HINTS & SOLUTIONS

PART-A (PHYSICS)

1. Light of.....

Sol. Because below threshold frequency there is no photoelectron emitted. Hence no photo current.

2. When photons.....

Sol. Self explanetry.

3. The maximum.....

Sol. $K.E_{max} = \frac{hc}{\lambda} - \phi$

$$\frac{1}{2}mv^2 = \frac{hc}{\lambda} - \phi$$

$$V = \left(\frac{2hc - \lambda\phi}{m\lambda}\right)^{1/2}$$

6. A photon .....

Sol. Frequency of light does not change with medium.

7. An X-ray.....

Sol. Some of the energy of photon will be absorbed by the electron. Hence, energy of the photon will reduce correspendingly wavelength will increase and frequency decreases.

8. Yellow light.....

Sol. stoping potential (V_s) = 0.25 V

$eV_s = hv + W$

Where W is work function W

$$\Rightarrow W = \frac{hc}{\lambda} - ev_s$$

$$= \frac{12400(A^oeV)}{5770A^o} - 0.25eV$$

= 2.75 - 0.25

W = 1.90 eV

$$W = \frac{hc}{\lambda_s}$$

λ_s - thereshold wave length

$$\Rightarrow \lambda_s = hc/w$$

$$= \frac{12400A^oeV}{1.40(eV)} = 6526A'$$

= 653 nm

9. Which of.....

Sol. de-Broglie ware length $\lambda = \frac{h}{p}$

$$\Rightarrow P = \frac{h}{\lambda} \text{ or } P \alpha \frac{1}{\lambda}$$

10. In an α-decay.....

Sol. We have $K_\alpha = \frac{m_y}{m_y + m_\alpha}.Q$

$$\Rightarrow K_\alpha = \frac{A-4}{A}.Q \qquad \Rightarrow 48 = \frac{A-4}{A}.50 \Rightarrow A = 100$$

11. The half-life.....

Sol. In one half life, half of the nuclei will decay as $T_{av.} > T_{1/2}$, more than half of the nuclei will decay in one average life time.

$$\frac{\ln 2}{\lambda_x} = \frac{1}{\lambda_y} \Rightarrow \lambda_y > \lambda_x$$

Rate of decay

$$\left|\frac{dN}{dt}\right| = \lambda.N.$$

Aliter. $\therefore \quad \left|\frac{dN}{dt}\right|_y > \left|\frac{dN}{dt}\right|_x$

or $\frac{0.693}{\lambda_x} = \frac{1}{\lambda_y}$

$\therefore \lambda_x = 0.693\,\lambda_y$

$\lambda_x < \lambda_y$ or $= \lambda N$

12. At time t = 0.....

Sol. $A = A_0 e^{-\lambda t}$

$\ell n\, A = \ell n\, A_0 - \lambda t$

$\Rightarrow$ y = c – mx equation of straight line.

ℓn A versus t is a linearly decreasing graph with slope depending to λ. As λ does not change, slope remains same.

13. ^{22}Ne nucleus.....

Sol. $^{22}_{10}Ne \rightarrow {}^{14}_{6}X + 2\,\alpha$

14. A nucleus $_nX^m$ .....

Sol. In a-particle emission atomic mass decreases by 4 unit and atomic number decreases by 2 unit. IN β-particle emission, atomic mass remains unchanged and atomic numgber increases by 1 unit.

Tje reaction can be shown as

$$_nX^m \xrightarrow{\alpha} n-{}_2Y^{m-4}$$

$$n-{}_2Y^{m-4} \xrightarrow{2\beta} {}_nX^{m-4}$$

Thus, the resulting mucleus is the isotope of parent uncleus and is $_nX^{m-4}$.

15. Complete the.....

Sol. In a nuclear reaction, atomic mass and charge number remain conserved,

For a nuclear reaction to be com,pleted, the mass number and charge number on both sides should be same.

If we com,plete the equation by choice (1), then the complete reaction is

Total atomic number on on LHS = 92 + 0 = 92

$_{92}U^{235} + {}_0n^1 \rightarrow {}_{38}Sr^{90} + {}_{54}Xe^{143} + 3{}_0n^1$

Total atomic unmber on RHS
= 38 + 54 + 0 = 92
Total atomic unmber on RHS = 235 + 1 = 236
Total atomic unmber on RHS
= 90 + 143 + 3 × 1 = 236
Thus, choice (1) is correct,

18. If a mica.....

Sol. When a mica sheet is introduced in the path of one of interfering beams, the whole interference pattern is displaced by an amount $\frac{D}{d}(\mu - 1)\, t$ in the direction of introduction of sheet.

19. In a YDSE.....

Sol. As $\lambda << d$; we can we $\beta = \frac{\lambda D}{d}$

we get $\beta = \frac{500 \times 10^{-9} \times 1}{10^{-3}}$ = 0.5 mm.

As β is not very small; hence it might so happen that till 1000^{th} maxima, we no longer can apply
y' = 1000 × β.
Lets see if we can apply:
At 1000^{th} maxima. Path difference is 1000 λ.

$\Rightarrow$ 1000 λ = d sinθ = $\frac{d \times y}{\sqrt{D^2 + y^2}}$

$\Rightarrow (5 \times 10^{-4})^2 = \frac{(10^{-3}\ \text{m})^2 \times y^2}{D^2 + y^2}$

$\Rightarrow$ 0.25 $D^2 = y^2 (1 - 0.25)$

$\Rightarrow y = \left(\frac{0.25}{0.75}\right)^{\frac{1}{2}} \times D$

$y = \frac{D}{\sqrt{3}}$ = 0.577 m.

As 0.577 m. and 0.5 m. are quite distant, so we could not use y' = 1000 β for such a high maxima.

21. The threshold.....

Sol. Thereshold freq. = γ_0
$K.E_{max} = h\gamma - w$
$= h(2\gamma_0) - h\gamma_0$
$= h\gamma_0 = \frac{1}{2}v_1^2 \Rightarrow v_1 \alpha \sqrt{\gamma_0}$

Now $K.E_{max} = h5\gamma_0 - h\gamma_0 = 4h\gamma_o = \frac{1}{2}mv_2^2$

$v_2 \alpha \sqrt{v'} \Rightarrow v_2 \alpha \sqrt{4\gamma_0} \Rightarrow v_o = 2 \times v_1 = 8 \times 10^3$ m/s

22. The attractive.....

Sol. $U = eV = eV_0 \ln\left(\frac{r}{r_0}\right)$ $\therefore |F| = \left|-\frac{dU}{dr}\right| = \frac{eV_0}{r}$

This force will provide the necessary centripetal force. Hence

$\frac{mv^2}{r} = \frac{eV_0}{r}$ or $\upsilon = \sqrt{\frac{eV_0}{m}}$ ...(i)

$m\upsilon r = \frac{dh}{2\pi}$ ...(ii)

Dividing equation (ii) by (i) we have

$mr = \left(\frac{nh}{2\pi}\right)\sqrt{\frac{m}{eV_0}}$ or $r_n \propto n$

23. The wavelength.....

Sol. For $K_\alpha \Rightarrow \sqrt{\nu} \propto (z-1) \Rightarrow \frac{1}{\sqrt{\lambda}} \propto (z-1)$

or $\lambda \propto \frac{1}{(z-1)^2}$ .....(i)

$4\lambda \propto \frac{1}{(z'-1)^2}$ .....(ii)

$\Rightarrow \frac{1}{4} = \frac{(z'-1)^2}{(z-1)^2}$ $\Rightarrow$ $\frac{z'-1}{z-1} = \frac{1}{2}$

$\Rightarrow$ 2z' – 2 = z – 1 $\Rightarrow$ 2z' – 2 = 11 – 1 = 10

$\Rightarrow$ z' = 6

24. If Bohr's .....

Sol. $(r_m)\left(\frac{m^2}{z}\right)(0.53\ \text{Å}) = (n \times 0.53)\text{Å}$

$\therefore \frac{m^2}{z} = n$

m = 5 for 100 Fm^{257} (the outermost shell) and z = 100

$\therefore n = \frac{(5)^2}{100} = \frac{1}{4}$

25. Bombardment of.....

Sol. For ${}_ZX^A$, Z = 0 + 5 – 2 = 3 and A = 1 + 10 – 4 = 7

26. If 10% of a.....

Sol. After 5 days N = 90%
After 10 days, N = 90 – 9 = 81 %

After 15 days $81 - \frac{10}{100} \times 81 \approx 73\%$

28. For a parallel.....

Sol. Width of central maxima = $\frac{2\lambda D}{a}$

29. An unpolarised .....

Sol. When unpolarised light passes through a polaroid, intensity of emergent light,
$i = I_0 (\cos^2\theta)_{mean}$
$= I_0 \times \frac{1}{2} = \frac{I_0}{2}$

30. Find the half.....

Sol. Here $\sin\theta = \frac{\lambda}{a}$

Where θ is half angular width of the central maximum.
A = 12 × 10^{-5} cm, λ = 6000Å = 6 × 10^{-5}cm.

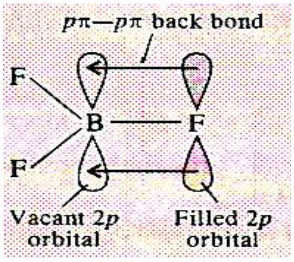
$\therefore \sin\theta = \frac{\lambda}{a} = \frac{6 \times 10^{-5}}{12 \times 10^{-5}} = 0.50$

or $\theta = 30°$

PART-B (CHEMISTRY)

31. The main factor .....

Sol.



32. A dark violet solid (X) .....

Sol. X is I_2 and Y is HI. The various reactions are

$3I_2 + 2\ NH_3 \rightarrow 2\ NI_3.\ NH_3$

(X) (Explosive)

$8\ NI_3.NH_3 \rightarrow 5\ N_2 + 6\ NH_4I + I_2$

(violet coloured gas) (X)

$I_2 + H_2 \rightarrow 2\ HI$

(X) (Y)

$$H_3PO_4 + 3NaI \xrightarrow{\Delta} Na_3PO_4 + 3HI$$

(salt of HI) (Y)

33. XeF_4 and XeF_6 .....

Sol. $$6\,XeF_4 + 12H_2O \longrightarrow 4\,Xe + 2XeO_3 + 24HF + 3O_2$$

$$XeF_6 + 3H_2O \longrightarrow XeO_3 + 6HF$$

Hence, (1) is correct

34. The presence of .....

Sol. F-centres made a crystal coloured and paramagnetic.

35. A binary solid ($A^+ B^-$).....

Sol. Let B^- ions constituting the lattice = 1

$\therefore$ No. of tetrahedral holes = 2

Now, 25% of tetrahedral holes are occupied by A^{+2}.

$\therefore$ No. of A^+ ions = 25% of 2 = ½

A	:	B
1/2	:	1
1	:	2

$\therefore$ formula is AB_2.

36. In a fcc arrangement .....

Sol. Out of the eight atoms present at the corners of unit cell, two atoms are missing. Thus, contribution of atoms per unit cell = 6/8. Since six atoms are present at the face centres and an atoms at face centre is shared by two cubes, thus, contribution of atoms per unit cell = 6/2 = 3.

Formula of the compound is $A_{6/8}B_3$ or A_6B_{24} or AB_4.

37. A compound XY .....

Sol. For bcc structure of the compounds

Nearest neighbor distance,

$$d = \frac{\sqrt{3}a}{2} = \frac{\sqrt{3} \times 480}{2}\ pm$$

Now $d = r_+ + r_-$

Thus, $r_+ + r_- = \frac{\sqrt{3} \times 480}{2}\ pm$

$r_+ + 225\ pm = 415.68\ pm$ or $r_+ = 415.68 - 225 = 190.68\ pm$

38. In the cyclic process .....

Sol. Process direction in the given diagram is clockwise so process direction in P-V diagram is anti-clockwise.

Net work done by system = Area of the circle

$$= \pi \times \frac{(P_2 - P_1)}{2} \cdot \frac{(V_2 - V_1)}{2}$$

39. Calculate average .....

Sol. (2) Average $C_{v.m} = \frac{n_1 C_{v.m_1} + n_2 C_{v.m2}}{n_1 + n_2}$

$$= \frac{2 \times \frac{3}{2}R + 2 \times \frac{5}{2}R}{2+2} = 2R$$

42. 1 mole of NH_3 gas.....

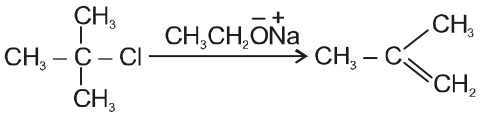
Sol. $T_1V_1^{\gamma-1} = T_2V_2^{\gamma-1} \Rightarrow 300 \times V^{1/3} = T_2(8V)^{1/3} \Rightarrow T_2 = 150\ K$

$W = nC_v\ (T_2 - T_1) = 1 \times 3\ R\ (150 - 300) = 3 \times 2\ (-150)$

$= -900$ cal

43. The major product .....

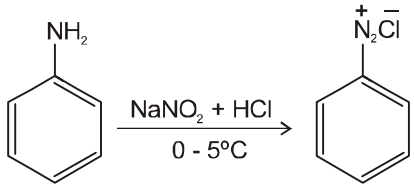
Sol.

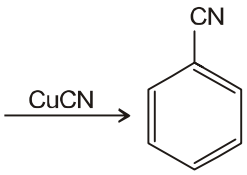


E - 2 reaction

44. Reaction of aniline .....

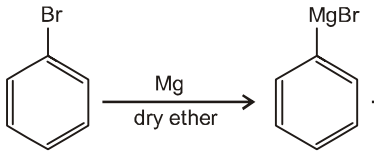
Sol.

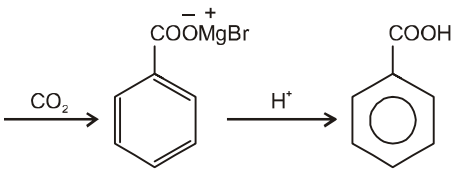




45. In the reaction……

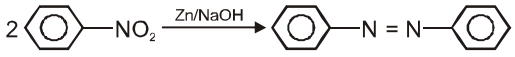
Sol.





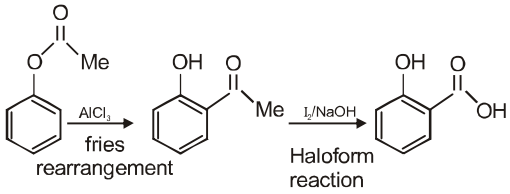
46. Azobenzene will ……

Sol. (3) Zn/NaOH



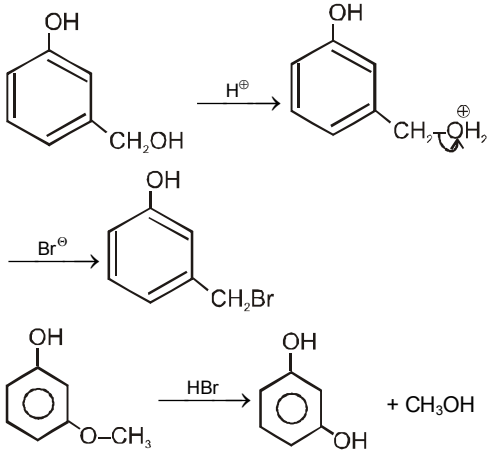
47. In the following transformation……

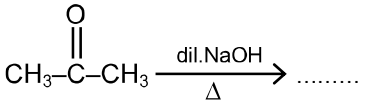
Sol.



48. Two isomeric compounds ……..

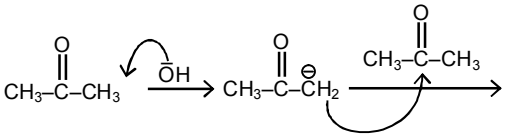
Sol.

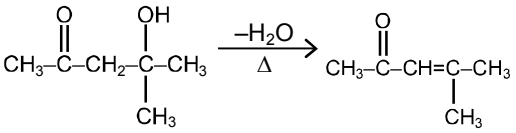


49. 

……

Sol.





The above reaction is Aldol condensation reaction.

51. Which of the following ……

Sol. FCl_3 does not exist because F does not have vacant d-orbitals and no electron excitation is possible. Thus, F can not form more than one bond.

52. The correct sequence ……

Sol. $\overset{(+7)}{HIO_4}, \overset{(+5)}{ICl_5}, \overset{(0)}{I_2}, \overset{(-1)}{HI}$

53. Greater reactivity ……

Sol. Factual question.

54. Which is **incorrect**……

Sol. Orthorhombic crystal has $a \neq b \neq c$, $\alpha = \gamma = 90°$. The given dimensions are for monoclinic crystal.

55. CsCl has bcc arrangement ……

Sol. CsCl has bcc structure.

Interionic distance (4) =

$$\frac{\sqrt{3}}{2}a = \frac{\sqrt{3}}{2} \times 400 = 346.4\,pm$$

56. A gas expands against ……

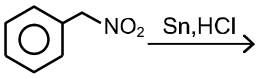
Sol. $\int dw = \int -P.dV$ s

$$\Rightarrow w = -\int 20.\frac{dV}{V} = -20 \ln \frac{V_2}{V_1}$$

$$w = -46.06\ Latm = -4665.8\ J$$

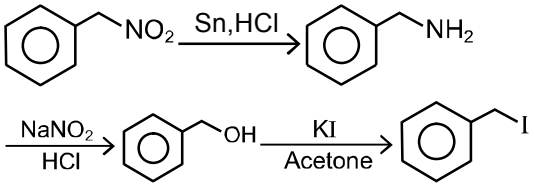
$$\Delta U = q + w \Rightarrow 400 = q - 4665.8$$

$$q = 5065.8\ J$$

57. 

……

Sol.



58. Acetaldehyde can be ……

Sol. $CH_3 - \underset{\underset{O}{\|}}{C} - OCH_3 \xrightarrow{H_3O^{\oplus}} CH_3 - COOH + CH_3 - OH$

60. The correct order .....

Sol. Rate of S_N2 reaction : 1° > 2° > 3°, as β-branching increases steric crowding increases in transition state so it makes less stable T.S.

PART-C (MATHEMATICS)

61. If $(\vec{a} \times \vec{b})^2$.....

Sol. $(\vec{a} \times \vec{b})^2 + (\vec{a}.\vec{b})^2 = 144$

$= |\vec{a}|^2 |\vec{b}|^2 (\sin^2\theta + \cos^2\theta) = 144$

$|\vec{a}||\vec{b}| = 12$

$|\vec{b}| = \frac{12}{4} = 3$

62. If ω is an.....

Sol. $\omega^{17} + \omega^7 = \omega^2 + \omega = -1$

$\cos\left(-\pi + \frac{\pi}{3}\right) = \cos\left(-\frac{2\pi}{3}\right) = -\frac{1}{2}$

63. The number.....

Sol. Vector perpendicular to $\vec{a}$ and $\vec{b}$ of unit length

$= \frac{\pm(\vec{a} \times \vec{b})}{|\vec{a} \times \vec{b}|}$

i.e. = 2

65. For parabola.....

Ans. Given equation

$x^2 + 2y - 3x + 5 = 0 \quad \Rightarrow \quad x^2 - 3x + 5 = -2y$

$x^2 - 3x = \frac{9}{4} + 5 - \frac{9}{4} = -2y$

$\Rightarrow \left(x - \frac{3}{2}\right)^2 = -2y - \frac{11}{4}$

$\left(x - \frac{3}{2}\right)^2 = -2\left(y + \frac{11}{8}\right)$

$\Rightarrow X^2 = -4AY$

Hence vertex $\equiv \left(\frac{3}{2}, -\frac{11}{8}\right)$

Axis $x - \frac{3}{2} = 0 \quad \Rightarrow \quad x = \frac{3}{2}$

directirx $y = -\frac{7}{8} \quad \Rightarrow$ latus rectum = 2

66. The line.....

Sol. We have the equation of the plane

$\pi : x - y + z - 1 = 0$ and $(x_1, y_1, z_1) = (0,0,0), (x_2, y_2, z_2)$

$= (1, -2, -5)$

Ratio

$= \frac{\lambda}{1} = -\frac{(ax_1 + by_1 + cz_1 + d_1)}{(ax_2 + by_2 + cz_2 + d_1)} = \frac{(-1)}{1 - (-2) - 5 - 1} = -\frac{1}{3}$

$\Rightarrow$ Ratio = $\frac{1}{3}$ (externally) (option C.)

67. The order.....

Sol. Here $\left[1 + \left(\frac{dy}{dx}\right)^2\right]^5 = x^2\left(\frac{d^3y}{dx^3}\right)^2$

$\therefore$ order = 3, degree = 2

68. The conjugate.....

Sol. complex number = $\frac{1}{-i - 1}$

70. Number of.....

Sol. Given vectors are co-planar if

$$\begin{vmatrix} \lambda & 1 & 2 \\ 1 & \lambda & -1 \\ 2 & -1 & \lambda \end{vmatrix} = 0$$

$\Rightarrow \lambda^3 - 6\lambda - 4 = 0$

$\Rightarrow (\lambda+2)(\lambda^2 - 2\lambda - 2) = 0$

will give 3 real value of λ.

71. A point .....

Sol. Given that

$y^2 + z^2 + z^2 + x^2 + x^2 + y^2 = 36$

$\Rightarrow 2(x^2 + y^2 + z^2) = 36$

$\Rightarrow x^2 + y^2 + z^2 = 18$

$\Rightarrow \sqrt{x^2 + y^2 + z^2} = 3\sqrt{2}$

72. Equation.....

Sol. d.c.s of x-axis = (1, 0, 0)

so $\frac{x}{1} = \frac{y}{0} = \frac{z}{0}$

73. The slope……

Sol. $\frac{dy}{dx} = \frac{1}{2y}$

$\Rightarrow y^2 = x + c$

$\because$ (4, 3) satisfies

$\Rightarrow 9 = 4 + c$

$\Rightarrow c = 5$

$\therefore y^2 = x + 5$

74. The locus……

Sol. $|z - 1| = |z + i|$

$\Rightarrow |(x - 1) + iy| = |x + i(y + 1)|$

$\Rightarrow (x - 1)^2 + y^2 = x^2 + (y + 1)^2$

$\Rightarrow x + y = 0$, which is a line through the origin.

75. The equation……

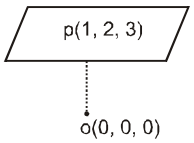
Sol. The point of intersection of two perpendicular tangents the parabola lies on directirx of the parabola.

Since, equation of directrix is $0 = x + 2$

So point is (–2, 0)

76. Equation of……

Sol.



Required equation $= 1(x - 1) + 2(x - 2) + 3(x - 3) = 0$

$\Rightarrow x + 2y + 3z = 14$

77. The solution ……

Sol. $(x^2 + y^2)\,dy = xy\,dx$; $\frac{dx}{dy} = \frac{x}{y} + \frac{y}{x}$

Let $x = vy$

$\therefore$ we get $v + y\frac{dv}{dy} = v + \frac{1}{v}$

$\Rightarrow y\frac{dv}{dy} = \frac{1}{v} \Rightarrow \int v\,dv = \int \frac{dy}{y}$

$\Rightarrow \frac{v^2}{2} = \ell ny + c$

$\Rightarrow \frac{x^2}{2y^2} = \ell ny + c$

at $x = 1$; $y = 1$

$\Rightarrow c = \frac{1}{2}$

$\Rightarrow \frac{x^2}{2y^2} = \ell ny + \frac{1}{2}$

at $x = x_0$; $y = e$

$\frac{x_0^2}{2e^2} = 1 + \frac{1}{2}$

$\Rightarrow x_0^2 = 3e^2$

$\Rightarrow x_0 = \pm\sqrt{3}\,e$

78. If $z = \frac{7 - i}{3 - 4i}$ ……

Sol. $z = \frac{7 - i}{3 - 4i} = \frac{(7 - i)(3 + 4i)}{9 + 16} = \frac{25 + 25i}{25}$

$= 1 + i = \sqrt{2}\,(\cos \pi/4 + i \sin \pi/4)$

$z^{14} = 2^7\left\{\cos\left(\frac{14\pi}{4}\right) + i \sin\left(\frac{14\pi}{4}\right)\right\}$

$= 2^7[\cos(7\pi/2) + i \sin(7\pi/2)] = -2^7 i$

79. The distance ……

Sol. The equation of a line passing through P (2, 3, 4) and parallel to the line

$\frac{x + 3}{3} = \frac{y - 2}{6} = \frac{z}{2}$ is $\frac{x - 2}{3} = \frac{y - 3}{6} = \frac{z - 4}{2}$

Any point on this line is given by

Any point on this line is given by

$\frac{x - 2}{3} = \frac{y - 3}{6} = \frac{z - 4}{2} = \lambda$

$\Rightarrow x = 3\lambda + 2$, $y = 6\lambda + 3$, $z = 2\lambda + 4$

If the point Q $(3\lambda + 2, 6\lambda + 3, 2\lambda + 4)$ lies on the plane $3x + 2y + 2z + 5 = 0$. Then,

$3(3\lambda + 2) + 2(6\lambda + 3) + 2(2\lambda + 4) + 5 = 0$

$\Rightarrow 25\lambda + 25 = 0$

$\Rightarrow \lambda = -1$

So the coordinates of Q are (–1, – 3, 2)

$\therefore$ Required distance = PQ $= \sqrt{(2 + 1)^2 + (3 + 3)^2 + (4 - 2)^2}$

$= \sqrt{9 + 36 + 4} = 7.$

80. If $|\vec{a}| = 7$……

Sol. $|\vec{a} + \vec{b}|^2 + |\vec{a} - \vec{b}|^2 = 2\left(|\vec{a}|^2 + |\vec{b}|^2\right) = 2(49 + 121) = 340$

$|\vec{a} - \vec{b}|^2 = 340 - 300 = 40$

81. The equation……

Sol. Direction ratios of the normal are <– 1, – 5, 6 >

$\therefore$ equation of a plane is $-1(x - 2) - 5(y + 3) + 6(z - 1) = 0$

i.e. $x + 5y - 6z + 19 = 0$.

82. The inclination……

Sol. $2x + 2\ \frac{dy}{dx} = 8$

at $x = 5,\ \frac{dy}{dx} = -1$

84. If $|z - i|$……

Sol. Given $|z - i| < 1$

Now , $|z + 12 - 6i| = |(z - i) + (12 - 5i)| \le |z - i| + |12 - 5i|$ $[\because |z_1 + z_2| \le |z_1| + |z_2|]$

$< 1 + 13 = 14$

Hence $|z + 12 - 6i| < 14$

85. If $y = 2x$……

Sol. $y = 2x - 3,\ y^2 = 4a\left(x - \frac{1}{3}\right)$

$(2x - 3)^2 = 4a\left(x - \frac{1}{3}\right)$

$4x^2 - 12x + 9 = 4ax - \frac{4a}{3}$

$4x^2 - (12 + 4a)x + \left(9 + \frac{4a}{3}\right) = 0$

$\because\ D = 0$

$(12 + 4a)^2 - 4.4.\left(9 + \frac{4a}{3}\right) = 0$

$\therefore\ a = \frac{-14}{3}$

86. If $z_1 = 1 + i$……

Sol. $\arg\left(\frac{z_1}{z_2}\right) = \arg(1 + i) - \arg(\sqrt{3} + i)$

$= \frac{\pi}{4} - \frac{\pi}{6} = \frac{\pi}{12} \Rightarrow \text{Arg}\left(\frac{z_1}{z_2}\right)^{50} = 50\left(\frac{\pi}{12}\right) = 4\pi + \frac{\pi}{6}$

So principal argument is $\left(\frac{\pi}{6}\right)$

87. Let Z is a……

Sol. Z will be circumcentre of triangle having vertices (0, 0), (0, 6) and (8, 0) in argand plan.

88. The equation……

Sol. Direction ratio of normal to the plane

$$\begin{vmatrix} \hat{i} & \hat{j} & \hat{k} \\ 2 & 3 & 1 \\ 3 & 1 & 2 \end{vmatrix} = -7\hat{i} + 7\hat{j} - 7\hat{k}$$

So equation of plane is

$-7(x - 1) + 7(y - 2) - 7(z - 3) = 0$

$-7x + 7y - 7z + 14 = 0$

$-7x + 7y - 7z + 14 = 0$

$x - y + z = 2$

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MAIN PATTERN PART TEST-6 (MPT-6)

TARGET : JEE (MAIN) 2018

DATE : 11-02-2018

COURSE : AJAY (01ER)

ANSWER KEY

CODE-0

PART-A (PHYSICS)

1.	(4)	**2.**	(2)	**3.**	(2)	**4.**	(3)	**5.**	(4)	**6.**	(4)	**7.**	(4)
8.	(2)	**9.**	(4)	**10.**	(2)	**11.**	(3)	**12.**	(2)	**13.**	(2)	**14.**	(1)
15.	(1)	**16.**	(1)	**17.**	(4)	**18.**	(2)	**19.**	(2)	**20.**	(2)	**21.**	(3)
22.	(2)	**23.**	(3)	**24.**	(2)	**25.**	(3)	**26.**	(2)	**27.**	(3)	**28.**	(4)
29.	(3)	**30.**	(4)										

PART-B (CHEMISTRY)

31.	(3)	**32.**	(4)	**33.**	(1)	**34.**	(2)	**35.**	(2)	**36.**	(4)	**37.**	(1)
38.	(3)	**39.**	(2)	**40.**	(3)	**41.**	(3)	**42.**	(1)	**43.**	(2)	**44.**	(3)
45.	(3)	**46.**	(3)	**47.**	(2)	**48.**	(1)	**49.**	(3)	**50.**	(2)	**51.**	(2)
52.	(4)	**53.**	(1)	**54.**	(2)	**55.**	(1)	**56.**	(3)	**57.**	(4)	**58.**	(1)
59.	(3)	**60.**	(1)										

PART-C (MATHEMATICS)

61.	(3)	**62.**	(2)	**63.**	(2)	**64.**	(1)	**65.**	(3)	**66.**	(3)	**67.**	(1)
68.	(3)	**69.**	(4)	**70.**	***(3)***	**71.**	(3)	**72.**	(3)	**73.**	(3)	**74.**	(3)
75.	(4)	**76.**	(3)	**77.**	(1)	**78.**	(3)	**79.**	(3)	**80.**	(3)	**81.**	(1)
82.	(3)	**83.**	(5)	**84.**	(1)	**85.**	(4)	**86.**	(1)	**87.**	(3)	**88.**	(5)
89.	(4)	**90.**	(2)										