19. (d) : Given, $v_1 = 2\text{m/s}$

$v_2 = ?$

By the equation of continuity

$A_1 v_1 = A_2 v_2$

$\pi R_1^2 v_1 = \pi R_2^2 v_2$

$(2)^2 \times 2 = (1)^2 \times v_2$

$v_2 = 8\text{m/s}$