

0533-111 | Physics

Class test 3 Time: 30 min Full Marks: 15 Sec: A

Questions

- a. Explain Lissajous figure? [5]
- b. Show that average potential energy and kinetic energy for a simple harmonic motion are half of the total mechanical energy for a complete cycle. [5]
- c. A block has mass $m = 2.72 \times 10^5 \text{ kg}$ and is designed to oscillate at frequency $f = 10.0 \text{ Hz}$ and with amplitude $x_m = 22.0 \text{ cm}$. What is the block's speed as it passes through the point which is 7 cm away from the equilibrium point? [5]