

والله اعلم
بما كنا نعمل

السؤال الرابع: 80 درجة

(b) $E = E_0 + E_K = m_0 c^2 + 0 \neq 0$

(b) 10^{-3} m.s^{-1} (6)

2) $V_1 - V_2 = 0$ الأنبوب

ع. ع. م. الزهراء: 27/8

$$(5) P_1 + \frac{1}{2} \rho v_1^2 + \rho g z_1 = P_2 + \frac{1}{2} \rho v_2^2 + \rho g z_2$$

(5) $b = \frac{b_0}{\gamma}$: $\frac{b_0}{\gamma} = \frac{b_0}{\sqrt{1 - \frac{v^2}{c^2}}}$

(5+5) $8 = \frac{b_0}{b} = \frac{2a}{a} = 2$

(10) $\gamma = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$

(5) $2 = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}} \Rightarrow 4 = \frac{1}{1 - \frac{v^2}{c^2}}$

(5) $4 - \frac{4v^2}{c^2} = 1 \Rightarrow \frac{4v^2}{c^2} = 3$

$v^2 = \frac{3}{4} c^2 \Rightarrow v = \frac{\sqrt{3}}{2} c$

(5) $v = \frac{\sqrt{3}}{2} \times 3 \times 10^8 =$

(5) $= \frac{3\sqrt{3}}{2} \times 10^8 \text{ m.s}^{-1}$

الفيزياء 60
المسألة الأولى : $\frac{b_0}{\gamma} = \frac{b_0}{\sqrt{1 - \frac{v^2}{c^2}}}$

(10) $E_0 = m_0 c^2 = m_p \cdot c^2$

(5) $= 1.67 \times 10^{-27} \times (3 \times 10^8)^2$

(5) $= 15.03 \times 10^{-11} \text{ J}$

(5) $E_k = E - E_0 = 4E_0 - E_0$

(5) $= 3E_0$

(5) $= 3 \times 15.03 \times 10^{-11}$

الفيزياء 70

(10) $Q' = S_1 \cdot v$

(3) $v_1 = \frac{Q'_1}{S_1} = \frac{3 \times 10^{-3}}{15 \times 10^{-4}}$

(2) $= 2 \text{ m.s}^{-1}$

(3) $v_2 = \frac{Q'_2}{S_2} = \frac{3 \times 10^{-3}}{5 \times 10^{-4}}$

(2) $= 6 \text{ m.s}^{-1}$

(10) $P_1 + \frac{1}{2} \rho v_1^2 + \rho g z_1 = P_2 + \frac{1}{2} \rho v_2^2 + \rho g z_2$

(5) $P_1 - P_2 = \frac{1}{2} \rho (v_2^2 - v_1^2) + \rho g (z_2 - z_1)$
 $= \frac{1}{2} \rho (v_2^2 - v_1^2) + \rho g z$

(5) $= \frac{1}{2} \times 1000 (36 - 4) + 1000 \times 10 \times 20$

$= \frac{1}{2} \times 1000 \times 32 + 200000$

(5) $= 16000 + 200000 = 216000 \text{ pa}$

(10) $W = -mgz + (P_1 - P_2) \Delta V$ (3)

(5) $m = \rho \cdot \Delta V \stackrel{!}{=} \rho \cdot V$

(3) $= 1000 \times 50 \times 10^{-3} = 50 \text{ kg}$

(5) $W = -50 \times 10 \times 20 + 216000 (50 \times 10^{-3})$

(2) $= 800 \text{ J}$

$$(5) E = 45,09 \times 10^{-11} \text{ J}$$

$$(5) E = m \cdot c^2$$

$$(5) m = \frac{E}{c^2} = \frac{4E_0}{c^2}$$

$$(5) = \frac{4 \times 15,03 \times 10^{-11}}{9 \times 10^{16}}$$

$$(5) = 6,68 \times 10^{-27} \text{ Kg}$$

المسألة الرابعة: م. 60

$$(10) Q' = \frac{V}{\Delta t} = \frac{800 \times 10^{-3}}{400} \quad (1)$$

$$(5) = 2 \times 10^{-3} \text{ m}^3 \cdot \text{s}^{-1}$$

$$(10) Q' = S \cdot v$$

$$v = \frac{Q'}{S} = \frac{2 \times 10^{-3}}{5 \times 10^{-4}}$$

$$(5) = 4 \text{ m} \cdot \text{s}^{-1}$$

$$(5) = 4 \text{ m} \cdot \text{s}^{-1}$$

$$(10) S_1 \cdot v_1 = S_2 \cdot v_2 \quad (3)$$

$$(5) S_1 \cdot v_1 = \frac{1}{3} S_1 \cdot v_2$$

$$(3) v_2 = 3v_1 = 3 \times 4 = 12 \text{ m} \cdot \text{s}^{-1} \quad (2)$$

النتيجة

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