MAJOR TEST-1 (MT-1)

PATTERN : NEET

TARGET : NEET / AIIMS - 2019

DATE : 11-02-2018 | CLASS-XI | COURSE : SAKSHAM (MA) ; SAMARTH (MB)

HINTS & SOLUTIONS (संकेत एवं हल)

PART-A
CHEMISTRY

1. Mole (मोल) = $\frac{180}{180}$ = 1 mol

mass of solution (विलयन का भार) = 1180 g

$V = \frac{1180}{1.15\times1000} = \frac{118}{115}$ L

$M = \frac{1\times115}{118} = 0.97$ M

3. n = 4, ℓ = 2 and तथा m = 0

5. Theory based. (सैद्धान्तिक)

8. $Z = \frac{(V_m)_{real}}{(V_m)_{ideal}} = \frac{22.4}{(V_m)_{ideal}} < 1$

$V_{real} < 22.4$ L

9. By the graph

$T_2 = T_B$ (Boyle's temp)

$T_1 > T_B$

$T_3 < T_B$ & $T_B > T_C$

So, T_1 & T_2 must be above T_C

10. $M_iV_i = M_f V_f$

$5 \times 500 = M_f \times 1500$

Or $M_f = 1.66$ M

11. NO_2^+ has bond angle value 180º

NO_2^+ बंध कोण मान 180º रखता है।

12. $BaSO_4 \rightleftharpoons Ba^{2+}(aq) + SO_4^{2-}$

S 0.1M+S

$K_{sp} = (Ba^{2+})(SO_4^{2-}) = (S)(S + 0.10)$

$\Rightarrow 10^{-10} \simeq (S)(0.1)$ ($\because$ S<< 0.1)

$\Rightarrow S = 10^{-9}$ M.

13. Refer theory

14. $N_2 : (\sigma1s)^2 (\sigma^*1s)^2 (\sigma2s)^2 (\sigma^*2s)^2 (\pi2p^2_x = \pi2p^2_y)(\sigma2p_z)^2$

The bond order of N_2 is 1/2(10 – 4) = 3.

$N_2^+ : (\sigma1s)^2 (\sigma^*1s)^2 (\sigma2s)^2 (\sigma^*2s)^2 (\pi2p^2_x = \pi2p^2_y)(\sigma2p_z)^1$

The bond order of N_2^+ is 1/2(9 – 4) = 2.5.

$O_2 : (\sigma1s)^2 (\sigma^*1s)^2 (\sigma2s)^2 (\sigma^*2s)^2 (\sigma2p_z)^2 (\pi2p^2_x = \pi2p^2_y)(\pi^*2p_x^1 = \pi^*2p^1_y)$

The bond order of O_2 1/2(10 – 6) = 2.

$O_2^+ : (\sigma1s)^2 (\sigma^*1s)^2 (\sigma2s)^2 (\sigma^*2s)^2 (\sigma2p_z)^2 (\pi2p^2_x = \pi2p^2_y)(\pi^*2p_x^1 = \pi^*2p^0_y)$

The bond order of O_2^+ 1/2(10 – 5) = 2.5.

The bond order of NO^+ 1/2(10 – 4) = 3.

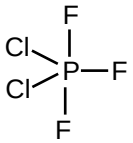
NO derivative of O_2 and isoelectronic with O_2^+ ; $(\sigma1s)^2 (\sigma^*1s)^2 (\sigma2s)^2 (\sigma^*2s)^2 (\sigma2p_z)^2 (\pi2p^2_x = \pi2p^2_y), (\pi^*2px)^1$

The bond order of NO is 1/2(10 – 5) = 2.5.

bond order $\propto$ 1/bond length $\propto$ bond dissociation energy.

15. Hybridisation $\Rightarrow sp^3d_{Z^2}$

Geometry $\Rightarrow$ Trigonal bipyramidal



Strucutre $\Rightarrow$ Hybridisation: sp^3d

Geometry: Trigonal bipyramidal

16. (1 & 2) H can not contract d-orbital of P and S atom due to less electronegativity.

(3) 2d-orbital is absent in Boron.

(1 & 2) H न्यून वैद्युतऋणता के कारण P तथा S परमाणु का d-कक्षक संकुचित (contract) नहीं हो सकता है।

(3) 2d-कक्षक बोरोन में अनुपस्थित है।

17. $K_{SP}(MX) \Rightarrow S^2 = 4 \times 10^{-8} \Rightarrow S = 2 \times 10^{-4}$

$K_{SP}(MX_2) \Rightarrow 4S^3 = 3.2 \times 10^{-14} \Rightarrow S = 2 \times 10^{-5}$

$K_{SP}(M_3X) \Rightarrow 8S^4 = 2.7 \times 10^{-15} \Rightarrow S = \sqrt{\frac{27}{8}} \times 10^{-4}$

So solubility order will be $MX > M_3X > MX_2$.

इसलिए विलेयता क्रम $MX > M_3X > MX_2$ होगा।

18. $H_2O(\ell) \rightleftharpoons H_2O(g)$;

$K_p = p_{H_2O} = VP$ For endothermic process T↑ K_P↑

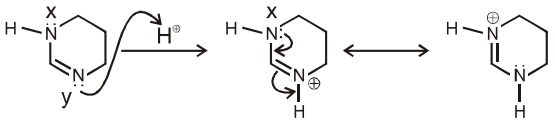
$K_p = p_{H_2O} = VP$ ऊष्माशोषी प्रक्रम के लिए T↑ K_P↑

19. Basic buffer $NH_4OH + NH_4Cl$ will be formed by reaction.
बफर विलयन $NH_4OH + NH_4Cl$ अभिक्रिया द्वारा बनेगा।

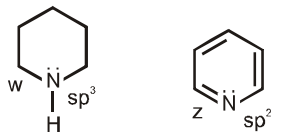
20. $h = \sqrt{K_h} = \sqrt{\frac{K_w}{K_a K_b}} = \sqrt{\frac{10^{-14}}{\left(1x10^{-5}\right)^2}} = 10^{-2}$

$h = 10^{-2} \times 100 = 1\ \%$

31. 1° 2° and 3° amines are functional isomers
1° 2° और 3° एमीन क्रियात्मक समावयवी हैं।

32. 

(delocalised +ve charge)
(विस्थानीकृत +ve आवेश) $y > x$



$y > w > z > x$

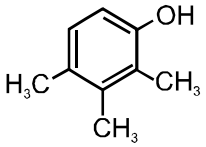
33. N^{3-} and Mg^{2+} are isoelectronic, so Mg^{2+} (Z = 12) is smaller than N^{3-} (Z = 7) as ionic size $\propto \frac{1}{\text{Nuclear charge}}$
Mg^{2+} and Li^+ are diagonally related. Hence Mg^{2+} is smaller than Li^+ because of higher positive charge (i.e. +2).
N^{3-} एवम् Mg^{2+} समइलेक्ट्रॉनिक हैं, इसलिए Mg^{2+} (Z = 12), N^{3-} (Z = 7) से अपेक्षाकृत छोटा होगा क्योंकि
आयनिक आकार $\propto \frac{1}{\text{नाभिकीय आवेश}}$
Mg^{2+} तथा Li^+ विकर्णीय रूप से सम्बन्धित होते हैं। इसलिए Mg^{2+} उच्च धनावेश (i.e. +2) के कारण Li^+ की अपेक्षा अधिक छोटा होगा।

34. The first four members of group 16th are nonmetals and collectively they are called 'the chalcogens' ore forming elements, because a large number of metal ores are oxides or sulphides. Their general electronic configuration is [inert gas] $ns^2\ np^4$.
16th वर्ग के प्रथम चार तत्व अधातुऐं होती हैं, जिन्हें संयुक्त रूप से तत्व निर्माण करने के लिए 'चालकोजन' अयस्क कहते हैं, क्योंकि अधिकतम धातु अयस्क की ऑक्साइड या सल्फाइड के रूप में होते हैं। इनका सामान्य इलेक्ट्रॉनिक विन्यास [अक्रिय गैस] $ns^2\ np^4$ है।

35. $CaSO_4 . 2H_2O$ – Gypsum
$CaSO_4 . \frac{1}{2}H_2O$ – Plaster of Paris or calcium sulphate hemihydrate

$$CaSO_4.\ 2H_2O \xrightarrow{390\ K} CaSO_4.\ \frac{1}{2}H_2O + 1\ \frac{1}{2}H_2O$$

Gypsum Plaster of Paris

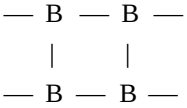
38. 

This compound is functional isomer of the given compound.
यह यौगिक दिये गये यौगिक का क्रियात्मक समावयवी है।

39. Presence of enolic/phenolic group.
(फिनॉलिक/इनॉलिक समूह उपस्थित।)

42. It is phoshgene. Phosphene is PH_3

43. Crystalline boron have very high melting piont because it has covalent polymeric network



PHYSICS
PART-B

46. $\text{cop} = \frac{T_{less}}{T_{more} - T_{less}} = \frac{273}{300.3 \times 273} = 10$

$Q_{less} = mL_f = (5)(80)$
$= 400\ \text{cal/sec} = 400 \times 4.2 = 1680\ \text{J/sec.}$

$\text{Cop} = \frac{Q_{less}}{w} \quad \Rightarrow \quad 10 = \frac{1680}{w}$

$W = 168\ \text{J/sec} = 168\ \text{watt}$

47. $v^t \propto r^2$

Power dissipated against viscous force

$P_{loss} = (F_v)\ V = (6\pi r_2 rv)\ (v) = 6\pi r^2$

$P_{lass} \propto (r)\ (r^2)^2 \Rightarrow P_{loss} = \propto r^5$

48. The eqn. of the process is :

$T \propto V^{-\frac{1}{3}} \Rightarrow \quad PV \propto V^{-\frac{1}{3}} \Rightarrow \quad PV^{\frac{4}{3}} = \text{const}$

So it is a kind of poly tropic process where $x = \frac{4}{3}$

So molar heat capacity will be :-

$C = C_v + \frac{R}{1-x} = \frac{5}{2}R + \frac{R}{1-4/3} = -\frac{R}{2}$

49. $w = \frac{nR}{1-x}\Delta T = \frac{(1)\frac{25}{3}}{1-\frac{4}{3}} \times 20 = -500J$

50. $TV^{\gamma-1}$ = constant नियतांक

$T_1 V^{\frac{7}{5}-1} = T_2(32V)^{\frac{7}{5}-1}$

$\frac{T_2}{T_1} = \frac{1}{(32)^{2/5}} = \frac{1}{4}$

$\eta = 1 - \frac{T_2}{T_1} = 1 - \frac{1}{4} = \frac{3}{4}$

51. Open organ pipe

$f = \frac{V}{2\ell}$ ...(i)

For closed organ pipe

$f' = \frac{V}{4\left(\frac{\ell}{2}\right)} = \frac{V}{2\ell} = f$

खुला आर्गन पाइप

$f = \frac{V}{2\ell}$ ...(i)

बंद आर्गन पाइप के लिए

$f' = \frac{V}{4\left(\frac{\ell}{2}\right)} = \frac{V}{2\ell} = f$

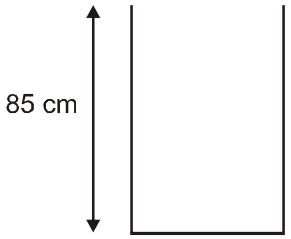
52. For closed organ pipe f

बंद ऑर्गन पाइप के लिए

$f = \frac{(2n+1)v}{4\ell}, \quad (n = 0,1,2.....)$

$\frac{(2n+1)v}{4\ell} < 1250$

$(2n + 1) < 1250 \times \frac{4 \times 0.85}{340}$



(2n + 1) < 12.5
2n < 11.50
n < 5.25
So n = 0, 1, 2, 3.....5
So we have 6 possibileties
अतः हम 6 सम्भावनाऐं हैं।

53. When the bus comes closer

$f_1 = 1000\left(\frac{v}{v-u}\right)$

when the bus goes away

$f_2 = 1000\left(\frac{v}{v-u}\right)$

$\frac{f_1}{f_2} = \frac{v+4}{v-4} = \frac{11}{9} \quad \Rightarrow \quad u = \frac{v}{10}$

55. $\left(\frac{dm}{dt}\right)_{in} = \left(\frac{dm}{dt}\right)_{out}$

AV = N(av)

$\pi(1cm)^2 \times 1$ cm/sec $= N(\pi(0.01\ (cm)^2) \times 0.5$

N= 20,000

57. $F = \left(\frac{yA}{\ell}\right)x$

$x = \frac{F\ell}{YA}$ as x and y are same, so

$\frac{F_1\ell_1}{A_1} = \frac{F_2\ell_2}{A_2} \quad \Rightarrow$

$\frac{A_1}{A_2} = \frac{F_1\ell_1}{F_2\ell_2} = \frac{1}{16} \times \frac{2}{1} = \frac{1}{8}$

$\frac{d_1}{d_2} = \frac{1}{2\sqrt{2}}$

58. $k = 10\pi = \frac{2\pi}{\lambda} \quad \Rightarrow \quad \lambda = \frac{1}{5}m$

$w = 400\ \pi = 2\pi f \quad \Rightarrow \quad f = 200$ Hz

$V = f\lambda = (200)\left(\frac{1}{5}\right) = 40m/sec$

$V = \sqrt{\frac{T}{\mu}} \quad \Rightarrow \quad 40 = \sqrt{\frac{T}{5\times10^{-3}}} \Rightarrow T = 8$ N

59. $F_{thrust} - mg = (m)(a)$

$V_{rel}\frac{dm}{dt} - mg = (m)(a)$

$(2000)\frac{dm}{dt} - (100)g = (100)(2)$

$\frac{dm}{dt} = 0.6\,kg/sec$

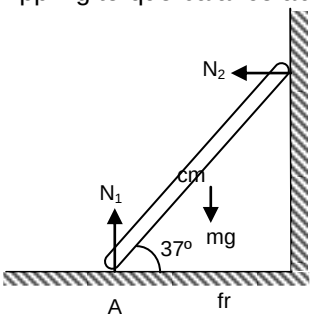
60. $f_{eq} = \frac{n_1f_1 + n_2f_2}{n_1 + n_2} = \frac{(2)(3)+(3)(5)}{2+3} = \frac{21}{5}$

$\gamma_{eq} = 1 + \frac{2}{f_a} = 1 + \frac{2}{\frac{21}{5}} = \frac{31}{21}$

61. $N_1 = mg$ .....(1)

$N_1 = fr$ .....(2)

Appling torque balance about the point A :



$(mg)\ \frac{\ell}{r}$ SM $53^o = (N_2)\ (\ell)$ sin (37^o)

get $N_r = fr = 200$ M

65. Surface tension force on the disc is $(T)(2\pi R)$

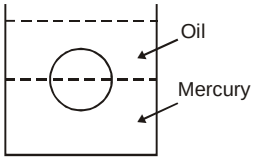
For balance $(T)\ (2\pi R) = (\Delta m)g$

$\Rightarrow\ \Delta m = \frac{(T)(2\pi R)}{g}$

67. $R_e = \frac{\rho VD}{\eta}$ for the flow to be laminar $R_e \downarrow$ so ρ, V and D should be small and η should be more.

68. Weight = Buoyant force

भार = उत्पलावक बल



$V\rho_m g = \frac{V}{2}\ \rho_{Hg}g + \frac{V}{2}\rho_{oil}$

$r_m = \frac{\rho_{Hg} + \rho_{oil}}{2} = \frac{13.6+0.8}{2} = \frac{14.4}{2} = 7.2$

70. $v_1 = \frac{1}{2\ell_1}\sqrt{\left(\frac{T}{4\pi r^2\rho}\right)}$ and $v_2 = \frac{1}{2\ell_1}\sqrt{\left(\frac{T}{\pi r^2\rho}\right)}$

$v_1 = v_2$

$\Rightarrow\ \frac{1}{2\ell_1}\sqrt{\left(\frac{T}{4\pi r^2\rho}\right)} = \frac{1}{2\ell_2}\sqrt{\frac{T}{\pi r^2\rho}}$

$\Rightarrow\ \frac{1}{2\ell_1} \times \frac{1}{2} = \frac{1}{2\ell_2}\quad \Rightarrow\quad \ell_1 : \ell_2 = 1 : 2$

71. $a = \frac{g\sin\theta}{1+\frac{I_{cm}}{mR^2}} = \frac{10\times\frac{1}{2}}{1+\frac{1}{2}} = \frac{10}{3}$

time taken to return back

$T = \frac{24}{g_{eff}} = \frac{2\times5}{10/3} = 3$ sec.

72. $K = \frac{AY}{\ell} = \frac{AY}{\ell} = 2 \times 10^6$

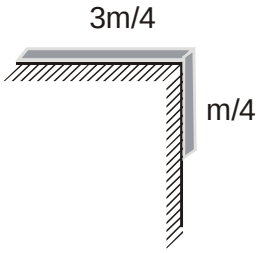
$\omega = \sqrt{\frac{K}{m}} = 100$

73. $S_2 = \frac{(1000)\ (1/2)\ (80°-40°)}{900\ \ (40°-20°)} - \frac{(200)\ (1/2)}{900}$

$= 1$ cal/gm °C

74. Apply system equation

निकाय की समीकरण लगाने पर



$\Rightarrow \mu = \frac{1}{3} = 0.33\quad \Rightarrow\quad \frac{m}{4}g = \frac{3m}{4}g \times \mu$

75. $V_1 = \left(\frac{dx}{dt}\right)_1 = \frac{2}{2} = 1$

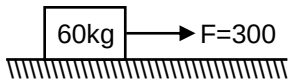
$V_2 = \left(\frac{dx}{dt}\right)_2 = -1$

Impulse आवेग

$= |\Delta P| = |m(V_2 - V_1)| = |0.4\ (-1 - 1)| = 0.8$ Ns

76. $S = \frac{u^2}{2\mu g} = \frac{m^2u^2}{2\mu gm^2} = \frac{P^2}{2\mu m^2 g}$

77.



W.S. = $\mu_s N = 300N$

Since w.s. = 300, so horizontal force required for sliding is also 300 N.

Now the block start sliding, so a kinetic friction will act in backward direction

$f_k = \mu_k N = (0.4)(600) = 240$ N

So $a = \dfrac{300-240}{60} = 1 m/sec^2$

78. $P = \bar{F}.\bar{v} = 50 - 30 + 120 = 140$ J/s

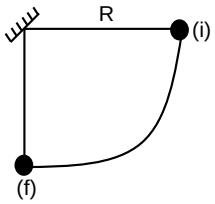
79. force at a point is equal to the negative gradient of he electrostatic potential at that point.

$\vec{F} = \dfrac{dU}{dr}$

$\vec{E} = -\dfrac{\partial v}{\partial r} = \left[-\dfrac{\partial v}{\partial x}\hat{i} - \dfrac{\partial v}{\partial y}\hat{j} - \dfrac{\partial v}{\partial x}\hat{k}\right]$

$= [\hat{i}\ (2xy + z^3) + \hat{j}\ x^2 + \hat{k}\ 3xz^2]$

80. Since there is some energy loss against are friction so we will apply modified work energy theorem :



$W_{us} + W_{nc} = KE\uparrow + U\uparrow$

$O + \left(-\dfrac{\mu g R}{10}\right) = \left(\dfrac{1}{2}mV^2 - O\right) + (-mgR)$

$\dfrac{1}{2}mV^2 = \dfrac{9}{10}mgR \Rightarrow V = \sqrt{\dfrac{9}{5}gR} = \sqrt{\dfrac{9}{5}\times 10\times 1.5}$

$V = \sqrt{27} m/sec$

82. Potential energy is minimum (in this case zero) at mean position ($x \propto 0$) and maximum at extreme positions ($x = \pm A$)

At time t = 0, x = A. Hence P.E. should be maximum. Therefore graph I is correct.

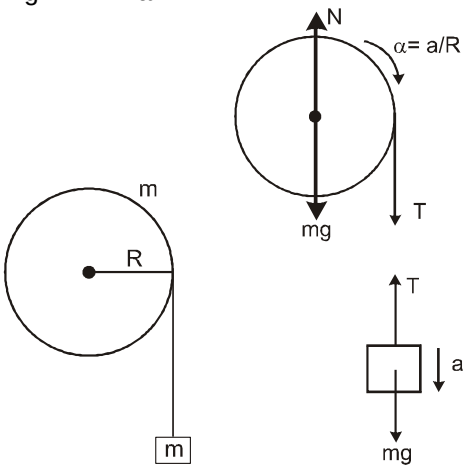
Further in graph III, P.E. is minimum at x = 0. Hence this is also correct.

माध्य स्थिति ($x \propto 0$) पर स्थितिज ऊर्जा न्यूनतम है। (इस स्थिति में शून्य है) और चरम स्थिति ($x = \pm A$) पर अधिकतम है।

t = 0, x = A अतः स्थितिज ऊर्जा अधिकतम होनी चाहिए, इसलिए आरेख I सही है।

दुबारा आरेख III में, स्थितिज ऊर्जा x = 0 पर न्यूनतम है। अतः यह भी सही है।

83. $mg - T = ma$



$TR = \dfrac{mR^2\alpha}{2} \quad \Rightarrow \quad T = \dfrac{mR\alpha}{2} = \dfrac{ma}{2}$

$mg - \dfrac{ma}{2} = ma \quad \Rightarrow \quad \dfrac{3ma}{2} = mg$

$a = \dfrac{2g}{3}$ **Ans.**

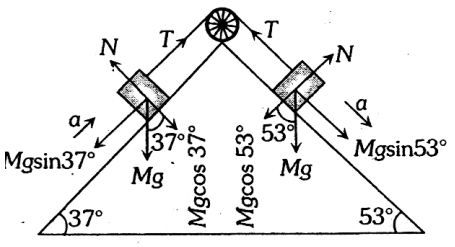
84. Moment of inertia of a cylinder about an axis passing through centre and normal to circular face $= \dfrac{MR^2}{2}$

Moment of inertia of a cylinder about an axis passing through centre and normal to its length $= M\left[\dfrac{L^2}{12} + \dfrac{R^2}{4}\right]$

But $\dfrac{MR^2}{2} = M\left[\dfrac{L^2}{12} + \dfrac{R^2}{4}\right]$ or $\dfrac{R^2}{2} = \dfrac{L^2}{12} + \dfrac{R^2}{4}$

or $\dfrac{R^2}{4} = \dfrac{L^2}{12} \quad \therefore \quad L = \sqrt{3}\,R$

85.



Let T be the tension in the string.

Let a be acceleration of the system.

The equation of motion are

$Ma = Mg \sin 53° - T$ …(i)

and $Ma = T - Mg \sin 37°$

Adding (i) and (ii), we get

$$a = \frac{Mg(\sin 53° - \sin 37°)}{2M}$$

= g cos 45° sin 8°

$$\left[\because \sin A - \sin B = 2\cos\left(\frac{A+B}{2}\right)\sin\left(\frac{A-B}{2}\right)\right]$$

$$= 10 \times \frac{1}{\sqrt{2}} \times 0.139$$

= 0.98 $ms^{-2} \approx 1\ ms^{-2}$

86. Applying Newton's second law to a particle of mass m moving in a circular orbit of radius r with speed v, we get

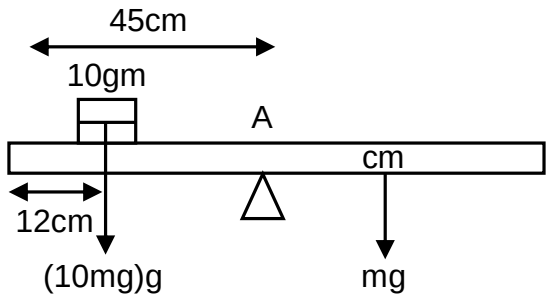
$$\frac{mv^2}{r} = \frac{k}{r^3}$$

$$v = \sqrt{\frac{k}{m}}\left(\frac{1}{r}\right)$$

Time period, $T = \frac{2\pi r}{v} = \frac{2\pi r}{\sqrt{\frac{k}{m}}\left(\frac{1}{r}\right)} = 2\pi r^2\sqrt{\frac{m}{k}}$

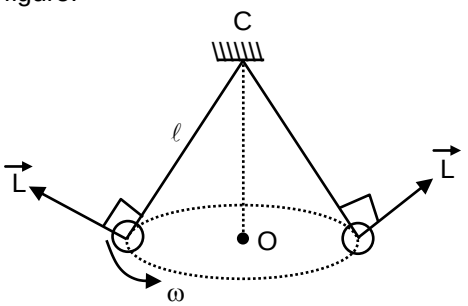
$T \propto r$

87. Applying torque balance about the support A :



(mg) (4 m) = [(10 gm)g] [45 – 12]
M = 66 gm

88. About the point C, the value of angular momentum will be constant |L| = mVℓ but its direction will continuously charge as shown in the figure.



89. Mass of block (M) = 0.9 kg, mass of bullet (m) = 0.1 kg, initial velocity of bullet (u) = 100 ms^{-1} and initial velocity of block (U) = 0.

$\therefore$ Momentum of bullet and block before impact = mu + MU = mu.Let be the velocity of the bullet + block after impact. Then, the momentum after impact = (m + M)υ. From the principle of conservation of momentum, we have

mu = (m + M) υ

or $\upsilon = \frac{mu}{(M+m)} = \frac{0.1\times100}{(0.9 + 0.1)} = 10\ ms^{-1}$

KE of bullet + block = $\frac{1}{2}$ (m + M)υ^2 (i)

Let the bullet + block system rise to a height h. At this height

PE of bullet + block = (m + M) gh (ii)

Equation (i) and (ii) , we get

$$h = \frac{\upsilon^2}{2g} = \frac{(10)^2}{2\times10} = 5 \text{ m}$$

Hence the correct choice is (b).

MAJOR TEST-1 (MT-1)

PATTERN : NEET

TARGET : NEET/AIIMS - 2019

DATE : 11-02-2018 | CLASS-XI | COURSE : SAKSHAM (MA) ; SAMARTH (MB)

ANSWER KEY

CODE-4

PART –A
(CHEMISTRY)

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

PART - B
(PHYSICS)

46.	(4)	**47.**	(4)	**48.**	(2)	**49.**	(4)	**50.**	(2)	**51.**	(3)	**52.**	(3)
53.	(1)	**54.**	(4)	**55.**	(3)	**56.**	(1)	**57.**	(1)	**58.**	(3)	**59.**	(2)
60.	(4)	**61.**	(2)	**62.**	(2)	**63.**	(2)	**64.**	(3)	**65.**	(4)	**66.**	(2)
67.	(2)	**68.**	(3)	**69.**	(2)	**70.**	(1)	**71.**	(1)	**72.**	(3)	**73.**	(3)
74.	(1)	**75.**	(2)	**76.**	(4)	**77.**	(4)	**78.**	(3)	**79.**	(1)	**80.**	(2)
81.	(3)	**82.**	(4)	**83.**	(3)	**84.**	(2)	**85.**	(1)	**86.**	(2)	**87.**	(1)
88.	(3)	**89.**	(2)	**90.**	(2)								

PART - C
(BIOLOGY)

91.	(4)	**92.**	(1)	**93.**	(3)	**94.**	(4)	**95.**	(2)	**96.**	(3)	**97.**	(3)
98.	(4)	**99.**	(1)	**100.**	(2)	**101.**	(2)	**102.**	(3)	**103.**	(2)	**104.**	(3)
105.	(3)	**106.**	(4)	**107.**	(3)	**108.**	(4)	**109.**	(2)	**110.**	(4)	**111.**	(4)
112.	(1)	**113.**	(4)	**114.**	(2)	**115.**	(4)	**116.**	(3)	**117.**	(2)	**118.**	(3)
119.	(4)	**120.**	(1)	**121.**	(4)	**122.**	(3)	**123.**	(1)	**124.**	(2)	**125.**	(3)
126.	(4)	**127.**	(4)	**128.**	(3)	**129.**	(1)	**130.**	(4)	**131.**	(1)	**132.**	(1)
133.	(2)	**134.**	(2)	**135.**	(2)	**136.**	(4)	**137.**	(1)	**138.**	(4)	**139.**	(2)
140.	(3)	**141.**	(1)	**142.**	(2)	**143.**	(4)	**144.**	(3)	**145.**	(3)	**146.**	(2)
147.	(4)	**148.**	(2)	**149.**	(3)	**150.**	(1)	**151.**	(1)	**152.**	(2)	**153.**	(4)
154.	(2)	**155.**	(1)	**156.**	(1)	**157.**	(3)	**158.**	(1)	**159.**	(3)	**160.**	(1)
161.	(1)	**162.**	(3)	**163.**	(1)	**164.**	(4)	**165.**	(1)	**166.**	(2)	**167.**	(2)
168.	(2)	**169.**	(3)	**170.**	(1)	**171.**	(4)	**172.**	(1)	**173.**	(4)	**174.**	(1)
175.	(2)	**176.**	(1)	**177.**	(3)	**178.**	(1)	**179.**	(3)	**180.**	(1)		