



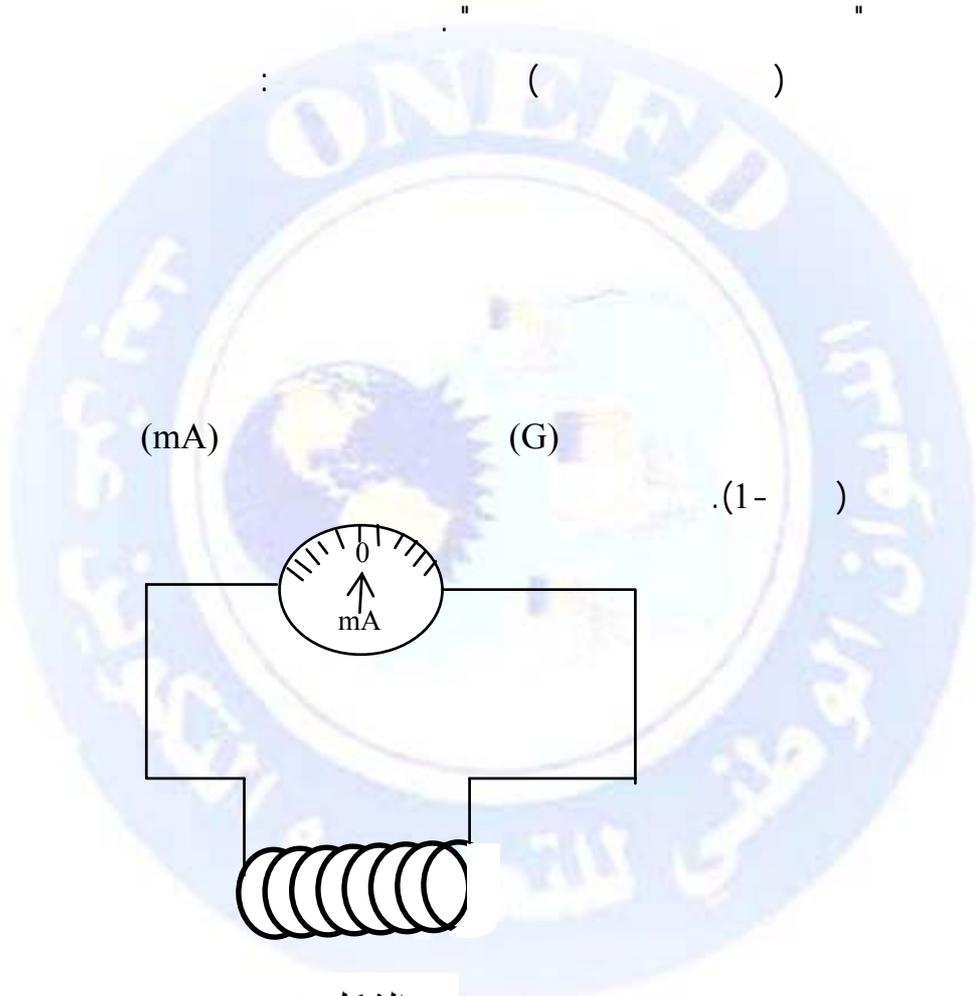
. - :
 :
 .()
 . - :
 . -
 . -
 .() -
 :



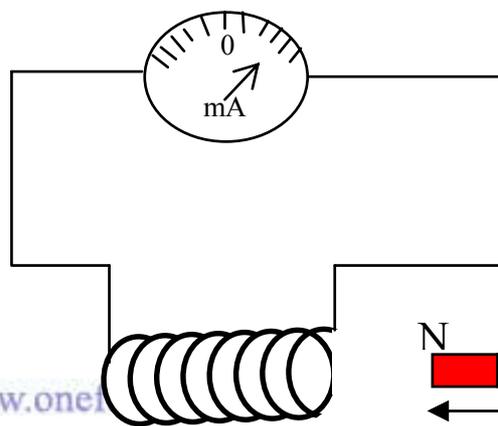
*
*
*
*
*

- :

- :



الشكل-1

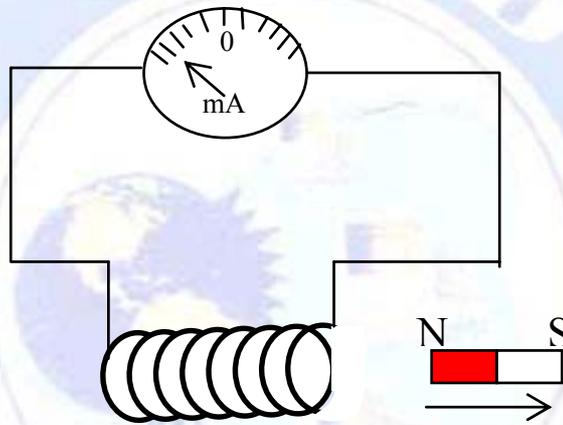


الشكل- 2أ

(mA)

(1-

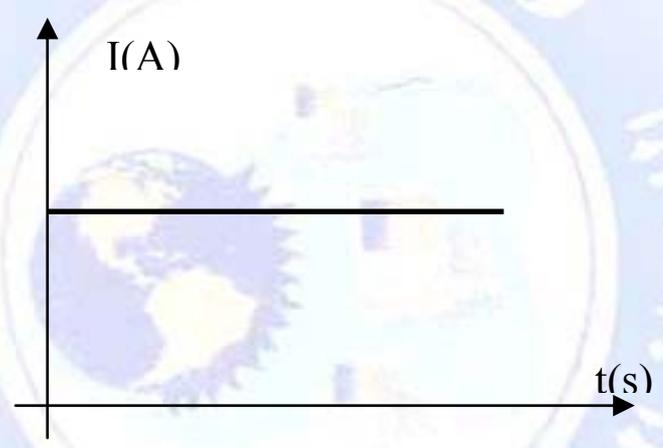
(1-



الشكل-2ب

. 1831

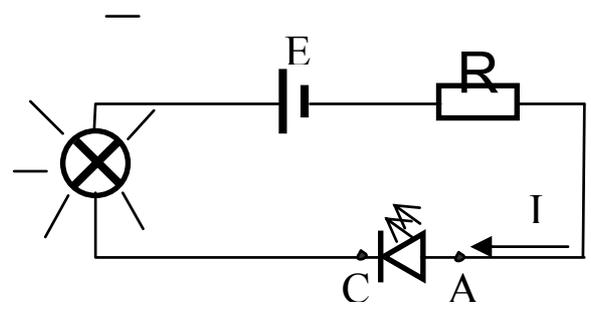
3-



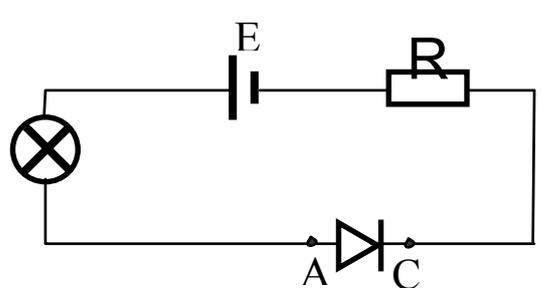
الشكل-3

(4-)

(5-)



الشكل-5



الشكل-4

()

: 6-

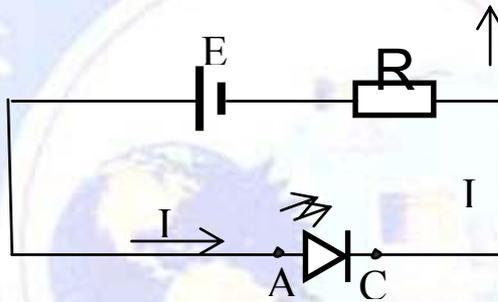


الشكل-6

C

A

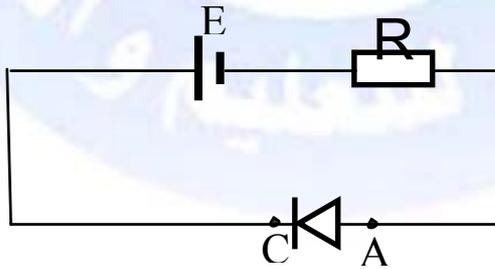
(7-)



الشكل-7

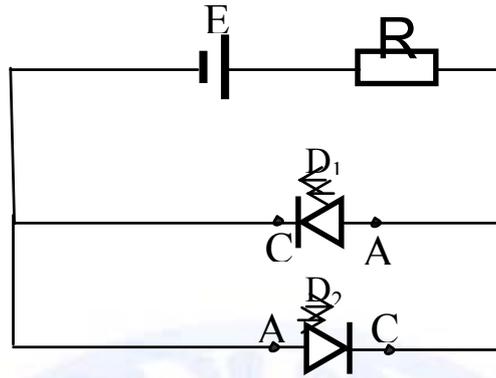
A

(8-)



الشكل-8





الشكل-9

D₂

D₁

D₂

D₂ D₁

2-

1-

(mA)

(mA)

(mA)

(10-)

3-



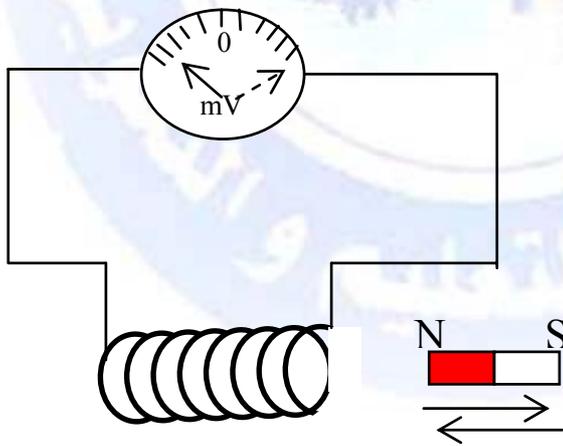
الشكل-10

(mA)

1-

:3-

(mV)



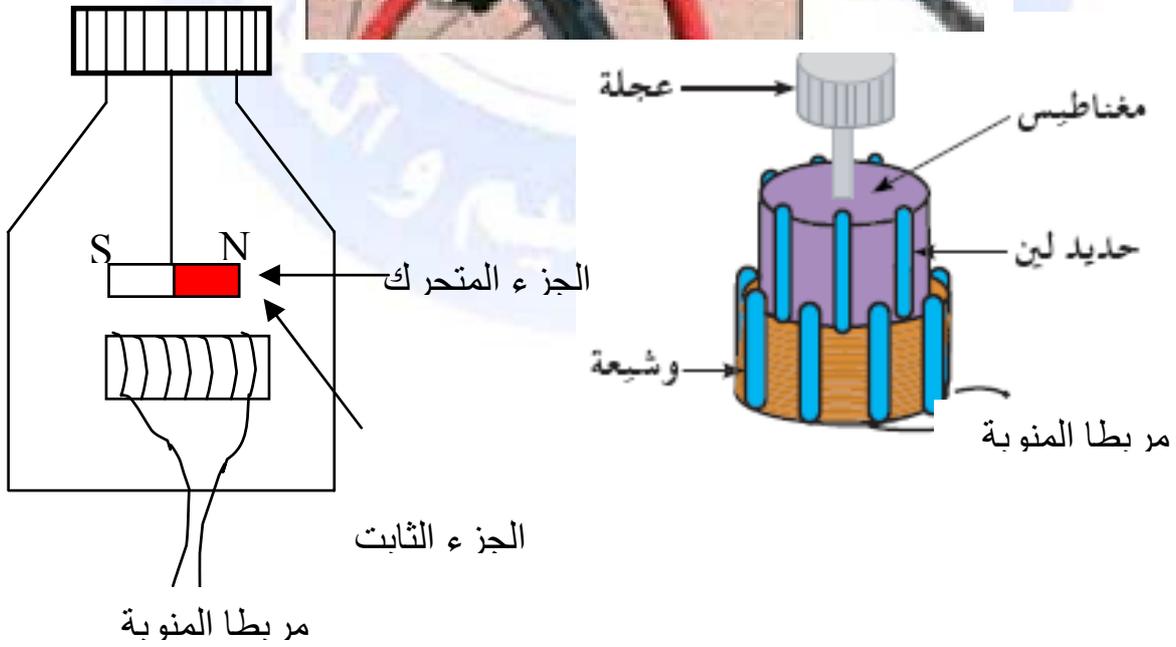
الشكل-11

(mV)

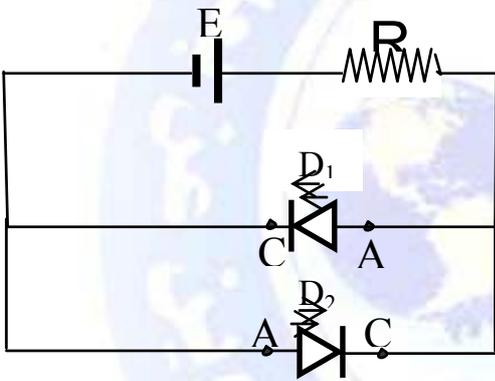
(mV)

(11-)

(12-)



G_2



الشكل-13

A

C

D_1

D_2

:13-

D_2 D_1

الشكل-14

D_1

C

D_2 D_1

الشكل-14

D_1

C

D_2 D_1



(1)

(2)

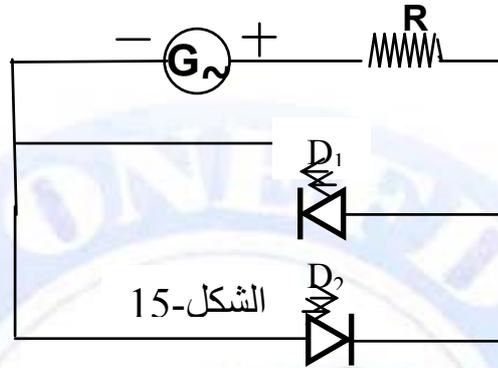
(3)

.15-

14-

D_2

D_1

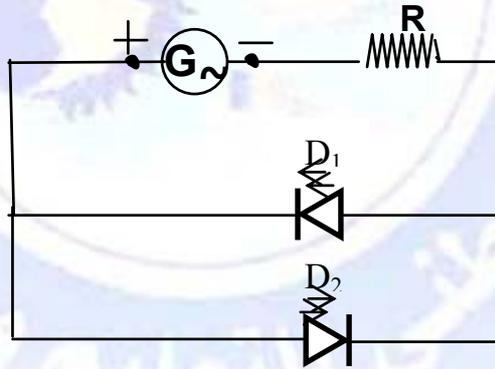


.16-

14-

D_1

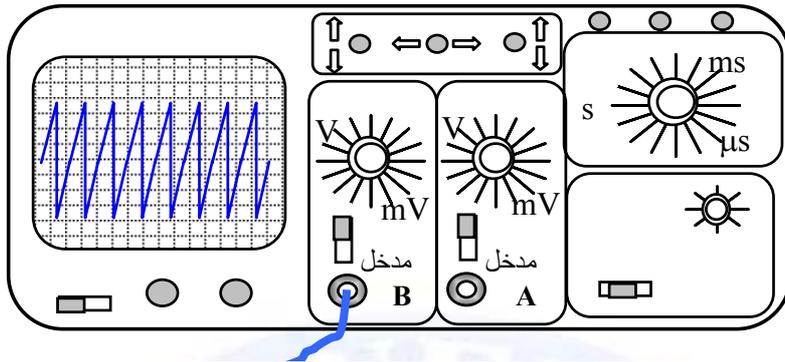
D_2



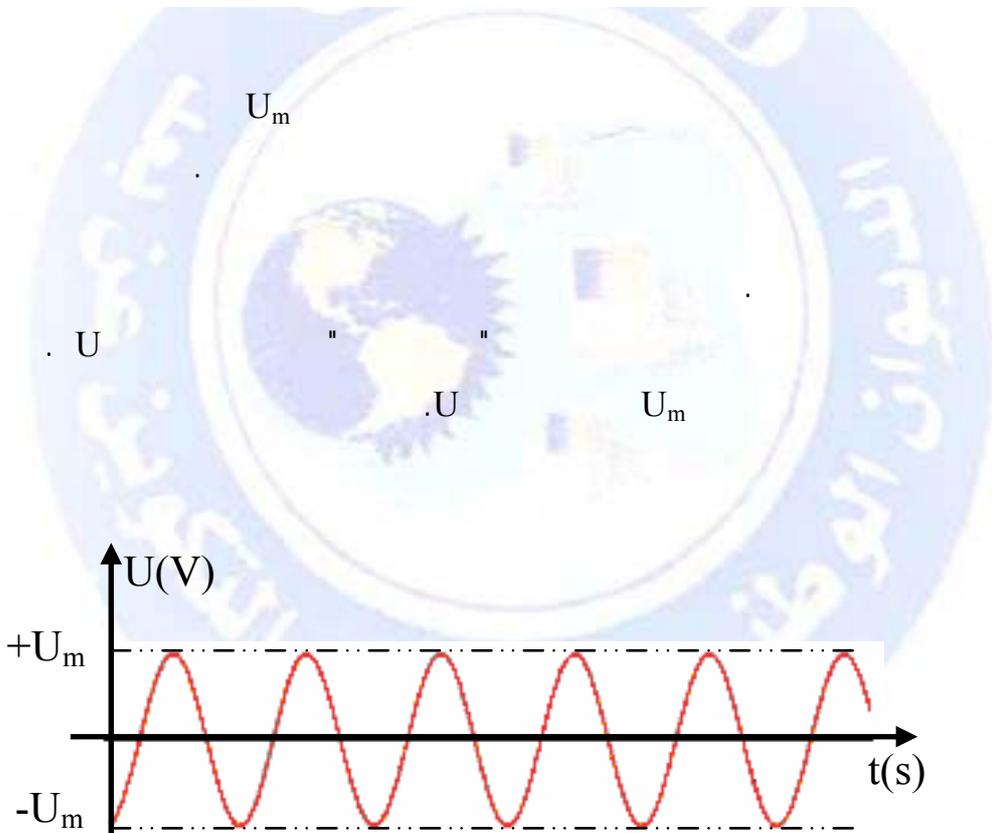
D_1 I 16-

(3)

(17-)



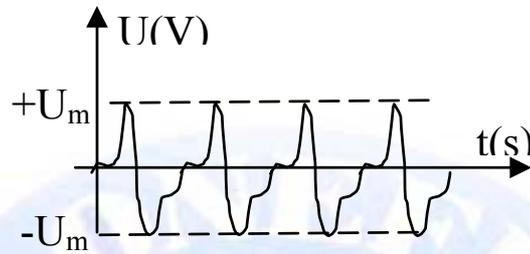
" "



:

(...)

(17-)



الشكل-17

220 U

(Hz) 50

(Hz) f

(s) T

(V) U

(V) U_m

f

T

*

*

*

*

1-

-1

(Turbines)

3 Watts	3	
1 kiloWatts	1	
10 kiloWatts	10	
10 MégaWatts	16	
500 MégaWatts	500	
500 MégaWatts	500	
2 GigaWatts	2	

:

() *

"

.

"

. f T U U_m *

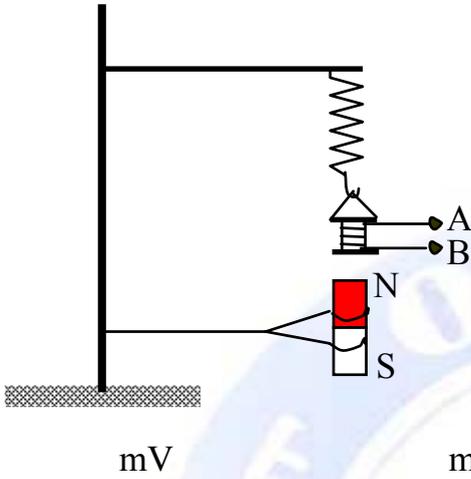
.

*

. 220V *

. 50 Hz *

*



mV

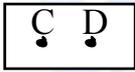
mA

B A

(1

(2

(3

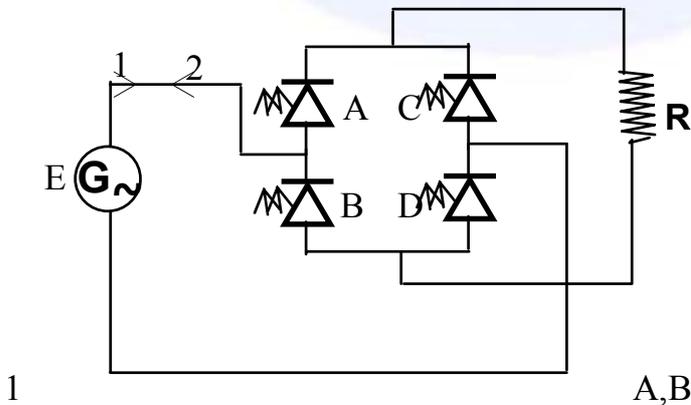


I



II

II I



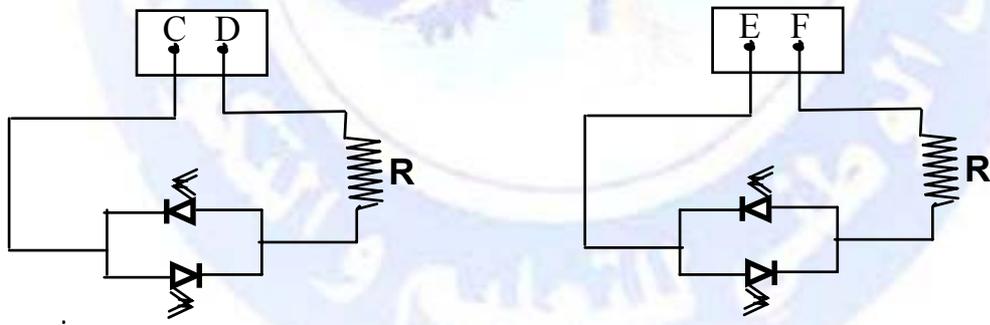
1

A,B,C,D

(1

(2

2



(1)

(2)

-

-

(3)

(1)

: R

A,B,C,D

: E

(2)

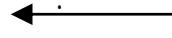
A

D

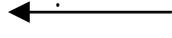
: 2



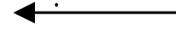
B



C



D



B

