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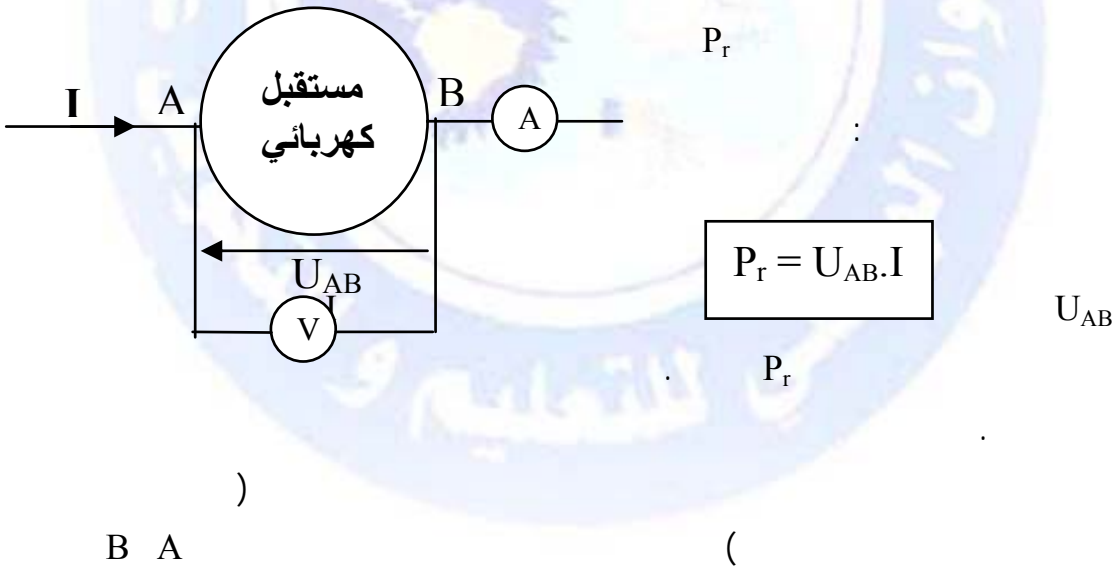
( )





)

(



$U_{eff}$       B A  
 $I_{eff}$       U  
 $U_{eff}$        $U_M$

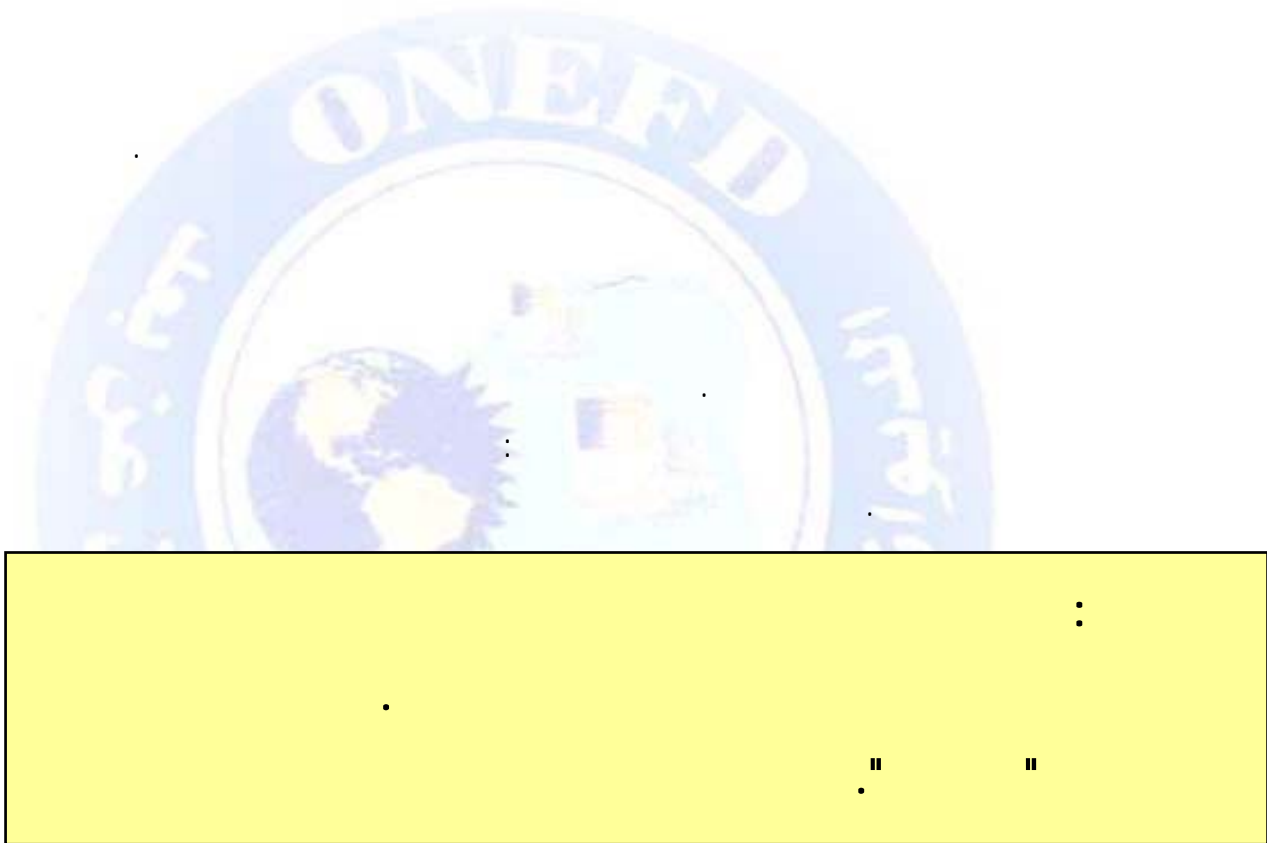
$$U_{eff} = \frac{U_M}{\sqrt{2}}$$

$I_{eff}$        $I_M$   
 $I_{eff} = \frac{I_M}{\sqrt{2}}$   
 $P_r$

$$P_r = U_{eff} \cdot I_{eff}$$

$U_{eff} \cdot I_{eff}$	$I_{eff}(A)$	$U_{eff}(V)$		
	5.45		220v - 1200W	
	0.45		220V - 100W	
	2.27		220V - 500W	
	3.64		220V - 800W	
	0.09		220V - 20W	
	8.18		220V - 1800W	
	6.36		220V - 1400W	

- :



:

" "

:

(We) (Q)

.....

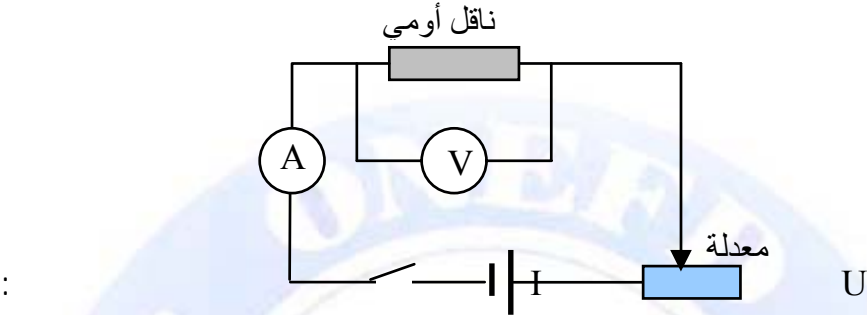
" "

:

(We) (Wi)( ) (Wr) (Wm) (Q)

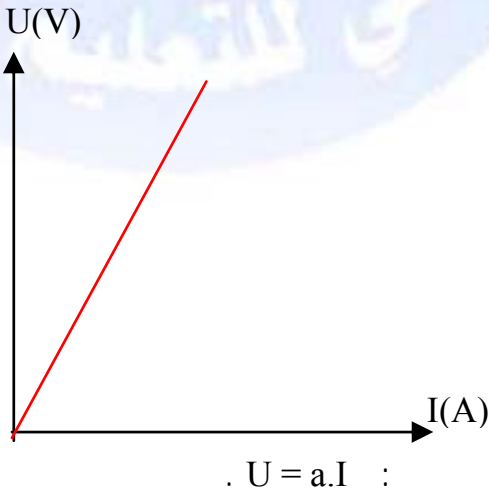
...

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I(A)	U(V)
0.5	10
1	20
1.5	30
2	40

)  
 $U = f(I)$   
 (





. R

:

$$U = R \cdot I$$

.Ω

:

, A

V

$$U = R \cdot I$$

$$R = \frac{U}{I} = \frac{12}{0.5}$$

$$R = 24 \, \Omega$$

:

$$P_r = U \cdot I$$

$P_r$

U

$$U = R \cdot I$$

$$P_r = (R \cdot I) \cdot I = R \cdot I^2$$

$$P_r = R \cdot I^2$$

Q

.Δt

$$Q = P_r \cdot \Delta t$$

:

$$Q = R \cdot I^2 \cdot \Delta t$$

.S t A

Q

( )

( )

R

$U_{\text{eff}}$

:  $I_{\text{eff}}$

$$U_{\text{eff}} = R \cdot I_{\text{eff}}$$

:

$$P_r = R \cdot I_{\text{eff}}^2$$

:  $\Delta t$

$$Q = R \cdot I_{\text{eff}}^2 \cdot \Delta t$$

:

V

$\Omega$

:

-  
-  
-

$U_{\text{eff}} = 220\text{V}$ :

$$U_{\text{eff}} = \frac{U_M}{\sqrt{2}} :$$

$$\sqrt{2} \approx 1.4$$

$$U_{\text{eff}} = R \cdot I_{\text{eff}} :$$

$$I_{\text{eff}} = \frac{U_{\text{eff}}}{R} :$$

$I_{\text{eff}} = .44\text{A}$  :

$$Q = R.I_{eff}^2 \Delta t :$$

$$Q = (500).(0.44)^2.(1.3600)$$

$$Q = 348480J :$$

:

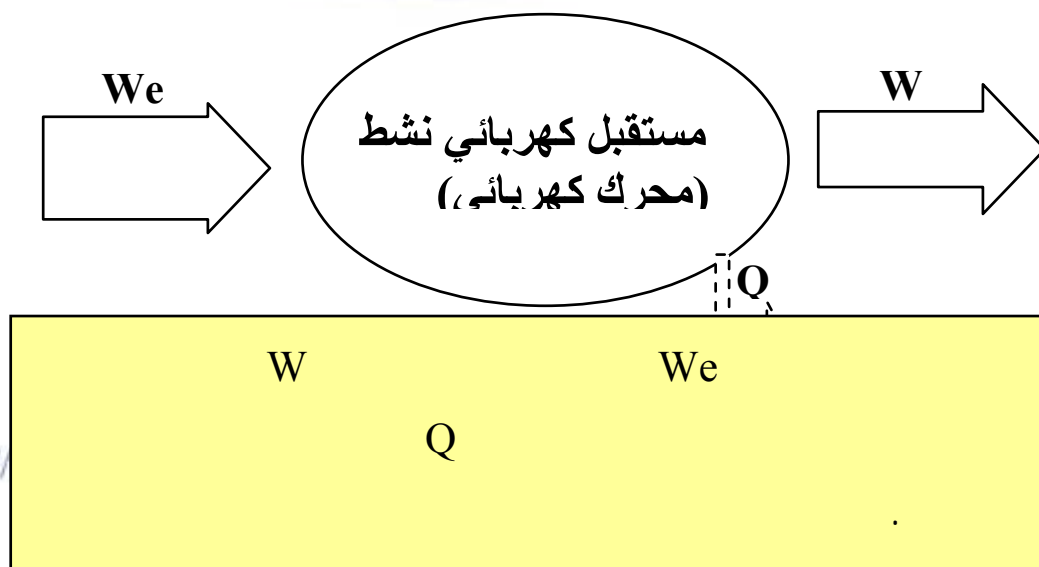
W

$$.E_r \quad (E_i)$$

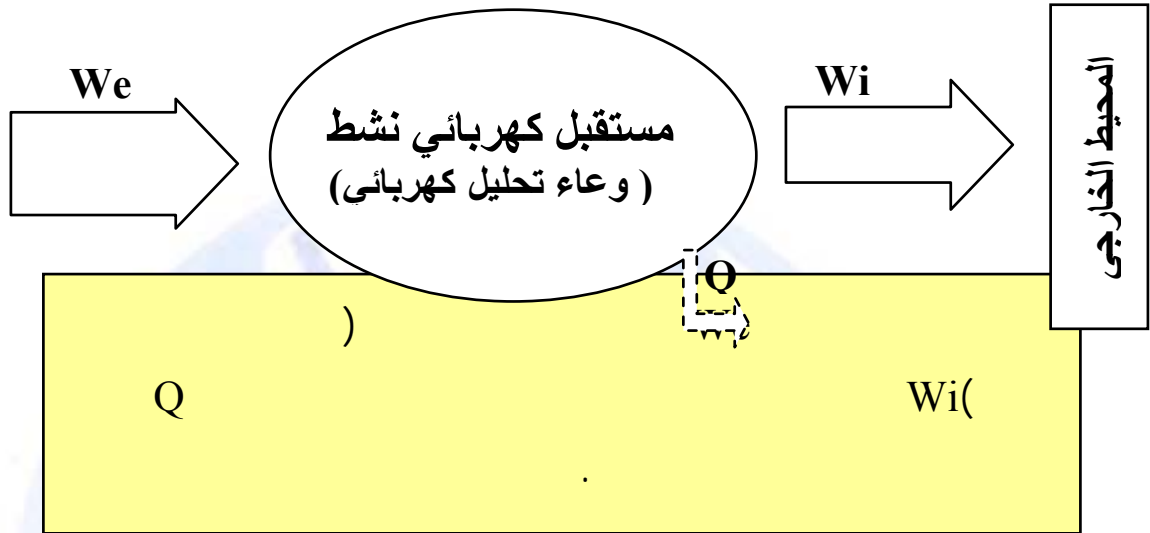
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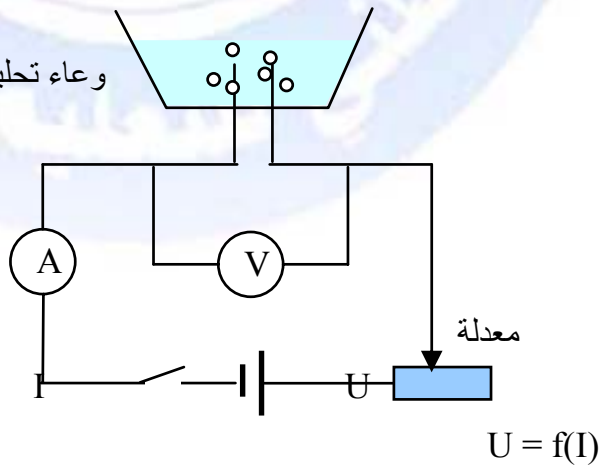
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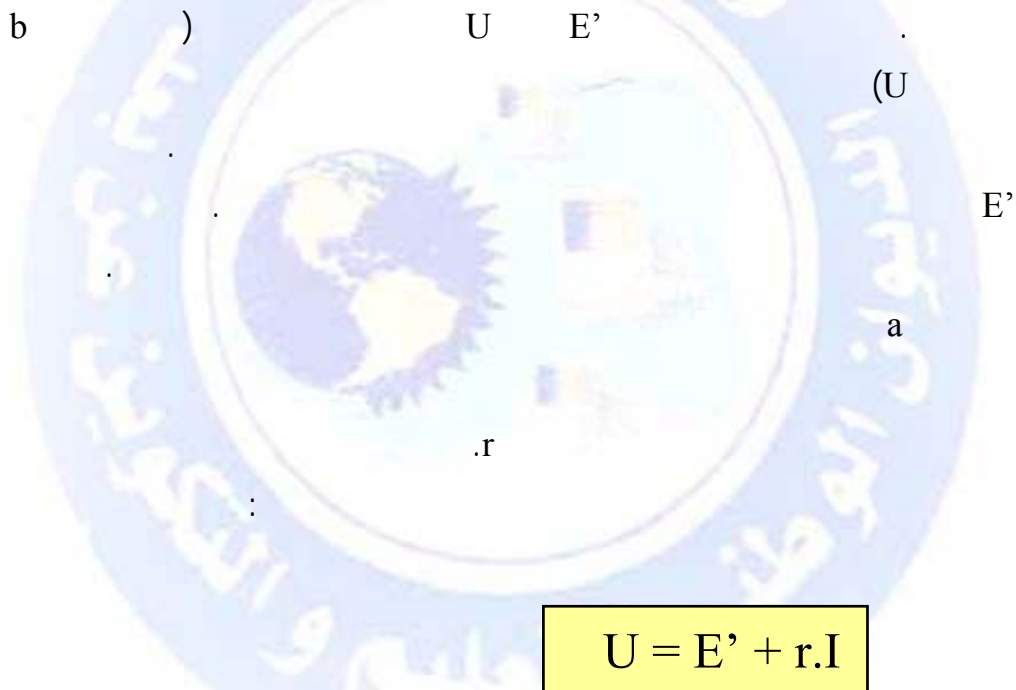


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وعاء تحليل كهربائي





$$U = E' + r.I$$

$$P_r$$

$$P_r$$

$$P_r = U \cdot I$$

$$P_r = (E' + r.I) \cdot I$$

$$P_r = E' \cdot I + r.I^2$$

$$P_r$$

$$P_r = E' \cdot I + r.I^2$$

:

$$r.I^2: \quad ( \quad ) \quad *$$

$$E'.I : \quad *$$

. $\Delta t$

$$: \quad W_e$$

$$W_e = P_r. \Delta t = (E'.I + r.I^2) \Delta t$$

:

$$W_e = E'.I. \Delta t + r.I^2. \Delta t$$

$$r.I^2. \Delta t : \quad :$$

$$) \quad E'.I. \Delta t : \quad E_i \quad ($$

:

$$r = 1\Omega$$

$$E' = 6V$$

$$.U = 12V$$

-

-

-

:

$$U = E' + r.I : \quad -$$

$$U - E' = r.I :$$

$$I = \frac{U - E'}{r} :$$

$$I = \frac{12 - 6}{1} = 6A :$$

$$P_{r(w)} = r.I^2$$

$$P_{r(w)} = 1.(6)^2$$

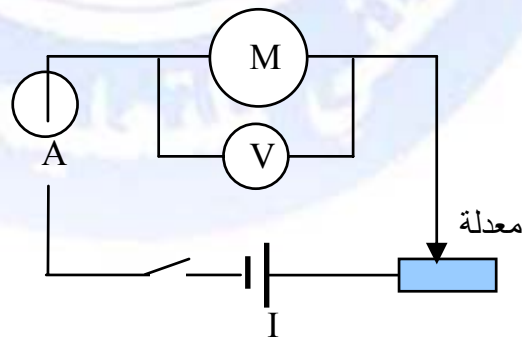
$$P_{r(w)} = 36W$$

$$P_{r(w)} = E'.I^2$$

$$P_{r(w)} = 6.(6)^2$$

$$P_{r(w)} = 216W$$

محرك كهربائي



U =

U

f(I)

U(V)

<http://www.onefd.edu.dz>

E'

جميع الحقوق محفوظة ©

I(A)

$$U = aI + b :$$

:

r

a -

E'

b -

:

$$U = E' + r.I$$

$$P_r = E'.I + r.I^2$$

E'.I

W<sub>m</sub>

. r.I<sup>2</sup>

Q

: Δt

$$W_e = E'.I. \Delta t + r.I^2. \Delta t$$

Δt

E'.I. Δt:

r.I<sup>2</sup>. Δt:

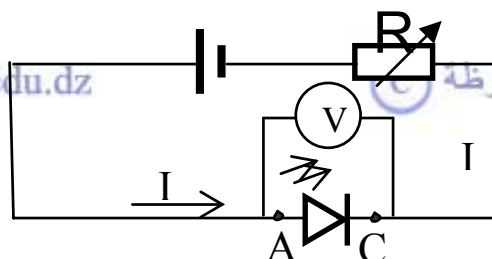
Δt

:(DEL)

-

: -

:





$U =$

$I$

$U$

$f(I)$

:

$U(V)$

$U_s$

$I(A)$

$$U = aI + b$$

:

$r$

$a -$

$U_s$

$b -$

$$U = U_s + r.I$$

:

$$P_r = U_s.I + r.I^2$$

$U_s.I$

$W_r$

$. r.I^2$

$Q$

$\Delta t$

$$W_e = U_s I \cdot \Delta t + r \cdot I^2 \cdot \Delta t$$

$\Delta t$

$$r \cdot I^2 \cdot \Delta t: \quad Q \qquad U_s I \cdot \Delta t: \quad E_i$$

75W-220V :

-  
-  
-  
-

\*



	U (V)	P (W)	I (A)	E
	12	50		...kJ
	220			150 kWh
			4,55	$54 \times 10^5$ J
		60	0,27	...kWh

(1h30min )



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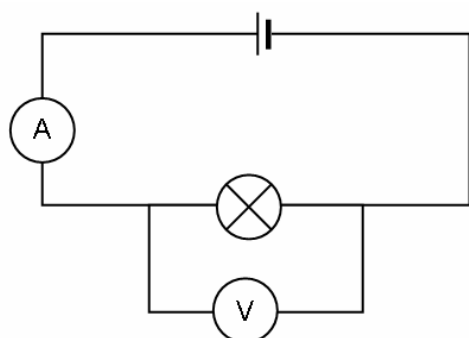
:

	U (V)	P (W)	I (A)	E
	12	50	4,16	270 kJ
	220	100	0,45	150 kWh
	220	1000	4,55	54 x10 <sup>5</sup> J
	# 220	60	0,27	90 kWh

-

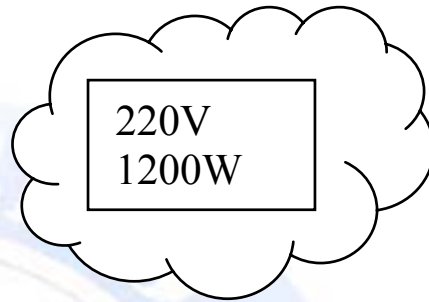
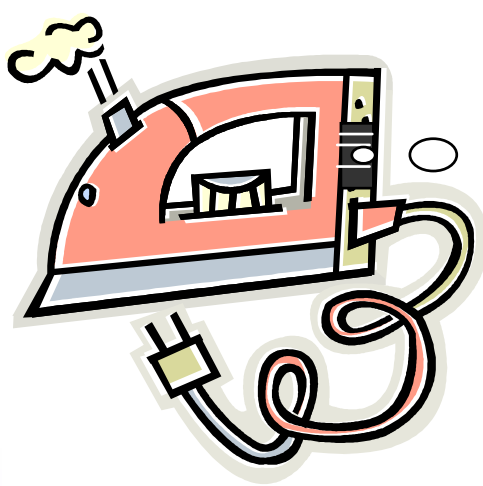
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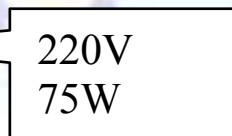
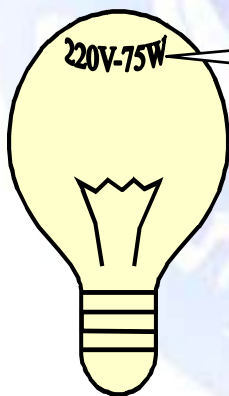
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220V -  
1200W-

.P



) 50Hz

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60Hz

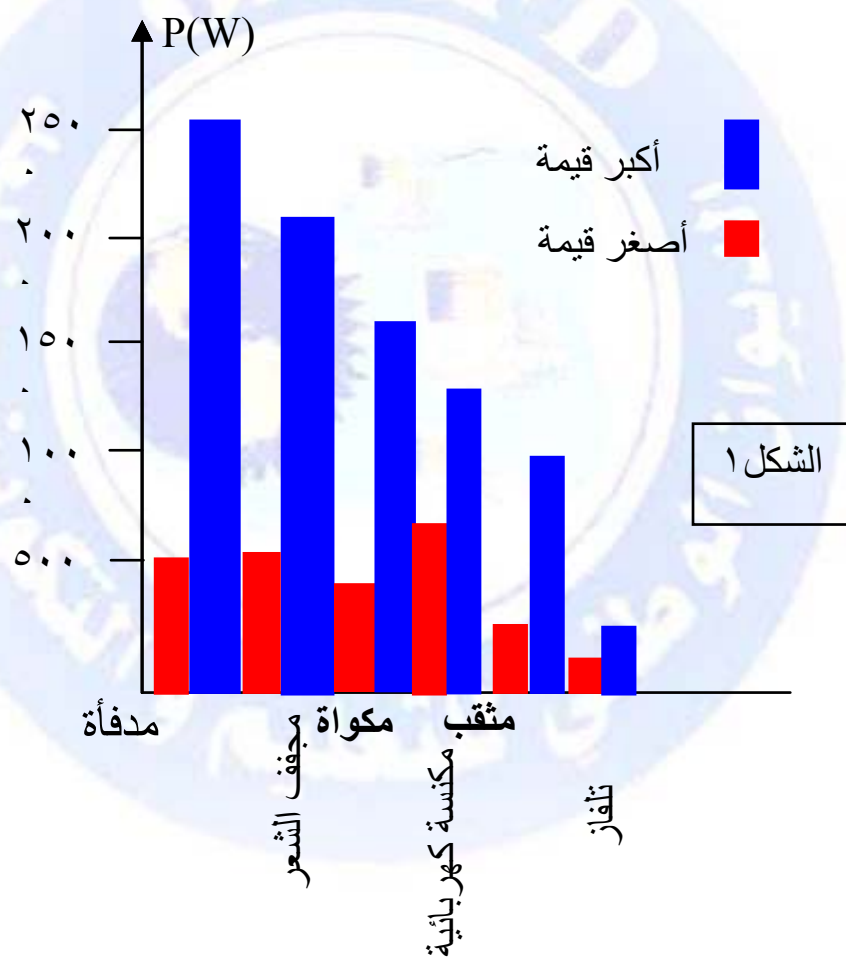
P

: t

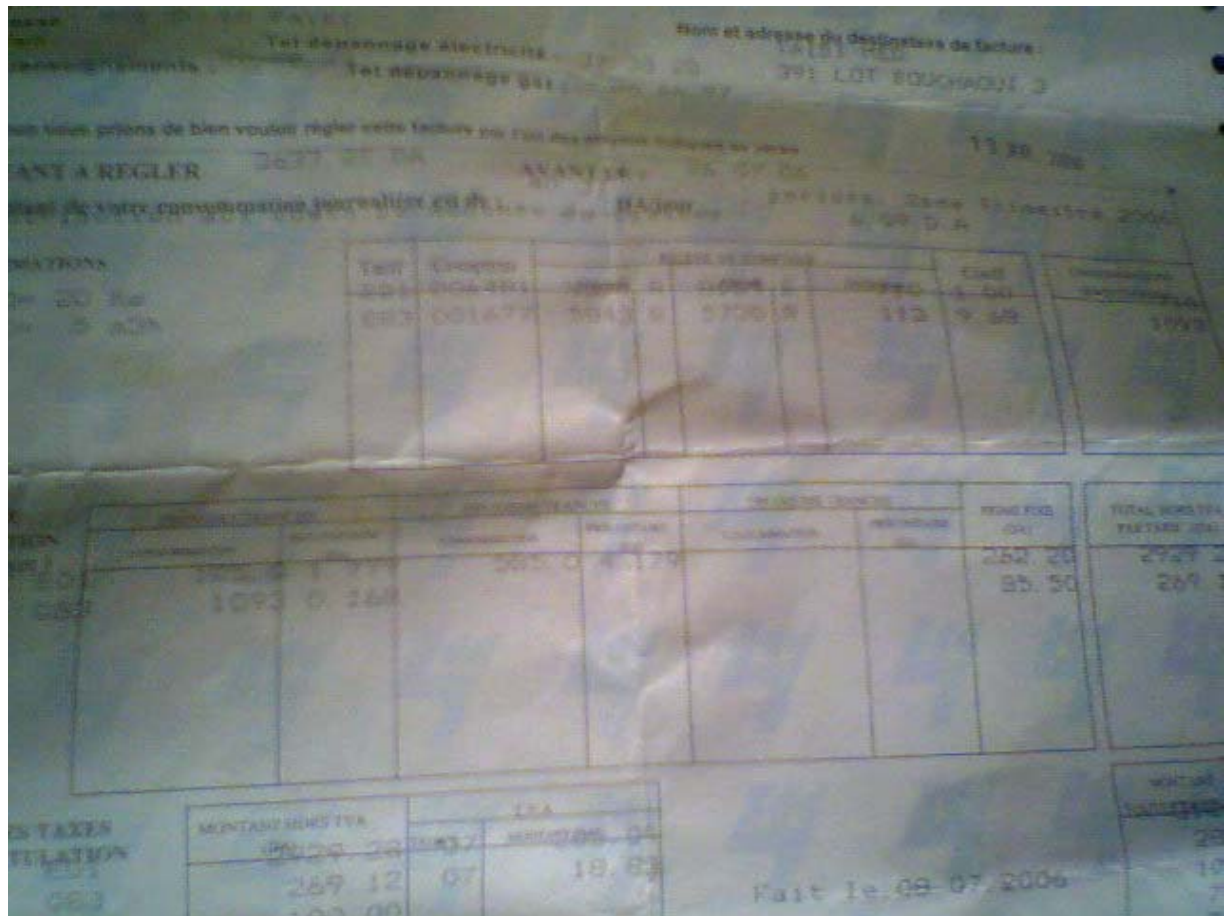
We P

$$We = P.t$$

$$\begin{aligned}
 &= \times \quad \text{We} \\
 &= \times \times \quad \text{(KJ)} \quad \text{(J)} \\
 &\quad \text{(KJ)} \\
 &(\text{Wh}) = \times : \quad (\text{Wh}) \\
 &\quad \text{(KWh)}
 \end{aligned}$$







فاتورة استهلاك الكهرباء والغاز

consommation

tarif	compteur	relevé de compteur		Difference	Coef	Consommation
		Nouveau	Ancien			
E1	006495	10520	9374	1146	1.00	1146
G83	001544	5940	5843	97	9.68	938

( ) -

#### DETAIL DE FACTURATION(en hors taxes)

IER E	TRANCH E	DEUXIE ME	TRANCH E	TROISIE ME	TRANCH E		)
OM ION	PRIX UNITAIR E (DA)	CONSOM MATION	PRIX UNITAIR E (DA)	CONSOM MATION	PRIX UNITAIR E (DA)	PRIME FIXE	( TOTAL (HORS TVA)
25.0	1.779	1021.0	4.179			262.20	4751.32
938	0.68					85.50	24308

-

#### Calcul des taxes et récapitulation

	Montant Hors TVA	TVA		المبلغ Montant Toutes Taxes
		Taux	( ) Montant (DA)	
Electricité E1	4751.32	07	332.59	5083.91
Gaz G83	243.08	07	17.01	26009
Droit fixe	100.00			100.00
axe Habitation	75.00			75.00
Timbre	56.00			56.00
	5225.40		349.60	<b>5575.0</b>

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A A )

( A A A

. 2.6Wh/tr

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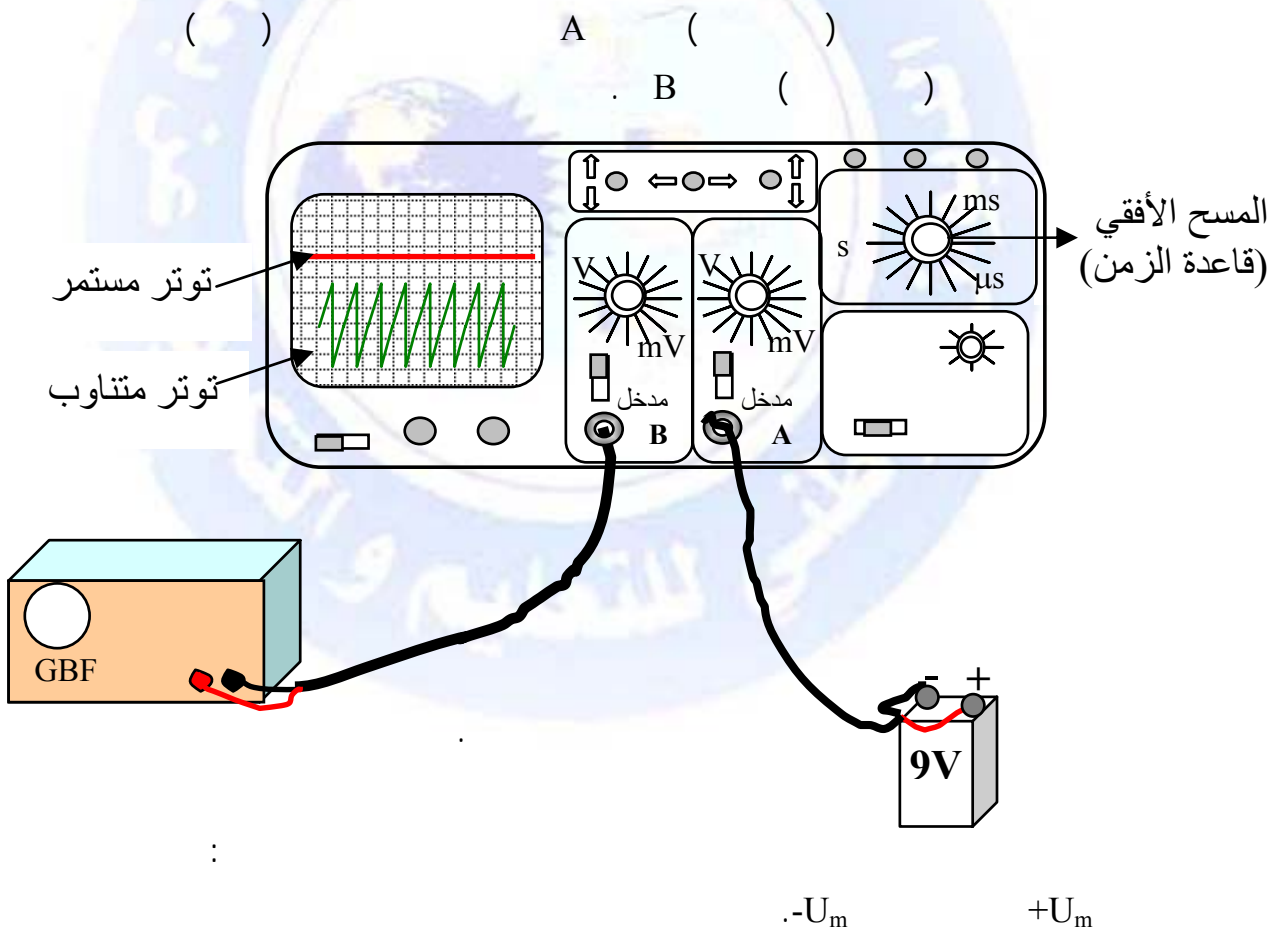


220V

~ التي

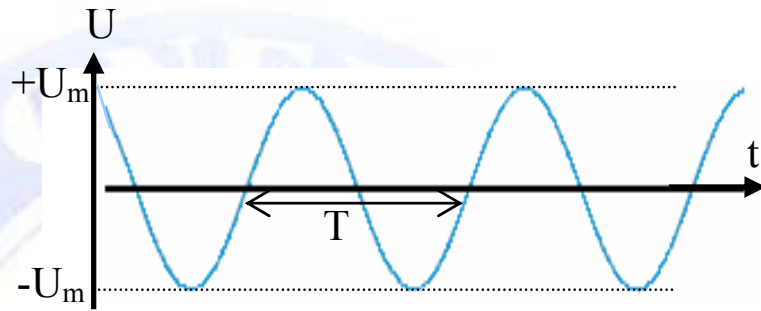
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T

f

بيان لتغيرات توتر متناوب  
جيبي بدلالة الزمن

$$T = 1/f$$

(Hertz)

- :

75W-220V :

-  
-  
-  
-

- :

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-  
-  
-

- :

	11W	15W	20W
	60W	75W	100W

.75W

60W

100W

-

-

500,00 DA

-

-

3,00 DA (kWh)

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