THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

1. Which of the following statements is incorrect?
   c) Sound travels in a straight line
   d) Sound is a form of energy
   e) Sound travels faster in vacuum that then in air
   f) Sound needs a medium to travel.

2. The equation of a progressive wave traveling on a stretched string is $y = 10 \sin\left(\frac{t}{0.02} - \frac{x}{100}\right)$ where x and y are in cm and t is in sec. what is the speed of the wave?
   i) 500 cm/s
   j) 50 m/s
   k) 40 m/s
   l) 20 m/s

3. Which of the following relationships between the acceleration 'a' and the displacement 'x' of a particle involve simple harmonic motion?
   m) $a=0.7x$
   n) $a=-200x^2$
   o) $a = -10x$
   p) $a=100x^3$

4. Spring is pulled down by 2 cm. What is the amplitude of motion?
   q) 0 cm
   r) 2 cm
   s) 4 cm
   t) 1 cm

5. Time period of simple pendulum of length L and a place where acceleration to gravity g is T. What is the period of simple pendulum of the same length at place where the acceleration due to gravity is 1.02 g is:
   u) T
   v) 1.02 T
   w) 0.99 T
   x) 1.01 T

6..In SHM graph of which of the following is a straight line?
   y) Total energy against Displacement
   z) Potential energy against Displacement
   aa) Acceleration against time
   bb) Velocity against time