9. . A catapult with a basket of mass 50 kg launches a 200 kg rock by swinging around from a horizontal to a vertical position with an angular velocity of 2.0 rad/s. Assuming the rest of the catapult is massless and the catapult arm is 10 m long, what is the velocity of the rock as it leaves the catapult?  (A) 10 m/s (B) 20 m/s (C) 25 m/s (D) 50 m/s (E) 100 m/s