⬚ Chose the correct answer of the following questions.
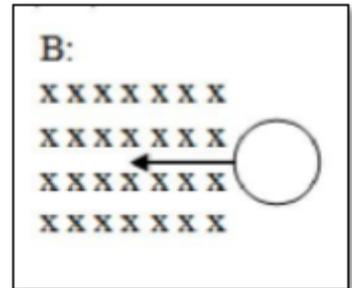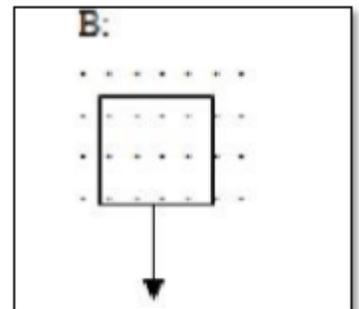
1- **What is the direction of the induced current that produced in the loop shown in the figure, at the instant that the loop Enters the constant magnetic field B.**
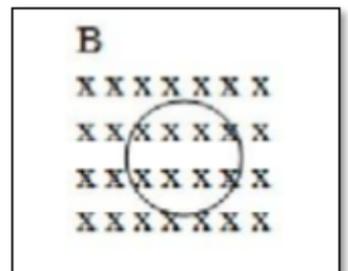

   A.   Clockwise.

   B.   Counterclockwise.

   C.   Out of the page.

   D.   No induced current will produce.

2- **What is the direction of the induced current that produced in the rectangular loop shown in the figure, at the instant that the loop leaves the constant magnetic field B.**


   A.   Clockwise.

   B.   Counterclockwise.

   C.   Out of the page plane.

   D.   Inside the page plane.

3- **What is the direction of the induced magnetic field that produced in inside the loop shown in the figure, if the magnitude of the magnetic field B is increasing?**

   A.   Inside the page plane.

   B.   Outside the page plane.

   C.   To the right of the page plane.

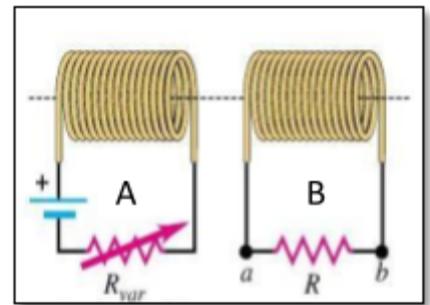   D.   No induced magnetic field will produce.

4- **What is the direction of the induced current produced in the loop shown in the figure?**

↑   →   ↓   ←

| N   S |
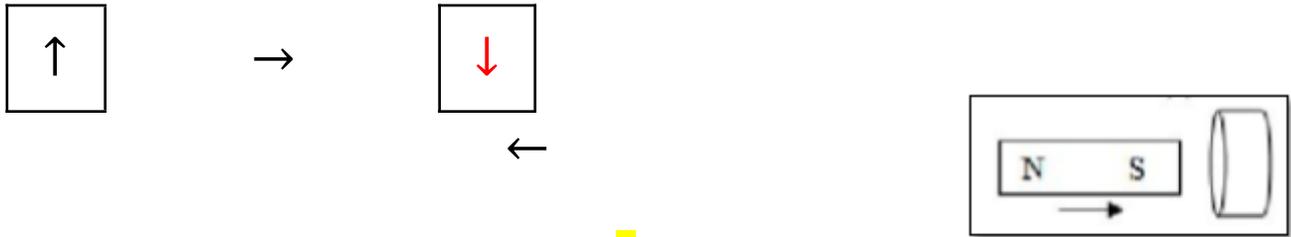
A.   B   C   D

5- **What is the direction of the induced current through the resistor R in circuit B, if the magnitude of the variable resistor in circuit A is decreased?**

A.   From a to b
B.   From b to a
C.   Oscillating between a and b
D.   No induced current will produce.

6- **What is the direction of the induced current through the resistor in circuit B, at the instant of turning on circuit A.**

A.   From A to B
B.   From B to A
C.   Oscillating between A and B
D.   No induced current will produce.
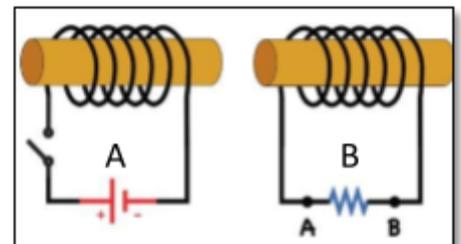
7- **Determine the direction of the eddy currents that produced in the rectangular piece of metal shown in the figure, at the instant of entering the constant magnetic field B.**

A.   Inside the plane of page.
B.   To the right of the plane of page
C.   Counterclockwise
D.   Clockwise

Many Thanks for Mr,Mohannad Sami
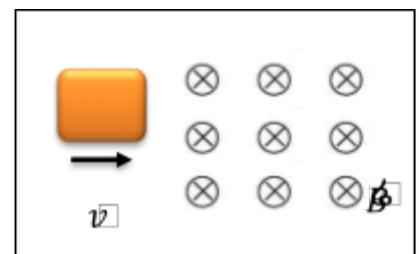
8- A magnetic field changing with time, $[B(t) = 6.2\ t^2]$ passing through a rectangular wire loop with (**3 cm length and 2 cm width**), if the angle between the magnetic field and the loop is **30 deg** what is the magnitude of the induced potential difference in that loop at t= 3 s?
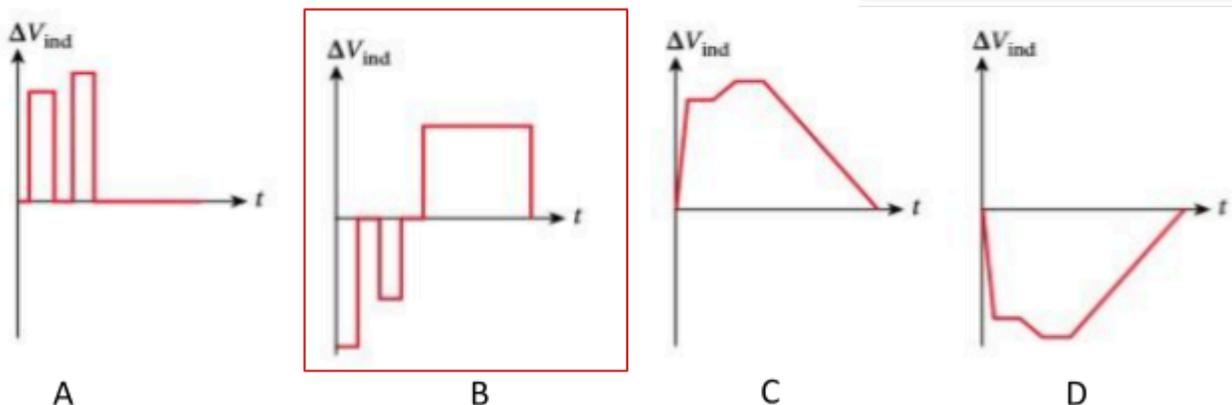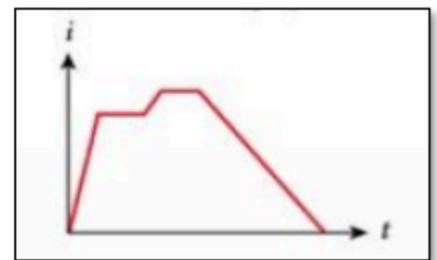
    A. 0.2 V
    B. 1.3 V
    C. 6.7 V
    D. 0.01 V

9- The graph represents the changes of the current during a different time interval in an inductor with inductance of **10 mH**, what is the magnitude of the maximum induced potential difference in the inductor during the intervals shown in the graph?
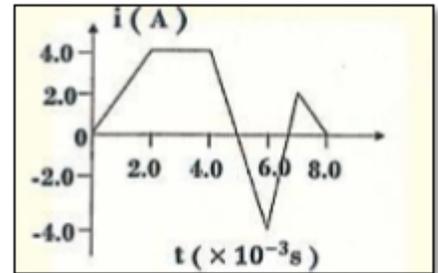
A.   20 V
B.   40 V
C.   60 V
D.   80 V

10- A graph of the current i through loop (A) as a function of time, t, is shown in the figure. Which graph best describes the induced potential difference as a function of time , in loop (B) located near loop A?

A   B   C   D

Many Thanks for Mr,Mohannad Sami

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