Guru Aanklan

GuruAanklan Foundation / MHT-CET / Examination
Physics + Chemistry
Set - [A]

PHYSICS + CHEMISTRY

General Instructions :

(i) The test is of **1½ hours** duration. This Question Paper is of total **11** Pages

(ii) This paper consists of **100 questions.** The maximum marks are **200.**

(iii) There is **TWO** part in the question paper.

The distribution of marks subjectwise in each part is as under for each correct response.

Q. No.1 - 50 – **PHYSICS** **(+2, 0)** **(100 marks) – 50 questions**

Q. No.51 - 100 – **CHEMISTRY** **(+2, 0)** **(100 marks) – 50 questions**

(iv) Each question has 4 choices (**A**), (**B**), (**C**) **and** (**D**), out of which **ONLY ONE** is correct. Candidates will be awarded **TWO** marks each for indicating **correct** response of each question & there is no negative marking.

PHYSICS

[Single Answer Choice Type]

*This Section contains **50** Single choice questions. Each question has 4 choices (A), (B), (C) and (D) out of which ONLY ONE is correct.*

= =

1. A bomb of mass 9 kg explodes into two pieces of masses 3 kg and 6 kg. the velocity of mass 3 kg is 16m/s. The KE of mass 6 kg in joule is :

   [A] 96 [B] 384 [C] 192 [D] 768

2. The second hand of a clock slows down to 50 rotation per hour in 7 minutes. The angluar retardation during slow down is

   (A) 4.15×10^{-5} rad/s^2 (B) 4.15×10^{-3} rad/s^2 (C) 4.15×10^{-4} rad/s^2 (D) 4.15×10^{-2} rad/s^2

3. Binding enegry of satellite is 4×10^8 J. Its potential energy is

   (A) -4×10^8 J (B) -8×10^8 J (C) 8×10^8 J (D) 4×10^8 J

4. Kepler's second law states that the straight-line joining the planet to the sun sweeps out equal areas in equal times. This statement is equivalent to saying that

   (A) Total acceleration is Zero (B) Tangential acceleration is zero

   (C) Logitudinal acceleration is zero (D) Areal acceleration is zero

5. A thin wire of length 'L' and uniform linear mass density 'ρ' is bent into a circular loop with centre 'O' as shown. The moment of inertia of the loop- about the axis XX^1 is
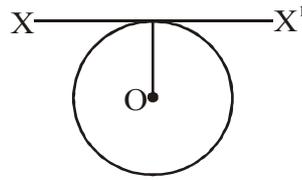

(A) $\dfrac{\rho L^3}{8\pi^2}$ (B) $\dfrac{\rho L^3}{16\pi^2}$ (C) $\dfrac{5\rho L^3}{16\pi^2}$ (D) $\dfrac{3\rho L^3}{8\pi^2}$

6. Which of the following is not equal to watt :

[A] joule/second   [B] Ampere × volt   [C] $(\text{Ampere})^2 \times \text{ohm}$ [D] Ampere/volt

7. The root mean square distance of 5 indentical particles of masses 1gram each are distributed along OX is 8 cm (from 0). The total moment of inertia about OX is
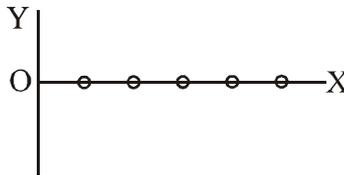
(A) $40\,\text{gcm}^2$ (B) $320\,\text{gcm}^2$ (C) $230\,\text{gcm}^2$ (D) $203\,\text{gcm}^2$

8. A soild sphere of mass 1kg rolls on a table with linear speed 1 m/s. Its total kinetic energy is

(A) 0.7 J   (B) 1 J   (C) 1.4 J   (D) 0.35 J

9. A particle of mass 10 gm is executing simple harmonic motion with an amplitude of 0.5 m and periodic time of $\pi/5\,\text{sec}$. The maximum value of the force acting on the particle is

(A) 0.5 N   (B) 2.5 N   (C) 25 N   (D) 5 N

10. The displacement time graph of a particle executing S.H.M. is as shown in the figure. The corresponding force time graph of the particle is
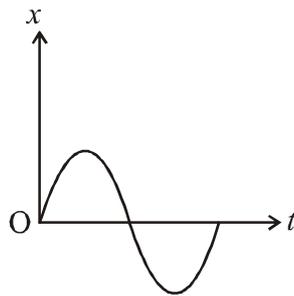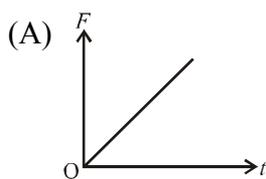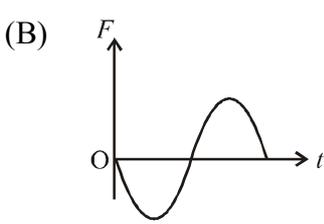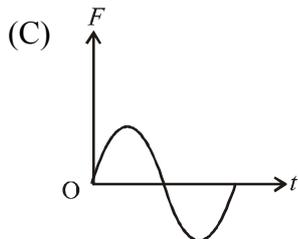
(A)   (B)   (C)   (D)
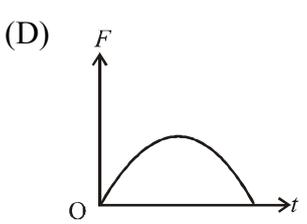
11. If $\vec{a} = 5\hat{i} + 3\hat{j} + 4\hat{k}$ and $\vec{b} = 6\hat{i} - 8\hat{j}$. Then $|\vec{a} + \vec{b}|$ is equal to :

[A] $5\sqrt{2}$ [B] $7\sqrt{2}$ [C] $9\sqrt{2}$ [D] $10\sqrt{2}$

12. Strain energy of a wire is $1.8 = 10^{-3}$ J and strain energy per unit volume under the same coditions is 6×10^{-3} SI unit. If the radius of wire is $\frac{1}{\pi}$ SI units. Then the length of wire is

(A) 0.3 m   (B) 0.942 m   (C) 10.46 m   (D) 9.42 m

13. Which of the following is used in case of rain coat

(A) Low adhesion   (B) High cohesion

(C) Angle of contact is reduced   (D) Low cohesion

14. A film of soap solutoin is formed in a metal ring of radius 1cm. If the surface tension of soap solution is 0.035J/m, the surface energy of the film is

(A) 2.19×10^{-5} J   (B) 2.19×10^{-2} J   (C) 3.45×10^{-3} J   (D) 4.19×10^{-2} J

15. A square wire frame of side 'L' is dipped in a liquid. On taking out a membrane is formed. If the surface tension is 'T', the force acting on the frame will be

(A) 2 TL   (B) 4TL   (C) 8 TL   (D) 10TL

16. A rigid body of mass m is moving in a circle of radius r with a constant speed v. The force on the body is $\frac{mv^2}{r}$ and is directed towards the centre. What is the work done by this force in moving the body over half the circumference of the circle.

[A] $\frac{mv^2}{\pi r^2}$ [B] zero   [C] $\frac{mv^2}{r^2}$ [D] $\frac{\pi r^2}{mv^2}$

17. Two progressive waves of same frequencies have amplitude 4cm and 3cm respectively. If they are travelling along the same line and superpose over each other, the ratio of maximum to minimum intensities will be

(A) 4:3   (B) 6 :9   (C) 7 : 1   (D) 49 : 1

18. The equation of a stationary wave is $y = 5\sin\frac{\pi x}{3}\cos 40\pi t$ where x & y are in cm & t in sec. Then the separation between two consecutive nodes is

(A) 1.5 cm   (B) 6 cm   (C) 3 cm   (D) 12 cm

19. What is the phase difference between two waves, if the resultant amplitude due to their superposition is same as that of the waves ?

(A) $\pi/2$ (B) π (C) $2\pi/3$ (D) $\pi/3$

20. When an open pipe is vertically dipped in water 10 cm is inside the water, then fundamental frequency of air column is 400 Hz and when it is 6 cm inside water then fundamental frequency of the column is 300Hz. Then the length of pipe will be

(A) 14 cm   (B) 12 cm   (C) 22 cm   (D) 2 cm

21. A body of mass 2 kg rests on a rough inclined plane making an angle with the horizontal. The coefficient of static friction between the block and the plane is 0.7. The frictional force on the block is :

[A] 9.8 N   [B] $0.7 \times 9.8 \times \sqrt{3}$ N   [C] $9.8 \times \sqrt{3}$ N   [D] 0.7×9.8 N

22. Change in pressure of an ideal gas causes

(A) Change in rms velocity

(B) Change in velocity of sound through gas

(C) Change in mean free path

(D) Change in the ratio of pressure to density of gas

23. Two bodies A and B are painted with red and black colours respectively. If E_R and E_B are their emissive power then

(A) $E_R < E_B$ (B) $E_R > E_B$ (C) $E_R = E_B$ (D) Cannot predicted

24. A tungesten filament of an electric bulb has surface area of 0.30 cm^2, and is raised to a temperature of $2727°C$ by applying electric power to it. Emissivity of the filament is 0.35 and stefan's constant is 5.7×10^{-5} erg/cm^{2}sec K^4. The rate of supply of electric power to maintain the temperature of the filament constant is

(A) 0.482 watt   (B) 4.82 watt   (C) 48.2 watt   (D) 482 watt

25. Emissive power of any surface

(A) Decreases with temperture

(B) Does't change with temperture

(C) Increase with temperature

(D) Decreases initially upto a certain temperature and then increases

26. A U-tube of uniform cross-section is partially filled with a liquid I. Another liquid II which does not mix with liquid I is poured into right side of U-tube, it is found that the liquid levels of the right side of the tube remains same while the level of liquid in left side is raised by 2cm. If the specific gravity of liquid I is 1.1, the specific gravity of liquid II must be :

[A] 2.2   [B] 1.1   [C] 4.4   [D] 1.0

27. If λ_1 is wavelength of light in medium of R.I. μ_1, λ_2 is wavelength in medium of R.I. μ_2. Then which of the following is correct.

(A) $\dfrac{\mu_1}{\mu_2} = \dfrac{\lambda_1}{\lambda_2}$ (B) $\dfrac{\mu_1}{\mu_2} = 1$ (C) $\mu_1 \lambda_1 = \mu_2 \lambda_2$ (D) $\mu_1 \lambda_2 = \mu_1 \lambda_2$

28. Using following diagram, the refractive index of glass w.r.t. air is
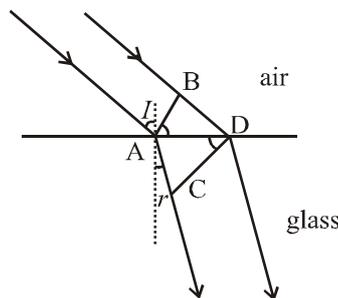
(A) BD/AC   (B) AB/CD   (C) $\dfrac{BD}{AD}$ (D) AC/AD

29. The colour of bright fringe nearest central fringe in the interference pattern with white light will be

(A) violet   (B) red   (C) green   (D) yellow

30. The path difference between two waves is 3.75 μm and the wavelength is 5000 Å. The point is

(A) Uncertain   (B) Dark   (C) Partically bright   (D) Bright

31. A cut diamond sparkles because of its :

    [A] Hardness

    [B] High refractive index

    [C] Emission of light by the diamond

    [D] Absorption of light by the diamond

32. Two interfering beams have intensities in the ratio of 9 : 4. Then the ratio of maximum to minimum intensity in interference pattern is

    (A) 25 : 1   (B) 13 : 5   (C) 5 : 1   (D) 3 : 2

33. If n drops each of capacitance C and charged to a potential V coalesce to form a big drop. The ratio of energy stored in big drop to that in each drop will be

    (A) $n : 1$ (B) $n^{4/3} : 1$ (C) $n^{5/3} : 1$ (D) $n^{2/3} : 1$

34. Two wires of same material are connected in parallel with cell. The ratio of their length is 4 : 3 and that of radii is 2 : 3. The ratio of currents passing through wires is

    (A) 2 : 3   (B) 4 : 3   (C) 1 : 3   (D) 1 : 2

35. A potentiometer wire of length 3m has resistance of $100\,\Omega$. It is connected to a battery of 6 volt. The potential difference between two points on wire separated by 50 cm will be

    (A) 1 volt   (B) 1.5 volt   (C) 2 volt   (D) 2.5 volt

36. Where should an object be placed in front of a convex lens to get a real image of the size of the object ?

    [A] At the principal focus of the lens

    [B] At twice the focal length

    [C] At infinity

    [D] Between the optical centre of the lens and its principal focus.

37. In an ammeter, 4% of main current is passing through the galvanometer. Shunt resistance is 5 Ω hence resistance of galvanometer will be

    (A) $60\,\Omega$ (B) $120\,\Omega$ (C) $240\,\Omega$ (D) $480\,\Omega$

38. A coil has resistance 30 ohm and inductive reactance 20 ohm at 50 Hz frequency. If an A.C. source, of 200 volt, 100 Hz is connected across the coil, the current in the coil will be

    (A) $\dfrac{20}{\sqrt{13}}\,A$ (B) 2.0 A   (C) 4.0 A   (D) 8.0 A

39. Dimensions of magnetic potential are

    (A) $\left[M^1 L^2 T^{-2} A^{-2} \right]$ (B) $\left[M^1 L^1 T^2 \right]$ (C) $\left[M^1 L^1 T^{-2} A^{-1} \right]$ (D) $\left[M^2 L^2 T^{-2} A^{-1} \right]$

40. LCR circuit produces the phase difference of 60° between current and emf of maximum values 4A & 60 volt respectively. The average power consumed in circuit will be.

   (A) 20 Watt   (B) 40 Watt   (C) 60 Watt   (D) 80 Watt

41. Two long parallel wires carrying current 1 A and 2 A as shown in figure. The ratio of magnitude of magnetic field at the point P due to 1 A to 2 A is:
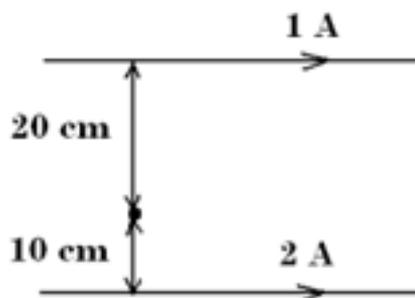

    [A] 1 : 1   [B] 1 : 2   [C] 2 : 1   [D] 1 : 4

42. A rectangular coil of 20 turns and area of cross section is 25 cm^2 has a resistance of 100 Ω. If the magnetic field, is perpendicular to plane of the coil changes at the rate of 1000 T/S, the induced current will be.

    (A) Zero   (B) 5A   (C) 0.5 A   (D) 500 A

43. A transfomer has efficiency of 70%. The primary coil is connected to a.c. mains of 210 volts & draws a current of 0.1A. The maximum power of a load that the can be connected with secondary coil is approxmately.

    (A) 2.1 W   (B) 10 W   (C) 15 W   (D) 19 W

44. Photoelectric effect is not produced by

    (A) UV rays   (B) X- rays   (C) γ - rays   (D) Radiowaves.

45. An electron of mass m_e and proton of mass m_p are accelerated through same potential difference. The ratio of deBroglie wavelength associated with electron and proton is

    (A) 1:1   (B) $\dfrac{m_p}{m_e}$ (C) $\dfrac{m_e}{m_p}$ (D) $\sqrt{\dfrac{m_p}{m_e}}$

46. The energy of electron in third orbit is $-1.51\,eV$. The energy of electron in fourth orbit will be

    (A) 8.5 eV   (B) 0.85 eV   (C) 1.51 eV   (D) -0.85 eV

47. Work function of a metal of 2 eV. The maximum wavelength of photons required to emit electrons from its surface is

    (A) 6215 Å   (B) 6500 Å   (C) 5700 Å   (D) 5900 Å

48. For working of any type of transistor, emitter junction and collector junction should be....

    (A) Reverse and forward bias respectively   (B) Forward and reverse bias respectively

    (C) Forward an forward bias respectively   (D) Reverse and reverse bias respectively

49. Troposphere layer of atmosphere is nearly up to height .... from earth surface :

    (A) 12 Km to 50 Km   (B) 50 Km to 80 Km   (C) 12 Km   (D) 12 Km to 80 Km

50. The magnetic lines of force inside a bar magnet:
    [A] are from north-pole to south-pole of the magnet.
    [B] do not exist
    [C] depend upon the arc of cross-section of the bar magnet
    [D] are from south-pole to north-pole of the magnet

CHEMISTRY
[Single Answer Choice Type]

*This Section contains **50** Single choice questions. Each question has 4 choices (A), (B), (C) and (D) out of which ONLY ONE is correct.*

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51.

A is

(A)

(B)

(C)

(D)
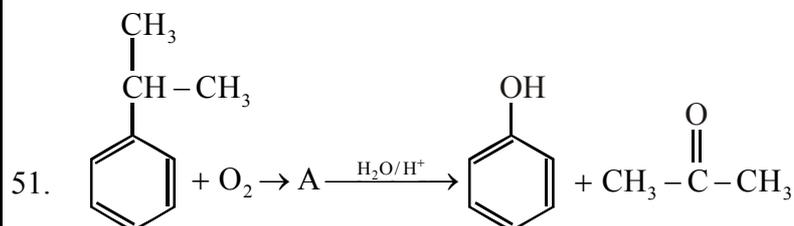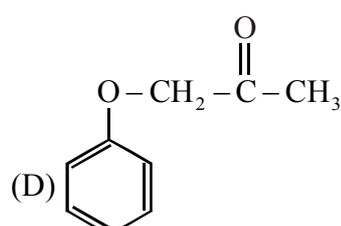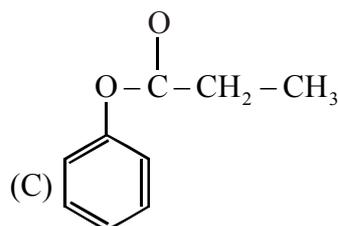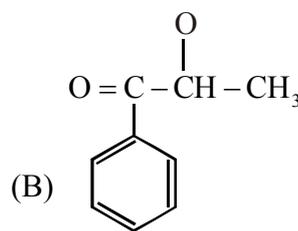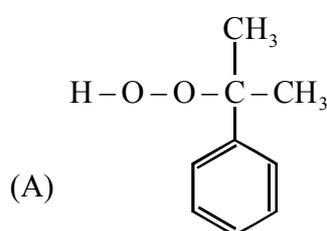
52. Which of the following does not react with $NaHSO_3$

(A) $C_2H_5COC_2H_5$ (B) $CH_3COC_2H_5$ (C) $CH_3COC_3H_7$ (D) Benzaldehyde

53. The weakest acid among the following is

(A) HF   (B) HCl   (C) HBr   (D) HI

54. The general formula for carbohydrates is

(A) $C_x(H_2O)y$ (B) $C_nH_{2n+1}COOH$ (C) C_nH_{2n+2} (D) $C_nH_{2n+1}OH$

55. Which isomer of C_4H_9Br produces 2-methyl propan-2-ol by reaction with aq. KOH

(A) n-butyl bromide   (B) sec butyl branide   (C) Iso butyl bromide   (D) Tert. butyl bromide

56. The chemical which give relief from mental tension are called

(A) analgesics   (B) antacids   (C) tranquilizers   (D) antibiotics

57. Poly caprolactum is known as

(A) Nylon-6   (B) Nylon-66   (C) Polyester fibre   (D) Regenerated fibre

58 Radioactive lanthanide is

(A) Pm   (B) Sm   (C) Eu   (D) Gd

59. 'Alkanone' is the IUPAC name of the following compounds

(A) Aldehyde   (B) Ethers   (C) Alcohols   (D) Ketones

60. If a salt bridge is removed between, the voltage of the cell

(A) drops to zero   (B) does not change   (C) increases reapidly   (D) increases gradually

61. What is the mass per cent of carbon in carbon dioxide?

(A) 0.034%   (B) 3.4%   (C) 27.27%   (D) 28.7%

62. The basic character of hydrides of the 15-group elements decreases in the order

(A) $SbH_3 > PH_3 > AsH_3 > NH_3$ (B) $NH_3 > SbH_3 > PH_3 > AsH_3$

(C) $NH_3 > PH_3 > AsH_3 > SbH_3$ (D) $SbH_3 > AsH_3 > PH_3 > NH_3$

63. Graphite is a soft lubricant extremely difficult to melt. The reason for this anomalous behaviour is that graphite

(A) is a non-crystalline substance

(B) is an allotropic form of diamond

(C) has molecules of variable molecular masses like polymers

(D) has carbon atoms arranged in large plates of rings of strongly bound C-atoms with weak interplate bonds.

64. Some statements regarding defects in solids are given below.

(P) Frenkel defect in usually favoured by a very small difference in sizes of cation and anion.

(Q) Frenkel defect is a dislocation defect.

(R) Trapping of an electron in the lattice leads to formation of F-center.

(S) Schottky defects have no effect on the physical properties of solids.

Among these the correct statement(s)

(A) P, Q and R   (B) Q and R   (C) Only Q   (D) Q and S

65. Equimolar solutions of two non-electrolytes in the same solvent should have

(A) same boiling point but different freezing point   (B) same freezing point but different boiling point

(C) same boiling point and same freezing point   (D) different boiling point and different freezing point

66. The differential rate expression for the reaction, $H_2 + I_2 \longrightarrow 2HI$, is

(A) $\dfrac{-d[H_2]}{dt} = \dfrac{-d[I_2]}{dt} - \dfrac{-d[HI]}{dt}$ (B) $\dfrac{d[H_2]}{dt} = \dfrac{d[I_2]}{dt} - \dfrac{d[HI]}{dt}$

(C) $\dfrac{1}{2} \cdot \dfrac{d[H_2]}{dt} = \dfrac{1}{2} \cdot \dfrac{d[I_2]}{dt} - \dfrac{d[HI]}{dt}$ (D) $-2\dfrac{d[H_2]}{dt} = -2\dfrac{d[I_2]}{dt} = \dfrac{d[HI]}{dt}$

67. The shape of BrF_5 is

(A) *octahedral*   (B) *pentagonal bipyramidal*

(C) *trigonal bipyramidal*   (D) *square pyramidal*

68. Mole fraction of the solute in a 1 molal aqueous solution is

(A) 1.770   (B) 0.177   (C) 0.0177   (D) 0.0344

69. The Coordination number and oxidation state of the element "M" in the complex $[M(en)_2(C_2O_4)]NO_2$ are respectively.

(A) 6 and + 2   (B) 4 and + 2   (C) 6 and + 3   (D) 4 and + 3

70. In the reaction, $H_2O_2 + Na_2CO_3 \longrightarrow Na_2O_2 + CO_2 + H_2O$ the substance undergoing oxidation is

(A) H_2O_2 (B) Na_2CO_3 (C) Na_2O_2 (D) None of these

71. Which one of the following is a mineral of iron

(A) Cassiterite   (B) Magnetite   (C) Pyrolusite   (D) Malachite

72. Which of the following reactions can be brought about by acidified potassium dichromate?

(A) $SO_2 \longrightarrow H_2SO_4$ (B) $NO_3^- \longrightarrow NO_2^-$

(C) $CH_3CHO \longrightarrow CH_3CH_2OH$ (D) both (A) and (B)

73. Li_2CO_3 decomposed at a lower temperature whereas Na_2CO_3 at higher temperature. This is due to

(A) small Li ion   (B) large CO_3^{2-} ion

(C) high hydration enthalpy of Li   (D) All of the above

74. In the following sequence of reactions, D is

$C_2H_4 \xrightarrow{HBr} A \xrightarrow{aq.NaOH} B \xrightarrow{Na} C \xrightarrow{CH_3I} D$

(A) butane   (B) ethane   (C) ethyl methyl ether   (D) propane

75. The organic chloro compound which shows complete sterochemical inversion during SN^2

(A) $(C_2H_5)_2CHCl$ (B) $(CH_3)_3C.Cl$ (C) $(CH_3)_2CHCl$ (D) CH_3Cl

76. Silicon has a strong tendency to form polymers like silicones. The chain length of silicone polymer can be controlled by adding

(A) $MeSiCl_3$ (B) Me_2SiCl_2 (C) Me_3SiCl (D) Me_4Si

77. Arrange the following;

(I) CH_3NH_2 (II) $(CH_3)_2NH$ (III) $C_6H_5NH_2$ (IV) $(CH_3)_3N$

In increasing order of basic nature in aqueous medium

(A) II < I < IV < III   (B) III < IV < I < II   (C) I < II < III < IV   (D) II < III < I < IV

78. Clemmensen reduction of a ketone is carried out in the presence of which of the following?

(A) H_2 and Pt as catalyst   (B) Glycol with KOH   (C) Zn – Hg with HCl

(D) $LiAlH_4$

79. What is the mass ratio of isotopes of hydrogen?

(A) 1 : 1 : 1   (B) 1 : 2 : 1   (C) 1 : 2 : 3   (D) 1 : 3 : 2

80. A well stoppered thermosflask contains some ice-cubes, this is example of

(A) closed system   (B) open system

(C) Isolated system   (D) non thermodynamic system

81. Among the compounds

   (a) OH   (b) OH, CH_3 (c) OH, NO_2, NO_2 (d) OH, NO_2
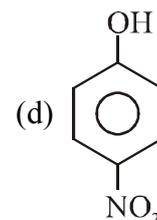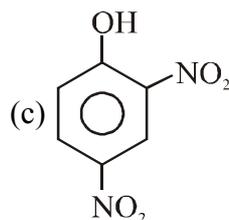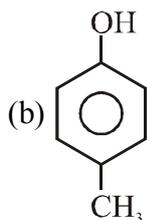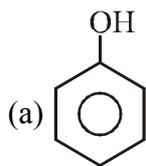
   the strength of acidity is in the order.

   (A) b > a > c > d   (B) c > d > a > b   (C) a > d > c > b   (D) d > c > a > b

82. Which of the following is an example of absorption?

   (A) Water on silica gel   (B) Water on calcium chloride

   (C) Hydrogen on finely divided nickel   (D) Oxygen on metal surface

83. Which of the following is a secondary cell ?

   (A) lead storage battery   (B) nickel cadmium storage cell

   (C) mercury cell   (D) both (A) and (B)

84. Which of the following is a heterocyclic compound?

   (A) Phenanthrene   (B) Thiophene   (C) Phenol   (D) Aniline

85. If concentration of reactant is increased, the rate of reaction :

   (A) Remains unaffected   (B) Increases

   (C) Decreases   (D) may increase or decrease

86. $\overset{O}{\overset{\|}{-C-}}$ groups in ketone is called

   (A) Carboxyl group   (B) Acetyl group   (C) Formo group   (D) Oxo group

87. The osmotic pressure of 15% black cane sugar solution at 150°C is

   (A) 12.05 atm   (B) 18.55 atm   (C) 17.05 atm   (D) 15.05 atm

88. In the reaction, $C_2H_5I \xrightarrow{\text{alc. KOH}} X \xrightarrow{Br_2} Y \xrightarrow{KCN} Z$; X, Y and Z are respectively.

   (A) C_2H_4, C_2H_5Br. C_2H_5CN

   (B) C_2H_5OH, C_2H_5Br, C_2H_5CN

   (C) C_2H_4, $CH_2Br\text{-}CH_2Br$, $CH_2CN.CH_2CN$

   (D) C_2H_4, $C_2H_4Br_2$, C_2H_5CN

89. Which one of the following reagents may be used to distinguish between phenol and benzoic acid?

   (A) Aq. NaOH   (B) Tollen's reagent   (C) Neutral $FeCl_3$ (D) Molisch reagent

90. Suspension of slaked lime in water is known as

   (A) lime water   (B) quick lime

   (C) milk of lime   (D) aqueous solution of slaked lime

91. A solution containing $10g\ dm^{-3}$ of urea (Mol. Mass = 60) is isotonic with a 5% (w/v) solution of a non-volatile solute. The molecular mass $(in\ g\ mol^{-1})$ of the non-volatile solute is

(A) 350   (B) 200   (C) 250   (D) 300

92. On heating ozone, its volume

(A) Decreases to half   (B) Becomes double

(C) Increases to 3/2 times   (D) Remain unchanged

93. Alumina is

(A) acidic   (B) amphoteric   (C) basic   (D) None of these

94. Binary solution contains

(A) solute and solvent in same phase

(B) solute and two solvent in different phase

(C) one solvent in solid and two solute in liquid phase

(D) solute and solvent may be have same or different phase

95. Chlorobenzene on heating with aq. NH_3 under pressure in the presence of Cu_2Cl_2, gives

(A) benzamide   (B) aniline

(C) o-aminochlorobenzene   (D) dichlorobenzene

96. 2, 3-dimethylbutane can be obtained from wurtz reaction by using

(A) n- iodine alone   (B) ethyl chloride and methyl chloride

(C) iso-propyl iodide alone   (D) 2-iodobutane alone

97. If two gram equivalent solute present in one dm^3 of solvent, it is

(A) one molal sol^n (B) one normal sol^n (C) two normal sol^n (D) 2 molal sol^n

98. Carbolic acid is

(A) C_6H_5OH (B) C_6H_5COOH (C) $C_6H_6Cl_6$ (D) $p-C_6H_4Cl_2$

99. Heat of combustion of C (s), $H_{2(g)}$ & $CH_{4(g)}$ are –393.71, –285.77 and –890.36 KJ respectively. What will be heat of formation of $CH_{4(g)}$?

(A) –74.86 KJ   (B) +748.9 KJ   (C) –1855.61 KJ   (D) +1855.6 KJ

100. The vapour pressure of the solution is highest for

(A) 0.1 M sugar sol^n (B) 0.1 M KCl sol^n

(C) $0.1 M Ba(NO_3)_2\ sol^n$ (D) 0.1 M silver nitrate sol^n