

1. A Paolo Veronese work that was intended to depict this scene had its title changed by the Inquisition; that work is *The Feast in the House of Levi*. Another depiction of it features angels emerging from a lamp and a diagonally-oriented table and was painted by Tintoretto. The best known depiction of this scene is thought to depict an effeminate Saint John sitting next to the central figure and was painted by Leonardo da Vinci. For 10 points, name this religious scene, Christ's last meal.

ANSWER: the **Last Supper** [or il **Cenacolo**; or l'**Ultima Cena**; prompt on **Christ's last meal** or similar descriptive answers]

083-10-22-04101

2. This metal is used with aluminum in a namesake catalyst for hydrogenating vegetable oils. That catalyst is named for Raney. The decay of the 56 isotope of this element into the 56 isotope of cobalt releases lots of energy in a type I supernova. This metal is processed by the Mond process. This metal is alloyed with iron in maraging (muh-RAGING) steel. This metal is used in conjunction with cadmium or hydrides in various batteries. This element has atomic number 28. For 10 points, name this metal with symbol Ni.

ANSWER: **nickel** [or **Ni** before it is read]

001-10-22-04102

3. One work by this man details the terminal illness of a man who injures himself while hanging curtains, and is called *The Death of Ivan Ilyich*. In addition to writing a novella whose protagonist kills his wife after she performs the title musical piece with her lover, *The Kreutzer Sonata*, this author wrote a novel whose protagonist has a relationship with Count Vronsky before killing herself by jumping in front of a train. For 10 points, name this author of *Anna Karenina* and *War and Peace*.

ANSWER: Leo Nikolayevich **Tolstoy**

081-10-22-04103

4. This group grew out of the Bible Students movement, and adopted their current name in 1931 under Joseph Rutherford. This group's founder preached that Christ returned to the earth in 1874, and that the "Gentile Times" would end in 1914. Founded by Charles Taze Russell, they practice disfellowship, or shunning, and believe that exactly 144,000 people will be allowed into heaven after Armageddon. For 10 points, name this Christian sect which publishes *The Watchtower* and refuses blood transfusions.

ANSWER: **Jehovah's Witnesses** [or The **Watchtower Bible And Tract Society**]

082-10-22-04104

5. This artist's depiction of the god Iris is missing both an arm and a head and was incorporated into *The Apotheosis of Victor Hugo*. Romantically involved with the sculptor Camille Claudel, he also created a monument to the martyrs of a French city besieged during the Hundred Years' War, *The Burghers of Calais* (kuh-LAY). This sculptor's *The Gates of Hell* includes miniature versions of *The Kiss* and a sculpture of Dante resting his chin on a clenched fist. For 10 points, name this French sculptor of *The Thinker*.

ANSWER: François-Auguste-René **Rodin** (roh-DAN)

083-10-22-04105

6. This country is home to the Mothers of the Plaza de Mayo, a group that protests government actions taken during the so-called Dirty War. That period saw the rule of such dictators as Reynaldo Bignone and Jorge Videla. This country engaged with Great Britain in the Falklands War. The first female head of state in this country came to power after the death of her husband Juan Perón, whose second wife Eva is also known as Evita. For 10 points, name this South American country with its capital at Buenos Aires.

ANSWER: **Argentina** [or **Argentine Republic**; or Republica **Argentina**]

083-10-22-04106

7. This organ contains tissues called the Cords of Billroth and PALS. Blood is transported in it by the trabecular arteries and veins. Its marginal zone is found at the border of its two major tissue types. Like the lymph nodes, this organ contains germinal centers. It is divided into white and red pulp. This organ plays an important role in the immune system as well as removing old red blood cells. For 10 points, name this organ in the lymphatic system found to the left of the stomach.

ANSWER: **spleen**

001-10-22-04107

8. Some economists claim that this concept is obsolete because factors of production can be relocated. This theory was popularized by the author of *Political Economy and Taxation*, and it states that trade partners should specialize in processes for which they have lower opportunity costs. David Ricardo used an example involving Portuguese wine and English cloth to demonstrate this concept. For 10 points, name this concept that shows that countries can benefit from trade despite having absolute advantage in production.

ANSWER: **comparative advantage**

085-10-22-04108

9. This interaction is described by an extension of the GIM mechanism, the CKM matrix, and an experiment by Chien-Shiung Wu showed that this interaction violates parity. It is mediated by heavy W and Z bosons and is capable of changing flavor, and one property of this interaction was posited by Glashow, Salam, and Weinberg. That property is this force's interaction with the electromagnetic force. For 10 points, name this physical force that is not as powerful as the strong force.

ANSWER: **weak** force [or **weak** interaction]

081-10-22-04109

10. This man chartered the *Oskar II*, his namesake "peace ship," to travel to Europe and negotiate an end to World War I. An anti-Semite, this businessman published the *Protocols of the Elders of Zion* in his newspaper, the *Dearborn Independent*. He built his factory in Detroit, where he innovated the use of assembly lines to streamline production. For 10 points, name this man who founded a motor company that produced the Model T.

ANSWER: Henry **Ford**

080-10-22-04110

11. DMSO is a polar aprotic one. Partition coefficients are used compare the concentrations in two phases created by two of these. Acetone is an organic one which is used to clean lab equipment and is found in nail polish remover. In freezing point depression, the constant is a property of this component of the system. The mass of one of these is the denominator in molality, while the volume of one is the denominator in molarity. Water is often called the universal one. For 10 points, name these substances that dissolve solutes.

ANSWER: **solvents**

001-10-22-04111

12. The 1968 Supreme Court case *U.S. v. O'Brien* held that burning a symbol of this policy is not constitutionally protected speech. In the 1860s, one could become exempt from this policy by paying three hundred dollars. That was one factor leading to an 1863 riot in New York against its use. For 10 points, identify this program which went dormant in 1973 and, were it to return, would use data from the Selective Service system.

ANSWER: the U.S. military **draft** [or **conscription** or other synonyms or word forms]

019-10-22-04112

13. In one work by this man, Doctor Cukrowicz (kew-KROH-vihts) is offered a grant to perform a lobotomy on Catharine Holly due to her telling stories about Sebastian Venable. That work by this man is *Suddenly, Last Summer*. The former Episcopal preacher Larry Shannon is a tour guide for a Sunday school class in Mexico in this man's *Night of the Iguana*. Another of his plays sees Stanley Kowalski abuse his wife Stella and her cousin, Blanche DuBois. For 10 points, name this author of *A Streetcar Named Desire*.
ANSWER: Tennessee **Williams** [or Thomas Lanier **Williams**]

030-10-22-04113

14. The kurtosis is a measure of how badly a distribution deviates from this kind of distribution. The error function is given by the integral of this distribution. This distribution is characterized by an "e to the negative x squared" term, and in this distribution, ninety-five percent of the population is found within two standard deviations of the mean. For 10 points, name this distribution that is also known as a Gaussian distribution or a bell curve.

ANSWER: **normal** distribution [or **Gaussian** distribution before it is read; prompt on **bell curve**]

003-10-22-04114

15. At one point in this work, E23 is disguised as a Saddhu by the title character. Hurree Chunder Mookerjee initiates the title character into the Sons of the Charm in this novel. In this novel, the title character is given the nickname "Friend of All the World" by Mahbub Ali, and Teshoo Lama is the title character's guardian. For 10 points, name this novel about the title British spy, an orphaned boy raised in India, a work by Rudyard Kipling.

ANSWER: **Kim**

030-10-22-04115

1A. What Greek philosopher came up with the first example of taxonomy, in addition to writing about the natural world in his *Physics*?

ANSWER: Aristotle [or Aristoteles]

1B. Name the American composer who wrote the short opera *Trouble in Tahiti* and who collaborated with Jerome Robbins and Stephen Sondheim on *West Side Story*.

ANSWER: Leonard Bernstein

2A. What pair of brothers built a series of gliders and the first successful airplane while working in Kitty Hawk, North Carolina?

ANSWER: Wilbur and Orville Wright

2B. In wave physics, what term refers to the time required for one complete cycle of a wave?

ANSWER: period

3A. This is a 10-second calculation question. What is $3 + 4i$ multiplied by its conjugate?

ANSWER: 25

3B. This is a 10-second calculation question. What is the probability of flipping a coin and it landing heads up 6 times in a row?

ANSWER: 1/64

4A. What British Prime Minister became infamous for his concessions of land to Nazi Germany in the lead-up to World War II?

ANSWER: Neville Chamberlain

4B. Name the city formerly known as Jahangirnagar that is located on the banks of the Buriganga River and serves as the capital of Bangladesh.

ANSWER: Dhaka

5A. This is a 20-second calculation question. What is the remainder when x^2 is divided by the quantity $x + 1$?

ANSWER: 1

5B. This is a 20-second calculation question. Expressed in terms of r^2 , what is the difference in the surface area of a cube with side lengths r and the surface area of a cube with side lengths $3r$?

ANSWER: 48 r^2

6A. What equation, with a steric factor, can be used to calculate activation energy given the rate constant and temperature?

ANSWER: Arrhenius equation

6B. This is a 30-second calculation question. What is the standard deviation of the set $\{2, 2, 2, 10\}$?

ANSWER: 4

7A. This is a 30-second calculation question. What is the exact area of a triangle with side lengths 3, 3 and 4?

ANSWER: square root of 20

7B. Identify the Latin case used for the name of a person that is being directly addressed, as in "Marcus" in the sentence "Marcus, put down that stick."

ANSWER: vocative case

8A. Name the actor who played James Brennan in *Adventureland* and portrayed Mark Zuckerberg in 2010's *The Social Network*.

ANSWER: Jesse Adam **Eisenberg**

8B. Name the novel by Kazuo Ishiguro which is narrated by Kathy H, who is a clone destined to provide organ donations.

ANSWER: **Never Let Me Go**

9A. What brother of Zeus and Hades served as the Greek god of the seas?

ANSWER: **Poseidon**

9B. Name the Arizona congresswoman who was shot while talking with constituents at a Safeway store in January 2011.

ANSWER: Gabrielle Dee "Gabby" **Giffords**

10A. Blizzard Entertainment recently released what real-time strategy game, which follows Jim Raynor's fight against Kerrigan and the Zerg?

ANSWER: **Starcraft II: Wings of Liberty** [do not accept or prompt on "Starcraft"]

10B. A New Year's Eve bomb blast outside of an army barracks in the capital of Abuja occurred in what nation led by President Goodluck Jonathan?

ANSWER: Federal Republic of **Nigeria**

1. One king of this name used his pro-French sympathies to bring about support for the Entente Cordiale. Another king of this name renounced the Scottish throne in the Treaty of Northampton. Another king of this name was possibly murdered by Richard III. For 10 points, give this name for eight kings of England, the last of whom abdicated in 1936 in order to marry American divorcee Wallis Warfield Simpson.

ANSWER: **Edward**

030-10-22-04117

2. This location is the site of an evaporated glacial lake that was once over 80 miles long and 600 feet deep called Lake Manly. The highest point in this desert is located at Telescope Peak. The highest temperature in the Western hemisphere was recorded at Furnace Creek in this desert. Another point of interest located in this desert can be found in the Badwater Basin. For 10 points, name this American desert that contains the lowest point on land in the Western hemisphere, at 282 feet below sea level.

ANSWER: **Death Valley**

023-10-22-04118

3. One species of these found in the Caribbean is critically endangered and is commonly known as elkhorn. Those in family Scleractinia are called "stony" and have skeletal cups are made from calcium carbonate. Like some sea anemones, they exist in symbiosis with zooxanthellae (ZO-uh-zan-THEL-ee), which are algae. These are cnidarians, and individual ones are called polyps. Many of these organisms form an important habitat off the coast of Australia. For 10 points, name these small animals that build reefs.

ANSWER: **corals**

001-10-22-04119

4. This man wrote about three imaginary dialogues between himself and St. Augustine in his *My Secret Book*. The brother of a Carthusian monk, he also wrote two books of biographies on Roman and Biblical leaders and an unfinished biography of Scipio Africanus. This author of *On Illustrious Men* and *Africa* is best known for *Il Canzoniere*, a collection of 366 poems dedicated to his lifelong love, who died from the plague in 1348. For 10 points, name this 14th-century Italian poet who wrote to a mysterious Laura.

ANSWER: **Petrarch** [or Francesco **Petrarca**]

083-10-22-04120

5. One character in this novel is referred to by the governor as a demon-child and later notes on a walk that the sunshine seems to avoid her mother because of the titular object. That mother is married to Roger Chillingworth, though the daughter is the product of an affair with Arthur Dimmesdale and is named Pearl. For 10 points, name this novel by Nathaniel Hawthorne in which Hester Prynne is branded with a red emblem.

ANSWER: *The **Scarlet Letter***

081-10-22-04121

6. The extinction event preceding this period saw the dying off of the conodonts. The Morrison Formation is from this period. This period is named for a mountain range north of the Alps in Switzerland and France. The Solnhofen limestone contains fossils from this period, including *Archaeopteryx*. The Brachiosaurus and Apatosaurus first appeared in this period. This is the middle period of the Mesozoic Era. For 10 points, name this period occurring before the Cretaceous and after the Triassic.

ANSWER: **Jurassic** period

001-10-22-04122

7. Old English poetry typically favors alliteration over this literary technique. Geoffrey Chaucer invented the "royal" version of this literary technique, in which it is used over seven lines. The letters a, b, and c are often used to diagram patterns in this technique, which is imperfect in its "slant" form. The last two words in a couplet exemplify this technique. For 10 points, name this literary technique in which similar-sounding words are used, exemplified by the words "house" and "mouse."

ANSWER: **rhyme** [or word forms]

026-10-22-04123

8. Molecular orbital theory explains how the naturally occurring form of this element contains a double bond and is paramagnetic. This element was named dephlogisticated air when it was discovered by Joseph Priestley. An ether contains an atom of this element bonded to two alkyl groups. This element has the second highest electronegativity behind fluorine and reacts with a hydrocarbon in a typical combustion reaction. For 10 points, name this element, three of which are bonded to nitrogen in a nitrate ion.

ANSWER: **oxygen** [or **O**]

064-10-22-04124

9. This player's home run put his team ahead in game one of the 2006 World Series, a series his team won. This baseball player owns the record for the most 30-home run seasons to begin a player's career, with ten. For 10 points, name this baseball player, a three-time NL MVP and first baseman for the St. Louis Cardinals.

ANSWER: Jose Albert **Pujols** Alcantara [or Jose Albert Pujols **Alcantara**]

088-10-22-04125

10. This character steals a boat to strand two robbers on board the wreck of the *Walter Scott*. At the end of the novel named for him, he resolves to "light out for the territory." He hides a sack of gold in a coffin to protect Mary Jane Wilkes from the Duke and the Dauphin, and resolves to help a slave running away from Miss Watson to escape from St. Petersburg, Missouri. For 10 points, name this character who rafts down the Mississippi River with Jim in a novel by Mark Twain.

ANSWER: **Huckleberry** Finn [or Huckleberry **Finn**]

004-10-22-04126

11. This is the only currently independent country that is the namesake of one of the six basic anthropological kinship systems. This African country is also where Edward Evans-Pritchard studied the Nuer and their cow-based economy. Its southern population is mostly animist or Christian, which has caused conflict with the Muslim north, particularly the Janjaweed militias. For 10 points, identify this home to the Dinka people, who, with others, have suffered in the conflict over Darfur.

ANSWER: Republic of the **Sudan** [or Jumhuriyat as-**Sudan**]

019-10-22-04127

12. One American politician with this surname captured forty percent of the vote in the 1968 New Hampshire Democratic primary, causing Lyndon Johnson to withdraw from the race. Another Senator with this last name worked closely with attorney Roy Cohn and was condemned by Joseph Welch for his lack of "decency." For 10 points, give this name shared by Minnesotan Eugene and Wisconsinite Joseph, the latter of whom led hearings in search of Communists.

ANSWER: **McCarthy**

019-10-22-04128

13. William James elucidated this concept in the ninth chapter of his work *The Principles of Psychology* in opposition to the concept of a series of ideas. The French writer Edouard Dujardin (doo-zhar-DEHN) first used this mode of narration, which was also used in *The Sound and the Fury* by William Faulkner and *The Waves* by Virginia Woolf. For 10 points, name this form of narrating a work of literature that shows the thoughts of a character as they flow.

ANSWER: **stream of consciousness** [or **stream of thought**; or **interior monologue**]

023-10-22-04129

14. This man composed a work that was meant to be "as Haydn might have written it, had he lived in our day," his *Classical Symphony*. This composer drew on themes from Slavic mythology for the ballet *Ala and Lolli* and reworked it for his *Scythian Suite*. In addition to composing the scores for *Ivan the Terrible* and *Alexander Nevsky*, this man composed a work in which the grandfather is represented by a bassoon and the duck is represented by an oboe. For 10 points, name this Russian composer of *Peter and the Wolf*.

ANSWER: Sergei Sergeyevich **Prokofiev**

030-10-22-04130

15. In this novel's second section, its main character rapes and kills his lover Bessie Mears. This novel's third section, "Fate," climaxes with a long speech by Boris Max defending the main character in court. The main character of this 1940 novel is jailed in Chicago for accidentally smothering Mary Dalton with a pillow. For 10 points, name this novel about the life of Bigger Thomas by Richard Wright.

ANSWER: **Native Son**

004-10-22-04131

1. Santiago Ramon y Cajal [ruh-MOAN ee kuh-HALL] showed that these structures are independent of one another, and the Hodgkin-Huxley model was derived from experiments on a "giant" one of these structures taken from a squid. These structures are often surrounded by a myelin sheath, and ion channels along these structures are clustered at nodes of Ranvier [RON-vee-ay]. For 10 points, name these parts of a neuron that conduct electrical impulses from a namesake hillock to the synapse.

ANSWER: axons [prompt on neuron before "giant"]

003-10-22-04132

2. A government of this country was brought down in the Guillaume Affair, a spy scandal affecting the cabinet that had pursued the "Ostpolitik" foreign relations approach of Willy Brandt. Citizens of this country benefitted from a 1948 "airlift" to a district that it controlled. For 10 points, name this country which was reunified with a former Communist state following the fall of the Berlin Wall.

ANSWER: West Germany [or Westdeutschland; prompt on Federal Republic of Germany; prompt on FRG; prompt on Bundesrepublik Deutschland; prompt on BRD]

019-10-22-04133

3. One god of these people created the moon by tossing his sister's head into the sky after defeating her and his 400 brothers. After being impregnated by a ball of feathers, another deity of these people gave birth to twins, one of whom fights Tezcatlipoca (tez-KAHT-lee-POH-kuh) and is depicted as a "feathered serpent." For 10 points, name these Mesoamerican people who misidentified Hernán Cortés to be their god Quetzalcoatl (KET-zul-koh-AH-tul).

ANSWER: Aztecs

083-10-22-04134

4. One author from this country wrote *The Traps of Faith* about an earlier writer from this nation. That writer is also known for the poem "Sunstone." Another writer from this country of Sor Juana Ines De La Cruz imagined a dying soldier and member of the PRI recalling his life in *The Death of Artemio Cruz* and was inspired by the disappearance of Ambrose Bierce to write *The Old Gringo*. For 10 points, Carlos Fuentes and Octavio Paz hail from what large Latin American country?

ANSWER: Mexico [or United Mexican States; or Estados Unidos Mexicanos]

082-10-22-04135

5. The relationship between these entities can be described as an aggregation, association, or composition. Those relationships can be seen in a UML diagram. In Java, anonymous ones don't have names. Abstract ones cannot be instantiated and these can implement an interface. "Sub" ones are declared using the Java keyword "extends." The keywords "protected," "private," and "public" are used to declare their methods and variables. For 10 points, name these constructs that when instantiated are objects.

ANSWER: classes [or objects before "anonymous"]

001-10-22-04136

Name the Chinese writer of short stories such as "A Madman's Diary" and "The True Story of Ah Q."

ANSWER: Lu Xun [or Zhou Shuren]

001-10-22-04137

This is a calculation question. Expand quantity $x^2 + 2x + 1$ end quantity squared.

ANSWER: $x^4 + 4x^3 + 6x^2 + 4x + 1$

001-10-22-04137