

1. US Literature

This character says: “But a man is not made for defeat. A man can be destroyed but not defeated.” A big Joe DiMaggio fan, he endures eighty-four days of bad luck but is still respected by his apprentice Manolin. Name this Cuban fisherman from Hemingway’s *The Old Man and The Sea*.

ANSWER: Santiago

2. Calculus/Combinatorics (30 Seconds)

Assuming that the angle is measured in radians, evaluate the derivative of $y = x \sin x$ at $x = \pi$.

ANSWER: $-\pi$ (do not accept π)

3. Music

(Note to moderator: The g in giorno makes a j sound.) This opera includes the songs “Questo giorno di tormenti” and “E Susanna non vien”. One of the primary characters is a Count no longer interested in his wife. They were wed in an earlier opera by Rossini titled *The Barber of Seville*. Name this comic opera by Mozart.

ANSWER: (The) Marriage of Figaro (accept The Crazy Day or Le nozze di Figaro (ossia la folle giornata))

4. Chemistry (10 Seconds)

This term is used to describe certain processes that are quasistatic. They can take place very slowly because each intermediate step is close to equilibrium. These processes cannot cause any increase in entropy because of the Second Law of Thermodynamics. Give this term that begins with the letter R.

ANSWER: Reversible

5. Religion/Mythology

The heart types often were placed over the chests of the deceased and were about three inches in length. They contained a prayer requesting that nobody bear false witness. Their use began in the Old Kingdom, and their properties were supposed to be related to the animals they represented. Name these small amulets from ancient Egypt that resembled beetles.

ANSWER: Scarab(s) (prompt Beetle(s))

6. Algebra (10 Seconds)

He proved the Taniyama-Shimura Conjecture to be correct, a fact that would only be important to a small number of mathematicians were it not for the work of Ken Ribet. Ribet had proven that the conjecture was equivalent to a problem that was over three hundred years old. Name this British mathematician who teaches at Princeton and in 1994 completed a proof of Fermat's Last Theorem.

ANSWER: (Andrew) Wiles

7. World History

This battle preceded Plataea and was won by ships ramming into one another. Some historians believe that this defeat of Xerxes may have affected history more than any other battle. Name this Greek victory that followed soon after Thermopylae in 480 BC.

ANSWER: Salamis

8. Technology

In 1999, this site was acquired by Amazon for two hundred fifty million dollars. On the left side of the home page is a Developer's Corner, and it calls itself The Web Information Company. They offer a toolbar that works with Internet Explorer. Name this company best known for keeping track of web traffic.

ANSWER: (www.)Alexa(.com)

9. Pop Culture

In one book in the series, the main characters get in trouble for riding their skateboards over ketchup packets. In another, they bring a bunch of toilets to life. The main characters are George and Harold, who have hypnotized Principal Krupp. Partial titles of books in the series include *The Perilous Plot of Professor Poopyants* and *The Wrath of The Wicked Wedgie Woman*. Name this series of books by Dav Pilkey.

ANSWER: Captain Underpants

10. World Literature

His latest book is about a man named Giambattista Bodoni, often called Yambo, who has a stroke. He completed a novel in 1988 involving a computer that can connect conspiracy theories. In 1980, he completed a murder mystery set in the fourteenth century. Name this Italian author of *Foucault's Pendulum* and *The Name of the Rose*.

ANSWER: (Umberto) Eco

11. Biology

This disease is characterized by a sandpaper-like rash on the head and chest. It can lead to rheumatic fever, so it should be treated immediately with antibiotics and fluids. Caused by Group A strep infection, this rash gets its name based on its sunburn-like appearance.

ANSWER: Scarlet Fever (accept Scarletina; accept Rheumatic Fever or Strep before they are mentioned)

12. Language Arts

(Note to moderator: subpoena is pronounced suppeena.) Spell the word that comes from the Latin word for under penalty. It can be followed by the phrase 'ad testificandum' or 'duces tecum'. It represents a writ commanding a person to attend court. Spell the word subpoena.

ANSWER: S U B P O E N A

13. Geography/Astronomy/Earth Science

It is about one thousand, eight hundred miles thick, and it is made up largely of silicon dioxide and magnesium oxide. It lies just below the Moho, and most of its upper portion is called the asthenosphere. Name this section of the Earth's interior between the crust and the core.

ANSWER: Mantle

14. Current Events

Its population is about three million people, and it was built by Abdul Karim Qassim in the 1950s to solve a housing shortage. It is the home of Camp War Eagle, which has recently been renamed Camp Hope. Despite the presence of these United States bases, many people claim this area is run by the Mahdi Army. Formerly named Revolution City, it is now named after the grandfather of a powerful cleric. Name this area that houses many poor Shiites from Baghdad.

ANSWER: Sadr City (accept Saddam City, prompt Revolution City)

15. Geometry/Trigonometry (30 Seconds)

Assuming the angle is acute, what is the tangent of the arcsine of $4/5$?

ANSWER: $4/3$ (or $1\frac{1}{3}$ or 1.3 repeating)

16. British Literature

This pilgrim tells the story of a knight who is eventually forced to marry an old woman because she is able to tell him what women want. Name this character from *The Canterbury Tales* who had been married five times.

ANSWER: (The) Wife of Bath (prompt partial answers)

17. Nonfiction

He was on the faculty of Harvard from 1872 to 1907 and established the psychology department there, eventually writing *The Principles of Psychology* and *Varieties of Religious Experience*. He was also a respected philosopher who claimed that people could never reach absolute certainty about the world. His best-known philosophical works are *The Will To Believe* and *Pragmatism*. Name this writer whose brother Henry was a novelist.

ANSWER: (William) James

18. Physics (30 Seconds)

What power is required to push an object using ten Newtons of force for a distance of twenty meters with an average speed of five meters per second? Give your answer in Watts.

ANSWER: 50 (Watts)

19. Art/Architecture

(Note to moderator: Metope is a three-syllable word.) This form probably reached its peak in the fifth century BC. It featured metopes and triglyphs. Columns in this order are twenty-sided polygons if viewed from above and do not have flutes. They are topped by simple capitals and sometimes have no distinct base. Name this order that generally preceded the Ionic and Corinthian Orders.

ANSWER: Doric (Form or Order)

20. US History

This city was the site of Project C; the C stood for Confrontation. Organized by Fred Shuttlesworth and Martin Luther King, Jr, it involved demonstrations designed to provoke the police, who were led by Bull Connor. Later that year, a bomb at the 16th Street Baptist Church killed four Black girls. Name this most populous city in Alabama, where King wrote a famous letter while in prison.

ANSWER: Birmingham(, Alabama)

Tiebreakers: (If you need to replace a question, take one from the Replacement Packet.) Use these questions in the order given if you need to break a tie. The first correct answer wins the match.

Molecules with this property include anthracene, furan, toluene, and naphthalene. All are carcinogenic, and none are soluble in water. They include bonds that are intermediate between a single and double bond. This type of hydrocarbon is most commonly represented by benzene.

ANSWER: Aromatic(ity) (Hydrocarbon)

This word can refer to an air current, a sketch, an unedited work, or a system of choosing new team members. Give this five letter word beginning with the letter D.

ANSWER: Draft

Which state contains the towns of Springdale, Jonesboro, Fayetteville, Fort Smith, and Little Rock?

ANSWER: Arkansas