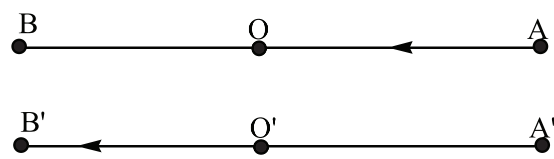
PHYSICS **Max Marks: 100**

(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 in all other cases.

26. Two particles undergo SHM along parallel lines with the same time period(T) and equal amplitudes and mean position at origin. At a particular instant, one particle is at its extreme position while the other is at its mean position. They move in the same direction. They will cross each other after a further time:



1) T/8 2) 3T/8 3) T/6 4) 4T/3

27. A particle at the end of a spring executes simple harmonic motion with a period t_1, while the corresponding period for another spring is t_2. If the period of oscillation with the two springs in series is T, then:

1) $T = t_1 + t_2$ 2) $T^2 = t_1^2 + t_2^2$ 3) $T^{-1} = t_1^{-1} + t_2^{-1}$ 4) $T^{-2} = t_1^{-2} + t_1^{-2}$

28. One end of a spring of force constant k is fixed to a vertical wall and the other to a body of mass m resting on a smooth horizontal surface. There is another wall at a distance x_0 from the body. The spring is then compressed by $2x_0$ and released. The time taken to strike the wall is:

1) $\frac{\pi}{6}\sqrt{\frac{m}{k}}$ 2) $\sqrt{\frac{m}{k}}$ 3) $\frac{2\pi}{3}\sqrt{\frac{m}{k}}$ 4) $\frac{\pi}{4}\sqrt{\frac{m}{k}}$

29. A particle moves with simple harmonic motion in a straight line. In first τs it travels a distance 'a' and in the next τs it travels a distance '2a', in same direction, then:

1) Amplitude of motion is 3a 2) Time period of oscillation is 8τ

3) Amplitude of motion is 4a 4) Time period of oscillations is 6τ

30. A particle performs SHM with a time period T and amplitude a. The magnitude of average velocity of the particle over the time interval during which it travels a distance $\frac{a}{2}$ from the extreme position is:

1) $\frac{a}{T}$ 2) $\frac{2a}{T}$ 3) $\frac{3a}{T}$ 4) $\frac{a}{2T}$

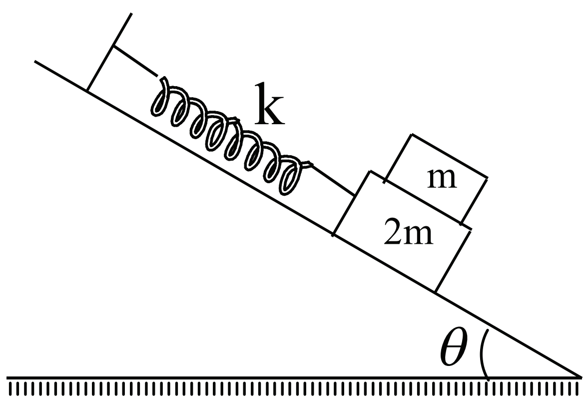
31. Two particles P and Q describe SHM of same amplitude a, same frequency f along the same straight line about same mean position. The maximum distance between the two particles is $a\sqrt{2}$. The phase difference between the particle is:

1) Zero 2) $\frac{\pi}{2}$ 3) $\frac{\pi}{6}$ 4) $\frac{\pi}{3}$

32. A particle performs SHM of amplitude A along a straight line. When it is at a distance $\frac{\sqrt{3}}{2}A$ from mean position, its kinetic energy gets increased by an amount $\frac{1}{2}m\omega^2A^2$ due to an impulsive force. Then its new amplitude becomes:

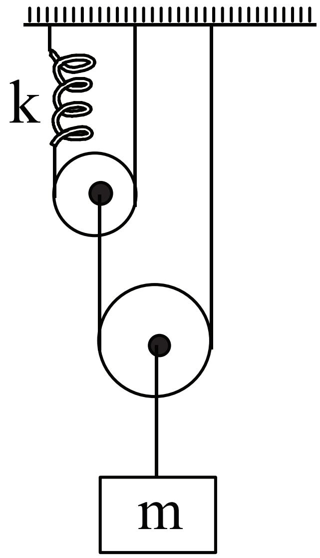
1) $\frac{\sqrt{5}}{2}A$ 2) $\frac{\sqrt{3}}{2}A$ 3) $\sqrt{2}A$ 4) $\sqrt{5}A$

33. The coefficient of friction between block of mass m and 2m is $\mu = 2\tan\theta$. There is no friction between block of mass 2m and inclined plane. The maximum amplitude of two blocks system for which there is no relative motion between both the blocks is:



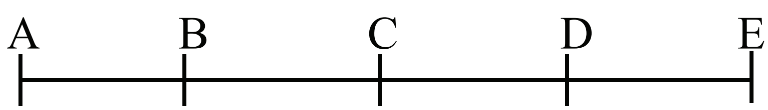
1) $g\sin\theta\sqrt{\frac{k}{m}}$ 2) $\frac{mg\sin\theta}{k}$ 3) $\frac{3mg\sin\theta}{k}$ 4) None of these

34. Find the natural frequency of oscillation of the system as shown in figure. Pulleys are mass less and frictionless. Spring and string are also mass less.



1) $\frac{1}{7\pi}\sqrt{\frac{k}{m}}$ 2) $\frac{1}{2\pi}\sqrt{\frac{k}{m}}$ 3) $\frac{2}{\pi}\sqrt{\frac{k}{m}}$ 4) $\frac{1}{\pi}\sqrt{\frac{2k}{m}}$

35. A body performs SHM along the straight line segment ABCDE with C as the midpoint of segment AE (A and E are the extreme position for the SHM). Its kinetic energies at B and D are each one fourth of its maximum value. If length of segment AE is 2R, then the distance between B and D is:



1) $\frac{\sqrt{3}}{2}R$ 2) $\frac{R}{\sqrt{2}}$ 3) $\sqrt{3}R$ 4) $\sqrt{2}R$

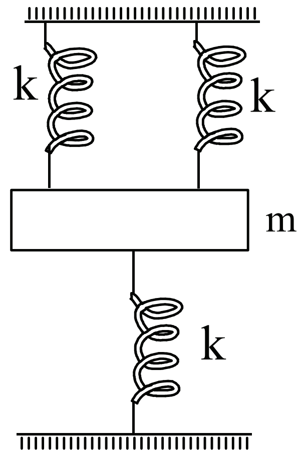
36. A horizontal spring-block system of mass 2kg executes SHM. When the block is passing through its equilibrium position, an object of mass 2kg is put on it and the two move together. The new amplitude of vibration is (A being its initial amplitude):

1) $\sqrt{\frac{2}{3}}A$ 2) $\sqrt{\frac{3}{2}}A$ 3) $\sqrt{2}A$ 4) $\frac{A}{\sqrt{2}}$

37. A particle executes SHM of amplitude A and time period T. the distance travelled by the particle in the duration its phase changes from $\frac{\pi}{12}$ to $\frac{5\pi}{12}$:

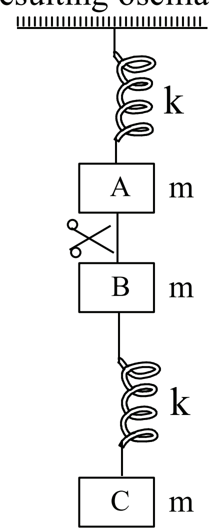
1) $\frac{1}{\sqrt{2}}A$ 2) $\sqrt{\frac{3}{2}}A$ 3) $\frac{2}{\sqrt{3}}A$ 4) None of them

38. In the figure all springs are ideal and identical having spring constant k. The block has mass m. The frequency of oscillation of the block is :



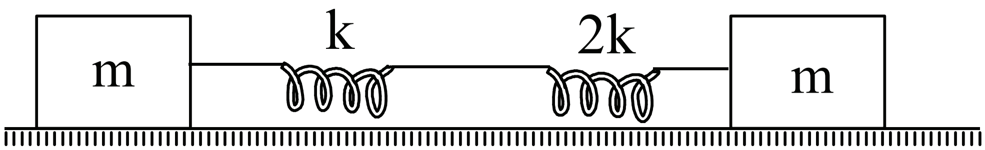
1) $\frac{1}{2\pi}\sqrt{\frac{3k}{m}}$ 2) $\frac{1}{2\pi}\sqrt{\frac{3k}{2m}}$ 3) $2\pi\sqrt{\frac{2K}{3m}}$ 4) $2\pi\sqrt{\frac{K}{m}}$

39. The spring block system as shown in figure is in equilibrium. The string connecting blocks A and B is cut. The mass of all the three blocks is m and spring constant of both the spring is k. the amplitude of resulting oscillation of block A is:



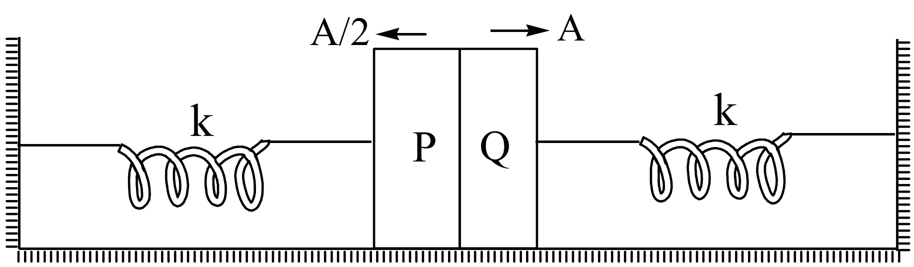
1) $\frac{mg}{k}$ 2) $\frac{2mg}{k}$ 3) $\frac{3mg}{k}$ 4) $\frac{4mg}{k}$

40. A system is shown in the figure. The time period for small oscillations of the two blocks will be.



1) $2\pi\sqrt{\frac{3m}{k}}$ 2) $2\pi\sqrt{\frac{3m}{2k}}$ 3) $2\pi\sqrt{\frac{3m}{4k}}$ 4) $2\pi\sqrt{\frac{3m}{8k}}$

41. Two identical blocks P and Q have mass m each. They are attached to two identical springs (of spring constant k) initially unstretched. Both the block are initially in contact as shown. Now the left spring (attached with block P) is compressed by $\frac{A}{2}$ and the right spring (attached with block Q) is compressed by A. Both the blocks are then released simultaneously.

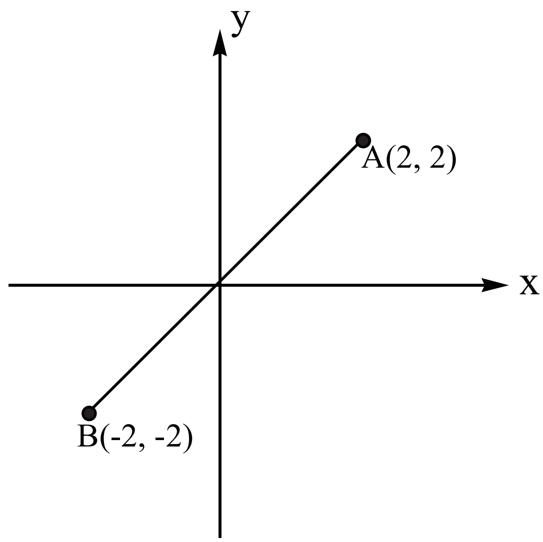


Smooth horizontal floor

After what time when they were released from rest, shall the blocks collide for the first time.

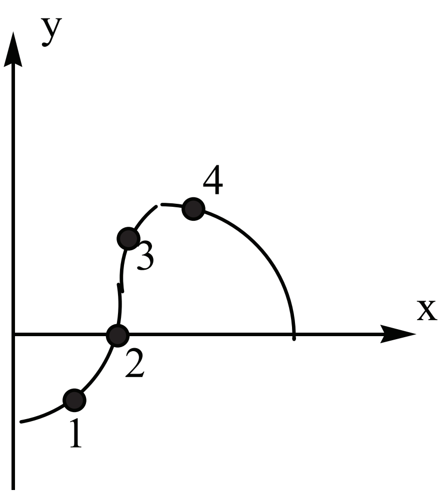
1) $\frac{\pi}{2}\sqrt{\frac{m}{k}}$ 2) $\pi\sqrt{\frac{m}{k}}$ 3) $\frac{\pi}{3}\sqrt{\frac{m}{k}}$ 4) None of these

42. A particle of mass m = 2 kg executes SHM in xy-plane between points A and B under action of force $\vec{F} = F_x\hat{i} + F_y\hat{j}$. Minimum time taken by particle to move from A to B is 1 sec. At t = 0 the particle is at x = 2 and y = 2. Then F_x as function of time t is :



1) $-4\pi^2 \sin \pi t$ 2) $-4\pi^2 \cos \pi t$ 3) $4\pi^2 \cos \pi t$ 4) $4\pi^2 \sin \pi t$

43. Velocity time graph of a particle executing SHM is as shown in fig. select the correct alternatives. At point 4, velocity is maximum.



i) At position-1, displacement of particle may be + ve or – ve

ii) At position-2, displacement of particle – ve

iii) At position-3, acceleration of particle + ve

iv) At position-4, acceleration of particle – ve

1) i, ii 2) ii, iii 3) i, iv 4) iii, iv

44. Time period (T) and amplitude (A) are same for two particles which undergo SHM along the same line starting from same time, At one particular instant, one particle is at phase $\frac{3\pi}{2}$ and other is at phase zero, while moving in the same direction. Find the time at which they will cross each other:

1) 4T/3 2) 3T/8 3) 3T/4 4) 3T/7

45. T he force acting on a particle of mass 0.5kg executing SHM is given by F= -4x. Total mechanical energy is 10J and amplitude of oscillations is 2m.. At x = +1m,, potential energy and kinetic energy of the particle are

1) 2J and 8J 2) 8J and 2J 3) 6J and 4J 4) 4J and 6J

(NUMERICAL VALUE TYPE)

This section contains 5 questions. Each question is numerical value. For each question, enter the correct numerical value (in decimal notation, truncated/rounded-off to second decimal place.
(e.g. 6.25, 7.00, -0.33, -.30, 30.27, -127.30).
Marking scheme: +4 for correct answer , 0 if not attempted and 0 in all other cases.

46. A particle is moving on x-axis has potential energy $U = 2 - 20x + 5x^2 J$ along x-axis. The particle is released at x = -3. The maximum value of 'x' will be ________
[x is in meters and U is in joule]

47. A block weighing 10N is attached to the lower end of a vertical spring (k =200N/m), the other end of which is attached to a ceiling. The block oscillates vertically and has a kinetic energy of 2.0J as it passes through the point at which the spring is unstretched. The maximum kinetic energy of the block as it oscillates is ____________ J.

48. A block weighing 10N is attached to the lower end of a vertical spring (k =200N/m), the other end of which is attached to a ceiling. The block oscillates vertically and has a kinetic energy of 2.0J as it passes through the point at which the spring is unstretched. The amplitude of the oscillation of block is _____m

49. A pan with certain weight is attached to a spring. The period of vertical oscillation is found to be 0.5sec. If some weight is added in the pan, the time period becomes 0.6sec. the additional distance through which the spring stretches due to additional load in equilibrium is______ cm

50. Large number of springs of spring constants K, 2K, 4K, 8K, …….. are connected in series. A mass 'm' is attached to one end the system and is allowed to oscillate. Its time period is $2\pi\sqrt{\frac{Pm}{K}}$, find the value of 'P'.

Sec: Jr.Super60 | Jee-Main | Date: 02-01-2021
Time: 10.00Am to 01.00Pm | **WTM-22** | Max.Marks:300

Key Sheet

MATHEMATICS

1	3	2	3	3	1	4	2	5	3
6	1	7	2	8	3	9	4	10	2
11	3	12	1	13	1	14	3	15	3
16	2	17	3	18	2	19	2	20	1
21	6.0	22	6.0	23	2.0	24	5.0	25	4.0

PHYSICS

26	2	27	2	28	3	29	4	30	3
31	2	32	3	33	3	34	3	35	3
36	1	37	1	38	1	39	2	40	3
41	1	42	2	43	2	44	2	45	4
46	7.0	47	2.25	48	15.0	49	2.7	50	2.0

CHEMISTRY

51	4	52	2	53	1	54	3	55	1
56	1	57	2	58	2	59	3	60	2
61	3	62	4	63	2	64	1	65	2
66	3	67	1	68	3	69	**3**	70	4
71	5.0	72	**2**	73	4.0	74	4.0	75	4.0

$\frac{dS}{dx} = \frac{b}{c}(c-2x)\sin A = 0 \Rightarrow x = \frac{c}{2}$

Also, $\left.\frac{d^2S}{dx^2}\right]_{x=\frac{c}{2}} = \frac{-2b}{c} < 0$

So, S is maximum when $x = \frac{c}{2}$

Now, $S_{\max} = \frac{1}{4}bc\sin A$

$= \frac{1}{2}\left(\frac{1}{2}bc\sin A\right) = \frac{1}{2}\left[area(\Delta ABC)\right] = \frac{1}{4}\left|\begin{vmatrix} 1 & -1 & 1 \\ 4 & -2 & 1 \\ 9 & 3 & 1 \end{vmatrix}\right| = 5(sq)$

25. $f(x) = \left(\sqrt{4-x^2}-3\right)^2 + \left(\sqrt{4-x^2}+1\right)^3$

$\left(\begin{array}{ll} & Let\ \sqrt{4-x^2} = a \\ \Rightarrow & a \in [0,2]\ for x \in [-2,2] \end{array}\right)$

$f(a) = (a-3)^2 + (a+1)^3$

$\Rightarrow \quad f'(a) = 3a^2 + 8a - 3$

$\Rightarrow \quad f'(a) = 0$

$a = \frac{1}{3}, -3$ (to be rejected)

$f_{\max} = \max\left\{f(0), f(2), f\left(\frac{1}{3}\right)\right\}$

$= \max\left\{10, 28, \frac{256}{27}\right\} = 28$

PHYSICS

26. We can map the two SHMs as projections of two uniform circular motions and find the phase angle of the position where the two particles will cross each other. This will happen at a phase angle 135^0 from initial positions hence the time to cover 135^0 is $T(135/360) = 3T/8$

27. For a spring block system time period is given as $T = 2\pi\sqrt{\frac{m}{k}} \Rightarrow T \propto \frac{1}{k}$

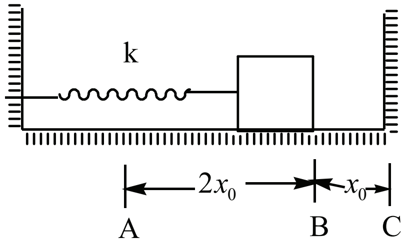
For the two given springs, we use

$t_1^2 \propto \frac{1}{k_1}$ & $t_2^2 \propto \frac{1}{k_2} \Rightarrow t_1^2 + t_2^2 \propto \frac{1}{k_1} + \frac{1}{k_2}$

But $\frac{1}{k_1} + \frac{1}{k_2} = \frac{1}{k_{eq}} \propto T^2$

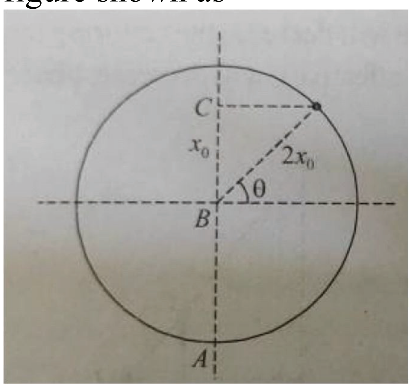
$\Rightarrow t_1^2 + t_2^2 = T^2$

28. The total time from A to C



$t_{AC} = t_{AB} + t_{BC} = \frac{T}{4} + t_{BC}$

Where T = Time period of oscillation of spring-mass system and t_{BC} can be given by the figure shown as



$\theta = \frac{\pi}{6}$

$t_{BC} = \frac{\pi/6}{\omega} = \frac{T}{12}$

$t_{AC} = \frac{T}{4} + \frac{T}{12} = \frac{T}{3} = \frac{2\pi}{3}\sqrt{\frac{m}{k}}$

29. We use equation of SHM as

$x = A\cos\omega\tau$

$A - a = A\cos\omega\tau$

$A - 3a = A\cos 2\omega\tau$

Using $\cos 2\omega\tau = 2\cos^2\omega\tau - 1$

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

$\Rightarrow \frac{A-3a}{A} = \frac{2A^2 + 2a^2 - 4Aa}{A^2} - 1$

$\Rightarrow A^2 - 3Aa = A^2 + 2a^2 - 4Aa$

$\Rightarrow 2a^2 = Aa$

$\Rightarrow A = 2a$

From equation (1) $a = 2a\cos\omega\tau$

$\cos\omega\tau = \frac{1}{2}$

$\Rightarrow \omega\tau = \frac{\pi}{3}$

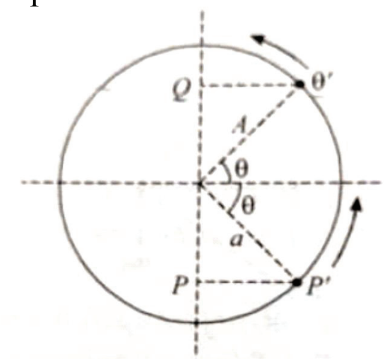
$\Rightarrow \frac{2\pi}{T}.\tau = \frac{\pi}{3}$

$\Rightarrow T = 6\tau$

30. The magnitude of displacement in the given time interval is $\frac{a}{2}$ and time taken by the particle to cover a distance $\frac{a}{2}$ starting from rest is $\frac{T}{6}$

Hence the magnitude of average velocity over given time interval is $v = \frac{a/2}{T/6} = \frac{3a}{T}$

31. For two particles in SHM along same time below figure shows the state of maximum separation.



Here we use

$PQ = a\sqrt{2} = 2a\sin\theta$

$\Rightarrow \sin\theta = \frac{1}{\sqrt{2}}$

$\Rightarrow \theta = \sin^{-1}\left(\frac{1}{\sqrt{2}}\right) = \frac{\pi}{4}$

Thus phase difference between P & Q is $\phi = 2\theta < \frac{\pi}{2}$

32. Due to impulse, the total energy of the particle becomes

$\frac{1}{2}m\omega^2A^2 + \frac{1}{2}m\omega^2A^2 = m\omega^2A^2$

Oscillations and simple Harmonic Motion

Let A' be the new amplitude

$\Rightarrow \frac{1}{2}m\omega^2(A')^2 = m\omega^2A^2$

$\Rightarrow A' = \sqrt{2}A$

33. The maximum static frictional force is

$f = \mu mg\cos\theta = 2\tan\theta mg\cos\theta = 2mg\sin\theta$

Applying Newton's second law to block at lower extremic position, we have

$f - mg\sin\theta = m\omega^2A$

34. Let mass 'm' falls down by x so spring extends by $4x$, which causes an extra tension T in lowest string

$\Rightarrow \frac{T}{4} = k(4x)$

$T = (16k)x$

Thus equation of motion of mass m is

$T = ma$

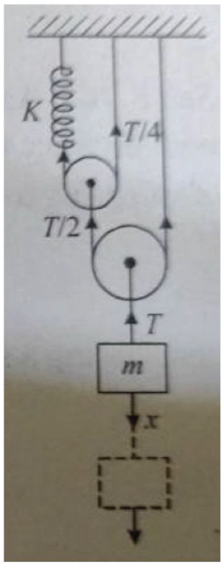
$$\Rightarrow a = -\frac{16k}{m}x$$

Comparing with $a = -\omega^2 x$

We get $\omega = \sqrt{\frac{16k}{m}}$

$$\Rightarrow f = \frac{\omega}{2\pi} = \frac{1}{2\pi}\sqrt{\frac{16k}{m}}$$

$$= \frac{2}{\pi}\sqrt{\frac{k}{m}}$$



35. When the particle crosses point D, its speed is half of the maximum speed. Given that amplitude is 2R

$$\Rightarrow v = \frac{v_{\max}}{R}\sqrt{r^2 - x^2}$$

Or $\frac{v_{\max}}{2} = \frac{v_{\max}}{R}\sqrt{R^2 - x^2}$

Or $x = \frac{\sqrt{3}}{2}R$

$\Rightarrow$ Distance $RD - 2x = \sqrt{3}R$

36. By conservation of momentum, we have

$$2V = 3V'$$

$$\Rightarrow V' = \frac{2}{3}V$$

Initially $E_1 = \frac{1}{2}m_1V_1^2 = \frac{1}{2}2.V^2 = V^2$

If A is initial amplitude we use

$$\Rightarrow \frac{1}{2}KA^2 = V^2$$

Finally $E_f = \frac{1}{2}m_2V'^2 = \frac{1}{2}.3.\frac{2}{3}.\frac{2}{3}V^2 = \frac{2}{3}V^2$

If A' is final amplitude, we use

$$\Rightarrow \frac{1}{2}KA'^2 = \frac{2}{3}V^2$$

$\Rightarrow \frac{1}{2}KA'^2 = \frac{2}{3}\left(\frac{1}{2}KA^2\right) \Rightarrow A' = \frac{2}{3}A$

37. Distance travelled by the particle is given as

$l = A\sin\frac{4\pi}{12} - A\sin\frac{\pi}{12} = \frac{A}{\sqrt{2}}$

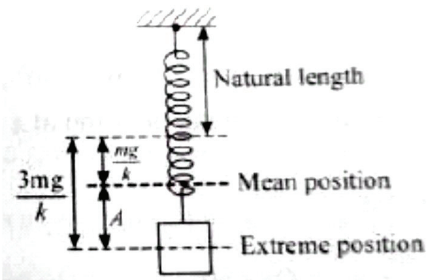
38. If spring has the mass then we use oscillation frequency as

Equivalent force constant of spring

$= 3k$ (As all are taken in parallel)

$\Rightarrow f = \frac{1}{2\pi}\sqrt{\frac{3k}{m}}$

39. Just after cutting the string extension in spring = $\frac{3mg}{k}$ and extension in the spring when block is in mean position = $\frac{mg}{k}$



$\Rightarrow$ Amplitude of oscillation is given as

$A = \frac{3mg}{k} - \frac{mg}{k} = \frac{2mg}{k}$

40. Both the spring are in series

$K_{eq} = \frac{K(2K)}{K+2K} = \frac{2K}{3}$

Time period

$T = 2\pi\sqrt{\frac{\mu}{K_{eq}}}$ where $\mu = \frac{m_1 m_2}{m_1 + m_2}$

Here $\mu = \frac{m}{2}$

$\Rightarrow T = 2\pi\sqrt{\frac{m}{2}.\frac{3}{2K}} = 2\pi\sqrt{\frac{3m}{4K}}$

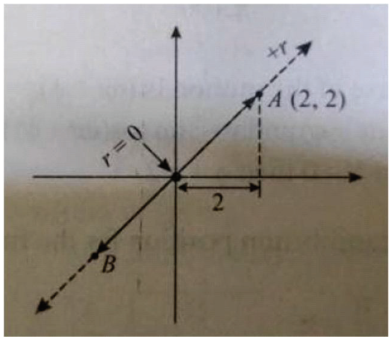
41. The block shall meet after time $t = \frac{T}{4}$, where T time period of either isolated spring block system,

$t = \frac{T}{4} = \frac{1}{4}2\pi\sqrt{\frac{m}{k}} = \frac{\pi}{2}\sqrt{\frac{m}{k}}$

42. $r = 2\sqrt{2}\cos\omega t$

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

$r = 2\sqrt{2}\cos\pi t$



$x = r\cos 45^0 = \frac{r}{\sqrt{2}} = 2\cos\pi t$

$\Rightarrow a_x = -\omega^2 x = -\pi^2 2\cos\pi t$

$\Rightarrow F_x = ma_x = -4\pi^2 \cos\pi t$

43. $v = -v_0 \cos\omega t$ (from graph)

$a = a_0 \sin\omega t$

$x = -A\sin\omega t$

$x_1 < 0, x_2 = -A, a_3 > 0, a_4 = 0$

44. $x_1 = A\sin\left(\omega t + \frac{3\pi}{2}\right) = A\sin\left(\omega t - \frac{\pi}{2}\right)$

$x_2 = A\sin(\omega t)$

When they cross, $x_1 = x_2$ & $v_1 = -v_2 \Rightarrow \phi_1 + \phi_2 = \pi$

$\left(\omega t - \frac{\pi}{2}\right) + \omega t = \pi$

$2\omega t = \frac{3\pi}{2} \Rightarrow t = \frac{3\pi}{4\omega} = \frac{3T}{6}$

45. $F = -m\omega^2 x$ & $F = 4x$

$= \frac{-1}{2}.\omega^2 x \Rightarrow \omega^2 = 8$

$E = \frac{1}{2} m\omega^2 A^2 + v_0$

$10 = \frac{1}{2} \times \frac{1}{2} \times 8 \times 2^2 + v_0 = 2J$

$x = 1m = \frac{A}{2}, v = \frac{1}{2} m\omega^2 x^2 + v_0$

$= \frac{1}{2} \times \frac{1}{2} \times 8 \times 1^2 \times 2$

$= 4J$

$KE = 6J$

46. Given that $U = 2 - 20x + 5x^2$

Interaction force on particle is given as

$F = -\frac{dU}{dx} = 20 - 10x$

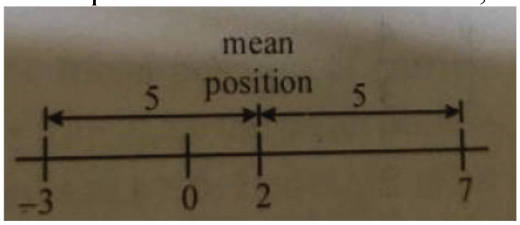
As F is linearly with $-x$, particle is executing SHM

At equilibrium position F = 0

$\Rightarrow 20-10x=0$

$\Rightarrow x=2$

Since particle is released at $x=-3$, therefore amplitude of particle is 5



It will oscillate about $x=2$ with an amplitude of 5

$\Rightarrow$ maximum value of x will be 7

$$t=\frac{1}{4}=\frac{1}{4}2\pi\sqrt{\frac{m}{k}}=\frac{\pi}{2}\sqrt{\frac{m}{k}}$$

47. Maximum KR is acquired by the block when it passes the mean position of SHM where $\sum F=0$ or $mg=kx$

Fig….

$$x=mg/k=\frac{10}{200}=\frac{1}{20}m$$

Applying work energy theorem from position A to B on the block $K_f-K_i=W_{gravity}+W_{spring}$

$$\Rightarrow K_f-2J=10N\left(\frac{1}{20}m\right)+\left[-\frac{1}{2}\times200\times\left(\frac{1}{20}\right)^2\right]$$

$$\Rightarrow k_f=2.25J$$

48. $KE_{\max}=\frac{1}{2}kA^2$

$$A=\sqrt{\frac{2(KE_{\max})}{k}}=\sqrt{\frac{2\times(2.25)}{200}}=\sqrt{\frac{9}{400}}=\frac{3}{20}m=15cm$$

49. $T=2\pi\sqrt{\frac{m}{K}}=2\sqrt{\frac{m\pi^2}{K}}=2\sqrt{\frac{mg}{K}}$

$$T_1=\frac{1}{2}=2\sqrt{\frac{m_1g}{K}}\Rightarrow\frac{m_1g}{K}=\frac{1}{16}=x_1$$

$$T_2=0.6=2\sqrt{\frac{m_2g}{K}}\Rightarrow\frac{m_2g}{K}=\frac{9}{100}=x_2$$

$$\Delta x=x_2-x_1=\frac{9}{100}-\frac{1}{16}=\frac{36-25}{400}=\frac{11}{400}m=\frac{11}{4}cm$$

50. $\frac{1}{k'}=\frac{1}{k_1}+\frac{1}{k_2}+.......=\frac{1}{k}\left(1+\frac{1}{2}+\frac{1}{4}+.....\right)$

$$=\frac{1}{K}-\frac{1}{1-\frac{1}{2}}=\frac{2}{K}\qquad T=2\pi\sqrt{\frac{2m}{K}}$$

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02-01-2021_Jr.Super60_Jee-Main_WTM-22_Final Key

S.NO	SUB	Q.NO	GIVEN KEY	FINALIZED KEY	EXPLANATION
1	MAT	3	1	1 or 4	Key Change
2	MAT	5	3	2	Key Change
3	MAT	8	3	4	Key Change
4	MAT	11	3	Delete	Ambiguity Question
5	PHY	36	1	4	Key Change
6	PHY	48	15.0	0.15	Key Change
7	PHY	49	2.7	2.70 to 2.80	Range must be given
8	CHE	72	2	0	Key Change
9	CHE	74	4	2 or 4	Stereoisomers can't position isomers

Question Paper Setter is **Total responsible** for the Key finalization**:**

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