

1. This man's childhood "Grand Tour" produced the first copy of Gregorio Allegri's *Miserere*, which the Vatican kept secret, when he transcribed it from memory after one hearing. He composed six quartets dedicated to Josef Haydn. His twenty-first piano concerto is called "Elvira Madigan." His final symphony was in C major, and was his forty-first. For 10 points, name this Salzburg-born composer whose music is listed in the Koechel catalog, and wrote the *Little Night Music* and *Jupiter* symphony.

ANSWER: Wolfgang Amadeus **Mozart** [accept Johannes Chrysostomus Wolfgangus Theophilus **Mozart**]

026-09-9-04101

2. This author wrote about flowers that "eat my oxygen" in "Tulips" and ended one poem by claiming "I rise with my red hair and I eat men like air" after stating her skin was as "Bright as a Nazi lampshade." This author of "Lady Lazarus" wrote "I have always been scared of you, with your Luftwaffe" in a poem in which she conflates Nazi imagery with her father. This author also wrote a novel about Esther Greenwood's psychiatric treatment. For 10 points, name this suicidal American author of "Daddy" and *The Bell Jar*.

ANSWER: Sylvia **Plath**

015-09-9-04102

3. This figure's blood transformed into anemones after he was gored by a boar. Theias (THY us) chases his daughter Myrrha with a knife after their incestuous union produces this figure. One love interest of this figure placed him in a chest after birth. He was given in that chest to Persephone, who refused to give him up. Zeus settled the dispute by decreeing that this man must spend half the year of earth with Aphrodite and half in the underworld with Persephone. For 10 points, name this mythological figure whose name is often used to describe any handsome young man.

ANSWER: **Adonis**

045-09-9-04103

4. In one of this author's novels, Clavdia Chauchat has an affair with the protagonist. This man created a Jesuit educated Jew who duels with Ludovico Settembrini named Leo Naptha. One of his works is about the composer Adrian Leverkuhn selling his soul to the devil. He wrote about a man who becomes obsessed with the Polish boy Tadzio. This author of *Doktor Faustus* wrote about a man who lives in a Swiss sanatorium named Hans Castorp. Gustav von Aschenbach (AAH shen bach) dies in a story by this man. For 10 points, name this author of *The Magic Mountain* and *Death in Venice*.

ANSWER: Thomas **Mann**

027-09-9-04104

5. In a letter to this man, William Molyneux questioned whether a blind man given sight could recognize touched items. That letter responded to this man's work on Boyle's idea of primary and secondary qualities. He defended his religion in *The Reasonableness of Christianity*, but argued against persecuting dissenters in his *Letter Concerning Toleration*. This empiricist advanced a natural rights theory of the social contract and formulated the *tabula (TAH boo lah) rasa*. For 10 points, name this Englishman who influenced the U.S. Founding Fathers with his *Two Treatises on Government*.

ANSWER: John **Locke**

019-09-9-04105

6. This author wrote a novel narrated by Sophie, the aunt of policeman Pieter van Vlaanderen (VLAN durr en). This author of *Too Late the Phalarope* wrote a work in which a political activist named Dubula constructs Shanty Town. That work's plot is motivated by a letter from Theophilus Msimangu (mm see MAHN goo) telling the protagonist to help his sick sister, Gertrude, who is actually a prostitute and informs Stephen Kumalo that for the murder of Arthur Jarvis, his son Absalom is in jail. For 10 points, name this South African author of *Cry, the Beloved Country*.

ANSWER: Alan **Paton** (PAY ton)

022-09-9-04106

7. This man's chief political opponent is proposing to reverse this person's defunding of the Council on Learning. Opposition leader Michael Ignatieff also denounced as "a crazy way of running democracy" this head of government's decision to petition Governor-General Michaëlle Jean to prorogue Parliament. Since defeating Paul Martin in 2006, he has led a minority government as the head of the Conservative Party. For 10 points, name this current prime minister of Canada.

ANSWER: Stephen Joseph **Harper**

019-09-9-04107

8. This author claimed to be "Done with the compass, done with the chart" in one poem and described feeling "zero at the bone" in a poem about snakes. This author of "Wild Nights! Wild Nights!" and "A Narrow Fellow in the Grass" claimed that she "could not see to see" after hearing a "blue, uncertain, stumbling" sound in another poem. She surmises that "the horses' heads / were toward eternity" in a poem in which she rides in a carriage with Immortality. For 10 points, name this poet who heard a fly buzz when she died and for whom Death kindly stopped.

ANSWER: Emily Elizabeth **Dickinson**

029-09-9-04108

9. This figure separated the university aspect of the al-Azhar mosque and had its *ulema* issue new rulings to support his policies. Before taking power, this figure eliminated all parties but Liberation Rally and deposed Muhammad Naguib, whom he had earlier helped to take power following the success of the Free Officers movement against King Farouk. Prior to uniting his country with Syria to form the United Arab Republic, he built the Aswan High Dam, forming a namesake lake. For 10 points, name this second Egyptian president, who was succeeded by Anwar Sadat.

ANSWER: Gamal Abdel **Nasser**

022-09-9-04109

10. One character in this play poses as a Welshman named Le Roy. A scene in this play sees an offensive gift of tennis balls offered to the title character. One of the final scenes in this play sees that character requiring a translator, Alice, to woo the French Katharine. This play opens with a chorus talking about "a Muse of fire." The title character has a speech on St. Crispin's Day where he calls his men a "band of brothers" and declares "once more unto the breach, dear friends." For 10 points, name this Shakespearean play which describes the titular British king's success at the battle of Agincourt.

ANSWER: **Henry V**

052-09-9-04110

11. Lane Kirkland organized a boycott to support this organization, and gave it over six million dollars in aid. This organization was created after authorities ignored twenty-one proposed postulates based on KOR's Charter of Workers' Rights. It protested rising food prices and food shortages in its country, and its impetus was a dockworkers strike in the Lenin Shipyard in Gdansk. For 10 points, name this trade union led by Lech Walesa, which spurred the end of Soviet control of Poland.

ANSWER: **Solidarity** [or **Independent Self-Governing Trade Union**; or **Solidarnosc**; or **Niezalezny Samorzad Zwiaskow Zawodowych**]

004-09-9-04111

12. Historically, it was believed that these objects could be modeled as a cavity with equally likely modes that increased with frequency. The fourth power of temperature is proportional to the flux emitted by one of these according to the Stefan-Boltzmann (STEF-on BOLTS-mon) law. They have a wavelength of maximum intensity described by Wien's (VEENZ) displacement law. The ultraviolet catastrophe describes the breakdown of the Rayleigh-Jeans Law governing radiation from these entities. For 10 points, name these objects that absorb all incoming energy.

ANSWER: **blackbody**

001-09-9-04112

13. Joseph Smith appealed to this president to intervene against Lilburn Boggs's extermination order. This man was the target of Charles Ogle's Gold Spoon Oration. This man was president during the Amistad Affair, and the bloodless Aroostook War also occurred during his single term. His first year in office saw the British relations strained by the Caroline Affair, and his entire term was overcast by the Panic of 1837. For 10 points, name this Democratic Politician who served as Andrew Jackson's Vice President before becoming the eighth President.

ANSWER: Martin **Van Buren**

015-09-9-04113

14. An alternate name for this type of reaction is "metathesis" (muh-TATH-uh-sis). If one of the products of this kind of reaction breaks down to release a gas, it is an effervescent reaction. This type of reaction is also undergone when acids and bases are neutralized to form salts. This type of reaction differs from a redox reaction in that no reactant changes oxidation states. In the most common form of this kind of reaction, two ionic solutions are added to each other to form a precipitate. For 10 points, name this type of reaction in which portions of two reactants swap positions with each other.

ANSWER: **double displacement** reactions [or **double replacement** reactions]

003-09-9-04114

15. In the finale of this show's first season, one character breaks up with her boyfriend for posting intimate details on his blog. In the same episode, another character compares a relationship to the Schrödinger's cat thought experiment. One character in this show is unable to speak to women except when he's drunk, and the two main characters, Leonard and Sheldon, are similarly socially inept. For 10 points, name this show created by Chuck Lorre and Bill Prady, about two physicists who are roommates at Caltech.

ANSWER: *The* **Big Bang Theory**

024-09-9-04115

1A. What European city is the site of the city hall Römer, the hub airport for Lufthanza, and the second largest stock exchange in Europe, behind the one in London?

ANSWER: **Frankfurt**, Germany

1B. What flap of cartilage tissue covers the entrance into trachea during ingestion to prevent choking on food?

ANSWER: **epiglottis**

2A. Examples of this genre include *Headlong Hall* by Thomas Love Peacock and *Point/Counterpoint* by Aldous Huxley. What is this term, describing a literary work in which real, identifiable people are thinly disguised as fictional characters?

ANSWER: **roman à clef**

2B. What Danish physicist told Einstein, “Don’t tell God what to do” when defending his Copenhagen interpretation of quantum physics?

ANSWER: Niels **Bohr**

3A. What Roman playwright of *The Eunuch* shares his name with a figure who is told “this is stupid stuff” in a poem by A.E. Housman?

ANSWER: **Terence**

3B. What phenomenon in psychology, also known as the correspondence bias, was observed by Edward Jones and Victor Harris in people who reacted to pro and anti Castro essays?

ANSWER: **fundamental attribution error**

4A. This is a 10-second calculation question. Give the prime factorization of 16,200.

ANSWER: **2³3⁴5²**

4B. This is a 10-second calculation question. Multiply 7.55 times 3.8.

ANSWER: **28.69**

5A. Name the South American city that beat out Chicago, Tokyo, and finally Madrid to be selected as the host of 2016 Summer Olympics.

ANSWER: **Rio de Janeiro**, Brazil

5B. Karen and Richard are the two musicians in what duo, whose songs include “Top of the World” and “Yesterday Once More?”

ANSWER: The **Carpenters**

6A. This is a 20-second calculation question. Find the foci of the hyperbola with equation $5(x-2)^2 - 3(y+1)^2 = 30$.

ANSWER: **(-2, -1) and (6, -1)**

6B. This is a 20-second calculation question. Factor: $8x^2 + 78x + 85$.

ANSWER: **(4x+5)(2x+17)** [order of factors does not matter]

7A. Name the lowest atmospheric layer, where almost all of weather on Earth occurs.

ANSWER: **troposphere**

7B. What organization led by Captain Paul Watson uses stink bombs and other sabotage tactics to fight what it calls “illegal slaughter of whales” by Japanese ships?

ANSWER: **Sea Shepherd** Conservation Society

8A. What force studied in tribology, whose static form allows for the movement of wheels, is described in Amontons' Laws?

ANSWER: **friction**

8B. *Woman With Her Throat Cut* is a sculpture of a praying mantis by what Swiss artist, known for extremely thin, elongated sculptures that reflects his existential philosophy?

ANSWER: Alberto **Giacometti**

9A. This is a 30-second calculation question. A coin is weighted to land heads 60% of the time. If you flip this coin three times, what is the probability that you will get at least two heads?

ANSWER: **81/125** [or **0.648**]

9B. This is a 30-second calculation question. Find the surface area of a cylinder that has a radius of 9 inches and a height of 13 inches. Use 3.14 as an approximation for pi.

ANSWER: **1243.44 square inches**

10A. English words like “algebra” and “zenith” come from what language, the original language of Qur'an?

ANSWER: **Arabic**

10B. An example of this technique is lines from *The Inferno* at the beginning of "The Love Song of J. Alfred Prufrock." Give the name for a quotation that prefaces a book or a poem.

ANSWER: **epigraph**

1. One side in this conflict was led by Gaston of Orléans and Bartolomé Mitre (MEE-tray). It began with the invasion of Mato Grosso, and its other engagements include the Battle of Cerro Corá [SAIR-o co-RAH] and the Battle of Tuyutí [too-yoo-TEE]. This conflict resulted in the defeat of a nation led by Francisco Solano López which lost the Battle of Riachuelo [REE-ah-chway-lo] to Brazil. For 10 points, name this bloody war fought from 1864 to 1870 between Paraguay and the namesake alliance of Argentina, Brazil, and Uruguay.
ANSWER: War of the **Triple Alliance**

024-09-9-04117

2. This nation is home to the Buddhist monuments of Borobudur and Prambanan. This country also shares an island with a nation with capital at Dili, Timor, and controls the islands which were the destination of Ferdinand Magellan, the Moluccas, or Spice Islands. This nation is also home to a volcano whose eruption created the Year Without a Summer, Mount Krakatoa. Its western province of Aceh was devastated by a tsunami in 2004. For 10 points, name this nation which includes the islands of Java, Sumatra, and Borneo with capital at Jakarta.
ANSWER: **Indonesia**

059-09-9-04118

3. The second man to hold this post previously developed high-yield corn strains, wrote *The Century of the Common Man*, and later ran for president as the candidate of the third Progressive Party. The first man to hold this post was nicknamed "Cactus Jack" and opposed his boss' court-packing scheme. The final man to hold this post later made the decision to drop the atomic bombs on Hiroshima and Nagasaki after becoming president. For 10 points, name this post held by Henry Wallace, John Nance Garner, and Harry Truman under the president who led the United States during the New Deal and World War II.
ANSWER: **Vice President of Franklin Roosevelt** [prompt on partial answers]

030-09-9-04119

4. These can be treated as a collection of stream processors. They often use z-buffers and they make use of framebuffers. These devices must deal with transformations, clipping, and shaders. Two popular ways of writing software that use them are OpenGL and DirectX. These devices use many small computing units to operate on vertices and pixels. For 10 points, name these components of a computer that accelerate the rendering and display of visual output.
ANSWER: **GPU** [or **graphics processing unit**; or **video card**; or **graphics card**]

001-09-9-04120

5. Because he was attacked by Achilles when he was tending his flocks, he organized the Dardanians to attack the Greeks. This man founded the town of Lavinium, named after his wife. He protected the body of Pandarus. Later, in battle, Diomedes broke this man's hip by throwing a stone, leading to his mother trying to rescue him. This ancestor of Romulus and Remus was the son of Venus and Anchises. Dido of Carthage killed herself when this man left her. For 10 points, name this Trojan survivor who was the subject of an epic by Virgil.
ANSWER: **Aeneas**

027-09-9-04121

6. This material completely surrounds lands known as "kipuka." A landform called a tuya results when this substance is found beneath a glacier. This substance interacts with water to form the "pillow" type of it. When this substance is very liquid, it is known as pahoehoe (pa-HOY-hoy). When this material takes on a chunky consistency, it is known as aa (AH-ah). Composite, or "strato" cones, alternate between this emitting this material and expelling tephra and ash. For 10 points, name this type of molten rock, the above-ground counterpart of magma.

ANSWER: **lava** [do not accept "magma"]

026-09-9-04122

7. This politician led a faction of his political party that opposed the Lecompton Constitution. Shortly before death, he made a trip to dissuade border states from seceding. As chairman of the powerful Committee on Territories, this Senator designed the Kansas-Nebraska Act. Later, he ran in an election with Herschel Johnson as his running mate and finished behind John Bell, Southern Democrat John Breckinridge and a man he debated at such sites as Alton and Freeport. For 10 points, name this Illinois Democrat who in 1858 engaged in a series of debates with Abraham Lincoln.

ANSWER: Stephen Arnold **Douglas**

064-09-9-04123

8. This is the number of variables that the Ackermann function takes. Euler's formula states that the number of vertices, minus the number of edges, plus the number of faces of any convex polyhedron is equal to this number. This is the only number for which the reciprocals of its powers sum to the number itself. This is the highest number x at which a to the x plus b to the x can equal c to the x , according to Fermat's Last Theorem. It is the third number in the Fibonacci series. For 10 points, name this number, the only even prime.

ANSWER: **two**

026-09-9-04124

9. This man's eldest son was part of a plot to overthrow him and was called "the Hunchback." The "miniscule" script was developed as part of this ruler's namesake "Renaissance." Einhard, this man's biographer, served as secretary for one of this man's sons, Louis the Pious. His army's ambush by Basques following the Battle of Roncevaux (RON say VAW) Pass was chronicled in the Song of Roland. The second Carolingian ruler was for 10 points, what son of Pepin the Short, who was crowned on Christmas Day by Pope Leo III as Holy Roman Emperor?

ANSWER: **Charlemagne**

051-09-9-04125

10. This process can be reversed in a pathway involving urokinase ("YOUR"-oh-KINE-ase), and it is downregulated by prostacyclin (PROS-tuh-"SIGH"-klin). Christmas disease results from a lack of Factor IX involved in this process. During this process, the serine protease (PRO-tee-ase) thrombin (THROM-bin) converts fibrinogen (fie-BRIN-oh-jen) into fibrin (FIE-brin), which forms a mesh polymer. Platelets have several important roles in this process. For 10 points, name this process by which the blood congeals after injury, which is impaired in hemophilia (HEE-mo-FILL-ee-uh).

ANSWER: **coagulation** [or **clotting**]

001-09-9-04126

11. This ruler occupied Finland in a period known as the Greater Wrath, Following his selection by the Duma, a rebellion of the Streltsy was led by his future regent, Sofia Alekseyevna. He fought the battles of Narva and Poltava in a conflict ended by the Treaty of Nystad, the Great Northern War against Sweden. This leader implemented a tax on beards and promoted European dress and customs. For 10 points, name this modernizign tsar of Russia.

ANSWER: **Peter I** of Russia [or **Peter the Great** of Russia; or **Pyotr Alexeyevich** Romanov; prompt on **Peter**]

022-09-9-04127

12. The first section of this work was reused in its composer's *Juditha Triumphans*. That F major movement represents a hunt. It was originally published as part of its composer's Opus 8, entitled "The Contest between Harmony and Invention." The second part of this work concludes with a thunderstorm, and the first depicts bird in the first movement, according to its accompanying sonnets. For 10 points, name this set of four violin concertos by Antonio Vivaldi representing different times of year.

ANSWER: *The **Four Seasons*** [or *Le **Quattro Stagioni***]

024-09-9-04128

13. The Hoffman modulation contrast type of these devices enhances phase gradients. A component named after Nomarski (no-MAR-skee) is used in the differential interference contrast type of these devices. Abbe (AH-BAY) condensers are attached to these devices. Confocal ones remove light that is out of focus. They have objective and ocular pieces. The multiplication of the strengths of two of their pieces gives the total magnification. For 10 points, name these laboratory devices that magnify images of cells and other structures.

ANSWER: optical **microscopes**

001-09-9-04129

14. One of his paintings shows a man and child huddled and facing a woman on a beach, all without shoes. Another work by this painter shows the faint outline of a woman's head visible above the neck of a hunched, cross-legged figure holding an instrument. This artist of *The Tragedy* and *The Old Guitarist* painted a chaotic scene with a screaming horse's head that depicted the bombing of a Basque town. This painter of *Guernica* (ger-NEE-kah) also had "Rose" and "Blue" periods. For 10 points, name this Spanish Cubist painter.

ANSWER: Pablo **Picasso** [or Pablo Diego José Francisco de Paula Juan Nepomuceno María de los Remedios Cipriano de la Santísima Trinidad Ruiz y **Picasso**]

023-09-9-04130

15. Near the end of this novel, a character's attempts to call an ambulance are thwarted when Clytie burns the manor house. One character in this novel begins an affair with the teenaged Milly shortly after his son Charles Bon is murdered in front of his manor's gates. The final sections of this novel involve the meeting of Miss Rosa Coldfield and the author's recurring character Quentin Compson, who learns the story of the central family. This novel opens when Thomas Sutpen buys land to build his plantation. For 10 points, name this Biblically-titled novel by William Faulkner.

ANSWER: **Absalom, Absalom!**

020-09-9-04131

1. In the 1980s and 90s, this man developed government and binding theory and the Minimalist Program. His namesake hierarchy classifies formal grammars. He discussed the sentence "Colorless green ideas sleep furiously" in his magnum opus, *Syntactic Structures*. He developed the concept of principles and parameters, which he considers to be a part of the universal grammar. For 10 points, name this founder of generative grammar, a linguist who is also known for left-wing political writing.

ANSWER: Avram Noam Chomsky

024-09-9-04132

2. One book associated with this religion is translated as the "Record of the Transmission of the Light." One common practice in this religion is counting one's breaths. One school in this religion was founded by Dogen, who emphasized "practice-realization." Another school in this religion emphasizes riddles found in collections such as *The Gateless Gate* and *The Blue Cliff Record*. Those riddles, known as koans, include "Does a dog have Buddha-nature?" and "What is the sound of one hand clapping?". For 10 points, name this offshoot of Buddhism that emphasizes meditation and is common in Japan.

ANSWER: Zen Buddhism [or Ch'an Buddhism; prompt on Buddhism]

003-09-9-04133

3. The product of one type of this process is recycled in the Cori Cycle after it is transported to the liver. This biochemical process is preferred over oxidative phosphorylation by organisms like yeast, and it is essential to such diverse phenomena as muscle soreness and the brewing of beer. For 10 points, name this alternative pathway to cellular respiration, in which cells anaerobically break pyruvate into products like ethanol or lactic acid instead of oxidizing it to carbon dioxide.

ANSWER: fermentation

022-09-9-04134

4. This work closes with Bailey declaring himself head of an expedition, and setting up strict penalties for anyone who would challenge his role as governor, judge, and record keeper. This work includes a description of a Haberdasher, Carpenter, Weaver, and Dyer, who do not appear later. This section begins with a description of the return of spring, with the accompanying April showers. For 10 points, name this section that describes pilgrims at the Tabard Inn, preceding the Knight's Tale in a collection by Geoffrey Chaucer.

ANSWER: the General Prologue to the Canterbury Tales [prompt on partial answer]

062-09-9-04135

5. **The entropy of one of these is the subject of the Gibbs paradox, and their entropy is described by the Sackur-Tetrode equation. Each of this kind of molecule has kinetic energy of "three halves times k sub b " times the temperature, and they can modeled by the (*) Maxwell-Boltzmann distribution.** The kinetic theory assumptions that govern them include point like masses and elastic collisions with no intermolecular forces. For 10 points, name these gases whose associated law says that PV equals nRT .

ANSWER: monatomic ideal gases [prompt on gases]

001-09-11-04136