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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 $m = 2.72 \times 10^5$ kg and is designed to oscillate at frequency $f = 10.0$ Hz and with amplitude $x_m = 22.0$ cm. What is the block's speed as it passes through the point which is 7 cm away from the equilibrium point? [5]