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Recognizing Traps Strategy: Informing Future Doctors MCAT Program

Link to the test taking strategy video: https://www.youtube.com/watch?v=hKQXzStxNKs

We've all heard people tell us that, "there's no such thing as a trick question," and "the AAMC doesn't want you to miss questions on the MCAT," but those just aren't true. There are inevitably questions that are misleading and answer choices that are purposefully distracting. That's the nature of testing and of selecting future doctors that have an attention to detail.
The MCAT will try to throw you off by playing on human psychology to throw off either your timing or your confidence. They do this in one of a few ways:

1. **Time Traps**
    a. **The MCAT is filled with information you do not have to know to get the questions correct. This pops up in the passages, in the answer choices, and in the questions. Make sure to stick to your strategies and remember, you don't have to know everything to get the question right. You just need to know the basic sciences well, and then be able to apply them. For help on sticking to just the sciences of a passage, check out our strategy called the Flowchart Method. And for help inside of answer choices, check out our strategy video called Simplifying the Question Stem where Maggie shows you how pinpoint what exactly they want you to know.**

During glycolysis, pyruvate $CH_3C(=O)CO_2^-$ is reduced to lactate $CH_3CH(OH)CO_2^-$ by nicotinamide adenine dinucleotide (NADH). What is the balanced reaction for this conversion?

A. $CH_3C(=O)CO_2^- + 2NADH \rightarrow CH_3CH(OH)CO_2^- + 2NAD^+$

B. $CH_3C(=O)CO_2^- + 2NADH + 2H^+ \rightarrow CH_3CH(OH)CO_2^- + 2NAD^+$

C. $CH_3C(=O)CO_2^- + NADH + 2H^+ \rightarrow CH_3CH(OH)CO_2^- + NAD^+$

D. $CH_3C(=O)CO_2^- + NADH + H^+ \rightarrow CH_3CH(OH)CO_2^- + NAD^+$

What is the frequency of the emitted gamma photons? (Note: Use Planck's constant $h = 6.6 \times 10^{-34}$ Js and the elementary charge $e = 1.6 \times 10^{-19}$ C.)

A. 2.11×10^{35} Hz

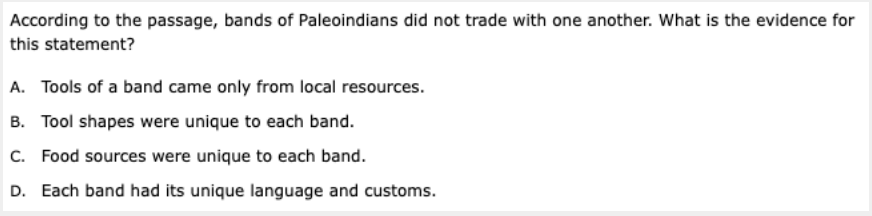
B. 3.38×10^{19} Hz

C. 3.01×10^{-20} Hz

D. 1.45×10^{-47} Hz

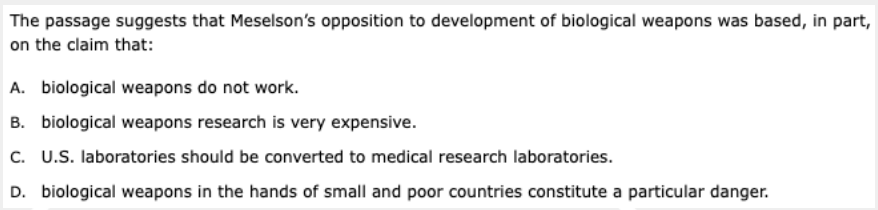
2. **Absolute Answer Choices**
    a. **Absolute answer choices are those that don't allow for wiggle room. They generally contain strong words like, "never", "always", or "only". These answer choices are generally not correct (although they can be) because they are quite literally saying that the alternative is impossible.**

i. The MCAT oftentimes makes these answer choices attractive by leaning into an obvious thought process but adding in one of these "absolute" words.
    1. Ex: *Glutamate <u>always</u> acts as an acid.* The truth is that Glutamate is learned as an "acidic amino acid" and within the body, it's usually behaving as an acid. However, it is theoretically possible to modify the pH of the surroundings to the extent that Glutamate will be accepting a proton AKA acting as a base.


According to the passage, bands of Paleoindians did not trade with one another. What is the evidence for this statement?

A. Tools of a band came only from local resources.
B. Tool shapes were unique to each band.
C. Food sources were unique to each band.
D. Each band had its unique language and customs.

A


The passage suggests that Meselson's opposition to development of biological weapons was based, in part, on the claim that:

A. biological weapons do not work.
B. biological weapons research is very expensive.
C. U.S. laboratories should be converted to medical research laboratories.
D. biological weapons in the hands of small and poor countries constitute a particular danger.

D

3. Namedropping
    a. Namedropping is when the MCAT uses a familiar word or phrase from the passage to make an answer choice sound attractive. Students that fall for this answer choice are generally picking answers off what "feels right" rather than what they can logically and scientifically reason to.
        i. Namedropping is very prominent in the CARS section of the exam. I want to emphasize: ***<u>Namedropping is not a reason that an answer choice is wrong, it is a reason that an answer choice is attractive.</u>*** Therefore, an answer choice can include namedropping and still be correct, it is just rare.

Passage 1 (Questions 1-7)

In the second half of the twentieth century, as the threat of communicable diseases receded, public medicine turned its attention to preventing and treating health problems that were not caused by germs. The death rates for chronic heart disease, in particular, seemed to be soaring after World War II. Some observers cautioned that the apparent increase might be the result of diagnostic advances, which had improved doctors' ability to detect heart ailments. However, this possibility failed to deter the press and advocacy groups like the American Heart Association from declaring the arrival of a frightening epidemic.

One theory blamed the problem on the American diet, and specifically on cholesterol—both the kind that you ingest when you eat animal products and the kind that your body produces when you eat saturated fats. After all, cholesterol is one component of the plaque that clogs arteries and causes heart attacks. But isolating the true causes of coronary disease proved elusive. In addition to diet, multiple factors were potential contributors, including genetics and personal habits such as smoking. Numerous studies on diet proved so inconclusive that, in 1969, the National Institutes of Health found no hard evidence that what people ate had a significant impact on heart disease.

Nevertheless, in the 1970s, the Select Committee on Nutrition and Human Needs decided to fight the apparent epidemic by making nutritional recommendations. Settling on the unproven theory that cholesterol was behind heart disease, the committee issued its guidelines in 1977. The guidelines urged people to reduce the fat that they consumed, principally by eating less meat and consuming fewer dairy products. The committee also advised raising carbohydrate intake and cutting one's intake of cholesterol by a quarter.

Some of the country's leading researchers spoke out against the guidelines and against population-wide dietary recommendations in general. Edward Ahrens, an expert in the chemistry of fatty substances at Rockefeller University, characterized the guidelines as "simplistic and a promoter of false hopes." Ahrens complained that the guidelines treated the population as "a homogeneous group of [laboratory] rats while ignoring the wide variation" in individual diet and blood chemistry.

The latest nutritional thinking has actually focused on carbohydrates as a potential cause of heart disease. Several studies have concluded that easily digestible carbohydrates, in particular—such as potatoes, white rice, bread from processed flour, and refined sugar—make it difficult to burn fat and also increase inflammations that can cause heart attacks.

Supporters of the guidelines have increasingly struggled to justify them, sometimes resorting to political arguments. Without clear dietary guidelines, they claim, the food industry and other special interests could lobby political leaders and influence policy in unhealthy ways. But this argument makes sense only if you assume that the government's guidelines will be any healthier. Supporters also argue that the government's success in persuading people to stop smoking, equally paternalistic, justifies its efforts to change American eating habits. But the major scientific dissenters from government dietary policy are not especially concerned with governmental paternalism, though that is a legitimate issue. They dissent because they find the government's evidence inadequate and its recommendations potentially harmful.

The best thing that the U.S. government can do to promote health is to encourage people to develop their own individually-tailored diet and exercise programs, in consultation with health-care professionals. Otherwise, public health medicine risks violating the central principle of medical ethics: First, do no harm.

Adapted from S. Malanga, The Washington diet, *City Journal*. ©2011 The Manhattan Institute.

Which of the following, if assumed to be true, would provide the best evidence to support the author's conclusion about how government should promote health?

A. Making the presentation of nutritional information on food packaging mandatory was proposed by lobbyists.
B. America's obesity rate was far lower back when nutrition was largely a parental responsibility.
C. Most public health officials support some government involvement in nutrition policy.
D. Government efforts to reduce smoking rates in the U.S. have been quite effective.

ii.

4. **Cop-outs (True, but Irrelevant)**
    a. **Cop-out answer choices are those that are technically true statements but do not answer the question being asked. I call them Cop-outs because the students that pick these answer choices are too scared of being wrong and Cop-out answer choices generally seem safe. Remember, the MCAT is not always asking you which of these statements is true. It's asking which one of these statements *best* answers the question being asked.**

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