نموذج اجابة امتحان الأزهر ... ٢

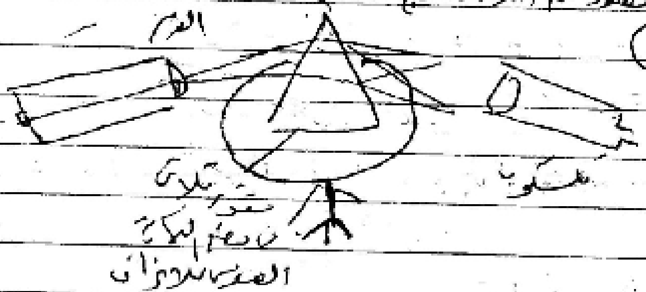
ج ١) ١- تسمية B ... من تشتت المسافة بين ... حيث الشحنة ... الذرية

٢- الجهد ... له قدرة عالية لتمييز تفاصيل الدقيقة ... $\lambda = \frac{h}{mv}$ ... ٧

٣- ... عدم ... بين ... والمجال

٤- ... الفراغ ... الرقي ... بزيادة ... الصوديوم ...

ب)



ج) $P_w = IV$ $\quad 12000 = I \times 240$ $\quad \therefore I = 50\,A$

$\eta = \frac{V_s N_p}{V_p N_s}$ $\quad \frac{80}{100} = \frac{240 \times 1800}{2400 \times N_s}$ $\quad \therefore N_s = 225$

$\eta = \frac{I_s N_s}{I_p V_p}$ $\quad \frac{80}{100} = \frac{50 \times 240}{I_p \times 2400}$ $\quad I_p = 6.25\,A$

ج٢) (١) mc (٢) $-mc$ (٣) $2mc$ ... $\frac{F\,\Delta t}{L}$

ب) ١- لأن لها قدرة عالية على ... الطول ...

٢- ... $V_B = V + Ir$

أ) $emf_{eff} = emf_{max} \times 0.707 = emf_{max} \times \frac{1}{\sqrt{2}}$

$\therefore emf_{max} = emf_{eff} \times \sqrt{2} = 220\sqrt{2} \times \sqrt{2} = 440\,V$

$emf_{max} = NBA\omega \quad \therefore 440 = 200 \times B \times 7 \times 10^{-2} \times \frac{2200}{7}$

$B = 0.1\,T$

$\omega = \frac{v}{r} = \frac{29}{10 \times 10^{-2}} = 290$

$emf_{max} = BANv = 240 \times 7 \times 10^{-2} \times 0.1 \times 290 = [illegible]\,V$

ج) ١) ... $\sin\theta = \dots$ $\quad \therefore f = \dots$

٢) ... الكبيرة جداً ...

٣) ...

٤) في عالم ... الإشعاعات ...

هـ) ... ؟

$\frac{h\nu}{c} = \dots$ ... $h\nu$ ...

$\frac{h\nu}{c^2}$

ج) ...

$V_B = V_g + V_R$
$\quad\;\; I_g R_g \quad\; IR$

$1.5 = \frac{3}{4} \times 40 \times 10^{-3} \times 10 + I \times 8$

$\therefore 1.5 = 0.3 + I \times 8 \quad \therefore 1.2 = 8I$

$\therefore I = 0.15\,A$

$\therefore R_s = \frac{I_g R_g}{I - I_g}$ $\quad R_s = \frac{\frac{3}{4} \times 40 \times 10^{-3} \times 10}{0.15 - 0.03} = 2.5\,\Omega$

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ج٤ - ١- الكترونات [illegible] ٢- [illegible] ٣- [illegible]

٤- [illegible]

I [illegible]

$$h\nu = h\nu_0 + \frac{1}{2}mv^2$$

$$I = \frac{V_B}{R} = \frac{6}{4} = 1.5\,A$$

$$B = \frac{\mu I N}{l}$$

$$= \frac{[illegible]\times 100 \times 1.5}{60\times 10^{-2}} = 0.75\,T$$

$$emf = -N\frac{\Delta B\,A}{\Delta t} = \frac{-166\times 40\times 10^{-?}\times 0.75}{0.1} = -3\,V$$

$$emf = -L\frac{\Delta I}{\Delta t} \quad L = \frac{emf\,\Delta t}{\Delta I} = \frac{3\times 0.1}{0.75}$$

ج٥ - [illegible]

[illegible]

$$\lambda = \frac{hc}{eV}$$

$$\frac{R_1}{R_2} = \frac{\rho_1 A_2 l}{R_2 A_2 l_1}$$

$$\frac{R_1}{R_2} = \frac{A_2}{A_1} \qquad \frac{R_1}{R_2} = \frac{A_2}{2A_2} = \frac{1}{2}$$

$$2R_2 = R_1$$

$I_1 = 2$

$I_2 = 1$

ج٦ ١- [illegible] ٢- [illegible] ٣- [illegible] ٤- [illegible]

[illegible]

$$B = \frac{\mu I N}{l} \qquad B = \frac{\mu I N}{2r}$$

$$\mu I N = \mu I N$$

$$B\,2r = B\,l$$

$$B\times 16\times 10^{-2} = 4\times 10^{-3}\times 20\times 10^{-2}$$

$$B = 80\times 10^{-?}\,T$$

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