Enthusiast, Leader & Achiever Course

PHASE : ALL PHASE

TARGET : PRE-MEDICAL 2020

Test Type : **MAJOR** Test Pattern : **NEET (UG)**

TEST DATE : 19-07-2020

Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
A.	1	1	2	4	3	4	3	3	3	2	3	3	4	2	2	1	3	1	2	2	3	2	3	3	1	2	3	2	2	1
Q.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A.	2	2	1	3	2	4	4	3	3	3	1	4	3	4	3	4	2	3	3	2	1	2	4	3	4	2	3	1	4	1
Q.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
A.	3	4	3	1	2	2	4	1	4	4	2	1	4	4	4	3	1	3	2	2	3	3	1	1	2	1	2	3	4	4
Q.	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
A.	2	3	1	1	2	3	2	3	4	3	2	3	4	1	1	2	3	3	1	2	1	2	2	2	2	4	3	1	2	1
Q.	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
A.	2	1	4	1	2	1	3	2	4	4	4	3	2	3	2	2	3	1	2	4	2	1	2	2	4	3	2	1	4	2
Q.	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
A.	1	2	3	4	2	2	4	3	4	1	4	3	3	1	2	3	3	2	3	2	4	4	2	3	3	2	3	1	3	1

HINT – SHEET

1. **Ans (1)**

$\theta = t^2 + 4t + 2$

$$\omega_{av} = \frac{\theta_f - \theta_i}{2}$$

$$= \frac{34 - 14}{2}$$

$\omega_{av} = 10 \text{rad/s}$

2. **Ans (1)**

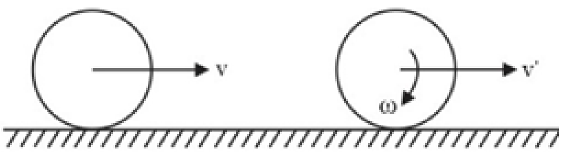
$$\text{Acceleration} = \omega^2 r$$

$$= \frac{v^2}{r} = \omega v$$

$$= \frac{2\pi}{T} v$$

3. **Ans (2)**

Let v be the velocity of COM of the ring just after the impulse is applied and v' is the velocity when pure rolling starts,



Angular velocity at this instant will be $\omega = \frac{v'}{r}$

and impulse J = mv

By COAM about bottom most point,

$mvr = mv'r + I\omega$

$$mvr = mv'r + \frac{mr^2 v'}{r}$$

$Jr = 2mv'r$

$$v' = \frac{J}{2m}$$

4. **Ans (4)**

$$\vec{F} = -\frac{\partial U}{\partial x}\hat{i} - \frac{\partial U}{\partial y}\hat{j} = 7\hat{i} - 24\hat{j}$$

$$\therefore\ a_x = \frac{F_x}{m} = \frac{7}{5} = 1.4\ \text{ms}^{-2}$$

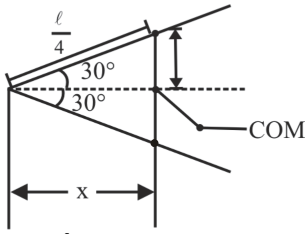
and $\therefore\ a_y = \frac{F_y}{m} = -\frac{24}{5} = -4.8\ \text{ms}^{-2}$

$\therefore v_x = a_x t = 1.4 \times 2 = 2.8\ \text{ms}^{-1}$

and $v_y = a_y t = 4.8 \times 2 = 9.6\ \text{ms}^{-1}$

$$\therefore\ v = \sqrt{v_x^2 + v_y^2} = 10\ \text{ms}^{-1}$$

5. **Ans (3)**



$$x = \frac{\ell}{4}\cos 30°$$

$$= \frac{\ell\sqrt{3}}{8}$$

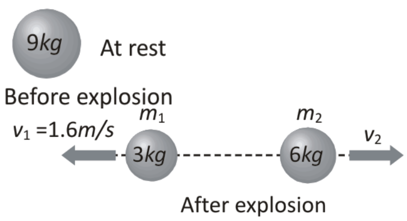
6. **Ans (4)**

$$a = \frac{v}{t_1}$$

velocity at time t, $v_f = at = \frac{vt}{t_1}$

$$W = \Delta KE = \frac{1}{2}mv_f^2 - 0 = \frac{1}{2}m\left(\frac{Vt}{t_1}\right)^2$$

7. **Ans (3)**



As the bomb initially was at rest therefore

Initial momentum of bomb = 0

Final momentum of system = $m_1v_1 + m_2v_2$

As there is no external force

$\therefore m_1v_1 + m_2v_2 = 0 \Rightarrow 3 \times 1.6 + 6 \times v_2 = 0$

velocity of 6 kg mass $v_2 = 0.8$ m/s (numerically)

Its kinetic energy $= \frac{1}{2}m_2v_2^2$

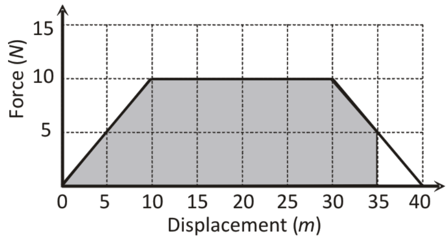
$$= \frac{1}{2} \times 6 \times (0.8)^2 = 1.92\ \text{J}$$

8. **Ans (3)**

$mg(h - h_1)$

$h_1 = e^2h$

9. **Ans (3)**



Work done = (Shaded area under the graph between

x = 0 to x = 35 m)

10. **Ans (2)**

Work done on the body = K.E. gained by the body

$F S \cos\theta = 1$ Joule $\Rightarrow F\cos\theta$

$$= \frac{1}{s} = \frac{1}{0.4} = 2.5\text{N}$$

11. **Ans (3)**

Force constant of a spring

$$K = \frac{F}{x} = \frac{mg}{x} = \frac{1 \times 10}{2 \times 10^{-2}} \Rightarrow k = 500\ \text{N/m}$$

Increment in the length

= 60 – 50 = 10 cm (given)

$$E = \frac{1}{2}kx^2 = \frac{1}{2}500(10 \times 10^{-2})^2 = 2.5\ \text{Joule}$$

12. **Ans (3)**

$$\vec{a} = 2t\hat{i} + 3t^2\hat{j}$$

$$\vec{v} = t^2\hat{i} + t^3\hat{j}$$

$$\vec{P} = \vec{F}.\vec{V} = (2t\hat{i} + 3t^2\hat{j}).(t^2\hat{i} + t^3\hat{j})$$

$$P = 2t^3 + 3t^5$$

13. Ans (4)

After 10 sec,

$$\frac{1}{2}mv^2 = \frac{1}{8}mv_0^2$$

$$\Rightarrow v = \frac{v_0}{2} = 5\,m/s$$

F = ma

$$-kv^2 = m\frac{dv}{dt}$$

$$\int_0^{10} dt = -\frac{m}{k}\int_{10}^{5}\frac{dv}{v^2}$$

$$[t]_0^{10} = -\frac{m}{k}\left[-\frac{1}{v}\right]_{10}^{5}$$

$k = 10^{-4}$

14. Ans (2)

$$\tan\alpha = \frac{a_r}{a_t}$$

$$\left(a_t = \frac{dv}{dt} = v\frac{dv}{ds}\right)$$

$v = a\sqrt{s}$

$v^2 = a^2s$

diff. w.r.t. s

$$2\left(v\frac{dv}{ds}\right) = a^2$$

$$a_t = \frac{a^2}{2}$$

$$a_r = \frac{v^2}{R} = \frac{a^2s}{R}$$

$$\tan\alpha = \frac{a_r}{a_t} = \frac{a^2s/R}{a^2/2} = \frac{2s}{R}$$

15. Ans (2)

Force always remains perpendicular to the direction of displacement.

work done $W = F\cdot d\cos\theta$ when $\theta = 90^\circ$

then W = 0

16. Ans (1)

$$\vec{\tau} = \vec{r}\times\vec{F}$$

so $\vec{\tau}\perp\vec{r} \Rightarrow \vec{r}\,.\,\vec{\tau} = 0$

$\vec{\tau}\perp\vec{F} \Rightarrow \vec{F}\,.\,\vec{\tau} = 0$

17. Ans (3)

M = Mass of the square plate before cutting the holes

Mass of one hole,

$$m = \left(\frac{M}{16R^2}\right)\pi R^2 = \frac{\pi M}{16}$$

$\therefore$ Moment of inertia of the remaining portion

$$I = I_{square} - 4I_{hole}$$

$$= \frac{M}{12}(16R^2 + 16R^2) - 4\left[\frac{mR^2}{2} + m(2R^2)\right]$$

$$= \frac{8}{3}MR^2 - 10mR^2$$

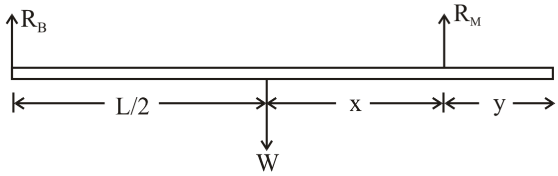
$$= \left(\frac{8}{3} - \frac{10\pi}{16}\right)MR^2$$

18. Ans (1)

Weight of the rod = w

Reaction of boy $R_B = w/4$

Reaction of man $R_M = 3w/4$



As the rod is the rotational equilibrium

$\therefore \sum\tau = 0$

$$R_B \times \frac{L}{2} - R_M \times x = 0$$

$$\Rightarrow \frac{w}{4}\times\frac{L}{2} - \frac{3w}{4}\times x = 0$$

$$\Rightarrow x = \frac{L}{6}$$

so, distance from other end, $y = \frac{L}{2} - x$

$$\Rightarrow y = \frac{L}{2} - \frac{L}{6} = \frac{2L}{6} = \frac{L}{3}$$

19. Ans (2)

The collision is not perfectly elastic or inelastic since when one is rest the other is in motion with different velocities.

$$mu = Mv \Rightarrow \frac{m}{M} = \frac{v}{u}$$

But, $e = \frac{v}{u} \leqslant 1 \Rightarrow e = \frac{m}{M} \leqslant 1$

20. Ans (2)

Total energy $= -\frac{GMm}{2r}$

Here, $r = R + h$, $GM = g_oR^2$

$$E = \frac{mg_0R^2}{2(R+h)}$$

21. Ans (3)

$$g_{in} = \frac{GMi}{r^2} = \frac{G.\frac{4}{3}\pi r^3.d}{r^2}$$

$$= \frac{4\pi G}{3} r.d = \text{constant}$$

$$d \propto \frac{1}{r}$$

22. Ans (2)

Gravitational potential,

$$V = \frac{-GM}{R+r}$$

Also, $g' = = \dfrac{GM}{(R+h)^2}$

Now,

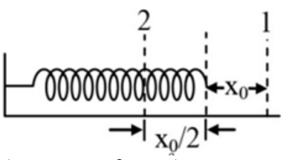
$$V = -\frac{GM}{(R+h)^2}(R+h) = -g'(R+h)$$

$\therefore -5.12 \times 10^7 = -6.4(6400 + h) \text{ x } 10^3$

Solving we get; h = 1600 km.

23. Ans (3)

Change in potential energy is independent of reference



$$U_2 - U_1 = \frac{1}{2}k\left(\frac{x_0}{2}\right)^2 - \frac{1}{2}kx_0^2 = -\frac{3}{8}kx_0^2$$

24. Ans (3)

Power P = F.v

or P = (ma) v

$\therefore a = \dfrac{P}{mv}$

or $v\dfrac{dv}{ds} = \dfrac{P}{mv}$

or $v^2dv = \dfrac{p}{m}ds$

or $\dfrac{P}{m}\displaystyle\int_0^s ds = \int_{v_1}^{v_2} v^2.dv$

or $\dfrac{P}{m}(s) = \dfrac{1}{3}(v_2^3 - v_1^3)$

or $s = \dfrac{m}{3P}(v_2^3 - v_1^3)$

25. Ans (1)

Let x_0 = maximum elongation

Then, $W_{mg} + W_N = \Delta KE + \Delta PE_{spring}$

$\Rightarrow mg\,x_0 \sin\theta + 0 = 0 + \dfrac{1}{2}kx_0^2$

$\therefore x_0 = \dfrac{2mg\ \sin\theta}{k}$

26. Ans (2)

Change in pressure

$\Delta P = 10^6 - 10^5 = 10^5 (10 - 1)$

$= 9 \times 10^5$ pascal

$\Delta V = \Delta P\ CV$

$= 9 \times 10^5 \times 50 \times 10^{-11} \times 1000\ cm^3$

$= 0.45\ cm^3$

27. Ans (3)

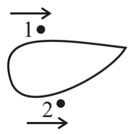
For floating body $\quad W = Th = V_{in}\,\rho_L g$

For A $\quad V\rho_A g = \dfrac{V}{2}\rho_w g \quad \Rightarrow \quad \rho_A = \dfrac{\rho_w}{2}$

For B $\quad V\rho_B g = \dfrac{2}{3}V\rho_w g \quad \Rightarrow \quad \rho_B = \dfrac{2}{3}\rho_w$

$\rho_A : \rho_B = 3 : 4$

28. Ans (2)



$$P_1 + \frac{1}{2}\rho v_1^2 = P_2 + \frac{1}{2}\rho v_2^2$$

$$(P2 - P1) = \frac{1}{2}\rho\ (v_1^2 - v_2^2)$$

$$= \frac{1}{2} \times 1.28\ [140^2 - 110^2]$$

$(P_2 - P_1) = 4800$ Pa

So force upwards $f = (P_2 - P_1)$ A

$= 4800 \times 10$

$= 48000$ N

29. Ans (2)

Distance of a small mass of piece decrease from axis so moment of inertia decreases.

30. Ans (1)

Given : $\theta(t) = 2t^3 - 6t^2$

$\therefore \frac{d\theta}{dt} = 6t^2 - 12t$

$\frac{d^2\theta}{dt^2} = 12t - 12$

Angular acceleration, $\alpha = \frac{d^2\theta}{dt^2} = 12t - 12$

When angular acceleration (α) is zero, then the torque on the wheel becomes zero ($\because \tau = I\alpha$)

$\Rightarrow 12t - 12 = 0$ or $t = 1$ s

31. Ans (2)

$\tau_{net} = (8 \sin 30^o \times 0.2) - (4 \times 0.2) + (9 \times .2)$

$= 1.8$ Nm. clockwise

32. Ans (2)

$mg\frac{\ell}{2} = \frac{1}{2} I\omega^2$

$\Rightarrow \frac{1}{2}\left(\frac{m\ell^2}{3}\right)\omega^2 = \frac{mg\ell}{2}$

$\omega = \sqrt{\frac{3g}{\ell}} \Rightarrow v = \omega\ell = \sqrt{3g\ell}$

33. Ans (1)

$K.E._H + P.E._H = K.E._B + P.E._B$

$(0 + 0 + 0) + 3\,mg\ell$

$= \frac{1}{2}I\omega^2 + \left[0 + mg\frac{\ell}{3} + mg\frac{2\ell}{3}\right]$

$3mg\ell - mg\ell =$

$\frac{1}{2}\left[M\left(\frac{1}{3}\right)^2 + M\left(\frac{2\ell}{3}\right)^2 + M(\ell)^2\right]\omega^2$

$4Mg\ell = \frac{M\ell^2}{9}(1 + 4 + 9)\omega^2$

$V_B = \omega\left(\frac{2\ell}{3}\right) = \sqrt{\frac{36g}{14\ell}}\left(\frac{2\ell}{3}\right)$

$V_B = \sqrt{\frac{8g\ell}{7}}$

34. Ans (3)

Initial K.E. $= \frac{1}{2}m u^2 + \frac{1}{2}I\omega^2$

$KEi = \frac{1}{2}m u^2 + \frac{1}{2}\left(\frac{2}{5}m r^2\right)\omega^2$, $(u = \omega r)$

$KEi = \frac{1}{2}m u^2 + \frac{1}{5}m u^2 = \frac{7}{10}mu^2$

Total KE converts to P.E. at maximum height (h)

$\Rightarrow mgh = \frac{7}{10}mu^2$

$h = \frac{7u^2}{10\,g}$

35. Ans (2)

$V_{ep} = \sqrt{\frac{2GM_p}{R_p}} = \sqrt{\frac{2G}{R_P}\frac{4}{3}\pi R_P^3 \times dp}$

$V_{ep} = \sqrt{8G\pi R_P^2 d_p}$, $R_P = 2Re$

$d_P = de$

$V_{ep} = \sqrt{8G\pi(2\,Re)^2 de}$

$= 2\sqrt{8G\pi Re^2 d_e} = 2V_e = 2\times11.2$ km/s

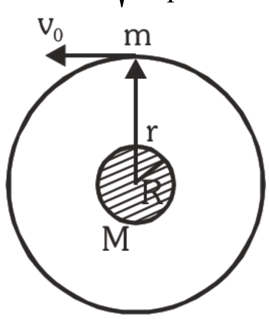
$V_{ep} = 22.4$ km/s

36. Ans (4)

By conservation of mechanical energy

$\frac{-GMm}{r} + 0 = \frac{-GMm}{R} + \frac{1}{2}mv^2$

but $v_0 = \sqrt{\frac{GM}{r}}$ and $V_e = \sqrt{\frac{2GM}{R}}$



$\Rightarrow -mv_0^2 = -\frac{mv_e^2}{2} + \frac{1}{2}mv^2$

$\Rightarrow v = \sqrt{v_e^2 - 2v_0^2}$

37. Ans (4)

$$F_G = \frac{Gm_1m_2}{r^m} = m_2\omega^2 r$$

$$\Rightarrow \omega^2 = \frac{Gm_1}{r^{m+1}}$$

$$\Rightarrow \left(\frac{2\pi}{T}\right)^2 = \frac{Gm_1}{r^{m+1}}$$

$$\Rightarrow T^2 \propto r^{m+1}$$

38. Ans (3)

$$2T\ell = Mg \;\Rightarrow\; M = \frac{2T\ell}{g}$$

$$= \frac{2\times 3\times 10^{-2}\times(10\times 10^{-2})}{10} = 0.6\text{ g}$$

39. Ans (3)

Work done in forming a bubble

$W = 8\pi R^2 T$

$W \propto R^2$

As $V \propto R^3$

$$\frac{2V}{V} = \left(\frac{R_2}{R_1}\right)^3 \Rightarrow R_2 = 2^{1/3}R_1$$

So $W_2 = W \times 2^{2/3}$

40. Ans (3)

$F_v + Th = W$

$F_v = W - Th \quad = V\rho_B g - V\rho_L g$

$$= V\rho_B g\left(1 - \frac{\rho_L}{\rho_B}\right)$$

$$= mg\left(1 - \frac{y}{x}\right)$$

41. Ans (1)

$P_A = P_B$

$P_0 + h_w\rho_w g = P_0 + h_0\rho_0 g$

$h_1 \times 10^3 g = 20 \times 0.9 \times 10^3 g$

$h_1 = 18$ cm

42. Ans (4)

Rotational kinetic energy is

$$K_R = \frac{1}{2}I\omega^2 = \frac{1}{2}Mk^2\left(\frac{v}{R}\right)^2 \qquad (\because\ I = Mk^2$$

and $v = R\omega$)

$$= \frac{1}{2}Mv^2\left(\frac{k^2}{R^2}\right)$$

Translational kinetic energy is

$$K_T = \frac{1}{2}\,Mv_2$$

As per questions, $K_R = 40\%\ K_T$

$$\therefore\ \frac{1}{2}Mv^2\left(\frac{k^2}{R^2}\right) = 40\%\frac{1}{2}Mv^2$$

or $\dfrac{k^2}{R^2} = \dfrac{40}{100} = \dfrac{2}{5}$

For solid sphere, $\dfrac{k^2}{R^2} = \dfrac{2}{5}$

Hence, the body is solid ball.

43. Ans (3)

$$a = \frac{g\sin\theta}{1 + k^2/R^2}\ \text{(Acceleration)}$$

$\dfrac{k^2}{R^2} = \dfrac{2}{5}$ for sphere

$\dfrac{k^2}{R^2} = \dfrac{1}{2}$ for disc & cylinder

so acceleration is maximum for sphere hence

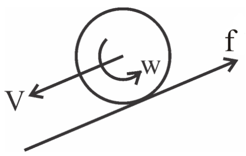
minimum time.

44. Ans (4)

$f \le \mu mg\cos\theta$ so (a) is false

In pure rolling no loss of energy

so (b) is false



f increases ω, decreases v

(c) is true

Equation of motion for sphere

$mg\sin\theta - f = ma$......(1)

torque $\tau = fR = mk^2\propto$

about centre, $a = R\propto$

$fR = mk^2\dfrac{a}{R}$

$fR^2 = mK^2a$ ..... (2) Put in (1)

$mg\sin\theta - f = \dfrac{fR^2}{R^2}$

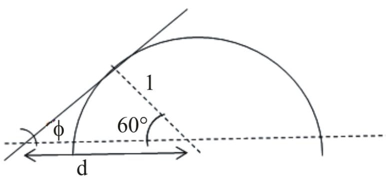
$mg\sin\theta = f\left(1 + \dfrac{R^2}{k^2}\right)$

$f = \dfrac{mg\sin\theta}{1 + R^2/K^2}$

As θ decreases, friction decreases.

45. Ans (3)

From the graph it can be seen that the max. value ϕ is at $\theta = 60°$. ϕ is max. when the rod Q is tangent on the circle on which the ring attached to P moves.



from the fig. d = 1 cos60° = 2

46. Ans (4)

5^{th} Period contains only 4d orbital not 5d.

47. Ans (2)

Left to right size decreases.

48. Ans (3)

IE $3s^1 < 2p^4 < 2p^5 < 2p^6$

49. Ans (3)

$$Cl \underset{IE_{(II)}}{\overset{EA^{(I)}}{\rightleftharpoons}} Cl^{\ominus}$$

EA of Cl = IE of $Cl^{\ominus}$

(I) (II)

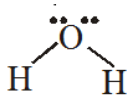
50. Ans (2)

strongest base = $Mg(OH)_2$,

$Be(OH)_2$ & $Al(OH)_3$= amphoteric,

$Si(OH)_4$= acid

51. Ans (1)

H_2O  contains no π bond.

52. Ans (2)

$Be^{+2} < Mg^{+2} < Na^{+} < O^{-2} < H^{\Theta}$ (radius)

53. Ans (4)

$$\frac{\oplus \text{charge}}{\ominus \text{charge}} \alpha \text{ I.E} \alpha \frac{1}{\text{size}}$$

54. Ans (3)

Third Period EA > 2^{nd} period EA

	Cl	>	S	>	O	>	N
Period =	3^{rd}		3^{rd}		2^{nd}		2^{nd}

$2s^22p^3 \Rightarrow$ stable conf^n so lowest EA

55. Ans (4)

H — F

EN $\Rightarrow$ 2.1 4.0 ΔEN = 1.9 most polar

56. Ans (2)

3,11 belong to same group

57. Ans (3)

4 group $\rightarrow$ magic no. 18, 32, 32

58. Ans (1)

$1s^2,2s^2\,2p^5$ = Highest IE_I

$1s^2\,2s^1 \xrightarrow{-e^-} 1s^2$, Highest IE_{II}

59. Ans (4)

$$O \underset{Exo}{\overset{Endo}{\rightleftharpoons}} O^{+} \quad O \xrightarrow{Exo} O^{\ominus}$$

So overall $O^{+} \rightarrow O \rightarrow O^{\Theta}$ Exo

60. Ans (1)

$\overset{+7}{Cl_2O_7} > \overset{+6}{SO_3} > \overset{+5}{P_4O_{10}}$

Acidic strength $\propto$ EN

61. Ans (3)

F>N>Be>Li (IE)

62. Ans (4)

IE = max. for Noble gas

EA = Minimum for Noble gas

63. Ans (3)

$$\begin{array}{ccccc} H & — & O & — & C \\ 2.1 & & 3.5 & & 0.7 \end{array}$$

$\Delta EN = 1.4$ $\Delta EN = 2.8$ (More polar bond)

64. Ans (1)

$N_2 \Rightarrow N \equiv N$ bond order $\propto$ Bond Energy

65. Ans (2)

$SF_2 = sp^3$

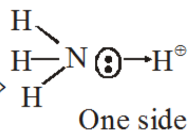
$SF_4 = sp^3d$

$SF_6 = sp^3d^2$

66. Ans (2)

XeF_4 = Square planar [sp^3d^2, Bp = 4, Lp = 2]

67. Ans (4)

$NH_4^{\oplus} \Rightarrow$ 

One side sharing

68. Ans (1)

$$\theta \propto \frac{1}{\text{Dipole Moment}}$$

69. Ans (4)

Intermolecular H-bond α Mpt

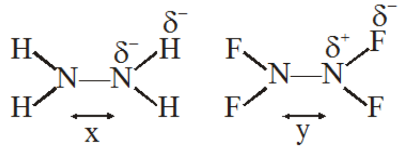
α Viscosity

$$\alpha \frac{1}{\text{Volatile nature}}$$

70. Ans (4)

BPt. order $\rightarrow$ $BiH_3 > SbH_3 > NH_3 > AsH_3 > PH_3$

71. Ans (2)



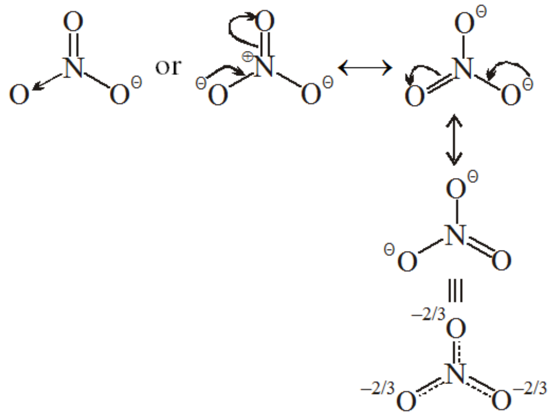
so x > y

72. Ans (1)

SF_4 dipole moment $\neq 0$

So polar

73. Ans (4)



$\Rightarrow$ Coordination no. of N = 3

$\Rightarrow$ Formal charge on N = +1

$\Rightarrow$ Avg. formula charge on O = –2/3

$\Rightarrow$ Avg. bond order of NO = $\frac{4}{3}$

$\Rightarrow$ All NO bonds are identical due to resonance

74. Ans (4)

(a) Polarisation $\propto$ Covalent character

(b) L.E. of oxide > L.E. of halides (Corresponding)

(c) Solubility $\propto \frac{HE}{LE}$

(d) Size of cation $\propto \frac{1}{\text{Polarisation}}$

75. Ans (4)

MF > MCl > MBr > MI (m.pt.)

76. Ans (3)

P_4 = Possible I_2, O_2, N_2 = Possible

P_2 = Not possible due to $3p\pi–3p\pi$ bond

77. Ans (1)

(1) PH_3 PH_4^+

94 109'28'

(2) NH_3 NH_4^+

107 109'28'

(3) BF_3 BF_4^-

120 109'28'

(4) NH_3 NCl_3

107 107.45

78. Ans (3)

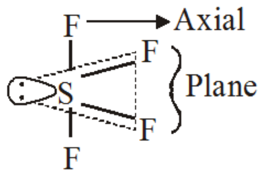
$CH_3Cl > CH_3F > \underbrace{BF_3 = CCl_4}_{\mu = 0}$

79. Ans (2)

Dipole induce dipole Xe----H_2O

80. Ans (2)

SF_4 sp^3d BP = 4, LP = 1 (See-Saw)



81. Ans (3)

$O_2 = \sigma 1s < \sigma^* 1s < \sigma 2s^2 < \sigma^* 2s^2 < \sigma 2p^2 < \pi 2p^2$

$O_2 = \pi 2p^2 < \pi^* 2p_x{}^1 = \pi^* 2p_y{}^1 < \sigma^* 2p_z$

(z = is internuclear axis)

82. Ans (3)

SF_4 $\rightarrow$ sp^3d BP = 4 LP = 1 (See-Saw)

83. Ans (1)

$Al^{+3} > Mg^{+2} > Ca^{+2} > Ba^{+2}$ (Hydration energy)

84. Ans (1)

NaCl is hydroscopic in nature

85. Ans (2)

Reducing Agent $\propto \frac{1}{\text{I. P.}}$

86. Ans (1)

$NaHCO_3$ + NaOH $\Rightarrow$ Can't exist together

(acidic hydrogen) (Base)

87. Ans (2)

Li is strongest R.A. due to high hydration energy

88. Ans (3)

(i) $K_2Cr_2O_7 = Cr^{+6}$ ($3d^0$) = diamagnetic but coloured due to charge transfer spectra.

(ii) $(NH_4)_2$ $(TiCl_6) = Ti^{+4} = (3d^0)$, Diamagnetic and colourless

(iii) $VOSO_4 = V^{+4}$ ($3d^1$) = Paramagnetic and coloured

(iv) K_3 $[Cu(CN)_4]$ = Cu^+ ($3d^{10}$) = diamagnetic and colourless.

89. Ans (4)

$$\underset{\text{R.A.}}{\overset{-1}{H_2O_2}} + \underset{\text{O.A.}}{\overset{0}{O_3}} \longrightarrow \text{Redox}$$

90. Ans (4)

Only B_2H_6 is electron deficient so work as Lewis acid.

92. Ans (3)

NCERT-XI, Pg. # 145, Fig-9.1 aminoacid

95. Ans (2)

NCERT-XI, Pg. # 143, Table 9.1

96. Ans (3)

NCERT-XI, Pg. # 150

97. Ans (2)

NCERT-XI, Pg. # 145 Fig 9.1 Nucleoside

99. Ans (4)

NCERT-XI, Pg. # 148 Fig 9.5 Polysaccharide

101. Ans (2)

NCERT-XI, Pg. # 144

102. Ans (3)

NCERT-XI, Pg. # 144

103. Ans (4)

NCERT-XI, Pg. # 148

106. Ans (2)

NCERT-XI, Pg. # 125, 8.2 Cell theory

107. Ans (3)

NCERT-XI, Pg. # 131, 8.5.1

108. Ans (3)
NCERT-XI, Pg. # 126, 8.3

109. Ans (1)
NCERT-XI, Pg. # 169, Fig. 10.3

110. Ans (2)
NCERT-XI, Pg. # 165, 10.2.2

111. Ans (1)
NCERT-XI, Pg. # 163, 10.1.1

113. Ans (2)
NCERT-XI, Pg. # 138, 8.5.10

114. Ans (2)
NCERT-XI, Pg. # 139

115. Ans (2)
NCERT-XI, Pg. # 139

116. Ans (4)
NCERT-XI, Pg. # 126, 8.3

119. Ans (2)
NCERT-XI, Pg. # 168, 10.4.1

120. Ans (1)
NCERT-XI, Pg. # 131, 8.5.1

121. Ans (2)
NCERT-XI, Pg. # 163

122. Ans (1)
NCERT-XI, Pg. # 135, 8.5.4

123. Ans (4)
NCERT-XI, Pg. # 136, 8.5.5

124. Ans (1)
NCERT-XI, Pg. # 137, 8.5.8

125. Ans (2)
NCERT-XI, Pg. # 165, 10.2.2

126. Ans (1)
NCERT-XI, Pg. # 133, 8.5.3.1

128. Ans (2)
NCERT-XI, Pg. # 131, 8.5.1

133. Ans (2)
NCERT-XI, Pg. # 229

134. Ans (3)
NCERT-XI, Pg. # 197

141. Ans (2)
NCERT-XI, Pg. # 178

143. Ans (2)
NCERT-XI, Pg. # 207

148. Ans (1)
NCERT-XI, Pg. # 212

150. Ans (2)
NCERT-XI, Pg. # 218

152. Ans (2)
NCERT-XI, Pg. # 249, Fig. 15.11

154. Ans (4)
NCERT-XI, Pg. # 199

158. Ans (3)
NCERT-XI, Pg. # 201, Fig. 12.3

159. Ans (4)
NCERT-XI, Pg. # 208

160. Ans (1)
NCERT-XI, Pg. # 211

164. Ans (1)
NCERT-XI, Pg. # 243

165. Ans (2)
NCERT-XI, Pg. # 178

169. Ans (3)
NCERT-XI, Pg. # 186

170. Ans (2)
NCERT-XI, Pg. # 187, Fig. 11.8