

Announcements:

- ▶ Interested in evening sessions for MCAT physics preparation? If enough people are interested, I'll arrange a couple of sessions. Email me.
- ▶ The first exam will be Thursday, February 13. You will be able to make and bring a 3" $\times$ 5" card with anything that you want written on it. We will not provide formulas (except for the integrals on the step-by-step sheet), but we will provide constants.

Physics & Astronomy Seminar

Allosteric Mechanisms of Transcriptional Control in FXR



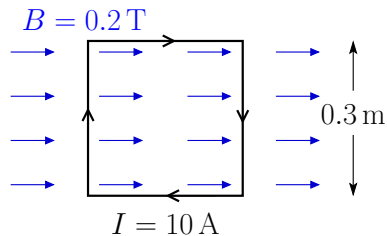
Denise Okafor
Penn State University

Thursday, February 6 at 12:00 pm
Olin 268

Pizza provided. Bring your own water bottle.

Lecture 5 — Concept Test 1

For the square loop in the example, what is the direction of the magnetic moment $\vec{\mu}$?



1. $\uparrow$

3. $\downarrow$

5. $\odot$ (out of screen)

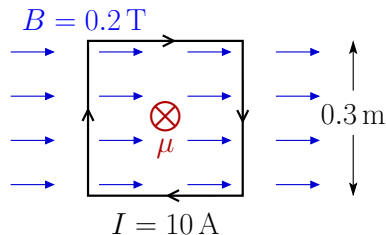
2. $\rightarrow$

4. $\leftarrow$

6. $\otimes$ (into screen)

Lecture 5 — Concept Test 2

Continuing ... We know that the magnetic moment $\vec{\mu}$ points into the screen. What is the direction of the torque acting on the square loop?



1. $\uparrow$

2. $\rightarrow$

3. $\downarrow$

4. $\leftarrow$

5. $\odot$ (out of page)

6. $\otimes$ (into page)

Lecture 5 — Concept Test 3

For the segment of wire shown, what is the direction of the magnetic field at point P ?



1. $\uparrow$

3. $\downarrow$

5. $\odot$ (out of page)

2. $\rightarrow$

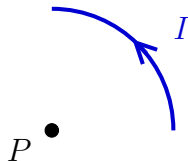
4. $\leftarrow$

6. $\otimes$ (into page)

Back of card. $\vec{B} = 0$

Lecture 5 — Concept Test 4

For the segment of wire shown, what is the direction of the magnetic field at point P ?



1. ↖

3. ↘

5. $\odot$ (out of page)

2. ↗

4. ↙

6. $\otimes$ (into page)

Back of card. $\vec{B} = 0$

Lecture 5 — Concept Test 5

What is the direction of the magnetic field at the point P due to a long straight wire carrying current out of the screen, as shown?

$\odot$ I

$\bullet$ P

1. $\uparrow$

3. $\downarrow$

5. $\odot$ (out of page)

2. $\longrightarrow$

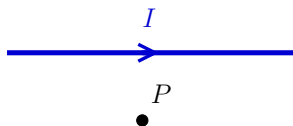
4. $\longleftarrow$

6. $\otimes$ (into page)

Back of card. $\vec{B} = 0$

Lecture 5 — Concept Test 6

What is the direction of the magnetic field at the point P due to a long straight wire carrying current to the right, as shown?



1. $\uparrow$

3. $\downarrow$

5. $\odot$ (out of page)

2. $\rightarrow$

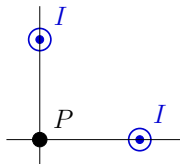
4. $\leftarrow$

6. $\otimes$ (into page)

Back of card. $\vec{B} = 0$

Lecture 5 — Concept Test 7

Which of the following options best shows the direction of the magnetic field at the point P due to two wires carrying equal currents out of the screen, as shown?



1. ↖

3. ↘

5. $\odot$ (out of page)

2. ↗

4. ↙

6. $\otimes$ (into page)

Back of card. $\vec{B} = 0$