# High Yield MCAT Physics Practice Questions With Detailed Explanations: Master the MCAT Physics Section

The MCAT Physics section is a challenging but important part of the exam. With a strong understanding of physics concepts, you can significantly improve your score. To help you prepare, we've compiled a list of high yield MCAT Physics practice questions with detailed explanations.



Sterling Test Prep MCAT Physics Practice Questions:
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Language : English
File size : 15080 KB

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#### Why Use High Yield MCAT Physics Practice Questions?

- Focus on the most important concepts tested on the MCAT
- Identify your strengths and weaknesses
- Practice applying physics concepts to real-world scenarios
- Build confidence in your ability to answer MCAT Physics questions

#### **Essential MCAT Physics Concepts**

Before you begin practicing, it's important to review the essential MCAT Physics concepts. These include:

- Classical Mechanics
- Electricity and Magnetism
- Waves
- Optics
- Modern Physics

#### **Tips for Answering MCAT Physics Questions**

- Read the question carefully and identify the key concepts.
- Draw a diagram or visualize the scenario if possible.
- Use dimensional analysis to check your answer.
- Eliminate incorrect choices before guessing.
- Practice, practice, practice!

#### **MCAT Physics Practice Questions With Detailed Explanations**

A 10 kg object is moving with a velocity of 5 m/s. What is its kinetic energy?

- $\bigcirc$  25 J
- ⊖ 50 J
- ⊖ 100 J
- ⊖ 200 J

The correct answer is 25 J. Kinetic energy is given by the formula KE = 1/2 mv<sup>2</sup>, where m is the mass of the object and v is its velocity. Plugging in

the values given in the question, we get  $KE = 1/2 (10 \text{ kg}) (5 \text{ m/s})^2 = 25 \text{ J}$ . A charged particle is moving through a magnetic field. What is the direction of the magnetic force on the particle?

 $\bigcirc$  In the direction of the magnetic field

 $\bigcirc$  Opposite the direction of the magnetic field

 $\bigcirc$  Perpendicular to both the magnetic field and the particle's velocity

○ The direction of the magnetic force cannot be determined from the information given

The correct answer is Perpendicular to both the magnetic field and the particle's velocity. The magnetic force on a charged particle is given by the equation F = qvB, where q is the charge of the particle, v is its velocity, and B is the magnetic field strength. The direction of the force is perpendicular to both the magnetic field and the particle's velocity, according to the right-hand rule.

A wave has a frequency of 2 Hz and a wavelength of 4 m. What is its speed?

- ⊖ 1 m/s
- ⊖ 2 m/s
- ⊖ 4 m/s
- ⊖ 8 m/s

The correct answer is 8 m/s. The speed of a wave is given by the equation  $v = f\lambda$ , where f is the frequency of the wave and  $\lambda$  is its wavelength. Plugging in the values given in the question, we get v = 2 Hz \* 4 m = 8 m/s.

A ray of light strikes a glass surface at an angle of 30 degrees. What is the angle of refraction?

#### $\bigcirc$ 15 degrees



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