

1. US Literature

One of the characters in this novel has an unknown first name, wears a celluloid eye patch, and plays horseshoes. Another character is a mess officer who knows how to make war profitable. The main character is an Air Force captain named Yossarian. Name this novel by Joseph Heller.

ANSWER: Catch-22

2. Calculus/Combinatorics (30 Seconds)

(Note to moderator:  $f(x)$  is 'f of x',  $f(0)$  is 'f of zero', and  $f(1)$  is 'f of one') Find the value of  $f(0)$  if  $f(1)=13$  and the derivative of  $f(x)$  is  $2x+3$ .

ANSWER: 9

3. Music

In the key of B, this type of triad chord includes the notes B, D, and F. In the key of C, it includes C, E Flat, and G Flat. In this chord, the gaps between consecutive notes are three semitones. Give this term beginning with the letter D.

ANSWER: Diminished (Chord)

4. Chemistry (10 Seconds)

Its existence was supported by Joseph Priestley and Georg Stahl, who believed that it combined with calx to form materials such as wood. Name this substance which was supposed to make things flammable. It was proven not to exist by several people, most notably Lavoisier.

ANSWER: Phlogiston (Theory)

5. Religion/Mythology

The first one mentions a visit by Timothy, and the second one warns against idleness. In the New Testament, these epistles are usually placed between Colossians and the letters to Timothy. Name these two letters addressed to the capital of Macedonia.

ANSWER: Thessalonians (accept longer answers)

6. Algebra (30 Seconds)

Find the 20<sup>th</sup> term of an arithmetic sequence if the 5<sup>th</sup> term is 17 and the 10<sup>th</sup> term is 27.

ANSWER: 47

### 7. World History

The leader who took over this country when it gained independence from France in 1953 was the head of state until 1970 and the King until 2004, when he voluntarily self-abdicated. His name is Norodom Sihanouk. This nation was the target of Operation Menu by the United States, which tried to bomb Vietcong hideouts. Conflicts between Lon Nol and Pol Pot and then control by the Khmer Rouge soon led to the deaths of millions of citizens. Name this nation on the Gulf of Thailand.

ANSWER: Cambodia (accept Kampuchea)

### 8. Technology

These objects often use fused quartz because regular glass would start to flow at their higher temperatures. They are successful because of a chemical reaction involving tungsten vapor. This leads to tungsten replacements at hot spots, which allows the filament to last longer. Name these devices whose name is based on the fact that they usually contain bromine or iodine.

ANSWER: Halogen (Lamp) (prompt Incandescent Light, accept longer answers or different second words)

### 9. Pop Culture

He began his career with the Memphis Showboats and ended it with the Carolina Panthers, but he is better known for his play with the Philadelphia Eagles and Green Bay Packers. He died in 2004 at the age of forty-three. Name this football player known as the Minister Of Defense, partly due to his religious beliefs, who used to be the All-Time NFL Sacks Leader.

ANSWER: (Reggie) White

### 10. World Literature

Give the first and last names of the man who lives at No. 7 Saville Row, Burlington Gardens, in London and spends a lot of time at the Reform Club. He has a servant named Passepartout and has been portrayed by David Niven, Pierce Brosnan, and Steve Coogan in movies. Name this main character of Jules Verne's *Around The World In Eighty Days*.

ANSWER: Phileas Fogg

### 11. Biology

These can appear anywhere in the body, though they are more common in certain areas such as joints, tendons, eyelids, sebaceous glands, and ovaries. Unlike tumors, they usually are caused by infections or embryonic development problems. Name this collection of air, fluid, or semi-solid material found within a capsule.

ANSWER: Cyst(s)

## 12. Language Arts

This twelve-letter word begins with the letter C and can mean the spread and development of a species in a new area. It usually refers to humans and has been used for the resettlement of freed American slaves in Africa. Give this term that also refers to the process of establishing settlements in conquered or unstable countries that historically has been done by European nations.

ANSWER: Colonization

## 13. Geography/Astronomy/Earth Science

Now that Pluto has been demoted, this is the planet with the most eccentric orbit. It has only been approached once by spacecraft—the Mariner 10 in the mid-1970s. It has the largest temperature variation of all planets because it has virtually no atmosphere to retain heat during its very long nights. It is located between forty-six and seventy million kilometers from the Sun. Name this planet that this past week was located directly between the Earth and the Sun.

ANSWER: Mercury

## 14. Current Events

He led a failed coup in 1992 and was elected in 1998. He is up for reelection next month, and he probably will win despite high disapproval ratings because some of his opposition will boycott the vote. On September 20<sup>th</sup>, he said, “Yesterday, ladies and gentlemen, from this rostrum, the president of the United States, the gentleman to whom I refer as the devil, came here, talking as if he owned the world.” Name this President of Venezuela.

ANSWER: (Hugo Rafael) Chavez (Frias)

## 15. Geometry/Trigonometry (10 Seconds)

In the fourth quadrant, this is found by subtracting the angle from three hundred sixty degrees. In the third quadrant, it is found by subtracting one hundred eighty degrees from the angle. In the second quadrant, it is found by subtracting the angle from one hundred eighty degrees. In the first quadrant, it is just the given angle. Name this angle that is acute and used to look up values in trigonometry tables.

ANSWER: Reference (Angle)

## 16. British Literature

This play features a Prince named Pedro and his brother John. John tries to break up the marriage of Hero and Claudio. There is also a relationship between Beatrice and Benedick. Identify this work by Shakespeare.

ANSWER: Much Ado About Nothing

17. Nonfiction

This early nineteenth century philosopher praised Socrates and criticized Hegel. Many twentieth century philosophers praised his emphasis on individual thought but criticized his focus on becoming a good Christian. Several Christian churches have not appreciated his emphasis on having an individual relationship with God independent of a church. He wrote *The Concept of Irony, Either/Or*, and *Fear and Trembling*. Name this Danish philosopher.

ANSWER: (Soren) Kierkegaard

18. Physics (30 Seconds)

Assume that the gravitational field strength at the Earth's surface is 9.80 Newtons per kilogram and that the radius of the Earth is  $6.40 \times 10^6$  meters. What is the gravitational field strength at an altitude of  $6.40 \times 10^6$  meters above the surface of the Earth? Include units in your answer.

ANSWER: 2.45 Newtons per kilogram (accept 2.45 meters per second squared or equivalent; do not accept 2.45 meters per second)

19. Art/Architecture

The upper left-hand corner of this painting shows Zephyr and Aura. The right side shows one of the Graces with a huge purple cape. In the middle, the main character makes some effort to cover her nakedness. She has just emerged from water, and she is standing on a half-shell. Name this Sandro Boticelli work.

ANSWER: (The) Birth of Venus (prompt Venus on the Half-Shell)

20. US History

He was stabbed to death in 1976 at the age of thirty-four. He became famous in 1965, and his fame paralleled that of Danny Escobedo. His mother died when he was in elementary school, and he spent a fair amount of time in reform school, the army, and jail. This rapist was convicted during a retrial after the Supreme Court ruled that his confession should be thrown out. Name this resident of Phoenix, Arizona.

ANSWER: (Ernesto Arturo) Miranda

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.

He ridiculed churches by calling them steeple-houses, and he argued against the use of all rituals. This seventeenth century Englishman started a group that refused to take oaths or take up arms. The common name for them came from a judge who ridiculed him for saying that people should 'tremble at the word of the Lord.' Name this man who started the Religious Society of Friends.

ANSWER: (George) Fox

Early in his career, he worked with Theodor Meynert, Jean Charcot, and Josef Breuer. Late in his career, he wrote the books *The Future of an Illusion*, *Civilization and Its Discontents*, and *Moses and Monotheism*. Name this doctor who believed that hysteria should be treated by free association, formulated the Oedipus complex, and divided the mind into the id, the ego, and the superego.

ANSWER: (Sigmund) Freud

Which state contains the towns of Hastings, Kearney, Grand Island, Lincoln, and Omaha?

ANSWER: Nebraska