

1. James Michael Curley served four terms as mayor of this city despite being in prison for part of them. In the 1970s, this city experienced a series of race riots after Judge W. Arthur Garrity mandated a busing plan. The Lowell and Cabot families were part of the aristocracy dominating this city in the nineteenth century nicknamed its "Brahmins." In this city, which experienced a deadly molasses flood in 1919, Whitey Bulger was a prominent leader of the Irish Mob. Name this city where, in 1773, the Sons of Liberty protested against British taxes during a Tea Party.

ANSWER: **Boston**

080-13-84-03101

2. In one poem, this author predicts that "the golden Muses have truly blessed me, I shall not be forgotten after death." A stanza of one short line followed by three long ones is named for this poet, who described summoning a goddess borne on doves to avenge a spurned lover in the "Ode to Aphrodite." Classical sources describe this author exchanging work with Alcaeus and throwing herself off the Leucadian cliffs to her death. Like the later Corinna, she was called the "tenth Muse." Name this ancient Greek poet from the island of Lesbos.

ANSWER: Sappho

019-13-84-03102

3. This man played Bette Midler's scheming husband Sam Stone in the 1986 movie *Ruthless People*. In another movie, he plays a character who Max Shrek attempts to make mayor and later attempts to kill the first-born sons of Gotham City. He currently plays a character who sings doowop as a member of the Yellow Jacket Boys and is the father of Dennis, Dee, and possibly Charlie. His breakout role came as the dispatcher Louie De Palma in *Taxi*. Name this actor who played the Penguin in *Batman Returns* and currently stars as Frank Reynolds on *It's Always Sunny in Philadelphia*

ANSWER: Danny **DeVito**

030-13-84-03103

4. Anticlus almost revealed the secret of this object after a woman imitated several voices. One person who was suspicious of this object proclaimed "Timeo Danaos et dona ferentes" (tim-EY-oh dah-NAH-ohs et DOH-nah feh-RENT-eyz). Laocoon (lay-AH-co-awn) was killed by serpents after denouncing this object, which was presented by Sinon. It was built by Epeius at the urging of Odysseus, after ten years of war. Identify this large wooden animal which secretly contained Greek soldiers.

ANSWER: Trojan Horse

019-13-84-03104

5. This experiment used a zinc sulfide screen attached to a microscope as a detector. The incident particles for it were generated from the decay of radon. This experiment was used to disprove the plum pudding model. Its results were compared to "firing a howitzer at tissue paper and having it reflect back at you." Name this experiment that used alpha particles to show that an atom contains a central nucleus, performed by a British physicist.

ANSWER: Rutherford's **gold foil** experiment [or **Geiger-Marsden** experiment; or **Rutherford** experiment]

6. In a price-versus-quantity graph of this market structure, the point at which marginal cost equals average revenue occurs at the right side of a triangle that represents a deadweight loss to consumer surplus. When extremely high barriers to entry are present, such as in telephone or water distribution networks, the "natural" form of this structure arises. Identify this microeconomic structure which occurs when a market has only one seller.

ANSWER: monopoly

019-13-84-03106

7. This thinker discussed the role of names as marks which aid one's memory in his *De Corpore*. His best-known book contains a chapter on the "Kingdom of Darkness." He delineated the concept of the "war of all against all." His magnum opus describes life as being "solitary, poor, nasty, brutish, and short." Identify this English philosopher who advocated for absolute sovereignty in his *Leviathan*.

ANSWER: Thomas **Hobbes**

189-13-84-03107

8. One novel by this author ends with a "Ride of the Kings," a noble tradition which Vladimir ignores, preferring to watch motorcycles. In that novel, Marketa receives a postcard reading, "Optimism is the opiate of the people" and "Long live Trotsky" from Ludvik Jahn. Characters in another of this author's novels include a dog that dies of cancer, named Karenin, as well as a professor from Geneva named Franz. This author of wrote about Tomas marrying Tereza in the shadow of the Prague Spring. Name this Czech novelist of *The Unbearable Lightness of Being*.

ANSWER: Milan Kundera

190-13-84-03108

9. Forces supporting this ruler were victorious in the Battle of Villalar during the Revolt of the Comuneros. As a child, this man was tutored by the future Pope Adrian VI and raised by his aunt Margaret of Austria. This ruler succeeded his mother Joanna the Mad on one throne, and he was the last ruler crowned by the Pope on another throne. Name this Hapsburg ruler who was both King of Spain and Holy Roman Emperor, and who presided over the Diet of Worms attended by Martin Luther.

ANSWER: <u>Charles V</u> of the Holy Roman Empire [or <u>Charles I</u> of Spain; prompt on <u>Charles</u>]

153-13-84-03109

10. One of this author's characters is rescued with his manservant Conseil and the Canadian harpoonist Ned Land after the sinking of the *Abraham Lincoln*. Another of his characters marries the Indian princess Aouda, is pursued by the detective Inspector Fix, and is served by Passepartout. One novel by this author concerns the submerged *Nautilus* and its Captain Nemo. Name this French author of *Around the World in Eighty Days* and *Twenty Thousand Leagues Under the Sea*.

ANSWER: Jules Verne

015-13-84-03110

11. Elements can be extracted from this data structure in a process called slicing. When most of the values are zero, this data structure is said to be sparse. A hash table is the most common way to implement the associative type of this data structure, which associates an arbitrary key with a value. These data structures are indexed according to pointer arithmetic. When one-dimensional, these data structures are called vectors, and they usually contain elements of only one data type. Identify these data structures analogous to matrices that store data in a contiguous address space.

ANSWER: arrays

12. In the 1950s, Semyon Bogatyrev completed this man's abandoned symphony in E-flat. Between his fourth and fifth symphony, he depicted the guilt-stricken lover of Astarte wandering in the Alps in his *Manfred* symphony. He included the dueling "La Marseillaise" and "God Save the Tsar" anthems in a work topped off with cannon-fire. Name this composer of the *Pathétique Symphony*, who depicted the defeat of Napoleon in his *1812 Overture*.

ANSWER: Pyotr Ilyich Tchaikovsky

019-13-84-03112

13. The site for this city was chosen after one man saw twelve vultures. In the underworld, Anchises told his son that his descendants would rule this place. It was founded by the sons of Rhea Silvia, who were saved by a she-wolf after being left to die of exposure. One of is founders killed the other in an argument over building a wall. Wives for its original settlers were taken from the Sabines at a festival for Neptune. Name this city, legendarily founded by Romulus and Remus.

ANSWER: Rome

121-13-84-03113

14. This character was raised by his Aunt Clara and hallucinates her scolding him at the end of the novel he appears in. This man was chased out of Weed on accusations of rape and is given a puppy by the "jerkline skinner" Slim. This figure's fate is foreshadowed by the death of Candy's dog. Constantly dreaming of being able to take care of the rabbits, he loves to pet soft things and accidentally breaks the neck of Curley's wife. For 10 points, name this mentally disabled ranch hand who is shot by his friend George at the conclusion of *Of Mice and Men*.

ANSWER: **Lennie** Small [or Lennie **Small**]

052-13-84-03114

15. One member of this dynasty survived a series of rebellions known as the Fronde. Another king from this dynasty arranged for the assassination of Concino Concini. The founder of this dynasty was assassinated by Francois Ravaillac and enacted the Edict of Nantes. One king of this dynasty had Madame de Pompadour as a mistress. The cardinals Richelieu and Mazarin served kings of this dynasty, one of whom declared "I am the state!" Name this French dynasty that was founded by Henry IV and included Louis XIV.

ANSWER: House of **Bourbon**

186-13-84-03115

16. One poet from this nation wrote the lines "Before you, mother Idoto, naked I stand," in his work "Heavensgate." A playwright from this nation described the contest between Lakunle and Baroka for Sidi's hand in marriage in *The Lion and the Jewel*. That playwright described Olunde's suicide in *Death and the King's Horseman*. Ikemefuna dies in a novel from this country that centers on Okonkwo. Name this country home to Christopher Okigbo, Wole Soyinka, and the author of *Things Fall Apart*, Chinua Achebe.

ANSWER: Nigeria [or Federal Republic of Nigeria]

192-13-84-03116

17. One type of these compounds can be used to bring ionic salts into an organic phase and are called the "phase transfer" type of them. One mole per second is the namesake SI unit describing the function of these species. In hydrogenations, noble metals often serve this purpose. These compounds do not change the position of an equilibrium, and they work by lowering the activation energy barrier for a reaction. In biology, protein ones are called enzymes. Name these species which speed up chemical reactions. ANSWER: **catalyst**s

18. This poet described a train as "punctual as a star" and "docile and omnipotent" in a poem which begins "I like to see it lap the miles." In another poem, she wrote that "to comprehend a nectar requires sorest need." Much of her innovative punctuation and capitalization was edited out of her poems in an edition published by her mentor Thomas Wentworth Higginson. She wrote "The stillness in the room was like the stillness in the air" in a poem beginning "I heard a fly buzz when I died." Name this reclusive Massachusetts poet of a poem that opens, "Because I could not stop for Death."

ANSWER: Emily **Dickinson**

015-13-84-03118

19. When this property is present in a molecule, one set of atomic orbitals are depicted at a higher energy on an MO diagram. This property occurs when two atoms have a difference of greater than 0.4 on the Pauling scale. Boron trifluoride does not possess this property because it has a trigonal planar geometry, so the moments cancel out. Carbon-hydrogen bonds don't have this property because they have very similar electronegativities. Name this property in which a molecule has partially positive and partially negatively-charged regions because atoms in bonds aren't shared equally.

ANSWER: **polar**ity [or word forms]

190-13-84-03119

20. This sub-national political division contains a large collection of distance markers at the "Sign Forest" outside of Watson Lake. Herschel Island, which lies just off the northern coast of this political division's mainland, is in the Beaufort Sea. In the southwest of this political division, the Kluane National Park contains a peak of the St. Elias Mountains, Mount Logan. The towns of Burwasli Landing, Sulphur, Forty Mile, and Glacier Creek lie on its western border with the United States. Dawson and Whitehorse are also found within what northwesternmost territory of Canada, which borders Alaska?

ANSWER: **Yukon** [or the **Yukon** Territory]



1. When multiplied on both sides by a matrix A, the matrix denoted by "pseudo-" this term is equal to A. In traditional logic, it is a conditional sentence that is the contrapositive of the converse. When applied to the output of a function f, a function of this type yields the argument to f. It is the element of a set that yields the identity of that set, giving zero and one for addition and multiplication, respectively. Name this operation usually signified by a superscript negative one.

ANSWER: inverse

066-13-84-03121

2. While at Coldwater II near this location, David Johnston became the first person to report an event here, radioing "This is it!" before his death. Reid Blackburn, a photographer for National Geographic, was eight miles away from this location when that event occurred. The Toutle River was filled with sediment after this peak's north face fell away early in the morning on May 18, 1980. Name this volcanic peak that erupted and killed 57 people in the state of Washington.

ANSWER: Mount Saint Helens

023-13-84-03122

3. One unsuccessful assassin in this modern-day country tried to jump into a river near the Latin Bridge, only to find it was five inches deep. In this country, Dutch peacekeepers failed to protect a UN-designated safe haven from massacre at Srebrenica, a largely Muslim town. This modern-day nation is where Black Hand affiliate Gavrilo Princip took aim at the Austro-Hungarian empire's heir apparent. Name this former Yugoslav state attacked in the 1990s by Croats and Serbs, with capital at Sarajevo.

ANSWER: **Bosnia** and Herzegovina [or **Bosna** i Hercegovina]

104-13-84-03123

4. Because this force is non-renormalizable, generating a quantum field theory of it is impossible. Radiation generated by this force requires a quadrupole (KWAH-droo-POLE) source. One constant that defines this force was measured using a torsion balance by Henry Cavendish; that value is equal to 6.67 times 10 to the negative 11. This force bends spacetime according to general relativity. Name this force described by Newton's inverse-square law, the attractive force between two bodies.

ANSWER: gravity

048-13-84-03124

5. The Zuavi Pontifici were formed to oppose this process, which was supported by the Expedition of the Thousand. This process was finalized in 1870, creating a "prisoner" status for Pius IX; nine years earlier, it triggered the re-crowning of Victor Emmanuel II. This series of events was orchestrated by Count Cavour and militarily aided by the Redshirts of Giuseppe Garibaldi. Identify this process that unified disparate states such as Piedmont and the Two Sicilies into the new Kingdom of Italy.

ANSWER: the **Risorgimento** [or descriptive answers such as the **unification of Italy** until "Italy" is read]

6. This author wrote, "Though they sink through the sea, they shall rise again," in a poem in which every stanza begins and ends with the line, "And death shall have no dominion." This author of "Fern Hill" wrote a radio drama entitled *Under Milk Wood*. In one of his poems, addressed to "you, my father, there on the sad height," the speaker believes that "old age should burn and rave at close of day." That villanelle includes the line, "Rage, rage, against the dying of the light." Name this Welsh poet of "Do Not Go Gentle into That Good Night."

ANSWER: Dylan **Thomas** [or Dylan Marlais **Thomas**]

190-13-84-03126

7. This man led the campaign to end the Beiyang government known as the Northern Expedition. A suspected kidnapping plot by Li Zhilong led to this man's political feud with Wang Jingwei. He used the Gang Greens as paramilitaries during the "White Terror." He was kidnapped by Zhang Xueliang (shoe-AY-lee-ahng) during the Xi'an (SHEE-ahn) incident and succeeded Sun Yat-sen. Name this Nationalist leader of China who was forced to flee to Taiwan after the Chinese Civil War was won by Mao Zedong.

ANSWER: <u>Chiang</u> Kai-shek [or <u>Jiang</u> Jieshi; or <u>Jiang</u> Zhongzheng; or <u>Chiang</u> Chieh-shih; or <u>Chiang</u> Chung-cheng]

186-13-84-03127

8. One member of this family names the temperature at which a ferromagnetic material becomes paramagnetic. Two brothers with this last name discovered piezoelectricity, which would be used in a very sensitive electrometer to discover two new elements. A husband and wife team with this last name created new radioactive elements by bombarding elements with alpha particles. One person with this last name is the only one to have one two Nobels in the sciences. Identify this last name of the husband and wife team that discovered radium and polonium.

ANSWER: Curie [prompt on Joliot-Curie]

066-13-84-03128

9. This man used his father as a model for the doctor in his early painting *Science and Charity*. He designed the sets and costumes for Erik Satie's avant-garde ballet *Parade*. He used African masks as the heads of prostitutes from a Barcelona street in *Les Demoiselles d'Avignon*. With Georges Braque, he founded a new genre which used geometric forms to depict many points of view at once. Name this expatriate Spanish-born co-founder of Cubism.

ANSWER: Pablo Ruiz y Picasso

019-13-84-03129

10. This author wrote about a perfume shop employee whose body is fished out of the Seine River. He also created a character who accidentally kills a woman when trying to shave her. In one of this author's stories, the Minister D steals the title compromising document and hides it in plain sight. He pioneered the mystery story with a work in which two killings are committed by a sailor's orangutan. Name this American author who featured detective C. Auguste Dupin in the stories "The Purloined Letter" and "The Murders in the Rue Morgue."

ANSWER: Edgar Allan Poe

- 1. Name these poets.
- [5] What British Romantic wrote "Ah, Sunflower" as well as a poem about syphilis, "The Sick Rose"?

ANSWER: William Blake

[10] What American poet wrote "To the Fringed Gentian," "The Yellow Violet," and "To a Waterfowl"?

ANSWER: William Cullen Bryant

[15] What poet of "Sunflower Sutra" asked Walt Whitman which way his beard points in "A Supermarket in California?"

ANSWER: Irwin Allen Ginsberg

[20] Name the fellow Beat who was fictionalized as Japhy Ryder in Jack Kerouac's *The Dharma Bums* and wrote the volume *Turtle Island* plus the poems "For Plants," "Wave," and "Why I Take Good Care of My Macintosh Computer."

ANSWER: Gary Snyder

186-13-84-03101

- 2. Name these bankrupt companies.
- [5] What automaker narrowly avoided bankruptcy through a 1.5 billion dollar loan in 1979 from the federal government and formed a partnership with Daimler-Benz in 1998?

ANSWER: Chrysler Corporation

[10] What investment bank's declaration of bankruptcy, the largest in history, helped to set off the financial crisis in September 2008?

ANSWER: Lehman Brothers Holdings Inc.

[15] What recipient of a controversial \$535 million loan filed for bankruptcy in 2012?

ANSWER: Solvndra Corporation

[20] In 2011, what company was led out of bankruptcy after the resignation of CEO Gerard Arpey, who was succeeded by Tom Horton, who engineered a merger?

ANSWER: **American** Airlines

019-13-84-03102

- 3. Name these historical politicians from the American South.
- [5] Name the senator, and Jackson's first vice-president, who defended nullification in his *South Carolina Exposition and Protest*.

ANSWER: John Caldwell Calhoun

[10] Name the President and former Texan senator who said "we have lost the South for a generation" after signing the 1964 Civil Rights Act.

ANSWER: Lyndon Baines **Johnson** [or **LBJ**]

[15] Who wrote a 1500-page history of his later political life while living on the estate of Sarah Ellis Dorsey?

ANSWER: Jefferson Finis Davis

[20] What virulent racist argued for the elimination of slavery as an impediment to Southern progress in his book that ignited a major 1850s controversy, *The Impending Crisis of the South?*

ANSWER: Hinton **Helper**

4. Name these jazz musicians.

[5] Name the jazz saxophonist who recorded the albums Giant Steps and My Favorite Things.

ANSWER: John William Coltrane

[10] Name the jazz musician who played a trumpet with a bent bell, a major figure in the development of bebop.

ANSWER: John Birks "Dizzy" Gillespie

[15] Who popularized a piece written by his mentor King Oliver, "West End Blues," and performed "Heebie Jeebies?"

ANSWER: Louis **Armstrong** [or **Satchmo**]

[20] What artist of *Flutista* and *Memphis Underground* helped popularize bossa nova in the United States and is often regarded as the greatest jazz flute player of all time?

ANSWER: Herbie Mann [or Herbert Jay Solomon]



Letter D

Letter P

Letter B

Letter D

[10] What linguistics term refers to a combination of the sound of two vowels?

ANSWER: diphthong

[10] What scientist is the namesake of the physical effect that causes wave frequency to change when the wave source is in motion relative to an observer, changing the colors of distant galaxies and the sound of passing cars?

ANSWER: Christian Andreas **Doppler**

[10] What three-word Latin phrase refers to the "god from the machine" who descends to sort out the plot of Classical plays?

ANSWER: "deus ex machina"

[10] Name the French composer of the ballet *Coppelia* who created the "Flower Duet" for his opera *Lakme*.

ANSWER: Leo **Delibes**

[10] The Golden Mile and an International Convention Centre that commonly hosts multinational organizations are found in what third-most-populous city in South Africa?

ANSWER: **Durban**

[10] Name the philosopher who wrote "Je pense donc je suis" or "I think therefore I am" in his *Discourse* on *Method*.

ANSWER: Rene **Descartes**

[10] Derived from the name of a third-century Greek mathematician, what adjective refers to algebraic equations which have only integer solutions?

ANSWER: **Diophantine**

[10] King Midas was given the ears of what animal after preferring Marsyas to Apollo in a music contest?

ANSWER: donkey

[10] Name the Southern Conference basketball team that reached the Elite Eight of the NCAA tournament in 2008 behind the play of Stephen Curry.

ANSWER: **Davidson** University

[10] The physical law showing that specific heat for all solid materials is roughly similar when expressed in terms of Joules per mole times Boltzmann's constant is named for Alexis Petit and what other French scientist?

ANSWER: Pierre Louis **Dulong**

019-13-84-0310-3

Letter P

[10] What saint wrote epistles to the Romans and the Corinthians?

ANSWER: Saint **Paul** [or **Saul**]

[10] What English royal house was inaugurated by Henry II?

ANSWER: House of **Plantagenet**

[10] What toy manufacturer makes board games like *Monopoly*?

ANSWER: Parker Brothers

[10] What literary term, coming from the Greek for "too much" denotes the rhetorical use of more words than are necessary to convey a point?

ANSWER: pleonasm

[10] What British Ambassador to the United States signed a treaty with John Hay nullifying the

Clayton-Bulwer Treaty?

ANSWER: Julian <u>Pauncefote</u>, 1st Baron Pauncefote [10] What American author wrote the *USA Trilogy*?

ANSWER: John Dos Passos

[10] What geologic epoch featured the last glacial period?

ANSWER: **Pleistocene** epoch

[10] What organ functions as a gland producing insulin and somatostatin?

ANSWER: Pancreas

[10] What volcano on the island of Luzon in the Philippines erupted in 1991?

ANSWER: Mount **Pinatubo**

[10] What Greek god lived in Arcadia and had the legs and horns of a goat?

ANSWER: Pan

080-13-84-0310-3

Letter B

[10] What early Renaissance painter created *Primavera*?

ANSWER: Sandro <u>Botticelli</u> (or Alessandro di Mariano di Vanni <u>Filipepi</u>) [10] What abolitionist conducted the raid on Harpers Ferry in West Virginia?

ANSWER: John **Brown**

[10] What rap group lost member MCA to cancer in 2012?

ANSWER: **Beastie Boys**

[10] What poet of "My Last Duchess" married Elizabeth Barrett?

ANSWER: Robert **Browning**

[10] What domain of life uses conjugation as a method of DNA transfer?

ANSWER: bacteria

[10] In Greek myth, who killed the Chimera?

ANSWER: **Bellerophon**

[10] What Chief Justice of the Supreme Court presided over Roe v. Wade?

ANSWER: Warren Earl **Burger**

[10] This is the term for the study of the mechanics of projectiles.

ANSWER: **ballistic**s

[10] Minsk is the capital of what nation? ANSWER: Republic of **Belarus** or **Bielarus**

[10] What Scottish poet wrote "A Red, Red Rose" and "Auld Lang Syne"?

ANSWER: Robert **Burns** or Robbie **Burns** or Rabbie **Burns** or **Robden of Solway Firth**

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1. This author wrote a dialogue in which Vivian tells Cyril that art reveals "nature's lack of design," "The Decay of Lying." In a novel by this man, Lord Henry Wotton corrupts the title character with a "yellow book," and the title character manages to stay young while a painting of him grows old. He also wrote a comedy in which Jack and Algernon both wish to have the title name. For 20 points, name this Victorian author of *The Picture of Dorian Gray*.

ANSWER: Oscar Wilde [or Oscar Fingal O'Flahertie Wills Wilde]

080-13-84-03101

2. *N equitans* is the only organism in one phylum of this taxon. Carl Woese first identified and classified this group of organisms. Organisms in this taxon have ether, rather than ester bonds, to fatty acids, and their fatty acids are branched. They have pseudomurein, rather than peptidoglycan, in their cell walls. Halophiles and methanogens are categorized into this taxon, which also contains a group of organisms which can live in hot springs. This prokaryotic domain was separated from Bacteria in 1977. For 20 points, name this group of unicellular extremophile organisms.

ANSWER: Archaea

190-13-84-03102

3. One portion of this document concerned the removal of fish-weirs from waterways, and another portion of this document concerns the levying of "scutage" money. This document was signed a year after the Battle of Bouvines, and one of its clauses led to the First Barons' War. This document codified the right of habeas corpus and limited the power of the English throne. For 20 points, identify this document signed at Runnymeade.

ANSWER: Magna Carta [prompt on Great Charter]

189-13-84-03103

4. After a great battle, this god defeated the "mist calf" and its creator, Hrungnir. In the Thrymskvida, this owner of Megingjard (muh-GIN-yard) dressed as a woman to regain a prized possession. This god rides on a chariot pulled by two goats, whose names mean "gap-tooth" and "tooth-grinder." This figure went fishing with Hymir, who cut his line before he could capture the Midgard Serpent. His wife Sif had her hair stolen by Loki. For 20 points, name this Norse deity whose hammer comes back to him whenever he throws it.

ANSWER: Thor

186-13-84-03104

5. An artist from this country depicted a gladiator who is receiving the thumbs down from the crowd in his painting *Pollice Verso*. Another artist from this country depicted himself in a top hat, running in front of a column of smoke in a painting that includes a kid brandishing two pistols as he walks over dead bodies and partially nude woman holding the tricolor flag. For 20 points, name this country, home to the painter of *Liberty Leading the People*.

ANSWER: France

6. This President defended a newly-announced dam from accusations that it was a pork-barrel project by saying "a rising tide lifts all boats." Ted Sorensen wrote many speeches for this President, including one given at American University to announce the Nuclear Test Ban Treaty. At Rice University, he said some decisions were made "not because they are easy, but because they are hard." Many people mistakenly believed he called himself a jelly doughnut during a speech in Berlin. For 20 points, name this President who, in his inaugural address, said "Ask not what your country can do for you, ask what you can do for your country."

ANSWER: **J**ohn Fitzgerald **Kennedy** [or **J**ack **Kennedy**; or **JFK**; prompt on **Kennedy**]

020-13-84-03106

7. The synthesis of this compound requires tyrosine-194 to bind to its single reducing end. The synthesis of this compound uses UDP-conjugated monomers to form alpha-1,4-linkages, and a branching enzyme to generate alpha-1,6 linkages. This compound is broken down in response to glucagon, and it provides energy for about 6 hours during a fast. For 20 points, name this polymer of glucose, which is stored in the liver and often called animal starch.

ANSWER: glycogen

048-13-84-03107

8. One king from this house was an ineffective ruler due to injuries sustained when he was kicked by a horse; that was Robert III. An attempt to restore this house to one throne it controlled included the Fifteen and Forty-Five Rebellions and was known as Jacobitism. This house's last reigning monarch was Queen Anne, whose childless death led George I of Hanover to take the throne. For 20 points, identify this ruling house of Scotland and England, whose rulers also included James I and Charles I.

ANSWER: House of **Stuart** [or **Stuart**s]

019-13-84-03108

9. These objects gain their most notable property due to their outer layer of doubly ionized helium expanding, becoming less opaque, then collapsing due to gravity; that occurs in the kappa mechanism. While doing work on the Magellanic Cloud, Henrietta Leavitt discovered the intrinsic relationship between these objects' period and luminosity, which allows them to be used to determine distances. For 20 points, name these variable stars that are often used as standard candles.

ANSWER: <u>Cepheid</u> variables [prompt on <u>variable</u>s stars]

048-13-84-03109

10. Some authorities assert that this object symbolizes the four exiles in Babylon, Persia, Greece, and Rome. It displays an acronym for the phrase "nes gadol hayah sham" (NESS gah-DOLE hi-AH SHAHM), meaning "a great miracle happened there." Depending on which letter is facing up, players of this object may contribute, do nothing, or take half or all of the pot. For 20 points, identify this top-like device which is used to play a traditional game on Hannukah.

ANSWER: a dreidel

019-13-84-03110

11. One ruler of this name succeeded his brother Simeon the Proud and was known as "the Meek." The first ruler of this name persuaded the head of the Russian Orthodox Church to move to Moscow, and was known for his financial shrewdness as "Moneybags." The third or "Great" ruler of this name broke away from Mongol lordship. For 20 points, give this name of four princes of Moscow, the last of whom lost the Livonian War, was the first tsar of Russia, and was called "Grozny."

ANSWER: Ivan

12. One of these pieces by this composer was, like a serenade bearing the same nickname, dedicated to a Salzburg family. Another of these pieces by this composer contains a distinctive five-voice fugato and was given its popular nickname by Johann Peter Salomon. The only two minor-key works of this type by this composer include the 25th and "the great G minor," which opens E-flat, D, D, E-flat, D, D, E-flat, D, D, B-flat. For 20 points, the 40th is the penultimate of what set of works, which includes the Jupiter? ANSWER: **symphonies** by Wolfgang Amadeus **Mozart** [or Johannes Chrysostomus Wolfgangus Theophilus **Mozart symphonies**]

020-13-84-03112

13. The inventor of this product abandoned his business interests in 1960 and spent the last fourteen years of his life as a missionary in Bolivia. In 1962, Homer Fesperman and Charles Weagley wrote the iconic jingle for this product, which notes that it's "fun for a girl or a boy." It was invented in 1946 by shipyard engineer Richard James, who demonstrated it at a Gimbel's store using an inclined plane. For 20 points, identify this toy which consists of a coiled spring.

ANSWER: Slinky

019-13-84-03113

14. This man joined with Edward Herman to statistically analyze American media sources in *Manufacturing Consent*. Chapters such as "Teaching Nicaragua a Lesson" and "The Crucifixion of El Salvador" appear in his polemic *What Uncle Sam Really Wants*. His essay *Objectivity and Liberal Scholarship* draws parallels between what he dubs the weak American intellectual responses to the Spanish Civil War and the Vietnam War. For 20 points, name this strident critic of American foreign policy, who is also an MIT-employed linguist who wrote *Syntactic Structures*.

ANSWER: Avram Noam Chomksy

019-13-84-03114

15. This poem states that "heard melodies are sweet, but those unheard are sweeter," and it describes "happy, happy boughs" that cannot shed their lives. This poem addresses its subject as "thou foster-child of silence and slow time," after referring to it as a "still unravished bride of quietness!" This poem ends with the lines, "Beauty is truth, truth beauty; that is all ye know on earth, and all ye need to know." For 20 points, identify this ode about a work of ancient pottery written by John Keats.

ANSWER: "Ode on a Grecian Urn"

126-13-84-03115

16. One English king of this name was close to Hugh le Despenser and Piers Gaveston, drawing accusations of homosexuality. The first numbered king of this name expelled England's Jews and was called "Longshanks." A sainted king of this name who died in 1066 was called the "Confessor." A royal son of this name won at Poitiers and Crecy during the Hundred Years' War. For 20 points, give this name of six English kings and the "Black Prince."

ANSWER: **Edward** [or **Edward** II; or **Edward** of Caernarvon; or **Edward** I; or **Edward** Longshanks; or **Edward** the Confessor; or **Edward** the Black Prince; or **Edward** of Woodstock]

104-13-84-03116

17. In one of this author's stories, Cyrus Bourne is shot by his father Reuben at the same place where Reuben abandoned Roger Malvin to die. Another character created by this author is ashamed to find his wife Faith cavorting in the forest. This author collected those stories in *Mosses from an Old Manse*. *Moby-Dick* was dedicated to this man, who began one novel by describing a rose bush next to a jail. He created the characters of Governor Bellingham, Roger Chillingworth, and Pearl. For 20 points, name this author who wrote about Hester Prynne.

ANSWER: Nathaniel **Hawthorne**

18. A photographer from this country took a picture of a glass bottle melted by extreme heat and wrote the book *Pencil in the Sun*. A Pulitzer-winning photograph shows a right-wing radical from this country about to stab the leader of its socialist party during a televised debate. Joe Rosenthal took a photograph in an island controlled by this country that served as the model for the Marine Corps Memorial and shows six soldiers struggling to raise a flag. For 20 points, name this country depicted in *Raising the Flag on Iwo Jima*.

ANSWER: **Japan** [or **Nihon**; or **Nippon**]

080-13-84-03118

19. A subgroup of this ethnicity uses the distinctive "tifinagh" alphabet, and these people speak Kabyle and other Amazigh languages. This ethnicity engages in a kind of political meeting called a "jama'ah." Subgroups of these people include the Shawia, the Rif, and the Tuareg. These people, descended from the classical Numidians, live in the Maghreb region, and they comprised the major part of the "Moor" identity that controlled Islamic Europe in the Middle Ages. For 20 points, identify this ethnicity which is prevalent in Morocco and Algeria and found throughout North Africa.

ANSWER: **Berber**s [or **Amazigh** until it is read; or **Imazighen** until "Amazigh" is read; or **Tuareg** until "Kabyle" is read; prompt on **Moor**s until it is read; do not accept or prompt on "Arabs"]

019-13-84-03119

20. One member of this family was a disciple of Howard Pyle in the Brandywine School, painted the massive *Apotheosis of the Family*, and illustrated the *Scribner's Classics* series. Another member of this family made 247 depictions of Helga Testorf, as well as a painting in which a woman looks at a distant farmhouse from a position on the ground in a pink dress. For 20 points, give this surname of illustrator N.C. and the painter of *Christina's World*, Andrew.

ANSWER: Wyeth



1. For fluid flow, this quantity is equal to flow rate times pressure. For a sinusoidal signal, this quantity is equal to the absolute value of the amplitude squared. It is equal to current times voltage for electrical components. In optics, one form of it is measured with diopters. This quantity is also given by the force dotted by the velocity vector, and its units are Joules per second, or watts. Name this quantity equal to work done per unit time.

ANSWER: **power**

048-13-84-03151

2. This man's last building, the Heidi Weber Museum, is dedicated to his works. Many of his works include the symbol of an open hand, including a sculpture within a city he helped plan, Chandrigarh. Pierre Jeanneret co-designed the Villa Savoye with this architect, who worked with Oscar Niemeyer on the UN Headquarters. He designed a church in Ronchamp, the Notre Dame du Haut. Name this French-Swiss architect who postulated Five Points of Architecture in *Towards a New Architecture*.

ANSWER: Le Corbusier

192-13-84-03152

3. This man collaborated with Alfred Kroeber to study the Yurok. Originally an art teacher, he was inspired to change professions after being psychoanalyzed by Anna Freud. This author of *Gandhi's Truth* invented "psychohistory" in *Young Man Luther* and described his major theory, including steps such as "ego integrity v. despair," in *Childhood and Society*. Identify this psychologist who believed that each person progresses through eight stages of life conflict.

ANSWER: Erik Homburger Erikson