
44. Which of the following relation is true?
- (a) $Y = 2\eta(1 - 2\sigma)$ (b) $Y = 2\eta(1 + 2\sigma)$ (c) $Y = 2\eta(1 - \sigma)$ (d) $(1 + \sigma)2\eta = Y$
45. Four wires of the same material are stretched by the same load. Which one of them will elongate most if their dimensions are as follows
- (a) $L = 100 \text{ cm}, r = 1 \text{ mm}$ (b) $L = 200 \text{ cm}, r = 3 \text{ mm}$
 (c) $L = 300 \text{ cm}, r = 3 \text{ mm}$ (d) $L = 400 \text{ cm}, r = 4 \text{ mm}$
46. The length of an elastic string is a metre when the longitudinal tension is 4 N and b metre when the longitudinal tension is 5 N. The length of the string in metre when longitudinal tension is 9 N is
- (a) $a - b$ (b) $5b - 4a$ (c) $2b - \frac{1}{4}a$ (d) $4a - 3b$
47. A long spring is stretched by 2 cm and its potential energy is U. If the spring is stretched by 10 cm; its potential energy will be
- (a) $U/5$ (b) $U/25$ (c) $5 U$ (d) $25 U$
48. According to Hooke's law of elasticity, if stress is increased, then the ratio of stress to strain.
- (a) becomes zero (b) remains constant (c) decreases (d) increases

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49. The increase in pressure required to decrease the 200 L volume of a liquid by 0.004% (in kPa) is (Bulk modulus of the liquid = 2100 MPa)
- (a) 8.4 (b) 84 (c) 92.4 (d) 168
50. The force constant of a wire is K and that of another wire is 2K. When both the wires are stretched, then the work done
- (a) $W_2 = 2W_1^2$ (b) $W_2 = 2W_1$ (c) $W_2 = W_1$ (d) $W_2 = 0.5 W_1$

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Date: 20.11.2022

ABHIMANYU BATCH
CHEMISTRY : REVISION TEST 3 (SET A)

Topics: Mole Concept, Redox Reaction, Periodic Properties, S Block, Hydrogen, Atomic Structure, Gaseous States and Chemical Equilibrium

51. If value of azimuthal quantum number is 2, then total possible values of magnetic quantum number will be
(a) 7 (b) 5 (c) 3 (d) 2
52. According to kinetic theory of gases,
(a) There are intermolecular attractions
(b) Molecules have considerable volume
(c) No intermolecular attractions
(d) The velocity of molecules decreases after each collision
53. An element which never has a positive oxidation number in any of its compounds
(a) Boron (b) Oxygen (c) Chlorine (d) Fluorine
54. The alkali metal widely used in photoelectric cells is
(a) K (b) Rb (c) Cs (d) Na
55. How does the surface tension of a liquid vary with increase in temperature?
(a) Remains same (b) Decreases
(c) Increases (d) No regular pattern is followed
56. The number of significant figures in 0.0045 are
(a) two (b) three (c) four (d) five

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57. In Habers process, the volume at S.T.P of ammonia relative to the total volume of reactants at STP is :
- (a) One fourth (b) One half (c) Same (d) Three fourth
58. The following are some statements about Mendeleeff's periodic table
- (i) It is based on increasing order of atomic numbers
- (ii) Mendeleeff corrected the atomic weight of some elements like Be, In, Os
- (iii) (Ar, K) (Co, Ni) (Te, I) are three inverted pairs
- (a) All are correct (b) ii and iii are correct
- (c) iii is correct (d) i and iii are correct
59. H_2O_2 is a
- (a) weak acid (b) weak base (c) neutral (d) strong base
60. The compressibility factor for an ideal gas is
- (a) 1.5 (b) 1.0 (c) 2.0 (d) ∞
61. Valency of the metal atom with respect to oxygen is maximum in
- (a) Mn_2O_7 (b) OsO_4 (c) MnO (d) CrO_3
62. The number of moles of $\text{K}_2\text{Cr}_2\text{O}_7$ reduced by one mole of Sn^{2+} ions is
- (a) $1/3$ (b) $1/6$ (c) $2/3$ (d) $3/4$
63. Arrange F, Cl, O and N in decreasing order of electron negativity.
- (a) $\text{O} > \text{F} > \text{N} > \text{Cl}$ (b) $\text{F} > \text{N} > \text{Cl} > \text{O}$ (c) $\text{Cl} > \text{F} > \text{N} > \text{O}$ (d) $\text{F} > \text{O} > \text{N} > \text{Cl}$
64. Chlorophyll, the green component of plants contains
- (a) Ca^{2+} (b) Be^{2+} (c) Mg^{2+} (d) Ba^{2+}
65. The number of hydroxide ions produced by one molecule of Na_2CO_3 on hydrolysis
- (a) 4 (b) 2 (c) 3 (d) 0

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66. The number of completed transitional series in the periodic table is / are
(a) 2 (b) 3 (c) 4 (d) 1
67. What is the mass of precipitate formed when 50 ml of 16.9 % solution of is mixed with 50 ml of 5.8 % NaCl solution?
(a) 7 gr (b) 14 gr (c) 28 gr (d) 3.5 gr
68. The composition of Tritium is
(a) 1 electron, 1 proton, 1 neutron (b) 1 electrons, 2 protons, 1 neutron
(c) 1 electron, 1 proton, 2 neutrons (d) 1 electron, 1 proton, 3 neutrons
69. Number of water molecules in Mohr's salt is
(a) 7 (b) 6 (c) 5 (d) 8
70. Lithium shows similarities to magnesium in its chemical behaviour because
(a) Similar feize, greater electronegativity and similar polariziilg power.
(b) Similar size, same electronegativity and lower polarizing power
(c) Similar size, same electronegativity and similar high polarizing power
(d) None of these
71. Van der waals radius is used for
(a) Molecular substances in gaseous state only (b) Molecular substances in liquid state only
(c) Molecular substances in solid state only (d) Molecular substances in any state

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72. The wavelength of a spectral line for an electronic transition is inversely related to
- (a) the number of electrons undergoing the transition
 - (b) the nuclear charge of the atom
 - (c) the difference in the energy of the energy levels involved in the transition
 - (d) the velocity of the electron undergoing the transition
73. The RMS velocity of CO_2 at a temperature "T" is x cm/sec. At what temperature, the RMS velocity of CO_2 would be 4x
- (a) 16T
 - (b) 2T
 - (c) 4T
 - (d) 32T
74. Heavy water is used as
- (a) Moderator in nuclear reactors
 - (b) Tracer for study of reaction mechanism
 - (c) Exchange compound to know the basicity of oxo acids
 - (d) All of these
75. A potter wishes to make a deep blue glaze. Which one of these available chemicals should be mixed?
- (a) Cuprous oxide
 - (b) Nickel oxide
 - (c) Cobalt oxide
 - (d) Iron oxide
76. Dipole - induced dipole interactions are present in which of the following pairs:
- (a) H_2O and alcohol
 - (b) Cl_2 and CCl_4
 - (c) HCl and He atoms
 - (d) SiF_4 and He atoms
77. Which of the following is not a redox reaction
- (a) $2\text{Rb} + 2\text{H}_2\text{O} \rightarrow 2\text{RbOH} + \text{H}_2$
 - (b) $2\text{CuI}_2 \rightarrow 2\text{CuI} + \text{I}_2$
 - (c) $2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$
 - (d) $4\text{KCN} + \text{Fe}(\text{CN})_2 \rightarrow \text{K}_4\text{Fe}(\text{CN})_6$
78. Number of electrons of manganese with magnetic quantum number value '0' is
- (a) 1
 - (b) 8
 - (c) 12
 - (d) 13

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79. The pressure of a 1:4 mixture of dihydrogen and dioxygen enclosed in a vessel is one atmosphere. What would be the partial pressure of dioxygen?
(a) $0.8 \times 10^5 \text{ atm}$ (b) 0.008 Nm^{-2} (c) $8 \times 10^4 \text{ Nm}^{-2}$ (d) 0.25 atm
80. The sulphate of a metal M contains 9.87% of M. This sulphate is isomorphous with $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$. The atomic weight of M is
(a) 40.3 (b) 36.3 (c) 24.3 (d) 11.3
81. A certain hydrate has the formula $\text{MgSO}_4 \cdot x\text{H}_2\text{O}$. A quantity of 54.2 g of the compound is heated in an oven to drive off the water. If the steam generated exerts a pressure of 24.8 atm in a 2.0 L container at 120°C , calculate x.
(a) 2 (b) 5 (c) 6 (d) 7
82. When excess CO_2 is sent into lime water solution
(a) milky white precipitate of CaCO_3 is formed (b) milky white precipitate of $\text{Ca}(\text{HCO}_3)_2$ is formed
(c) $\text{Ca}(\text{HCO}_3)_2$ formed, will be changed into CaCO_3 (d) CaCO_3 formed, will be changed into $\text{Ca}(\text{HCO}_3)_2$
83. Which of the following has same number of molecules as in 16 gr. of oxygen
(a) 16 gr. of O_3 (b) 16 gr. of SO_3 (c) 32 gr. of SO_2 (d) All of these
84. An element has successive ionization enthalpies as 940 (first), 2080, 3090, 4140, 7030, 7870, 16000 and $19500 \text{ kJ mol}^{-1}$. To which group of the periodic table does this element belong?
(a) 14 (b) 15 (c) 16 (d) 17
85. A reversible chemical reaction having two reactants in equilibrium. If the concentrations of the reactants are doubled, then the equilibrium constant will
(a) Also be doubled (b) Be halved (c) Become one-fourth (d) Remain the same
86. The photons of light having a wavelength 4000 \AA to provide 1 J of energy are
(a) 6.023×10^{23} (b) 6.023×10^{18} (c) 2.01×10^{18} (d) 2.01×10^{23}

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87. The first IE of lithium is 5.4 eV and first electron affinity of Cl is 3.6 eV. The value of ΔH for the reaction $\text{Li}_{(g)} + \text{Cl}_{(g)} \rightarrow \text{Li}_{(g)}^+ + \text{Cl}_{(g)}^-$ is.... eV
(a) +1.8 (b) +2.8 (c) -2.8 (d) +9
88. Hydrogen cannot reduce
(a) Hot CuO (b) Fe_2O_3 (c) Hot SnO_2 (d) Hot Al_2O_3
89. The covalent metal oxide among the following is
(a) MgO (b) BaO (c) CaO (d) BeO
90. The correct order regarding the covalent nature of hydrides is
(a) $\text{BeH}_2 > \text{MgH}_2 > \text{CaH}_2 > \text{SrH}_2 > \text{BaH}_2$ (b) $\text{MgH}_2 > \text{CaH}_2 > \text{BeH}_2 > \text{BaH}_2 > \text{SrH}_2$
(c) $\text{BaH}_2 > \text{MgH}_2 > \text{CaH}_2 > \text{BeH}_2 > \text{SrH}_2$ (d) $\text{BeH}_2 > \text{CaH}_2 > \text{MgH}_2 > \text{BaH}_2 > \text{SrH}_2$
91. RbO_2 is
(a) Peroxide and paramagnetic (b) Peroxide and diamagnetic
(c) Superoxide and paramagnetic (d) Superoxide and diamagnetic
92. Lithium forms Li_2O while other alkali metals form peroxides and super oxides because
(a) IP of Li^+ is more
(b) hydration energy of is more
(c) The smaller Li^+ ion cannot stabilize the larger peroxide or super oxide ions
(d) Both (a) & (b)
93. Which of the following electron configuration corresponds to the most electropositive character?
(a) $[\text{He}]2s^1$ (b) $[\text{He}]2s^2$ (c) $[\text{Xe}]6s^1$ (d) $[\text{Xe}]6s^2$
94. The vapour density of a tribasic acid is x. The equivalent mass of that acid is
(a) $x/3$ (b) $x - 3$ (c) $2x/3$ (d) $2x - 3$

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95. Light of wavelength ' λ ' falls on a metal having work function $\frac{hc}{\lambda_0}$. Photoelectric effect will take place only if
- (a) $\lambda \leq \lambda_0$ (b) $\lambda \geq 2\lambda_0$ (c) $\lambda \geq \lambda_0$ (d) $\lambda \geq \frac{\lambda_0}{2}$
96. When copper turnings are added to silver nitrate solution, a blue coloured solution is formed after some time. It is because copper
- (a) is more noble than silver (b) forms a blue coloured complex with AgNO_3
(c) is oxidised to Cu^{2+} (d) is reduced to Cu^{2+}
97. The reported element Ekamercury with atomic number 112 belongs to the group
- (a) IIB (b) IIIB (c) IVB (d) VIB
98. Al has lower ionization potential than that of Mg because
- (a) Al atom is bigger than Mg atom
(b) Mg atom is bigger than Al atom
(c) All electrons in Mg are paired, but those of Al are not
(d) Al belongs to a higher group
99. Which of the following pair exhibit similar polarising power?
- (a) $\text{Be}^+, \text{Al}^{3+}$ (b) $\text{B}^+, \text{Si}^{4+}$ (c) Li^+, Mg^+ (d) $\text{Li}^+, \text{Mg}^{2+}$
100. Which of the following is an amphoteric hydroxide?
- (a) $\text{Sr}(\text{OH})_2$ (b) $\text{Ca}(\text{OH})_2$ (c) $\text{Mg}(\text{OH})_2$ (d) $\text{Be}(\text{OH})_2$

Space for Rough Work



Max. Marks: 100

Date: 20.11.2022

ABHIMANYU BATCH

PHYSICS : REVISION TEST-3 (SET A) ANSWER KEY

Topic: Ray Optics + Circular Motion + Gravitation + Wave Optics + Rotational Motion + Elasticity

1.	(c)	2.	(d)	3.	(c)	4.	(b)	5.	(c)
6.	(d)	7.	(d)	8.	(b)	9.	(c)	10.	(c)
11.	(c)	12.	(c)	13.	(c)	14.	(b)	15.	(a)
16.	(a)	17.	(b)	18.	(d)	19.	(d)	20.	(b)
21.	(a)	22.	(d)	23.	(a)	24.	(a)	25.	(b)
26.	(a)	27.	(b)	28.	(c)	29.	(b)	30.	(a)
31.	(a)	32.	(b)	33.	(b)	34.	(b)	35.	(d)
36.	(a)	37.	(d)	38.	(a)	39.	(a)	40.	(b)
41.	(b)	42.	(d)	43.	(c)	44.	(d)	45.	(a)
46.	(b)	47.	(d)	48.	(b)	49.	(b)	50.	(b)

CHEMISTRY : REVISION TEST-3 (SET A) ANSWER KEY

Topics: Mole Concept, Redox Reaction, Periodic Properties, S Block, Hydrogen, Atomic Structure, Gaseous States and Chemical Equilibrium

51.	(b)	52.	(c)	53.	(d)	54.	(c)	55.	(b)
56.	(a)	57.	(b)	58.	(b)	59.	(a)	60.	(b)
61.	(b)	62.	(a)	63.	(d)	64.	(c)	65.	(b)
66.	(b)	67.	(a)	68.	(c)	69.	(b)	70.	(c)
71.	(c)	72.	(c)	73.	(a)	74.	(d)	75.	(c)
76.	(c)	77.	(d)	78.	(d)	79.	(c)	80.	(c)
81.	(d)	82.	(d)	83.	(c)	84.	(c)	85.	(d)
86.	(c)	87.	(a)	88.	(d)	89.	(d)	90.	(a)
91.	(c)	92.	(c)	93.	(c)	94.	(c)	95.	(a)
96.	(c)	97.	(a)	98.	(c)	99.	(d)	100.	(d)