

UP-CPMT - 2009

Paper-2

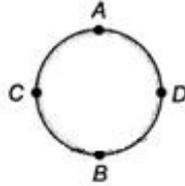
Physics

1. A block is resting on a piston which is moving vertically with SHM of period 1s. At what amplitude of motion will the block and piston separate?
 - 1) 0.2 m
 - 2) 0.25 m
 - 3) 0.3 m
 - 4) 0.35 m
2. Two simple harmonic motions are given by $x = A \sin (\omega t + \delta)$ and $y = A \sin (\omega t + \delta + (\pi/2))$ act on a particle simultaneously, then the motion of particle will be
 - 1) circular anti-clockwise
 - 2) elliptical anti-clockwise
 - 3) elliptical clockwise
 - 4) circular clockwise
3. Two sources are at a finite distance apart. They emit sound of wavelength λ . An observer situated between them on line joining the sources, approaches towards one source with speed u , then the number of beats heard per second by observer will be
 - 1) $2u/\lambda$
 - 2) u/λ
 - 3) $u/2\lambda$
 - 4) λ/u
4. A man goes at the top of a smooth inclined plane. He releases a bag to fall freely and himself slides down on inclined plane to reach the bottom. If u_1 and u_2 are the velocities of the man and bag respectively, then
 - 1) $u_1 > u_2$
 - 2) $u_1 < u_2$
 - 3) $u_1 = u_2$
 - 4) u_1 and u_2 cannot be compared
5. Two planets A and B have the same material density. If the radius of A is twice that of B, then the ratio of escape velocity (v_A/v_B) is
 - 1) 2
 - 2) $\sqrt{2}$

- 2) much smaller than the wavelength of light
3) of the order of one millimetre
4) much larger than the wavelength of light
12. A beam of electrons is moving with constant velocity in a region having electric and magnetic fields of strength 20 Vm^{-1} and 0.5 T at right angles to the direction of motion of the electrons. What is the velocity of the electrons?
- 1) 20 ms^{-1}
2) 40 ms^{-1}
3) 8 ms^{-1}
4) 5.5 ms^{-1}
13. Gases begin to conduct electricity at low pressure because
- 1) at low pressure, gases turn into plasma
2) colliding electrons can acquire higher kinetic energy due to increased mean free path leading to ionisation of atoms
3) atom breaks up into electrons and protons
4) the electrons in atoms can move freely at low pressure
14. A light of wavelength 5890 \AA falls normally on a thin air film. The minimum thickness of the film such that the film appears dark in reflected light is
- 1) $2.945 \times 10^{-7} \text{ m}$
2) $3.945 \times 10^{-7} \text{ m}$
3) $4.95 \times 10^{-7} \text{ m}$
4) $1.945 \times 10^{-7} \text{ m}$
15. For a black body at temperature 727°C its radiating power is 60W and temperature of surrounding is 227°C . If the temperature of the black body is changed to 1227°C , then its radiating power will be
- 1) 120 W
2) 240 W
3) 304 W
4) 320 W
16. An object is moving through the liquid. The viscous damping force acting on it is proportional to the velocity. Then dimensional formula of constant of proportionality is
- 1) $[\text{ML}^{-1} \text{T}^{-1}]$
2) $[\text{MLT}^{-1}]$
3) $[\text{M}^0 \text{LT}^{-1}]$
4) $[\text{ML}^0 \text{T}^{-1}]$

17. A car moves on a circular road. It describes equal angles about the centre in equal intervals of time. Which of the following statements about the velocity of the car is true ?
- 1) Magnitude of velocity is not constant
 - 2) Both magnitude and direction of velocity change
 - 3) Velocity is directed towards the centre of the circle
 - 4) Magnitude of velocity is constant but direction changes

18. A stone is attached to one end of a string and rotated in a vertical circle. If string breaks at the position of maximum tension, it will break at



- 1) A 2) B 3) C 4) D
19. A sealed container with negligible coefficient of volumetric expansion contains helium (a monoatomic gas). When it is heated from 300 K to 600 K, the average KE of helium atoms is
- 1) halved
 - 2) unchanged
 - 3) doubled
 - 4) increased by factor $\sqrt{2}$
20. A convex lens of focal length 20 cm placed in contact with a plane mirror acts as a
- 1) convex mirror of focal length 10 cm
 - 2) concave mirror of focal length 40 cm
 - 3) concave mirror of focal length 60 cm
 - 4) concave mirror of focal length 10 cm
21. A child is swinging a swing. Minimum and maximum heights of swing from earth's surface are 0.75 m and 2 m respectively. The maximum velocity of this swing is
- 1) 5 ms^{-1}
 - 2) 10 ms^{-1}
 - 3) 15 ms^{-1}
 - 4) 17 ms^{-1}
22. At ordinary temperature, the molecules of an ideal gas have only translational and rotational kinetic energies. At high temperatures they may also have vibrational energy. As a result of this at higher temperatures (C_V = molar heat capacity at constant volume)
- 1) $C_V = (3/2)R$ for a monoatomic gas
 - 2) $C_V > (3/2)R$ for a monoatomic gas
 - 3) $C_V < (5/2)R$ for a diatomic gas

4) $C_v = (5/2)R$ for a diatomic gas

23. Work done per mol in an isothermal change is

- 1) $RT \log_{10} (V_2/V_1)$
- 2) $RT \log_{10} (V_1/V_2)$
- 3) $RT \log_e (V_2/V_1)$
- 4) $RT \log_e (V_1/V_2)$

24. For a given plate-voltage, the plate current in a triode is maximum when the potential of

- 1) the grid is positive and plate is negative
- 2) the grid is positive and plate is positive
- 3) the grid is zero and plate is positive
- 4) the grid is negative and plate is positive

25. A wire is wound in the form of a solenoid of length l and distance d . When a strong current is passed through a solenoid, there is a tendency to

- 1) increase l but decrease d
- 2) keep both l and d constant
- 3) decrease l but increase d
- 4) increase both l and d

26. The seave of a galvanometer of resistance 100Ω contains 25 divisions. It gives a deflection of one division on passing a current of 4×10^{-4} A. The resistance in ohm to be added to it, so that it may become a voltmeter of range 2.5 V is

- 1) 150
- 2) 170
- 3) 110
- 4) 220

27. A train is moving with a constant speed along a circular track. The engine of the train emits a sound of frequency f . The frequency heard by the guard at rear end of the train is

- 1) less than f
- 2) equal to f
- 3) is greater than f
- 4) may be greater than, less than or equal to f depending on the factors like speed of train, length of train and radius of circular track

28. If λ_1 , λ_2 and λ_3 are the wavelengths of the waves giving resonance with the fundamental, first and second overtones respectively of a closed organ pipe. Then the ratio of wavelengths $\lambda_1 : \lambda_2 : \lambda_3$ is

- 1) 1 : 3 : 5
- 2) 1 : 2 : 3
- 3) 5 : 3 : 1
- 4) 1 : (1/3) : (1/5)

29. By what percent the energy of a satellite has to be increased to shift it from an orbit of radius r to $(3/2)r$?

- 1) 15%
- 2) 20.3%
- 3) 66.7%
- 4) 33.33%

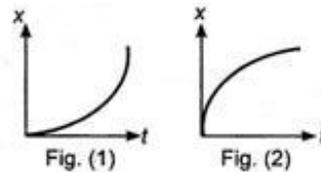
30. The slope of plate characteristic of a vacuum diode is $2 \times 10^{-2} \text{ mA V}^{-1}$. The plate resistance of diode will be

- 1) 50Ω
- 2) $50 \text{ k}\Omega$
- 3) 500Ω
- 4) $500 \text{ k}\Omega$

31. A stone is thrown vertically upwards. When stone is at a height half of its maximum height, its speed is 10 ms^{-1} , then the maximum height attained by the stone is ($g = 10 \text{ ms}^{-2}$)

- 1) 5 m
- 2) 150 m
- 3) 20 m
- 4) 10 m

32. Figures (1) and (2) show the displacement-time graphs of two particles moving along the x -axis. We can say that



- 1) both the particles are having a uniform accelerated motion
- 2) both the particles are having a uniform retarded motion
- 3) particle (1) is having uniform accelerated motion while particle (2) is having a uniform retarded motion
- 4) particle (1) is having a uniformly retarded motion while particle (2) is having a uniformly accelerated motion

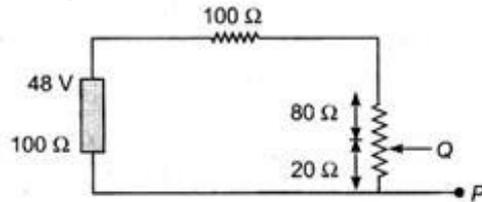
33. A particle of mass m is executing uniform circular motion on a path of radius r . If p is the magnitude of its linear momentum. The radial force acting on the particle is

- 1) $p m r$
- 2) $r m / p$
- 3) $m p^2 / r$
- 4) $p^2 / r m$

34. Water rises to a height h in a capillary tube lowered vertically into a water to a depth l . The lower end of the tube is closed inside the water and the tube is taken out of water and opened. If $l < h$, then the length of water column remaining in the tube is

- 1) zero
- 2) $l + h$
- 3) $2h$
- 4) h

35. In the circuit, the potential difference across PQ will be nearest to



- 1) 9.6 V
- 2) 6.6 V
- 3) 4.8 V
- 4) 3.2 V

36. A ball hits a vertical wall horizontally at 10 ms^{-1} and bounces back at 10 ms^{-1} , then

- 1) there is no acceleration because $10 \text{ ms}^{-1} - 10 \text{ ms}^{-1} = 0$
- 2) there may be an acceleration because its initial direction is horizontal
- 3) there is an acceleration because there is a momentum change
- 4) even though there is no change in momentum there is a change in direction. Hence it has an acceleration

37. Sodium and copper have work functions 2.3 eV and 4.5 eV respectively. Then the ratio of their threshold wavelengths is nearest to

- 1) 1 : 2
- 2) 2 : 1
- 3) 1 : 4
- 4) 4 : 1

38. Water flows along a horizontal pipe whose cross-section is not constant. The pressure is 1 cm of Hg where the velocity is 35 cms^{-1} . At a point where the velocity is 65 cms^{-1} , the pressure will be

- 1) 0.89 cm of Hg
- 2) 8.9 cm of Hg
- 3) 0.5 cm of Hg
- 4) 1 cm of Hg

39. In an inductor of self-inductance $L = 2 \text{ mH}$, current changes with time according to relation $I = t^2 e^{-t}$. At what time emf is zero?

- 1) 3 s
- 2) 4 s
- 3) 1 s
- 4) 2 s

40. A capacitor of $10 \mu\text{F}$ is charged to a potential 50 V with a battery. The battery is now disconnected and an additional charge $200 \mu\text{C}$ is given to the positive plate of the capacitor. The potential difference across the capacitor will be

- 1) 100 V
- 2) 60 V
- 3) 80 V
- 4) 50 V

41. A lump of clay of mass 10 g travelling with a velocity of 10 cms^{-1} towards east collides head on with another lump of clay of mass 10 g travelling with velocity of 20 cms^{-1} towards west. If the two lumps coalesce after collision, what is its velocity, if no external force acts on the system?

- 1) 15 cms^{-1} towards west
- 2) 15 cms^{-1} towards east
- 3) 5 cms^{-1} towards west
- 4) 5 cms^{-1} towards east

42. A particle is fired with a speed of 2 kmh^{-1} . The speed with which it will move in interstellar space is ($v_e = 8\sqrt{2} \text{ kmh}^{-1}$)

- 1) 16.5 kmh^{-1}
- 2) 11.2 kmh^{-1}
- 3) 10 kmh^{-1}
- 4) 8.8 kmh^{-1}

43. A car of mass 1500 kg is moving with a speed of 12.5 ms^{-1} on a circular path of radius 20 m on a level road. The value of coefficient of friction between the tyres and road, so that the car does not slip, is

- 1) 0.8
- 2) 0.6
- 3) 0.4
- 4) 0.2

44. If \vec{a}_1 and \vec{a}_2 are two non-collinear unit vectors and if $|\vec{a}_1 + \vec{a}_2| = \sqrt{3}$, then the value of $(\vec{a}_1 - \vec{a}_2) \cdot (2\vec{a}_1 + \vec{a}_2)$ is

- 1) 2
- 2) $3/2$
- 3) $1/2$
- 4) 1

45. The energy of photon of light is 3 eV . Then the wavelength of photon must be

- 1) 4125 nm
- 2) 412.5 nm

- 3) 41.250 nm
4) 4 nm
46. The half-life of radioactive material is 3 h. If the initial amount is 300 g. Then after 18 h, it will remain
- 1) 4.69 g
2) 46.8 g
3) 9.375 g
4) 93.75 g
47. The wavelength of K_{α} X-rays for lead isotopes Pb^{208} , Pb^{206} and Pb^{204} are λ_1 , λ_2 and λ_3 respectively. Then
- 1) $\lambda_1 = \lambda_2 = \lambda_3$
2) $\lambda_1 > \lambda_2 > \lambda_3$
3) $\lambda_1 < \lambda_2 < \lambda_3$
4) $\lambda_1 = \lambda_2 > \lambda_3$
48. A wire 50 cm long and 1 mm^2 in cross-section carries a current of 4 A when connected to a 2 V battery. The resistivity of the wire is
- 1) $2 \times 10^{-7} \Omega \text{ m}$
2) $5 \times 10^{-7} \Omega \text{ m}$
3) $4 \times 10^{-6} \Omega \text{ m}$
4) $1 \times 10^{-6} \Omega \text{ m}$
49. A magnet 10 cm long and having a pole strength 2 Am is deflected through 30° from the magnetic meridian. The horizontal component of earth's induction is $0.32 \times 10^{-4} \text{ T}$, then the value of deflecting couple is
- 1) $16 \times 10^{-7} \text{ Nm}$
2) $64 \times 10^{-7} \text{ Nm}$
3) $48 \times 10^{-7} \text{ Nm}$
4) $32 \times 10^{-7} \text{ Nm}$
50. A closely wound flat circular coil of 25 turns of wire has diameter of 10 cm which carries current of 4 A, the flux density at the centre of a coil will be
- 1) $2.28 \times 10^{-6} \text{ T}$
2) $1.679 \times 10^{-6} \text{ T}$
3) $1.256 \times 10^{-3} \text{ T}$
4) $1.572 \times 10^{-5} \text{ T}$

Chemistry

51. Benzene reacts with CH_3COCl in the presence of AlCl_3 and gives

- 1) $\text{C}_6\text{H}_5\text{COCH}_3$
- 2) $\text{C}_6\text{H}_5\text{CH}_3$
- 3) $\text{C}_6\text{H}_5\text{OCH}_3$
- 4) C_7H_{14}

52. Lucas test is given fastly by

- 1) butanol-2
- 2) butanol-1
- 3) *iso*-butanol
- 4) 2-methyl-2-propanol

53. NH_3 gas is passed over heated copper oxide. It oxidises to

- 1) N_2
- 2) NO_2
- 3) NO
- 4) HNO_2

54. Which of the following compounds shows optical isomerism?

- 1) $\text{CH}_3\text{—CH—BrCOOH}$
- 2) $\text{CH}_2\text{OHCH}_2\text{—COOH}$
- 3) COOHCHBr—COOH
- 4) $\text{CH}_2\text{Br—CH}_2\text{—COOH}$

55. $\text{CH}_2 = \text{CH}_2 \xrightarrow{\text{HBr}} \text{X} \xrightarrow{\text{Aq. KOH}} \text{Y} \xrightarrow[\text{I}_2]{\text{Na}_2\text{CO}_3} \text{Z}$

In the above reaction sequence, Z is

- 1) $\text{C}_2\text{H}_5\text{OH}$
- 2) $\text{C}_2\text{H}_5\text{I}$
- 3) CH_3CHO
- 4) CHI_3

56. $\text{C}_6\text{H}_5\text{Cl} + \text{CH}_3\text{Cl} \xrightarrow{\text{Na/dry ether}} \text{C}_6\text{H}_5\text{CH}_3 + 2\text{NaCl}$

This reaction is an example of

- 1) Wurtz reaction
- 2) Fittig reaction
- 3) Wurtz-Fittig reaction

- 4) Frankland reaction
57. The main difference between formic acid and acetic acid is that formic acid is
- 1) less acidic
 - 2) dehydrating agent
 - 3) reducing agent
 - 4) bleaching agent
58. Hinsberg reagent, $C_6H_5SO_2Cl$ does not react with
- 1) 1° amine
 - 2) 2° amine
 - 3) 3° amine
 - 4) NH_3
59. Ordinary glass is formed by mixing of
- 1) $Na_2CO_3 + CaCO_3$
 - 2) $Na_2CO_3 + CaCO_3 + silica$
 - 3) silica + Na_2CO_3
 - 4) silica + borax
60. Correct order of freezing point of 1 M solution of sucrose, KCl, $BaCl_2$ and $AlCl_3$ is
- 1) Sucrose > KCl > $BaCl_2$ > $AlCl_3$
 - 2) $AlCl_3$ > $BaCl_2$ > KCl > Sucrose
 - 3) $BaCl_2$ > KCl > $AlCl_3$ > Sucrose
 - 4) KCl > $BaCl_2$ > $AlCl_3$ > Sucrose
61. Table sugar is
- 1) sucrose
 - 2) glucose
 - 3) fructose
 - 4) maltose
62. If $(3/4)$ quantity of a radioactive substance disintegrates in 60 min, its half-life period will be
- 1) 15 min
 - 2) half an hour
 - 3) one hour
 - 4) one day
63. Element with atomic number 81, is present in which block?
- 1) s-block

- 2) *p*-block
- 3) *d*-block
- 4) *f*-block

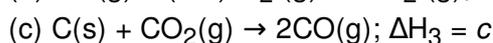
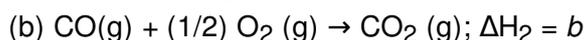
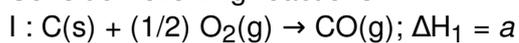
64. Correct order of basic strength is

- 1) $\text{Mg}(\text{OH})_2 > \text{NaOH} > \text{Al}(\text{OH})_3$
- 2) $\text{Mg}(\text{OH})_2 > \text{Al}(\text{OH})_3 > \text{NaOH}$
- 3) $\text{NaOH} > \text{Mg}(\text{OH})_2 > \text{Al}(\text{OH})_3$
- 4) $\text{Al}(\text{OH})_3 > \text{Mg}(\text{OH})_2 > \text{NaOH}$

65. Which of the following will give carbylamine test ?

- 1) N, N-dimethyl aniline
- 2) 2, 4-dimethyl aniline
- 3) N-methyl-2-methylaniline
- 4) N-methyl benzylamine

66. Consider following reactions



Select correct statement

- 1) Heat of formation of CO_2 is $(a + b)$
- 2) Heat of combustion of C is $(a + b)$
- 3) $\Delta H_3 = \Delta H_1 - \Delta H_2$
- 4) All the above are correct statements

67. Following reaction is catalysed by $\text{Br}^-(\text{aq})$. $2\text{H}_2\text{O}_2(\text{aq}) \rightarrow 2\text{H}_2\text{O}(\text{l}) + \text{O}_2(\text{g})$

This is an example of

- 1) homogeneous catalysis
- 2) heterogeneous catalysis
- 3) autocatalysis
- 4) enzyme catalysis

68. Ethylidene dibromide $\xrightarrow{\text{A}}$ $\text{CH} \equiv \text{CH}$ A is

- 1) aq. KOH
- 2) alc. KOH
- 3) conc. H_2SO_4
- 4) All of these

69. $\text{I}_2 + 2\text{S}_2\text{O}_3^{2-} \rightarrow \text{S}_4\text{O}_6^{2-} + 2\text{I}^-$

In the above reaction

- 1) iodine is reduced; sulphur is reduced
- 2) iodine is reduced; sulphur is oxidised
- 3) iodine is oxidised; sulphur is reduced
- 4) iodine is oxidised; sulphur is oxidised

70. Which is the strongest acid?

- 1) C_2H_6
- 2) C_6H_6
- 3) $CH \equiv CH$
- 4) CH_3OH

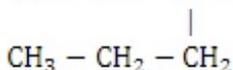
71. Number of spectral lines of Lyman series of electron when it jumps from 6 to first level (in Lyman series), is

- 1) 9 2) 12 3) 15 4) 18

72. Which of the following compounds does liberate CO_2 from $NaHCO_3$?

- 1) CH_3OH
- 2) CH_3NH_2
- 3) $(CH_3)_4N^+OH^-$
- 4) $CH_3\overset{+}{N}H_3Cl^-$

73. $H_3C - CH = C - CH_2 - CH_3$



Correct IUPAC name is

- 1) 3-ethylhex-2-ene
- 2) 3-ethylpent-2-ene
- 3) 3-ethylpent-3-ene
- 4) 3-propylpent-2-ene

74. In an organic compound, C = 68.5% and H = 4.91% . Which empirical formula is correct for it?

- 1) C_6H_{10}
- 2) $C_7H_6O_2$
- 3) C_5H_8O
- 4) C_9H_3O

75. E° for $Mg^{2+}/Mg = - 2.37$ V, $Zn^{2+}/Zn = - 0.76$ V and $Fe^{2+}/Fe = - 0.44$ V. Which statement is correct?

- 1) Zn reduces Fe^{2+}

- 2) Zn reduces Mg^{2+}
- 3) Mg oxidises Fe
- 4) Zn oxidises Fe

76. Enolic form of acetone has

- 1) 8σ , 1π ; 2 lone pairs
- 2) 9σ , 2π ; 1 lone pair
- 3) 8σ , 2π ; 1 lone pair
- 4) 9σ , 1π ; 2 lone pairs

77. 0.126 g of an acid is titrated with 0.1 N 20 mL of an base. The equivalent weight of the acid is

- 1) 63
- 2) 50
- 3) 53
- 4) 23

78. Darkening of surfaces painted with white lead is due to

- 1) H_2S
- 2) CO_2
- 3) Cu
- 4) O_2

79. Which of the following will give H_2 gas with dilute HNO_3 ?

- 1) Mg
- 2) Zn
- 3) Cu
- 4) Hg

80. When alkyl aryl ether is heated with HI, it gives

- 1) alcohol and phenol
- 2) alcohol and aryl halide
- 3) phenol and alkyl halide
- 4) alkyl halide and aryl halide

81. Which of the following is the purest commercial form of iron?

- 1) Cast iron
- 2) Steel
- 3) Wrought iron
- 4) Pig iron

82. What is the oxidation number of Fe in $Fe(CO)_5$?

- 1) +3
- 2) zero
- 3) +2
- 4) +5

83. Fog is a colloidal solution of

- 1) gaseous particles dispersed in liquid
- 2) liquid dispersed in gas

- 3) gaseous particles dispersed in gas
- 4) solid dispersed in gas

84. A petrol pump hose pipe for delivery of petrol is made up of

- 1) natural rubber
- 2) vulcanised rubber
- 3) neoprene
- 4) butadiene rubber

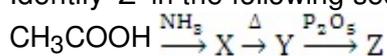
85. German silver is an alloy of

- 1) Cu and Zn
- 2) Cu and Ag
- 3) Cu and Sn
- 4) Cu, Zn and Ni

86. On increasing pressure, melting point of ice

- 1) decreases
- 2) increases
- 3) remains unchanged
- 4) changes in regular manner

87. Identify 'Z' in the following sequence of reactions.



- 1) CH₄
- 2) CH₃CHO
- 3) CH₃CN
- 4) CH₃COO⁻NH₄⁺

88. Which of the following is the most stable carbocation?

- 1) C₆H₅CH₂⁺
- 2) CH₃CH₂⁺
- 3) (CH₃)₂CH⁺
- 4) (CH₃)₃C⁺

89. Dehydration of methyl alcohol with concentrated H₂SO₄ yields

- 1) methane
- 2) ethane
- 3) dimethyl ether
- 4) acetone

90. 60 mL of (N/5) H_2SO_4 , 10 mL of (N/2) HNO_3 and 30 mL of (N/10) HCl are mixed together. The strength of the resulting mixture is
- 1) 0.1 N
 - 2) 0.2 N
 - 3) 0.3 N
 - 4) 0.4 N
91. A gas can be liquified
- 1) at its critical temperature
 - 2) above its critical temperature
 - 3) below its critical temperature
 - 4) at 0°C
92. The compound that is considered as a true peroxide, is
- 1) PbO_2
 - 2) BaO_2
 - 3) MnO_2
 - 4) NO_2
93. Which of the following oxides of nitrogen does react with FeSO_4 to form a brown compound in the test of nitrate?
- 1) N_2O
 - 2) NO
 - 3) NO_2
 - 4) N_2O_5
94. For the equilibrium,
 $2\text{NO}_2(\text{g}) \rightleftharpoons \text{N}_2\text{O}_4(\text{g}) + 14.6 \text{ kcal}$, increase in temperature
- 1) favours the formation of N_2O_4
 - 2) favours the decomposition of N_2O_4
 - 3) does not affect equilibrium
 - 4) stop the reaction
95. A certain mass of the oxygen gas occupies 7 L volume under a pressure of 380 mm Hg. The volume of the same mass of the gas at standard pressure, with temperature remaining constant, shall be
- 1) 26.60 L
 - 2) 54.28 L
 - 3) 3.5 L
 - 4) 7 L

96. Peroxide bond is absent in

- 1) $(S_2O_7)^{2-}$
- 2) $(S_2O_8)^{2-}$
- 3) CrO_5
- 4) BaO_2

97. Two acids A and B have pK_a 4 and 6, then

- 1) A is 4/6 times stronger than B
- 2) A is 10 times stronger than B
- 3) A is 6/4 times stronger than B
- 4) B is 10 times stronger than A

98. Which compound is expected to be coloured?

- 1) $CuCl$
- 2) CuF_2
- 3) Ag_2SO_4
- 4) MgF_2

99. Which compound is insoluble in dilute HNO_3 and dissolved in aqua regia?

- 1) HgS
- 2) CuS
- 3) Bi_2S_3
- 4) PbS

100. The process of converting hydrated alumina into anhydrous alumina is called

- 1) roasting
- 2) smelting
- 3) dressing
- 4) calcination

Answer Key

1) 2	2) 4	3) 1	4) 3	5) 1	6) 1	7) 4	8) 3	9) 4	10) 3
11) 4	12) 2	13) 2	14) 1	15) 4	16) 4	17) 4	18) 2	19) 3	20) 1
21) 1	22) 1	23) 3	24) 2	25) 2	26) 1	27) 2	28) 4	29) 4	30) 2
31) 4	32) 3	33) 4	34) 2	35) 4	36) 3	37) 2	38) 1	39) 4	40) 2
41) 3	42) 1	43) 1	44) 1	45) 2	46) 1	47) 1	48) 4	49) 4	50) 3
51) 1	52) 4	53) 1	54) 1	55) 4	56) 3	57) 3	58) 3	59) 2	60) 1
61) 1	62) 2	63) 2	64) 3	65) 2	66) 4	67) 1	68) 2	69) 2	70) 4
71) 3	72) 4	73) 1	74) 2	75) 1	76) 4	77) 1	78) 1	79) 1	80) 3
81) 3	82) 2	83) 2	84) 4	85) 4	86) 1	87) 3	88) 4	89) 3	90) 2
91) 3	92) 2	93) 2	94) 2	95) 3	96) 1	97) 2	98) 2	99) 1	100) 4