JEE MAIN 2025

Sample Paper - 9

Time Allowed: 3 hours **Maximum Marks: 300**

General Instructions:

1. There are three subjects in the question paper consisting of Physics (Q. no. 1 to 25), Chemistry (Q, no. 26 to 50), and Mathematics (Q. no. 51 to 75).

2. Each subject is divided into two sections. Section A consists of 20 multiple-choice questions & Section B consists of 5 numerical value-type questions.

3. There will be only one correct choice in the given four choices in Section A. For each question for Section A, 4 marks will be awarded for correct choice, 1 mark will be deducted for incorrect choice questions and zero marks will be awarded for not attempted questions.

4. For Section B questions, 4 marks will be awarded for correct answers and zero for unattempted and incorrect answers.

5. Any textual, printed, or written material, mobile phones, calculator etc. is not allowed for the students appearing for the test.

6. All calculations/written work should be done in the rough sheet is provided with the Question Paper.

PHYSICS **MAX.MARKS: 100**

SECTION – I
(SINGLE CORRECT ANSWER TYPE)

This section contains 20 multiple choice questions. Each question has 4 options (1), (2), (3) and (4) for its answer, out of which **ONLY ONE** option can be correct.

Marking scheme: +4 for correct answer, 0 if not attempted and -1 if not correct.

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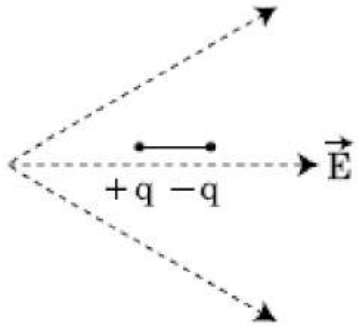
1. Two charged spherical conductors of radius R_1 and R_2 are connected by a wire. Then the ratio of surface charge densities of the spheres (σ_1 / σ_2) is :

A) $\frac{R_1}{R_2}$ B) $\frac{R_2}{R_1}$ C) $\sqrt{\left(\frac{R_1}{R_2}\right)}$ D) $\frac{R_1^2}{R_2^2}$

2. The velocity of a small ball of mass M and density d, when dropped in a container filled with glycerine becomes constant after some time. If the density of glycerine is $\frac{d}{2}$, then the viscous force acting on the ball will be :

A) $\frac{Mg}{2}$ B) Mg C) $\frac{3}{2}Mg$ D) $2Mg$

3. A dipole is placed in an electric field as shown. In which direction will it move ?



A) towards the left as its potential energy will increase.

B) towards the right as its potential energy will decrease.

C) towards the left as its potential energy will decrease.

D) towards the right as its potential energy will increase.

4. A lens of large focal length and large aperture is best suited as an objective of an astronomical telescope since :

A) a large aperture contributes to the quality and visibility of the images.

B) a large area of the objective ensures better light gathering power.

C) a large aperture provides a better resolution.

D) all of the above.

5. If a particle starts from rest under uniform acceleration of 2 m/s^2, then distance travelled in 3 seconds will be

A) 1 meter B) 4 meter C) 9 meter D) 6 meter

6. Column - I gives certain physical terms associated with flow of current through a metallic conductor. Column - II gives some mathematical relations involving electrical quantities. Match Column - I and Column - II with appropriate relations.

Column – I	**Column – II**
A) Drift Velocity	P) $\frac{m}{ne^2\rho}$
B) Electrical Resistivity	Q) $ne\upsilon_d$
C) Relaxation Period	R) $\frac{eE}{m}\tau$
D) Current Density	S) $\frac{E}{J}$

A) (A)-(R), (B)-(S), (C)-(P), (D)-(Q) B) (A)-(R), (B)-(S), (C)-(Q), (D)-(P)

C) (A)-(R), (B)-(P), (C)-(S), (D)-(Q) D) (A)-(R), (B)-(Q), (C)-(S), (D)-(P)

7. The weight of a body on the earth is 400 N. Then weight of the body when taken to a depth half of the radius of the earth will be

A) 300 N B) 100 N C) Zero D) 200 N

8. For a plane electromagnetic wave propagating in x-direction, which one of the following combination gives the correct possible directions for electric field (E) and magnetic field (B) respectively ?

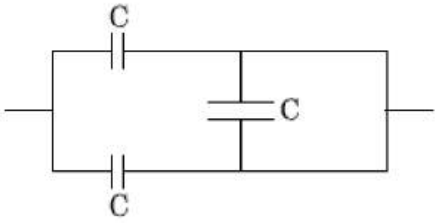
A) $\hat{j}+\hat{k},\ \hat{j}+\hat{k}$ B) $-\hat{j}+\hat{k},\ -\hat{j}-\hat{k}$

C) $\hat{j}+\hat{k},\ -\hat{j}-\hat{k}$ D) $-\hat{j}+\hat{k},\ -\hat{j}+\hat{k}$

9. A parallel plate capacitor has a uniform electric field '$\vec{E}$' in the space between the plates. If the distance between the plates is 'd' and the area of each plate is 'A', the energy density in the capacitor is: (ε_0 = permittivity of free space)

A) $\frac{1}{2}\varepsilon_0 E^2$ B) $\varepsilon_0 EAd$ C) $\frac{1}{2}\varepsilon_0 E^2 Ad$ D) $\frac{E^2 Ad}{\varepsilon_0}$

10. The equivalent capacitance of the combination shown in the figure is :



A) 3C B) 2C C) C/2 D) 3C/2

11. A particle is released from height S from the surface of the Earth. At a certain height its kinetic energy is three times its potential energy. The height from the surface of earth at that instant is

A) $\frac{S}{4}$ B) $\frac{S}{3}$ C) $\frac{S}{2}$ D) $\frac{S}{6}$

12. If E and G respectively denote energy and gravitational constant, then $\frac{E}{G}$ has the dimensions of :

A) $[M^2][L^{-1}][T^0]$ B) $[M][L^{-1}][T^{-1}]$

C) $[M][L^0][T^0]$ D) $[M^2][L^{-2}][T^{-1}]$

13. According to kinetic theory of gases the average kinetic energy of a monoatomic gas molecule is

A) 3 k_BT B) $\frac{3}{2}k_BT$ C) 2 k_BT D) k_BT

14. Inside a capacitor the value of displacement current depends on

A) Rate of change of electric flux B) Magnetic field in the region

C) External resistance D) Speed of light

15. The intensity of magnetic field due to a long wire carrying current I at a distance r is given by

A) $\frac{\mu_0 I}{\pi r}$ B) $\frac{2\mu_0 I}{\pi r}$ C) $\frac{\mu_0 I}{2\pi r}$ D) $\frac{\mu_0 I}{4\pi r}$

16. An electromagnetic wave of wavelength 'λ' is incident on a photosensitive surface of negligible work function. If 'm' mass is of photoelectron emitted from the surface has de-Broglie wavelength λ_d, then:

A) $\lambda = \left(\frac{2m}{hc}\right)\lambda_d^2$ B) $\lambda_d = \left(\frac{2mc}{h}\right)\lambda^2$ C) $\lambda = \left(\frac{2mc}{h}\right)\lambda_d^2$ D) $\lambda = \left(\frac{2h}{mc}\right)\lambda_d^2$

17. If force [F], acceleration [A] and time [T] are chosen as the fundamental physical quantities. Find the dimensions of energy.

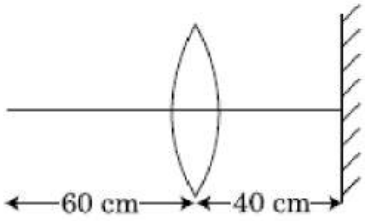
A) $[F][A][T]$ B) $[F][A][T^2]$

C) $[F][A][T^{-1}]$ D) $[F][A^{-1}][T]$

18. Two conducting circular loops of radii R_1 *and* R_2 are placed in the same plane with their centres coinciding. If $R_1 >> R_2$, the mutual inductance M between them will be directly proportional to :

A) $\frac{R_1}{R_2}$ B) $\frac{R_2}{R_1}$ C) $\frac{R_1^2}{R_2}$ D) $\frac{R_2^2}{R_1}$

19. A point object is placed at a distance of 60 cm from a convex lens of focal length 30 cm. If a plane mirror were put perpendicular to the principal axis of the lens and at a distance of 40 cm from it, the final image would be formed at a distance of :



A) 20 cm from the lens, it would be a real image

B) 30 cm from the lens, it would be a real image.

C) 30 cm from the plane mirror, it would be a virtual image.

D) 20 cm from the plane mirror, it would be a virtual image.

20. A particle of mass 'm' is projected with a velocity $u = kV_e\,(k<1)$ from the surface of the earth. (V_e =escape velocity)

The maximum height above the surface reached by the particle is:

A) $R\left(\frac{k}{1-k}\right)^2$ B) $R\left(\frac{k}{1+k}\right)^2$

C) $\frac{R^2k}{1+k}$ D) $\frac{Rk^2}{1-k^2}$

SECTION-II
(NUMERICAL VALUE ANSWER TYPE)

This section contains 5 questions. The answer to each question is a Numerical value. If the Answer in the decimals , **Mark nearest Integer only.**

Marking scheme: +4 for correct answer, -1 in all other cases.

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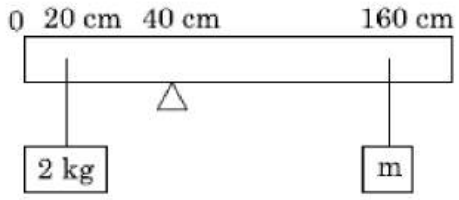
21. Twenty seven drops of same size are charged at 220 V each. They combine to form a bigger drop. Calculate the potential of the bigger drop (in Volt).

22. A uniform rod of length 200 cm and mass 500 g is balanced on a wedge placed at 40 cm mark. A mass of 2 kg is suspended from the rod at 20 cm and another unknown mass 'm' is suspended from the rod at 160 cm mark as shown in the figure.

The value of 'm' (in Kg) such that the rod is in equilibrium is $\frac{1}{x}\,kg$. Find x $(g = 10\ m/s^2)$



23. From a circular ring of mass 'M' and radius 'R' an arc corresponding to a 90^0sector is removed. The moment of inertia of the remaining part of the ring about an axis passing through the centre of the ring and perpendicular to the plane of the ring is 'K' times 'MR^2'. Then the value of '4K' is:

24. A step down transformer connected to an ac mains supply of 220 V is made to operate a 11 V, 44 W lamp. Ignoring power losses in the transformer, the current in the primary circuit is $\frac{1}{x}$ A. Find x

25. A screw gauge gives the following readings when used to measure the diameter of a wire

Main scale reading : 0 mm

Circular scale reading : 52 divisions

Given that 1 mm on main scale corresponds to

100 divisions on the circular scale. The diameter

of the wire from the above data In (cm) is $x \times 10^{-3}$:

CHEMISTRY **MAX.MARKS: 100**

SECTION – I
(SINGLE CORRECT ANSWER TYPE)

This section contains 20 multiple choice questions. Each question has 4 options (1), (2), (3) and (4) for its answer, out of which **ONLY ONE** option can be correct.
Marking scheme: +4 for correct answer, 0 if not attempted and -1 if not correct.

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26. **STATEMENT I :** Highest oxidation state of **Mn** is shown with Oxygen rather than Fluorine

STATEMENT II: The oxidation of **Mn in $KMnO_4$** is +7

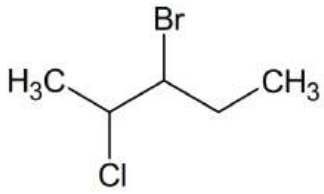
A) Both **STATEMENT I** and **STATEMENT II** are correct

B) Both **STATEMENT I** and **STATEMENT II** are incorrect

C) **STATEMENT I** is correct and **STATEMENT II** is incorrect

D) **STATEMENT I** is incorrect and **STATEMENT II** is correct

27. The IUPAC name of the given compound is



A) 2-Chloro-3-bromopentane B) 3-Bromo -2-chloropentane

C) 2-Bromo -3-chloropentane D) 3-Chloro-2-bromopentane

28. Which of the following are the example of double salt?

1) $FeSO_4[NH_4]_2SO_4.6H_2O$ 2) $[Cu(NH_3)_4]SO_4$

3) $K_2SO_4.Al_2(SO_4)_3.24H_2O$ 4) $K_4[Fe(CN)_6]$

Choose the correct anser

A) 1 and 3 only B) 1 and 2 only C) 1, 2 and 4 only D) 2 and 4 only

29. Glucose does not react with

A) HCN B) Br_2 water C) HNO_3 D) 2,4-DNP

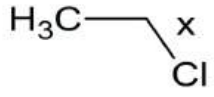
30. Which of the following relations are correct?

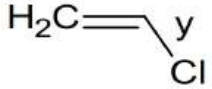
1) $\Delta H = \Delta U + P\Delta V$ 2) $\Delta G = \Delta H - T\Delta S$ 3) $\Delta S = \frac{q_{rev}}{T}$ 4) $\Delta H = \Delta U - \Delta nRT$

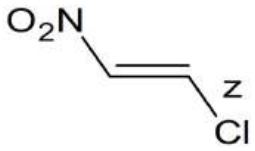
Choose the most appropriate answer from the options given below :

A) 3 and 4 only B) 2 and 3 only C) 1 and 2only D)1,2and 3 only

31. The correct order of C-Cl bond lengths of x, y and z in the given compounds are





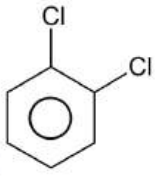


A) x > y > z B) z > y > x C) x > z > y D) y > z > x

32. Which of the following has zero dipole moment

A) *Cis* – 2 – *butene* B) 1,3-dichloro benzene

C) 

D) 

33. Choose the incorrect option

A) Bond Energy order $Cl_2 > Br_2 > F_2 > I_2$

B) Thermal stability order $HF > HCl > HBr > HI$

C) Bond Angle order $NH_3 < PH_3 < AsH_3 < AbH_3$

D) Boiling point order $H_2O > H_2Se > H_2Te > H_2S$

34. Which carboxylic acid gives **Hell – Volhard – Zelinsky** reaction?

A) Formic acid B) Ethanoic acid

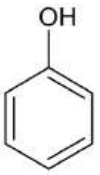
C) 2,2-Dimethylpropanoicacid D) Benzoic acid

35. Which one of the following sets of ions represents a collection of isoelectronic species? (Given : Atomic Number : F : 9, Cl : 17, Na = 11, Mg = 12, Al = 13, K = 19, Ca = 20, Sc = 21)

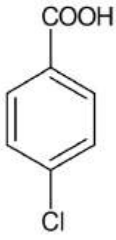
A) $\left(K^+, Cl^-, Ca^{2+}, Sc^{3+}\right)$ B) $\left(Ba^{2+}, Sr^{2+}, K^+, Ca^{2+}\right)$

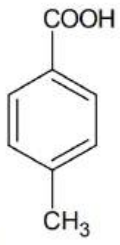
C) $\left(N^{3-}, O^{2-}, F^{-}, S^{2-}\right)$ D) $\left(Li^{+}, Na^{+}, Mg^{2+}, Ca^{2+}\right)$

36. Choose the most acidic compound among the given

A) 

B) 

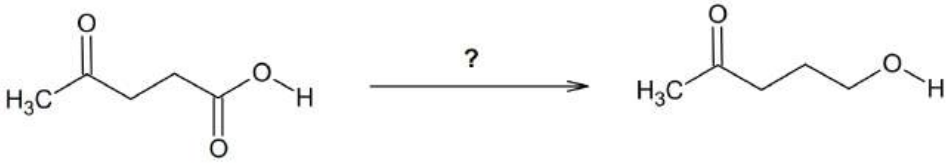
C) 

D) 

37. In which of the following is not a gaseous element?

A) F_2 B) H_2 C) Br_2 D) Cl_2

38. The best reagent used for the following conversion is



A) $LiAlH_4$ B) Zn/Hg; Con. HCl

C) H_2/Ni D) B_2H_6

39. Match List – I with List – II

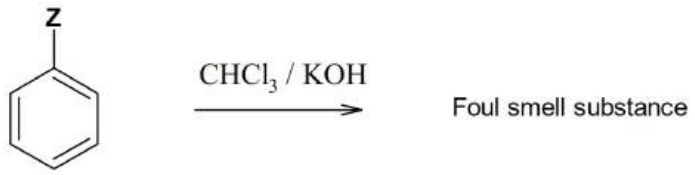
List – I		List – II	
P.	van't Hoff factor, i	I.	Cryoscopic constant
Q.	k_f	II.	Isotonic solutions
R.	Solutons with same osmotic pressure	III.	$\frac{\textit{Normal colligative property}}{\textit{Abnormal colligative property}}$
s.	Azeotropes	IV.	Solutions with same composition of vapour above it

Choose the correct answer from the options given below :

A)P– III, Q – I, R – II, S – IV B) p – III, Q – II, R – I, S – IV

C) P – III, Q – I, R – IV, S – II D) P – I, Q – III, R – II, S– IV

40. The atom or group "**Z**" in the given reaction scheme is



A) $-OH$ B) $-OCH_3$ C) $-Cl$ D) $-NH_2$

41. The effect of increase in pressure to the following reaction in equilibrium state, is :

$PCl_5(g) \rightleftharpoons PCl_3(g) + Cl_2(g)$

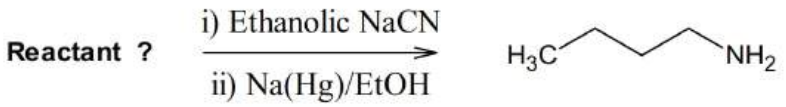
A) the equilibrium will shift in the forward direction and more of Cl_2 and PCl_3 gases will be produced.

B) the equilibrium will go backward due to suppression of dissociation of PCl_5.

C) No pressure effect on equilibrium

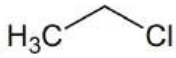
D) the equilibrium will go backward due to increase of dissociation of PCl_5.

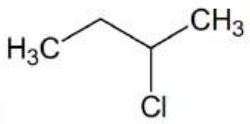
42. Which reactant is used to get the required product in a given reaction scheme?



A) 

B) 

C) 

D) 

43. In the titration of HCl & NaOH Methyl orange is used as indicator the colour change is observed

A) before the end point

B) before the equivalence point

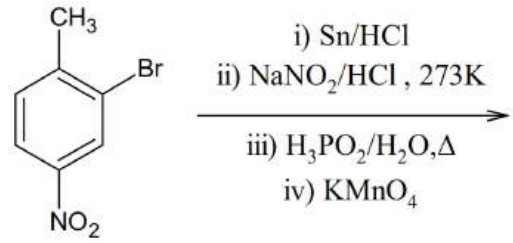
C) after the equivalence point

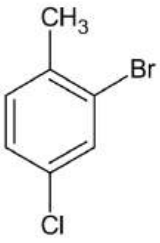
D) No colour change is observed

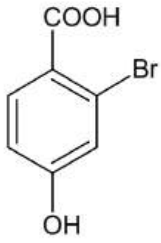
44. Rate constant of the reaction $2H_2O_2 \rightarrow 2H_2O + O_2$ is $2.3 \times 10^{-4}\ \text{sec}^{-1}$ order of reaction is

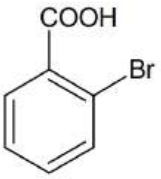
A) Zero B) 1 C) 2 D) 3

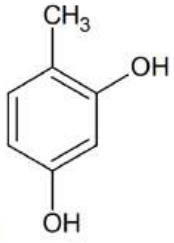
45. The major end product of the given reaction is



A) 

B) 

C) 

D) 

SECTION-II
(NUMERICAL VALUE ANSWER TYPE)

This section contains 5 questions. The answer to each question is a Numerical value. If the Answer in the decimals , **Mark nearest Integer only.**
Marking scheme: +4 for correct answer, -1 in all other cases.

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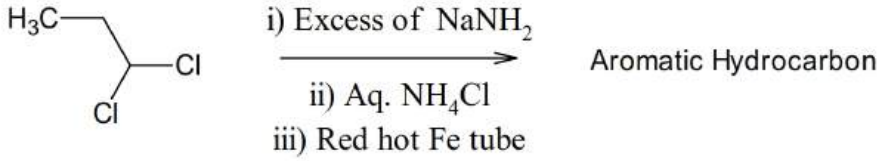
46. No. of elements in the 5^{th} period of periodic table is "x" and atomic number of first noble gas in the periodic table is "y". Then the value of (x + y) is

47. The number of SP^2 carbon atoms present in aromatic hydrocarbon obtained in the given reaction is

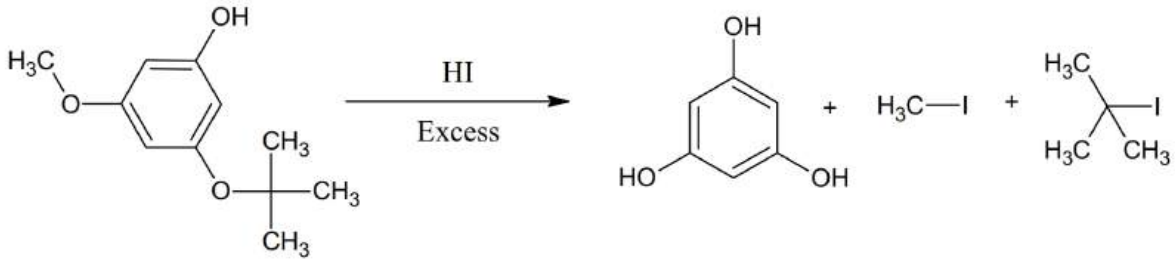


48. Total number of moles of AgCl precipitated on addition of excess of $AgNO_3$ to one mole each of the following complexes

$\left[Co(NH_3)_3Cl_3\right]$, $\left[Ni(H_2O)_6\right]Cl_2$, $\left[Pt(NH_3)_2Cl_2\right]$ and $\left[Pd(NH_3)_4\right]Cl_2$ is.

49. Oxidation state of 'S' in H_2SO_4 is_____

50. How many moles of hydrogen iodide is consumed in a given reaction (for one mole of reactant)?



MATHEMATICS **MAX.MARKS: 100**

SECTION – I
(SINGLE CORRECT ANSWER TYPE)

This section contains 20 multiple choice questions. Each question has 4 options (1), (2), (3) and (4) for its answer, out of which **ONLY ONE** option can be correct.

Marking scheme: +4 for correct answer, 0 if not attempted and -1 if not correct.

51. The set of all the values of 'a' for which the point (a^2-1,a) lies inside the parabola $y^2=8x$, is

A) $R-\left(-\sqrt{\frac{8}{7}},\sqrt{\frac{8}{7}}\right)$ B) $R-\left[-\sqrt{\frac{8}{7}},\sqrt{\frac{8}{7}}\right]$ C) R D) $R-\{0\}$

52. If $R=\{(3,3),(6,6),(9,9),(12,12),(6,12),(3,9),(3,12),(3,6)\}$ is a relation on the set $A=\{3,6,9,12\}$. The relation is

A) an equivalence relation

B) reflexive and symmetric

C) reflexive and transitive

D) only reflexive

53. If α,β,γ *and* δ are the angles made by a straight line with the diagonals of a cube, then $\sin^2\alpha+\sin^2\beta+\sin^2\gamma+\sin^2\delta$ is equal to

A) $\frac{5}{3}$ B) $\frac{8}{3}$ C) $\frac{7}{4}$ D) None of these

54. The radius of the circle passing through the foci of the ellipse $\frac{x^2}{16}+\frac{y^2}{9}=1$ and having its center at (0, 3) is

A) 3 B) 4 C) $\sqrt{12}$ D) $\frac{7}{2}$

55. Oil is leaking at the rate of $16cm^3/s$ from a vertically kept cylindrical drum containing oil. If the radius of the drum is 7 cm and its height is 60 cm. Then, the rate at which the level of the oil is changing when oil level is 18 cm, is

A) $\frac{-16}{49\pi}$ B) $\frac{-16}{48\pi}$ C) $\frac{16}{49\pi}$ D) $\frac{-16}{47\pi}$

56. If the lines $ax+2y+1=0, bx+3y+1=0, cx+4y+1=0$ are concurrent, then a, b, c are in

A) AP B) GP C) HP D) None of these

57. $\left(1+\cos\frac{\pi}{8}\right)\left(1+\cos\frac{3\pi}{8}\right)\left(1+\cos\frac{5\pi}{8}\right)\left(1+\cos\frac{7\pi}{8}\right)$ is equal to

A) 1 B) $\cos\frac{\pi}{8}$ C) $\frac{1}{8}$ D) $\frac{1+\sqrt{2}}{2\sqrt{2}}$

58. The solution of $\frac{dy}{dx}+1=e^{x+y}$ is

A) $e^{-(x+y)}+x+C=0$ B) $e^{-(x+y)}-x+C=0$

C) $e^{x+y}+x+C=0$ D) $e^{x+y}-x+C=0$

59. The value of $\int_{-\pi/2}^{\pi/2}\frac{\sin^2 x}{1+2^x}\,dx$ is

A) π B) $\frac{\pi}{2}$ C) 4π D) $\frac{\pi}{4}$

60. $\int\frac{dx}{\cos x-\sin x}$ is equal to

A) $\frac{1}{\sqrt{2}}\log\left|\tan\left(\frac{x}{2}-\frac{\pi}{8}\right)\right|+C$ B) $\frac{1}{\sqrt{2}}\log\left|\cot\left(\frac{x}{2}\right)\right|+C$

C) $\frac{1}{\sqrt{2}}\log\left|\tan\left(\frac{x}{2}-\frac{3\pi}{8}\right)\right|+C$ D) $\frac{1}{\sqrt{2}}\log\left|\tan\left(\frac{x}{2}+\frac{3\pi}{8}\right)\right|+C$

61. $\lim_{x\to\pi/2}\frac{\cot x-\cos x}{(\pi-2x)^3}$ equals

A) $\frac{1}{24}$ B) $\frac{1}{16}$ C) $\frac{1}{8}$ D) $\frac{1}{4}$

62. The domain of the function $f(x)=\frac{1}{\sqrt{|x|-x}}$ is

A) $(0,\infty)$ B) $(-\infty,0)$ C) $(-\infty,\infty)-(0)$ D) $(-\infty,\infty)$

63. The ratio of the coefficient of x^{15} to the term independent of x in the expansion of $\left(x^2+\frac{2}{x}\right)^{15}$, is

A) 7 : 16 B) 7 : 64 C) 1 : 4 D) 1 : 32

64. If the function $f(x)=axe^{-bx}$ has a local maximum at the point (2,10), then

A) $a=5e, b=1$ B) $a=5, b=\frac{1}{2}$

C) $a=5, b=\frac{e}{2}$ D) $a=5e, b=\frac{1}{2}$

65. The position vectors of points A, B, C are respectively $\hat{i}-\hat{j}-3\hat{k}, 2\hat{i}+\hat{j}-2\hat{k}$ and $-5\hat{i}+2\hat{j}-6\hat{k}$. If the internal angular bisector of $\angle A$ in ΔABC meets BC at D, then length of AD is

A) $\frac{1}{4}$ B) $\frac{11}{2}$ C) $\frac{15}{2}$ D) $\frac{3\sqrt{10}}{4}$

66. For two events A and B, if $P\left(\frac{B}{A}\right)=\frac{1}{2}, P(A)=P\left(\frac{A}{B}\right)=\frac{1}{4}$, then the correct statements is:

A) $P(A\cap B)=\frac{3}{8}$ B) $P(A\cap B)=\frac{3}{5}$ C) $P\left(\frac{\overline{A}}{B}\right)=\frac{3}{4}$ D) $P\left(\frac{\overline{A}}{B}\right)=\frac{1}{4}$

67. The area bounded by the curves $y = cos\ x$ and $y = sin\ x$ between the ordinates $x=0\ and\ x=\frac{\pi}{4}$, is

A) $\sqrt{2}-1$ B) $4\sqrt{2}+2$ C) $4\sqrt{2}-1$ D) $4\sqrt{2}+1$

68. Let $\vec{a}=\hat{j}-\hat{k}\ and\ \vec{c}=\hat{i}-\hat{j}-\hat{k}$. Then the vector $\vec{b}$ satisfying $\vec{a}\times\vec{b}+\vec{c}=\vec{0}\ and\ \vec{a}.\vec{b}=3$, is

A) $-\hat{i}+\hat{j}-2\hat{k}$ B) $2\hat{i}-\hat{j}+2\hat{k}$

C) $\hat{i}-\hat{j}-2\hat{k}$ D) $\hat{i}+\hat{j}-2\hat{k}$

69. Let $\cos(\alpha+\beta)=\frac{4}{5}\ and\ \sin(\alpha-\beta)=\frac{5}{13}$, where $0\le\alpha,\beta\le\frac{\pi}{4}$. Then $\tan 2\alpha =$

A) $\frac{25}{16}$ B) $\frac{55}{33}$ C) $\frac{19}{12}$ D) $\frac{20}{7}$

70. For two data sets each of size 5, the variances are given to be 4 and 5 and the corresponding means are given to be 2 and 4, respectively. The variance of the combined data set is

A) $\frac{5}{2}$ B) $\frac{11}{2}$ C) 6 D) $\frac{13}{2}$

SECTION-II
(NUMERICAL VALUE ANSWER TYPE)

This section contains 5 questions. The answer to each question is a Numerical value. If the Answer in the decimals , **Mark nearest Integer only.**

Marking scheme: +4 for correct answer, -1 in all other cases.

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71. Let $A=\{x_1,x_2,x_3,x_4,x_5\}; B=\{y_1,y_2,y_3,y_4,y_5\}$ then the number of one-one mappings from A to B such that $f(x_i)\neq y_i\forall i=1,2,3,4,5$

72. If system of equations $x = cy + bz, y = az + cx$ and $z = bx + ay$ have infinitely many solutions, then $a^2 + b^2 + c^2 + 2abc$ is equal to

73. The number of complex numbers z such that $|z-1| = |z+1| = |z-i|$, is

74. If α *and* β are the roots of the equation $x^2 - x + 1 = 0$, *then* $\alpha^{2009} + \beta^{2009} =$

75. If the latusrectum of a hyperbola through one focus substends 60^0 angle at the other focus, then the square of its ecentricity e is

KEY SHEET

PHYSICS

1.	B	**2.**	A	**3.**	B	**4.**	D	**5.**	C	**6.**	A
7.	D	**8.**	B	**9.**	A	**10.**	B	**11.**	A	**12.**	A
13.	B	**14.**	A	**15.**	C	**16.**	C	**17.**	B	**18.**	D
19.	D	**20.**	D	**21.**	1980	**22.**	12	**23.**	3	**24.**	5
25.	52										

CHEMISTRY

26.	A	**27.**	B	28.	A	**29.**	D	30.	D	31.	A
32.	C	33.	C	34.	B	35.	A	36.	C	**37.**	C
38.	D	39.	A	40.	D	41.	A	42.	B	43.	C
44.	B	45.	C	46.	20	47.	6	48.	4	49.	6
50.	2										

MATHEMATICS

51.	B	**52.**	C	**53.**	B	**54.**	B	**55.**	C	**56.**	A
57.	C	**58.**	A	**59.**	D	**60.**	D	**61.**	B	**62.**	B
63.	D	**64.**	D	**65.**	D	**66.**	C	**67.**	A	**68.**	A
69.	B	**70.**	B	**71.**	44	**72.**	1	**73.**	1	**74.**	1
75.	3										