

1. In this show, the death of a character played by McLean Stevenson was kept secret from the cast until the taping. The character of Sherman T. Potter replaced Stevenson's character, Henry Blake. "Goodbye, Farewell, and Amen" was the title of its final episode. Max Klinger often wore a Toledo Mudhens baseball cap and Radar O'Reilly slept with a teddy bear on this show. It also included Hawkeye Pierce, played by Alan Alda. For 10 points, name this show about the 4077 Mobile Army Surgical Hospital during the Korean War.

ANSWER: M*A*S*H

030-09-7-07101

2. During this war, Phineas Riall declared "Those are regulars, by God!" Congreve rockets were used during the Battle of Bladensburg in this war. Oliver Perry declared "We have met the enemy and they are ours" after the Battle of Lake Erie during this war. It was instigated due to the impressment controversy and the "land hunger" of the "War Hawks." It included the burning of the White House, and was ended by the Treaty of Ghent. For 10 points, name this war between the U.S. and Britain, which began in the namesake year.

ANSWER: War of 1812

015-09-7-07102

3. One sign of this disease is paired helical filaments formed from tau protein. One explanation for this disease attributes it to reduced synthesis of acetylcholine (uh-SEE-tul-KO-leen). The enormously frequent development of this disease by age forty among those with Down syndrome lends credence to a hypothesis that it stems from a precursor protein coded for on chromosome twenty-one. That hypothesis attributes this disease to the buildup of amyloid (AA-mill-oid) beta plaques. For 10 points, name this common form of dementia, which causes confusion and memory loss.

ANSWER: Alzheimer's disease

022-09-7-07103

4. This king's policies were protested by Robert Aske's followers in the Pilgrimage of Grace. This king's minister Thomas Cromwell ordered the large-scale dissolution of Catholic monasteries. This king's only male heir, Edward VI, was borne by his wife Jane Seymour. For 10 points, name this Tudor king of England, who founded the Anglican Church in order to divorce Catherine of Aragon and marry Anne Boleyn.

ANSWER: Henry VIII Tudor [prompt on Henry]

004-09-7-07104

5. Benny Goodman commissioned a clarinet concerto from this composer. One of his tone poems is about a "popular type dance hall in Mexico City" and is entitled *El Salon Mexico*. This composer included readings of this Gettysburg address in his *Lincoln Portrait*. One of this composer's ballets includes the sections "Buckaroo Holiday" and "Hoe-Down." Another of his ballets includes an arrangement of the Shaker hymn "Simple Gifts." For 10 points, name this American composer of *Rodeo* and *Appalachian Spring*.

ANSWER: Aaron Copland

015-09-7-07105

6. In *Plasmodium*, proteases (PRO-tee-aze-iz) are found in the "food" type of these organelles. In one form, they contain a substance called cell sap. In plants, proteins called aquaporins (ock-wuh-PORE-inz) are found in the membrane surrounding this organelle, called the tonoplast (TOE-noh-plast). This organelle can take up as much as ninety percent of a plant cell. This organelle maintains the plant's rigidity by causing a pressure called turgidity that is determined by their water content. For 10 points, name these storage organelles found in many cells.

ANSWER: vacuole

064-09-7-07106

7. Ixion made a cloud shaped like this goddess, with which he copulated to birth the race of centaurs. To prevent a certain birth, this figure ordered Alcmene's (alk-MEN-eez) legs to be tied up. She sent two snakes that one child easily killed and sent the hundred-eyed giant Argus to watch Io. This frequently jealous goddess was the protector of women and marriages. For 10 points, name this mother of Hebe (HEE-bee) and Ares (AAR-eez), who was the wife of Zeus and the queen of the Greek gods.

ANSWER: Hera [accept Juno before "Ares" is read]

003-09-7-07107

8. One obstacle to the completion of this project was the traversal of Montezuma Marsh, where at least a thousand workers died from swamp fever. This project's completion was celebrated by Mayor Wilkeson, who poured a keg of Atlantic Ocean water into this structure. This project ended in the Commercial Slip of Buffalo, was advocated by Dewitt Clinton, and started in Albany. For 10 points, identify this crucial nineteenth-century shipping route, which extends to the namesake Great Lake.

ANSWER: Erie Canal

020-09-7-07108

9. G. K. Gilbert names a type of these landforms that contain particularly coarse sediment. These landforms are sometimes the site of mouth bar creation and channel switching events, which act together to create networks of distributaries within these landforms. These landforms are created by the same interaction that creates estuaries, and they are similar in structure to alluvial fans. They are named for the Greek letter that their shape resembles. For 10 points, name these deposits of sediment that occur where a river flows into the sea.

ANSWER: river deltas [do not accept or prompt on "alluvial fan"]

022-09-7-07109

10. This country's twentieth-century politics were dominated by the Golkar Party, led by men such as Jusuf Habibie (JOO-suff huh-BEE-bee). This modern-day country was once home to the huge trading empire of Srivijaya (SHRIV-uh-JAY-uh). This country's current capital also served as the capital of the Dutch East Indies under the former name Batavia. Its first two presidents were Suharto and Sukarno. For 10 points, name this country, which in 2002 suffered a terrorist attack at a hotel on Bali.

ANSWER: Republic of Indonesia [or Republik Indonesia]

029-09-7-07110

11. This man used a klaxon horn to represent taxi cabs in the French capital in one tone poem. He wrote for bongos and maracas in his *Cuban Overture*. Ferde Grofe orchestrated one of his works, which had been commissioned as a "jazz concerto" by Paul Whiteman. This composer of *An American In Paris* collaborated with his brother Ira on the song "I've Got Rhythm." Another work by this composer opens with a trill on a clarinet, followed by a glissando. For 10 points, name this composer of *Rhapsody in Blue*.

ANSWER: George Gershwin [or Jacob Gershwin]

027-09-7-07111

12. The radiative decay of this particle has a half-life on the order of at least ten to the thirty-five years. A technique in analytical chemistry measures the precession of the magnetic moments of nuclei (NOO-clay-eye) with an odd number of these particles, which is a type of NMR. This particle is composed of two up quarks and one down quark. Two of these particles and two neutrons comprise an alpha particle. For 10 points, name this first-generation hadron which is equivalent to the H-plus ion and is the positively charged component of an atomic nucleus.

ANSWER: **proton**

022-09-7-07112

13. This man argued against empiricism by noting that melting wax changes some of the wax's qualities, yet we know it is the same wax. This man was asked by Princess Elizabeth of Bohemia to explain how an immaterial soul can cause a body to move in a correspondence. He claimed that he could doubt everything except the fact that he exists. He is the namesake of a belief in mind-body dualism. For 10 points, name this author of *Discourse on the Method* and *Meditations on First Philosophy*, who is credited with saying "I think, therefore I am."

ANSWER: Rene **Descartes** (day-CART)

027-09-7-07113

14. Along with sodium and tartrate, this substance makes up Rochelle's Salt, the main ingredient in baking powder. It is used with argon in radiometric dating. This element's chloride is used for executions. The ratio of this element's concentration and those of of nitrogen and phosphorous is used to label fertilizer. This element's carbonate is known as potash, and it forms a namesake pump with sodium in the cell wall. For 10 points, name this third-heaviest of the alkali metals, with atomic number 19 and atomic symbol K.

ANSWER: **potassium** [accept **K** before it is read]

059-09-7-07114

15. One symbol of this religion is a hand with a wheel on its palm. One sect of this religion requires that members be "sky-clad," or nude, and the other sect believes that the figure Mallinath was female. This religion, which is divided into the Svetambara (sh-VET-ahm-bara) and Digambara (DEE-gam-bara) sects, venerates twenty-four "bridge-builders" or tirthankaras (TEAR-than-karas), including the final one, Mahavira. For 10 points, name this Indian religion which emphasizes ahimsa, or nonviolence.

ANSWER: **Jainism**

022-09-7-07115

1A. Alfred Wegener (VEH-guh-ner) coined the term for this landmass that preceded Laurasia and Gondwanaland. Name this single supercontinent that existed 250 million years ago.

ANSWER: **Pangaea**

1B. The controversial book *The Bell Curve* argues that this entity varies systematically along racial boundaries. Name this measure for intelligence used by Mensa.

ANSWER: **IQ** [or **intelligence quotient**]

2A. Name the law of physics that states that the restoring force of a spring is directly proportional to the displacement of an object from equilibrium.

ANSWER: **Hooke's** law of elasticity

2B. In January 2010, a man tried to kill a Danish cartoonist who satirically depicted what religious figure as a suicide bomber in 2006?

ANSWER: Abu al-Qasim **Muhammad** ibn 'Abd Allah ibn 'Abd al-Muttalib ibn Hashim

3A. A reprise of "Breathe" is contained in this album's track "Time." Name this Pink Floyd album that contains the track "Money" and bears a prism on its cover.

ANSWER: *The **Dark Side of the Moon***

3B. This man first observed the photoelectric effect. Name this scientist who demonstrated the existence of electromagnetic waves and is the namesake of the SI unit of frequency.

ANSWER: Heinrich Rudolf **Hertz**

4A. This is a 10-second calculation question. Find the slope of any line perpendicular to the line $-8x + 3y = -2$.

ANSWER: **-3/8**

4B. This is a 10-second calculation question. Find the inverse of the function $f = 6x + 9$.

ANSWER: $f^{-1} = \mathbf{\underline{(x-9)/6}}$

5A. This sea is connected to the Atlantic Ocean by the English Channel and the Dover Strait. Name this sea that borders Norway, England, Denmark, and Germany, among other countries.

ANSWER: **North** Sea

5B. Ben Affleck's character in this movie can't imagine getting married. Name this 2009 romantic comedy, starring Jennifer Aniston, about relationships plagued by male disinterest.

ANSWER: **He's Just Not That Into You**

6A. This is a 20-second calculation question. Find nine and a third minus three and three-fifths.

ANSWER: **5 11/15** [or **86/15**]

6B. This is a 20-second calculation question. A random variable can take on the values 1, 2, 3, or 4. The probability of getting 1 is 0.13; of getting 2 is 0.03; and of getting 3 is 0.60. What is the probability of getting 4?

ANSWER: **0.24**

7A. This author railed against the use of Latinate (LAH-tin-ate) words in "Politics and the English Language." Name this British author of "Shooting an Elephant" based on his experiences in Burma.

ANSWER: George **Orwell** [or Eric Arthur **Blair**]

7B. This technique is used when one says "I'm so hungry that I can eat a bear." Identify this literary term denoting exaggeration for expressive effect.

ANSWER: **hyperbole**

8A. One of these in *Macbeth* begins "Tomorrow, and tomorrow, and tomorrow." Name this address that is delivered to nobody in particular by a characters in a play to detail the character's thoughts.

ANSWER: **soliloquy**

8B. What Belgian surrealist frequently painted bowler hats, apples, and confusing declarations, such as the phrase "this is not a pipe" below a picture of a pipe?

ANSWER: René François Ghislain **Magritte**

9A. This is a 30-second calculation question. Solve the equation $9x^2 + 30x + 26 = 0$.

ANSWER: **$(-5+i)/3$, $(-5-i)/3$** [both answers required]

9B. This is a 30-second calculation question. Using 3.14 for pi, find the area of a circle with radius 15 inches.

ANSWER: **706.5 square inches**

10A. Give either of the two Spanish infinitive verbs that mean "to be."

ANSWER: **ser** [or **estar**]

10B. Vegetation in this biome is restricted by a short growing season and low temperatures. Name this biome that contains permafrost and is found in northern Canada and Russia.

ANSWER: **tundra**

1. A ship named for this man sunk the British flagship *HMS Hood*, prompting Winston Churchill to give a three-word order to sink that ship. This man helped put in place Adalbert Falk's May Laws as a part of his work against the Catholic Church called the Kulturkampf (COUL-tour-kahmpf). He used Realpolitik (RAY-ahl-POH-loh-tik) on behalf of Wilhelm I (VILL-helm the first) to create the German Empire in 1871. For 10 points, identify this "Iron Chancellor" of Prussia and Germany.

ANSWER: Otto Eduard Leopold von **Bismarck**

023-09-7-07117

2. One method of assigning values in this system involves making one digit represent whether the number is positive or negative. That method is known as the sign-and-magnitude representation. Another method of assigning negative values in this system takes a positive number, inverts that number's digits, and then adds one. That method is called the two's complement representation. Numbers in this system are made up of values called bits. For 10 points, name this numbering system that differs from the decimal system by only using zeros and ones.

ANSWER: **binary** number system [or **base-two** number system]

023-09-7-07118

3. This author wrote about "thy kind voice call[ing her] back again" in the poem "To Imagination." One novel by this author tells of how the antagonist is bullied by Hindley before raising and abusing Hindley's son Hareton. That work by this author starts with the arrival of Mr. Lockwood at Thrushcross Grange. The antagonist of that work by this author persecutes Edgar Linton for marrying Catherine Earnshaw and is named Heathcliff. For 10 points, name this author of *Wuthering Heights*, who was the sister of Anne and Charlotte.

ANSWER: **Emily Jane Brontë** [prompt on **Brontë**]

059-09-7-07119

4. This author claims that "diffusion" gives an organism a "death-wish" in a book explaining "Eros" and "Thanatos," titled *Beyond the Pleasure Principle*. Another work by this author gives examples such as Otto's administration of some chemicals that caused an infection, called "Irma's Injection." Another of this man's patients was known as Anna O. For 10 points, name this psychologist who proposed a division of the psyche into the "id," "ego," and "superego," and wrote *The Interpretation of Dreams*.

ANSWER: Sigmund **Freud** [or Sigismund Schlomo **Freud**]

032-09-7-07120

5. Two characters in this work claim they have found a beast when they come upon the body of a downed pilot. A silent conversation in this work seems to take place between Simon and an animal head on a pole. Two groups form early on in this novel, one of which is originally made up only of choir boys. One rule created in it gives the right of speech to the holder of a conch shell. A boulder in this novel kills Piggy, who sides with Ralph against Jack. For 10 points, name this novel about a group of boys stranded on an island, by William Golding.

ANSWER: **Lord of the Flies**

023-09-7-07121

6. This award was made retroactive to 1854 to honor those who fought in the Crimean War. By 1881, eligibility for it was extended to include heroic acts not in the face of an enemy, such as saving lives at sea. This decoration is fashioned in a namesake shape with the words "For Valor" inscribed on it. For 10 points, name this highest of British military awards, which is given for bravery in the face of an enemy, and was instituted 1856 and named for the reigning queen.

ANSWER: the **Victoria Cross** [or **VC**]

045-09-7-07122

7. This man wrote about a hunchback that tricks another character to think he is that character's beloved Silvestre. That work is "Mario and the Magician." This man wrote a novel in which Ludovko Settembrini (loo-DUV-ko set-em-BREE-nee) and Leo Naphta are among Hans Castorp's acquaintances in a sanitarium in Switzerland. He also wrote a novel in which Gustav von Ascehenbach (GOO-stahv vahn AH-shen-bok) stays in the title city despite a cholera epidemic. For 10 points, name this German author of *The Magic Mountain* and *Death in Venice*.

ANSWER: Thomas **Mann**

030-09-7-07123

8. One scene in this opera is set in the Temple of Vulcan, where prayers for success in battle are said. This opera features the aria "Ritorna, Vincitor" (ree-TOR-nah VEEN-kee-tor). Two lovers in this opera plan to run away together after the aria "O Patria Mia." Amneris is betrothed to the central male character of this opera, a captain of the guard who is secretly buried alive to be with his beloved. For 10 points, name this opera about the Egyptian Radames's love for an Ethiopian princess, by Giuseppe Verdi.

ANSWER: **Aida**

026-09-7-07124

9. This man described the homosexuality of Kochan in his work *Confessions of a Mask*. He wrote another work in which Isao (EYE-sow), Ying Chan, and Toru are all successive incarnations of Kiyooki, who appears in *Spring Snow*. That work by this author centers on the lawyer Shigekuni Honda. This author ended a novel with Mizoguchi's arson of the titular *Temple of the Golden Pavilion*. All of those works were completed prior to this author's televised suicide by seppuku (SEH-puh-koo). For 10 points, name this Japanese author who wrote the *Sea of Fertility* tetralogy.

ANSWER: Yukio **Mishima** [or **Mishima** Yukio; do not accept or prompt on "Yukio" by itself; or Kimitake **Hiraoka**; or **Hiraoka** Kimitake; do not accept or prompt on "Kimitake" by itself]

020-09-7-07125

10. In this country, the Iguala plan created an empire led by Agustin Iturbide (ah-goo-STEEN ee-TURR-bee-day). Venustiano (vay-NOO-stee-AH-no) Carranza led a struggle against its dictator Victoriano Huerta. One leader of this country was a Zapotec from Oaxaca (wah-HAH-ka) named Benito Juarez. The treaty of Guadalupe (gwah-duh-LOO-pay) Hidalgo allowed the United States to take California from this country. For 10 points, name this country that once owned Texas.

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

027-09-7-07126

11. Pip and Daggoo are two of the black characters in this book. Dough-boy and Fleece supply the rest of the crew with food in this work. In this novel, the white turban-wearing servant Fedallah offers gloomy prophecies. The old blacksmith Perth, the first mate Starbuck, and the harpoon-wielding Queequeg are other occupants of the *Pequod*, a sailing ship from Nantucket. Captain Ahab chases a white whale in this story, which is told by the narrator Ishmael. For 10 points, name this novel by Herman Melville.

ANSWER: **Moby Dick**, or, *The Whale*

063-09-7-07127

12. Horace Greeley characterized the aim of this event as "but the assertion of a natural right." Thomas McClintock read from Blackstone's *Commentaries* here. The central organizers of this event had earlier joined William Lloyd Garrison at the World Anti-Slavery Conference. It included a speech by Frederick Douglass as well as the reading of the Declaration of Sentiments by Lucretia Mott and Elizabeth Cady Stanton. For 10 points, name this 1848 conference that began the women's suffrage movement and was held in a namesake New York village.

ANSWER: **Seneca Falls** Convention

060-09-7-07128

13. The central character of this novel declares "we want to smash other people" and calls a chemist "twenty times as useful as any poet." The protagonist of this work falls in love with a widow, Madame Odintsov (OH-deent-sohv), who finally kisses him on his deathbed before marrying a lawyer. The protagonist's protege, Arkady Kirsanov (AHR-kah-dee KEER-sah-nohv), abandons revolution in this work to become a magistrate. For 10 points, name this novel, centering on the nihilist (NYE-uh-list) Bazarov (BAH-zah-rohv), and written by Ivan Turgenev (tur-GAIN-ev).

ANSWER: **Fathers and Sons** [or **Fathers and Children**; or **Otcy i Deti**]

060-09-7-07129

14. One particularly fast method for this process is called "radix." Another algorithm for it repeatedly finds pivots to subdivide a set and was invented by Hoare ("HORE"). The time required by this process is judged by how many times the values of two elements need to be compared. Less efficient methods require n-squared steps; those include the "bubble" algorithm for this, which is named for the way elements rise through a list. For 10 points, name this procedure, which puts the elements of a data structure in order.

ANSWER: **sorting** algorithms

022-09-7-07130

15. This author described a theological crisis suffered by a veteran of the game show "It's a Wise Child" in one novel. That novel features members of the Glass family, as does this man's story about Muriel's husband Seymour shooting himself. This author wrote *Franny and Zooey* and "A Perfect Day for Bananafish." He also created a character who flees from Mr. Antolini and borrows money from his sister Phoebe after being expelled from Pencey Prep. For 10 points, name this author who created Holden Caulfield in *The Catcher in the Rye*.

ANSWER: Jerome David **Salinger**

019-09-7-07131

1. This man painted three depictions of his bedroom in a house he shared with Paul Gauguin. This painter depicted a mustachioed man in front of a pool table while other patrons huddle at tables in his *The Night Café*. He showed a woman pouring out four cups of coffee in a work that shows peasants at the dinner table. Another work by this man shows a cedar tree and the church spire of Saint-Remy (sahn reh-MEE) jutting into the swirling sky. For 10 points, name this Dutch Post-Impressionist who painted *The Potato Eaters* and *The Starry Night*.

ANSWER: Vincent Willem van Gogh

023-09-7-07132

2. The last step in this compound's synthesis is the demethylation (DEE-meth-uh-LAY-shun) of lanosterol (luh-NOST-uh-rawl). Cholestyramine (koh-luh-STY-ruh-meen) prevents bile acids from being used to resynthesize this compound. The rate-determining step of this compound's synthesis is determined by HMG-CoA ("H"- "M"- "G" co-"A") reductase activity. That step is targeted by drugs known as statins, to prevent this compound's synthesis. This compound is transported in assemblies that contain the APOB ("A"- "P"- "O"- "B") protein and whose "low-density" variety is mainly responsible for atherosclerosis (AATH-er-ohs-cler-OH-sis). For 10 points, name this waxy, steroid compound.

ANSWER: cholesterol

058-09-7-07133

3. Unusually for a Spanish-speaking South American nation, this country is less than fifty percent Catholic. Part of this country's border with Brazil runs through Lake Mirim, and this country is itself bisected east to west by the Rio Negro. Its capital sits on the north side of the estuary separating it from Argentina, the Rio de la Plata. For 10 points, identify this country in the southeastern part of South America, whose capital has a name meaning "I see a mountain," Montevideo.

ANSWER: Oriental Republic of Uruguay [or Republica Oriental del Uruguay]

019-09-7-07134

4. In this novel, Mrs. Phelps is moved to tears when the protagonist reads "Dover Beach" and Mildred is obsessed with her gigantic television set. The protagonist of this work seeks solace with his teenage neighbor Clarisse. The professor Faber helps the protagonist of this novel escape from the Mechanical Hound. That protagonist kills Captain Beatty and memorizes parts of Ecclesiastes. For 10 points, name this novel about Guy Montag, which was named by its author, Ray Bradbury, for the temperature at which books burn.

ANSWER: Fahrenheit 451

015-09-7-07135

5. When this classification is different for a fetus and its mother, HDN can occur, and must be treated with Rho(D) immune globulin. This classification system is determined by whether A or B antigens are present; if both are not, the person in question is an "O." For 10 points, name this classification system that governs which donors provide fluids for transfusion.

ANSWER: blood type [or blood group; prompt on blood]

026-09-7-07136