

1. One work by this artist contains "The Princess from the Land of Porcelain" at its center and was purchased by Charles Freer from Frederick Leyland. He objected to a critic calling one his works a "pot of paint flung in the public's face," and thus sued John Ruskin for libel over a depiction of fireworks above London. This artist of the *Peacock Room* and *Nocturne in Black and Gold* painted *The White Girl* and an "arrangement in grey and black" that depicted one of his close relatives. For 10 points, name this American expatriate artist, known for a portrait of his mother.

ANSWER: James Abbott McNeill Whistler

040-09-9-01101

2. The sequence KDEL marks proteins for retention in this structure. Chaperone proteins located in this structure fold newly created proteins. A specialized variety of this structure stores calcium ions and is found in smooth and striated muscle. That "sarcoplasmic" (sar-co-PLAZZ-mic) type of this organelle is in turn a subset of a type of this structure which is the location of carbohydrate and steroid metabolism. That type is known as "transitional" or "smooth." For 10 points, name this organelle, which also has a "rough" type that contains ribosomes (RYE-bo-soams).

ANSWER: endoplasmic reticulum [or ER; or smooth endoplasmic reticulum; or rough endoplasmic reticulum; prompt on sarcoplasmic reticulum; prompt on SR]

059-09-9-01102

3. This author addresses a subject who, if asked, should say that its father did not exist and that its mother threw it from her door due to poverty, in her poem "The Author to Her Book." A posthumous collection of her poems contains "To My Dear and Loving Husband," but she had gained some notice during her lifetime when her brother-in-law John Woodbridge published some of her manuscripts. For 10 points, name this early American poet, who lamented the loss of her possessions in *Upon the Burning of Our House*, and whose works were collected in *The Tenth Muse Lately Sprung Up In America*.

ANSWER: Anne Bradstreet

040-09-9-01103

4. This political unit was created at the Battle of the Leaping Mullet Fish. A resolution passed in 1993 at the urging of President Clinton, and the earlier Blount Report, both condemned the illegal overthrow of this place's leader. The Bayonet Constitution was signed here in 1887, following the machinations of Sanford Dole. It was united as a single kingdom by Kamehameha (kah-MAY-ha-MAY-ha), but its monarchy ended after the overthrow of Queen Liliuokalani (LILL-ee-oo-oh-ka-LAH-nee). For 10 points, name this former island nation that later became the fiftieth state in the United States.

ANSWER: the Kingdom of Hawaii

032-09-9-01104

5. One of this author's novels is narrated by a religious zealot named Drusilla Clack, who passes around a flier claiming that Satan can be found in sofa pillows. That novel also contains the butler Betteredge, who reveres *Robinson Crusoe*. He wrote about the somnambulating (som-NAMB-yoo-late-ing) Godfrey Ablewhite, who steals an object that he believes will bring harm to his love, Rachel Verinder. Colonel Herncastle previously stole that gemstone, causing three Hindus to attempt recovery in England. For 10 points, name this Victorian novelist, who wrote *The Woman in White* and *The Moonstone*.

ANSWER: William Wilkie Collins

026-09-9-01105

6. This man, who was recruited to the Office of Strategic Services by Preston Goodfellow, gained notoriety for ordering both the destruction of the Hangang Bridge and the massacre at Jeju island. This leader established the 1952 "peace line" to seize the Liancourt Rocks, which he renamed Dokdo. His electoral fraud led to his exile to Hawaii following the April Revolution. After converting to Christianity and gaining popularity through his resistance to Japan during World War II, he opposed the negotiations to end the Korean War. For 10 points, name the first president of South Korea.

ANSWER: Syngman **Rhee**

034-09-9-01106

7. This instrument plays a solo in the "Aviary" movement of Saint-Saens's (sahn SEN-zeh) *Carnival of the Animals*. It is the first instrument to play the primary melody in Ravel's *Bolero*, and it performs the opening chromatic scale in Debussy's *Prelude to the Afternoon of a Faun*. Players of this instrument, which delivers the lead melody in "Morning Mood" from *Peer Gynt*, have included Jean-Pierre Rampal and Herbie Mann. Its shorter variant, pitched an octave higher, is called the piccolo. For 10 points, name this reedless woodwind instrument that is usually made of silver metal.

ANSWER: C **flute**

005-09-9-01107

8. For a black hole, this quantity is given by the product of the area of that black hole with Boltzmann's constant, divided by four times the Planck length squared. Taking the negative derivative with respect to temperature of the Helmholtz free energy yields this quantity, which can be defined as Boltzmann's constant times the logarithm of the number of microstates of a system. This quantity goes to a minimum as temperature approaches absolute zero. For 10 points, the second law of thermodynamics holds that, over time for isolated systems, there is an increase in what measure of disorder, symbolized S?

ANSWER: **entropy** [prompt on **S** before it is read]

032-09-9-01108

9. This man served under MacArthur at Anacostia Flats to remove the Bonus Army. Earlier, he was aide-de-camp to Pershing during the pursuit of Pancho Villa. During Operation Overlord, he commanded a fictitious army invading Calais (cah-LAY) to divert German attention from Normandy. He relieved Bastogne (bass-TONE) during the Battle of the Bulge, commanding the U.S. Third Army. For 10 points, what World War II general, called "Old Blood and Guts," was removed from command for slapping a shell-shocked soldier hospitalized in Sicily?

ANSWER: George Smith **Patton, Jr.**

034-09-9-01109

10. This author wrote about a schoolteacher who prays naked, Kate Swift, in "The Strength of God." He also created Adolph Myers, who moves out and renames himself Wing Biddlebaum after being accused of molesting a boy, in "Hands." His other characters include a young reporter who sleeps with the farm girl Louise Trunnion. For 10 points, what American author wrote about George Willard in the short story collection *Winesburg, Ohio*?

ANSWER: Sherwood **Anderson**

034-09-9-01110

11. This battle was followed by fighting at Arles and at the River Berre that confined the losing side to the provinces of Narbonne and Septimania. It was caused by an appeal from Eudes (YOO-dayz), the Duke of Aquitaine, who, despite having won ten years earlier at Toulouse and Bordeaux, was now unequipped to deal with heavy cavalry. The defenders' strategy was to fight in a square, but Abd-al-Rahman underestimated their strength and charged anyway. For 10 points, al-Rahman was soundly defeated by Charles Martel's Frankish forces at what 732 engagement?

ANSWER: Battle of **Tours** [prompt on Battle of **Poitiers**]

040-09-9-01111

12. One episode of this show begins with a man stepping on a landmine in the sand trap of a Washington, D.C.-area golf course. One character on this show saves her boss's life by killing her Palestinian half-brother. Chilean actress Cote de Pablo plays Israeli officer Ziva David, who has a flirtatious relationship with officer Tony DiNozzo on this show. It also features the geeky McGee and a goth lab assistant named Abby. For 10 points, name this show that stars Mark Harmon as Jethro Gibbs, an agent of the title Navy investigative agency.

ANSWER: **NCIS**: *Naval Criminal Investigative Service* [or **NCIS**: ***Naval Criminal Investigative Service***]

026-09-9-01112

13. This group carries on its traditional musical arts at its community in Maine at Sabbathday Lake. Their official name is The United Society of Believers in Christ's Second Coming. They were transplanted to America by Ann Lee, and they maintain their numbers only through conversions and adoption of orphans, as they practice strict celibacy. Their more popular name was originally meant to insult the contortions they made during the dances that comprised a large portion of their public worship. For 10 points, name this Protestant sect with a name similar to the group they broke off from, the Quakers.

ANSWER: the **Shaker** community [or the **Shakers**; accept **United Society of Believers in Christ's Second Coming** before it is read]

045-09-9-01113

14. Joseph Priestley likely inspired the character of Inflammable Gas in this man's satirical *An Island in the Moon*. He created a mythology in which the son of Los and Enitharmon defeats Albion's Angel. His work is subtitled "Shewing the Two Contrary States of the Human Soul," and includes two poems titled "The Chimney Sweeper." Another poem in that collection asks, "What immortal hand or eye could frame thy fearful symmetry?" and addresses the title animal "burning bright in the forests of the night." For 10 points, name this British author whose *Songs of Innocence and Experience* contains the poem "The Tiger."

ANSWER: William **Blake**

003-09-9-01114

15. The largest lake in this mountain range is split by the Strait of Tiquina (tick-EE-nuh). This range is bordered on the northeast by Los Llanos (YAN-os). Split into regions called the Cordillera (cor-dee-YEAR-uh), its Occidental portion contains the extinct volcano Chimborazo, and its Oriental Range includes Lake Titicaca. Its highest point is Aconcagua. For 10 points, name this mountain range that runs along the western edge of South America, from Venezuela to Chile.

ANSWER: **Andes** Mountains

051-09-9-01115

1A. Name the language that gives us the word "mnemonic" (nuh-MAH-nik), from its word "mnemonikos" (nuh-MAH-nik-os), both of which refer to memory.

ANSWER: Classical/Ancient **Greek**

1B. Name the Rembrandt painting that depicts a man in black with a red sash and a man in yellow with a white sash leading a group of soldiers.

ANSWER: *The **Night Watch*** [or *De **Nachtwacht***; or *The **Company of Captain Franz Banning Cocq and Willem van Ruytenburch***]

2A. What 1964 Disney musical features Mr. and Mrs. Banks of Cherry Tree Lane and starred Dick Van Dyke as Bert and Julie Andrews in the title role?

ANSWER: **Mary Poppins**

2B. The square of this mathematical construct is the probability distribution of a particle. Name these solutions to the Schrodinger equation that collapse upon being measured.

ANSWER: **wavefunctions**

3A. Oedipus (ED-uh-pus) passing judgment against the murderer of his father Laius, assuming the authority of the gods, is an example of this trait. Name this trait, a common character flaw of heroes in Greek tragedy which results in their destruction.

ANSWER: **hubris**

3B. The health care bill that passed muster in the Senate in December 2009 lacked this major component of Obama's original proposal. Name this proposed program which would compete with private insurers.

ANSWER: **public option**

4A. This is a 10-second calculation question. Find 32 percent of 73.

ANSWER: **23.36**

4B. This is a 10-second calculation question. Add eight and six-sevenths plus thirty-four and one-quarter.

ANSWER: **1207/28** [or **43 3/28**]

5A. Name this author of *The Optimist's Daughter*, who wrote short stories collected in *A Curtain of Green* such as "A Worn Path" and "Why I Live at the P.O."

ANSWER: Eudora Alice **Welty**

5B. Name the poetic rhythm, prominently featured in the poetry of Gerard Manley Hopkins, which depends only on the total number of stressed syllables in a line.

ANSWER: **sprung** rhythm

6A. This is a 20-second calculation question. A company finds that demand for its widgets follows the equation $100 - 2p$, if p is the price they charge for each widget; and the amount of money earned by the company is the product of the price and the quantity sold. What price earns the largest revenue?

ANSWER: \$25

6B. This is a 20-second calculation question. Every domino in a set of dominoes is two inches long, three-quarters of an inch wide, and one-quarter of an inch thick. How many of these dominoes can fit in a box that is four and a half inches wide, four inches long, and two and three-quarters inches high?

ANSWER: 132

7A. Name the "father of the hydrogen bomb" who studied under Heisenberg and testified against Robert Oppenheimer.

ANSWER: Edward Teller

7B. This fictitious force results from attempting to apply Newtonian mechanics in a rotating reference frame. Name this force whose importance relative to inertial forces is measured by the Rossby number.

ANSWER: Coriolis force

8A. Located in the Bloomsbury section of London, it contains seven million items, including the Grecian Urn that inspired Keats and the Elgin Marbles taken from the Parthenon in Greece. Name this institution that is also home to the Rosetta Stone.

ANSWER: the British Museum

8B. This football franchise was formed when Art Modell moved the Cleveland Browns to replace another town's departed Colts. Name this football team quarterbacked by Joe Flacco.

ANSWER: Baltimore Ravens [or Ravens]

9A. This is a 30-second calculation question. Find $\cos(\sin^{-1} -6/13)$ ("cosine of the arcsine of negative six-thirteenths").

ANSWER: (square root 133)/13

9B. This is a 30-second calculation question. You have a coin that lands heads-up 75% of the time when it is flipped. If you flip this coin four times, find the probability of getting exactly three heads.

ANSWER: 27/64

10A. The process of gluconeogenesis occurs in this organ. Name this organ, which is the site of damage due to cirrhosis.

ANSWER: liver

10B. Identify the economist who is the namesake of an optimality criterion in which no exchange of resources would make both parties better off.

ANSWER: Vilfredo Pareto

1. The villagers of this work joke about Amadi the leper because he has white skin. The uncle of this novel's protagonist notes that "Mother is supreme" and welcomes the protagonist during his seven-year exile. Although Mr. Kiaga and Mr. Brown win support in this novel by offering the *osu*, or outcasts, refuge, Reverend James Smith is far less tolerant. This novel ends ironically when the District Commissioner decides that he would dedicate a paragraph in *The Pacification of the Primitive Tribes of the Lower Niger* to Okonkwo. For 10 points, "The Second Coming" inspired the title of what novel by Chinua Achebe?

ANSWER: Things Fall Apart

034-09-9-01117

2. This god's forms include the white, six-armed peacock rider who kills the demon Sindu, and Dhumraketu, who will cleanse the world during the Kali Yuga. Three of this god's four hands hold an axe, a whip, and a lotus. He is depicted riding a mouse or a rat, and this deity is often called the "remover of obstacles." This god is the oldest son of Parvati and Shiva, who chopped off his original head. He only has one tusk and is often shown holding the broken one. For 10 points, name this elephant-headed god from Hinduism.

ANSWER: Ganesh

032-09-9-01118

3. In one work by this author, Captain van Toch discovers the title marine animals near Sumatra, which, under the Great Salamander, rebel against humans. Alquist is the only human spared in his most famous play, in which Primus and Helena become Adam and Eve figures after the pair is given souls. That work sees Helena Glory, a representative of the Humanity League, marry the protagonist, Harry Domin. For 10 points, what author of *War with the Newts* introduced the word that means "labor" in Czech, "robot," in *R.U.R.* ?

ANSWER: Karel Capek

034-09-9-01119

4. The Havel-Hakimi theorem gives the conditions for a sequence to correspond to one of these. Ramsey's theorem deals with the coloring of complete ones. They can occur in undirected and directed forms, the latter of which gives a direction to one of their components. Hamilton and Euler (OY-ler) name cycles in these; Euler's is used in the Seven Bridges of Konigsberg Problem, which launched the study of them. For 10 points, name these mathematical objects made of vertices and edges.

ANSWER: graphs

040-09-9-01120

5. This conflict saw the appearance of the clubmen, vigilantes who sought to protect the public from its effects. The turning point of this conflict came with the indiscipline of the cavalry of Prince Rupert of the Rhine, allowing a victory at the Battle of Naseby for the New Model Army. This war led to the establishment of the Commonwealth, though its effects were overturned by the Restoration. For 10 points, name this conflict between Parliamentarians, or "Roundheads" and Royalists, or "Cavaliers" which resulted in the execution of King Charles I and the ascension of Oliver Cromwell.

ANSWER: First English Civil War [prompt on English Revolution]

059-09-9-01121

6. When these landforms lie parallel to one another, they create raised and lowered areas called horsts and grabens. Flat irons form from scarps, which are located along these features. These features divide a surface into a hanging wall and a footwall. At lower depths, they are called shear zones. If the movement of one of these features has both strike and dip components, it is known as an oblique-slip one. They also come in transform and strike-slip types. For 10 points, name these cracks in the Earth's surface, the movement of which causes earthquakes.

ANSWER: **faults**

003-09-9-01122

7. The captures of Forts Douaumont (DOO-oh-mon) and Vaux (VAW) were central to this battle. The ultimate failure of the attacking side was the inability to take Fort Souville. This battle began when commander Falkenhayn (FALL-ken-hein) decided to attack a town on the French-German border, knowing that the French would "throw in every man they had." French General Robert Nivelle's battle cry of "They shall not pass!" echoed long after this battle, in which Marshal Petain led the French effort. For 10 points, name this horrific 1916 battle between France and Germany in which both sides lost over three hundred thousand troops.

ANSWER: the Battle of **Verdun** (ver DONE)

045-09-9-01123

8. In the MIPS ("mips") architecture, many ALU ("A"- "L"- "U") operations, such as add, have this as their opcode. In "one's complement" notation there are two of these. In Unix, slash dev slash null has a counterpart that produces these. In C++ this is equivalent to false. Arrays usually start with this index. In digital circuits, this number corresponds to a low voltage. A common programming error, or exception, is dividing by this number. For 10 points, name this value, which is contrasted with "one" in the binary system used by computers.

ANSWER: **zero**

023-09-9-01124

9. This President was nicknamed "Ice Veins" for his cold personality, and his cabinet included the inventor of the department store, Postmaster-General John Wanamaker. This President signed a controversial bill that gave disability pensions to veterans even if their injury was not from combat. He worked with the "Billion Dollar Congress" and signed the Sherman Anti-Trust Act, the Sherman Silver Purchase Act, and the McKinley Tariff. For 10 points, name this President who served between Grover Cleveland's two terms, the grandson of William Henry Harrison.

ANSWER: **Benjamin Harrison** [prompt on **Harrison**]

021-09-9-01125

10. This composer wrote the movement "Montagues and Capulets" for his ballet *Romeo and Juliet*. He claimed that his first symphony was written in the style of Josef Haydn, had Haydn been alive in the twentieth century. An opera by this composer sees the King of Clubs' son cursed by Fata Morgana to seek after the title fruit. Another piece by this composer of the *Classical* symphony and the opera *Love for Three Oranges* uses the bassoon to represent the grandfather and the oboe to represent the duck. For 10 points, name this Russian composer of *Peter and the Wolf*.

ANSWER: Sergei Sergeyevich **Prokofiev**

026-09-9-01126

11. One class of this phylum is distinguished by the presence of a pharynx that opens into the gastrovascular (GAS-tro-VAS-kyoo-lurr) cavity and is known as the actinopharynx (ack-TIN-o-FAIR-inks). One member of this phylum, *Chironex fleckeri* (KY-ro-nex FLECK-er-eye), is in the class Cubozoa (CUBE-oh-ZO-uh). Its class Anthozoa (AN-tho-ZO-uh) contains corals. Organisms in this phylum are characterized by stinging cells known as nematocytes (nuh-MAT-oh-sites) and grow from a polyp to a medusa. For 10 points, what marine phylum includes sea anemone, hydra, and jellyfish?

ANSWER: **Cnidaria** (ni-DARE-ee-uh)

034-09-9-01127

12. This character drunkenly phones a girl to ask if he can trim her Christmas tree. He is annoyed that Jane Gallagher would go out with Ward Stradlater, whom this character had to write an English assignment for. He repeatedly asks cabbies where the ducks in Central Park go for the winter. He broke all the windows in the garage the night his brother Allie died. His brother D.B. is one of the "phonies" this character hates. For 10 points, name this protagonist of *The Catcher in the Rye*.

ANSWER: **Holden** Caulfield [or Holden **Caulfield**]

003-09-9-01128

13. The Shankland team supported the outcome of this experiment by finding fundamental flaws in Daisy Miller's observations. A version of this experiment looking for seasonal variation was carried out by Kennedy and Thorndike. It used a half-silvered mirror to split coherent light and attempted to detect a certain "wind" by measuring fringe shift with an interferometer. Its results were explained by the Lorenz-FitzGerald hypothesis concerning length contraction. For 10 points, what experiment, named for two physicists at Case Western, disproved the existence of luminiferous (loo-min-IF-er-us) aether (EE-ther)?

ANSWER: **Michelson-Morley** experiment

034-09-9-01129

14. One of this man's brothers, who rode around in a bronze chariot imitating Zeus, was Salmoneus (SAL-moh-NAY-uss). He marked the hooves of his cattle to prove that Autolycus was stealing from him. He earned Zeus's wrath for telling Asopus of Aegina's abduction. This son of Enarete (EE-nuh-REE-tay) and Aeolus (eye-OH-luss) claimed that his wife Merope (muh-ROH-pee) did not perform proper funeral rites. He made that claim in order to convince Persephone to allow him to return to life, and he earlier tricked Death into chaining himself. For 10 points, name the tragic Greek who was condemned to eternally roll a boulder up a hill.

ANSWER: **Sisyphus**

034-09-9-01130

15. Djedeba and Jalo are among the territories of this empire that were referred to as the Twelve Doors. This empire's legislature was called the Gbara. A victory at the Battle of Kirina over Sumanguru allowed it to be established. One leader of this empire distributed so much gold on his way to Mecca that it lowered gold prices in the Middle East. Along with Mansa Musa, other important figures of this empire include its founder Sundiata (soon-dee-AH-ta). For 10 points, name this African empire with capital at Niani whose major cities included Timbuktu.

ANSWER: the Empire of **Mali**

032-09-9-01131

1. In one play by this dramatist, Kratos (KRAH-tose) and Bia (BEE-uh) drag the title character to Scythia, where Io (EYE-oh) wanders by to deliver a prophecy about Heracles. Atossa (ah-TOE-suh) and the ghost of Darius (duh-RYE-us) advise Xerxes (ZERK-seez) in a different play by this man. Another of his works ends when a group's name is changed to "The Kindly Ones." That group had chased a character to Delphi following the killings of Aegisthus (eye-JISS-thus) and Clytemnestra (KLAE-tem-NESS-truh) in a previous play by this author, in vengeance for the death of Agamemnon. For 10 points, name this author of *Prometheus Bound* and *The Persians*, whose trilogy consisting of *Agamemnon*, *The Libation Bearers*, and *The Eumenides* (yoo-MEN-id-eez) tells the story of Orestes (oar-EST-eez).

ANSWER: Aeschylus (ESS-kuh-liss)

019-09-9-01132

2. In this opera, a grand concertato finale to Act Two includes "Gloria all'Egitto." In Act One, the title character sings "Ritorna Vincitor" (ree-TOR-nah VEEN-kuh-tor). "O Patria Mia" is an aria in this opera about the title character's homeland, which is at war with her captors. This opera includes the characters Amonasro and Ramfis. This opera concludes with Amneris at the tomb of Radames, where he dies along with the title character, a slave. For 10 points, name this opera, named after an Ethiopian princess and set in Egypt, by Guiseppe Verdi.

ANSWER: Aida

062-09-9-01133

3. This thinker defined sabotage as the "conscientious withdraw of efficiency" and noted businessmen's profit-seeking as an example. He expressed his hope for technocracy in *The Engineers and the Price System*. This writer criticized esoteric learning without meaning in a work whose title group develops out of barbarism. War, hunting, and sports support a certain predatory group according to, for 10 points, what economist, who attacked "pecuniary emulsion" and "conspicuous consumption" in *The Theory of the Leisure Class*?

ANSWER: Thorstein Bunde Veblen

034-09-9-01134

4. This compound is turned into xanthate (ZAN-thate) before being rebuilt through a spinneret in the process to create viscose rayon. This compound has beta-1,4 glycosidic (gly-co-SID-ic) linkages; those linkages are the only difference between this compound and starches, which are likewise made up of repeating chains of glucose. This most abundant organic compound on earth is indigestible by humans; however, it can be broken down by microorganisms that live in cows and termites. For 10 points, name this compound that makes up the majority of a plant's cell wall.

ANSWER: cellulose

027-09-9-01135

5. This statement is invoked in the Born-Haber (BORN HAW-ber) cycle. This statement follows from the fact that the quantity it concerns is a state function, and therefore its value is independent of the system's trajectory. This statement is often framed in terms of the heats of formation of reactants and products. For 10 points, name this statement of thermodynamics that suggests that a reaction's enthalpy change is equal to the sum of the enthalpy changes of each step.

ANSWER: Hess's Law

022-09-9-01136