11 A particle oscillating horizontally with simple harmonic motion has a displacement given by the equation:

$$x = 3.0 \sin(20t),$$

where x is the displacement in metres and t is the time in seconds.

What is the displacement of the particle when the kinetic energy of the particle is equal to the potential energy?

A 0 m
B 1.5 m
C 2.1 m
D 3.0 m

12 Which of the following is an example of resonance?