THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

1) A particle executing SHM starts from mean position. The phase of that particle is $\pi/2$ when it has
   a) Maximum displacement
   b) Maximum velocity
   c) Maximum energy
   d) Maximum kinetic energy

2) The ratio of kinetic energy of mean position to the potential energy when the displacement is half of the amplitude is A constant
   a) 4/1
   b) 2/3
   c) ¼
   d) ½

3) Two simple pendulums of length 5 meter and 20 meter respectively are given small linear displacement in one direction at the same time. They will be again in the same phase when the pendulum of shorter length has completed oscillations
   a) 1
   b) 2
   c) 3
   d) 4

4) How will the time period of a simple pendulum change when its length is doubled?
   a) $\sqrt{3}$ times
   b) $\sqrt{2}$ times
   c) 2 times
   d) 3 times

5) How is the time period effected, if the amplitude of a simple pendulum is increased?
   a) Increases
   b) Decreases
   c) Remains same
   d) Becomes zero

6) A simple harmonic wave having amplitude A and time period T is represented by the equation $y = 5 \sin \pi(t + 4)$ metres. Then the value of A (in metres) and T (in seconds) are
   a) A = 5, T = 2
   b) A = 10, T = 1
   c) A = 5, T = 1
   d) A = 5, T = 3