



1. This man wrote “They’ll see how beautiful I am and be ashamed” in his poem “I, Too, Sing America.” Discovered by Vachel Lindsay while working as a busboy, this poet wrote about hearing “a drowsy syncopated tune” on Lenox Avenue in “The Weary Blues.” Another of his poems asks, “does it dry up like a raisin in the sun? or fester like a sore- and then run?” For 15 points, name this man who asked “What happens to a dream deferred?”, the greatest poet of the Harlem Renaissance.

ANSWER: Langston **Hughes** [or James Mercer Langston **Hughes**]

015-12-85-08101

BONUS: Examples of these divisions include Nazca and Juan de Fuca ones (WAHN day FOO-kah). Name these divisions of the lithosphere that can subduct under one another and whose collision can cause earthquakes.

ANSWER: tectonic **plates**

066-12-85-0810-1

2. The male lead in this opera sings of his secret love in “Se quel gerrier io fossi” in the first act. That love of his sings the aria “O patria mia” prior to the appearance of her father, Amonasro. In this opera, the jealous princess Amneris fails to save the Captain of the Guard to whom she is betrothed from execution by being sealed underground. The title character dies in the tomb with that man, Radames. For 15 points, name this Giuseppe Verdi opera about an Ethiopian princess.

ANSWER: **Aida**

014-12-85-08102

BONUS: Hans Selye was the first to demonstrate the existence of the biological form of this term. What is this quantity found divided by strain in the definition of Young's modulus?

ANSWER: **stress**

066-12-85-0810-1

3. This state's independently-elected Lieutenant Governor is president of its Senate and thus more powerful than its actual governor. Abigail Fisher's lawsuit against the affirmative action policy of one of its universities will be heard by the Supreme Court in October. 234 executions in this state have been approved by its current governor, who voiced his distaste for gays serving in the military in the "Strong" ad. For 15 points, name this state whose governors have included Rick Perry and George W. Bush.

ANSWER: **Texas**

080-12-85-08103

BONUS: What playwright wrote about a female Salvation Army worker and her industrialist father in *Major Barbara*?

ANSWER: George Bernard **Shaw**

052-12-85-0810-1

4. This thinker argued that the life of pleasure was inadequate alongside the life lived according to reason for achieving a state of happiness called *eudaimonia*. Succeeded by Theophrastus at the Lyceum, this thinker considered a series of fallacies in his *Sophistical Refutations*, one of six texts comprising his work on logic, the *Organon*. His other texts include *Physics*, *Metaphysics*, and the *Nicomachean Ethics*. For 15 points, name this student of Plato, a prolific father of Western philosophy.

ANSWER: **Aristotle**

014-12-85-08104

BONUS: What man from Padua is known as the Catholic patron saint of lost things?

ANSWER: Saint **Anthony** of Padua

015-12-85-0810-1

5. A tone poem by this composer was too radical to be performed during his lifetime and is usually heard in its arrangement by Nikolai Rimsky-Korsakov. That piece by him depicts a witches' sabbath on St. John's Eve. Another of his compositions intersperses a "Promenade" theme with programmatic movements including one depicting Baba Yaga's hut and the grand finale, "The Great Gate of Kiev." For 15 points, name this Russian composer of *Night on Bald Mountain* and the piano suite *Pictures at an Exhibition*.

ANSWER: Modest **Mussorgsky**

014-12-85-08105

BONUS: What French ballet term, meaning "to whirl," describes a dancer turning in place on one leg?

ANSWER: **pirouette**

014-12-85-0810-1

6. Much of this artist's work is housed at a namesake museum in St. Petersburg, Florida. Owner of a pet ocelot named Babou, this artist created a *Lobster Telephone* and included a self-portrait in *Swans Reflecting Elephants*. In his best known painting, a branch protrudes from a wooden surface on the left, as ants crawl over a closed time piece and three watches appear to melt. For 15 points, name this Spanish surrealist and mustache aficionado, the creator of *The Persistence of Memory*.

ANSWER: Salvador **Dali**

015-12-85-08106

BONUS: Identify the thirty-part harpsichord work by Johann Sebastian Bach which was used to help the namesake student sleep, and consists of thirty pieces inspired by a preceding aria.

ANSWER: the **Goldberg Variations**

019-12-85-0810-1

7. Words of this type whose first principle part ends in "-do" tend to have second principle parts ending in "-dinis", and special ones with an "i-stem" have an ending in "ium" rather than "um." These words fit into five declensions, and besides the locative and the vocative, they have nominative, genitive, dative, accusative, and ablative forms that make up their five cases. For 15 points, name these words that denote persons, places, or things in a dead language spoken by the Romans.

ANSWER: Latin **nouns** [or third declension **nouns** before "declensions" is read; or **nomina**]

080-12-85-08107

BONUS: What Soviet novelist won the Nobel Prize in Literature after writing *Doctor Zhivago*?

ANSWER: Boris **Pasternak** [or Boris Leonidovich **Pasternak**]

014-12-85-0810-1

8. This woman was apprehended after the unsuccessful Flight to Varennes. Her son became known as the "Lost Dauphin." This woman was the daughter of Holy Roman Emperor Francis I and Maria Theresa. According to an apocryphal story, this woman responded to reports that the peasants had no bread to eat by declaring, "Let them eat cake." For 15 points, name this Austrian wife of Louis XVI who was executed along with her husband in the Reign of Terror during the French Revolution.

ANSWER: **Marie Antoinette** [prompt on **Marie**; prompt on **Antoinette**]

015-12-85-08108

BONUS: This is a 20-second calculation question. If x is equal to the natural logarithm of 4, what is e raised to x over 2?

ANSWER: **2**

080-12-85-0810-1

9. According to legend, this ruler wielded a sword named Joyeuse. He brought scholars such as Alcuin of York and Einhard to his court at Aachen (AH-kun). His grandsons Lothair I, Louis the German, and Charles the Bald divided his kingdom in the Treaty of Verdun. This man's lieutenant Roland was ambushed at the Battle of Roncevaux Pass. Leo III crowned him Emperor on Christmas in 800 CE. The son of Pepin the Short and grandson of Charles Martel, for 15 points, name this great Carolingian monarch.

ANSWER: **Charlemagne** [or **Charles I**; or **Charles the Great**; or **Charles le Grand**; or **Carolus Magnus**; or **Karl der Grosse**; prompt on **Charles**]

015-12-85-08109

BONUS: This is a 30-second calculation question. Consider a square inscribed in a circle of area 72 pi. What is the perimeter of the square?

ANSWER: **48** units

197-12-85-0810-1

10. Like rays, although unlike skates, these marine organisms exhibit ovoviviparity. These organisms use ampullae of Lorenzini to detect the electromagnetic fields of living organisms. The skin of these organisms is composed of dermal denticles, which feel like sandpaper when rubbed the wrong way. These organisms are in the class Chondrichthyes, which means they have a cartilaginous skeleton. For 15 points, identify these organisms whose well-known species include the tiger and great white.

ANSWER: **sharks**

066-12-85-08110

BONUS: What star of *My Left Foot* played Bill the Butcher in *Gangs of New York* and will play Abraham Lincoln in a 2012 biopic?

ANSWER: Daniel **Day-Lewis** [do not accept or prompt on just "Lewis"]

030-12-85-0810-1

11. This thinker considered the development from totemism of the title phenomenon used to create a sense of communal security in his study *The Elementary Forms of Religious Life*. In another work, he theorized the breakdown of societal norms, a state called *anomie*, as one of the chief causes of the title phenomenon, which also appears in altruistic, egoistic, and fatalistic varieties. For 15 points, name this French sociologist who wrote *Suicide*.

ANSWER: Emile **Durkheim**

014-12-85-08111

BONUS: Name the French founder of sociology who advocated positivism and coined the term "altruism."

ANSWER: Auguste **Comte**

014-12-85-0810-1

12. One of this man's poems is addressed to "You who hear the sound, in scattered rhymes, of those sighs on which I fed my heart." His poems often used paradoxical images such as freezing fires to symbolize love. Many of this man's poems were inspired by a sighting on Good Friday of a beautiful woman named Laura. A volta between the octave and the sestet characterizes a poetic form he innovated. For 15 points, name this Italian humanist who developed one of the major types of sonnet.

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

014-12-85-08112

BONUS: This is a 20-second calculation question. In simplest terms, find the horizontal component of a 50 N force pointing up and to the right at a 45-degree angle.

ANSWER: **25 times root 2** N

020-12-85-0810-1

13. Lead acid batteries commonly contain a salt of lead with this anion, which is ionic-bonded to copper in blue vitriol. Although it normally forms soluble compounds, a white precipitate of this ion with barium is used in X-ray imaging. This polyatomic ion is found in gypsum and Epsom salts. It is the anion of the only common diprotic strong acid. For 15 points, name this anion with a minus-two charge and formula  $\text{SO}_4$ .

ANSWER: **sulfates** [or **SO<sub>4</sub><sup>2-</sup>**- before mention]

190-12-85-08113

BONUS: This is a 20-second calculation question. When randomly picking a playing card from a standard 52-card deck, what is the probability the card will be either a 3 or a spade?

ANSWER: **4/13** [prompt on **16/52**]

197-12-85-0810-1

14. This war was largely ended by the Case-Church Amendment and caused Congress to pass the War Powers Resolution. One strategy during this war involved "winning the hearts and minds" of civilians. One side entered this war after the USS *Maddox* was engaged in the Gulf of Tonkin incident. Richard Nixon decided to withdraw from this conflict after the Tet Offensive. For 15 points, name this war that ended in 1975 with the Fall of Saigon.

ANSWER: **Vietnam** War

015-12-85-08114

BONUS: The third law of thermodynamics concerns what lowest possible temperature, at which molecular kinetic energy is minimized?

ANSWER: **absolute zero** [or **zero Kelvins**]

132-12-85-0810-1

15. This character embarrasses himself in Sunday school by claiming David and Goliath were the first two disciples. He witnesses the murder of Dr. Robinson while trying a cure for warts. He witnesses his own funeral, and saves Muff Potter by testifying against Injun Joe. This character gets lost in McDougal's Cave with Becky Thatcher. In the beginning of the novel named for him, he cons his friends into whitewashing a fence. For 15 points, name this friend of Huck Finn in some Mark Twain novels.

ANSWER: Tom **Sawyer** [or **Tom** Sawyer]

015-12-85-08115

BONUS: Who oversaw the creation of the Ten Most Wanted Fugitives list as the director of the FBI, a position he held for 48 years?

ANSWER: John Edgar **Hoover**

030-12-85-0810-1

16. In this work, the neck and voice of the protagonist's brother are compared to a bull, and that brother gives political speeches which he phrases carefully to avoid arrest. The protagonist unsuccessfully attempts to convince his sister Gertrude to end her life of prostitution in the city. After the murder of the white activist for racial equality named Arthur Jarvis, the protagonist's son Absalom is the lone culprit sentenced to execution. For 15 points, name this novel following Reverend Stephen Kumalo written by South African author Alan Paton.

ANSWER: ***Cry, the Beloved Country***

014-12-85-08116

BONUS: What is the name of the NASA Mars rover that touched down at the Bradbury Landing site on August 6th, 2012?

ANSWER: ***Curiosity***

030-12-85-0810-1

17. For an electron, the ratio of the coefficient of this process and mobility is equal to that of holes as a result of Einstein's relation. The simplest model of this process is Brownian motion. The flux of this process is related to the concentration gradient by Fick's first law. When this process occurs over a semipermeable membrane it is called osmosis. For 15 points, identify this passive transport process that occurs via random thermal motion, resulting in no bulk motion.

ANSWER: **diffusion**

066-12-85-08117

BONUS: Which American playwright wrote about Harry Hope's saloon in *The Iceman Cometh* and about the decay of the Tyrone family in *Long Day's Journey into Night*?

ANSWER: Eugene **O'Neill** [Eugene Gladstone **O'Neill**]

186-12-85-0810-1

18. One of these compounds synthesized from phenol and phthalic anhydride was once used as a laxative, but is now known to be a carcinogen. Cresol Red and bromothol blue are examples of these compounds, which demonstrate the endpoint of a titration. Better-known ones include red cabbage and a substance which turns pink in basic solution, phenolphthalein. For 15 points, name these compounds which distinguish between acids and bases.

ANSWER: pH **indicators**

190-12-85-08118

BONUS: What data structure is an ordered tree in which the keys of the parent nodes are always greater than, or always less than, the keys of the child nodes?

ANSWER: **heap**

066-12-85-0810-1

19. This law implies the existence of zero-point energy in the quantum harmonic oscillator, and the paper that introduced it also introduced the idea of wavefunction collapse. This law can be derived by finding the commutator of two non-commuting conjugate variables, like time and energy, and sets a lower bound of  $\hbar/2$ . For 15 points, name this law from quantum physics, which in one formulation states that it is impossible to know the exact position and momentum of a particle at the same time.

ANSWER: **Heisenberg uncertainty** principle

048-12-85-08119

BONUS: What sheep was the first successfully cloned mammal and was named for a country singer?

ANSWER: **Dolly**

066-12-85-0810-1

20. Supreme Court Justice Samuel Chase's close ties to this party were the reason for his unsuccessful impeachment. The "midnight judges" were mostly members of this party. One leader of this party wrote the *Report on Manufactures* and spearheaded the First Bank of the United States. A President of this party signed the Alien and Sedition Acts and lost to Thomas Jefferson in 1800. For 15 points, name this party whose membership included Alexander Hamilton and John Adams.

ANSWER: **Federalist** Party

015-12-85-08120

BONUS: Name the Catholic monarchs who initiated the Spanish Inquisition and supported the voyages of Christopher Columbus.

ANSWER: **Ferdinand and Isabella** [accept in either order; or **Ferdinand II** of Aragon and **Isabella I** of Castile; or **Ferdinand V of Castile and Isabella I**; prompt on partial answer]

023-12-85-0810-1

21. Throughout this novel, the silent and unnamed “Lady in Black” mourns her husband’s death. The fourteen-year-old Farival twins play the piano for vacationers in this novel. Its protagonist is the daughter of a Confederate officer known as “the Colonel,” and is counseled by Doctor Mandalet. That protagonist has an affair with Alcee Arobin despite her marriage to Leonce and her love for Robert Lebrun. For 15 points, name this Louisiana-set Kate Chopin novel in which Edna Pontellier drowns herself.

ANSWER: *The Awakening*

015-12-85-08121

BONUS: What military campaign recaptured Jerusalem after 400 years of Muslim rule and was the most successful and earliest of its type?

ANSWER: **First Crusade**

015-12-85-0810-1

22. SixTrack and Test4Theory are components of a distributed computing application put out by this facility. One experiment conducted here is headed by Pinfold and is called MoEDAL. ATLAS and CMS are among the detectors located here. Part of the purpose of this facility is to investigate supersymmetry, and an event of five-sigma significance at 126 giga-electron-volts in this facility is thought to be confirmation of the existence of the final object predicted by the standard model. For 15 points, name this facility at which the Higgs Boson was discovered in July 2012.

ANSWER: **Large Hadron Collider** [or **LHC**; prompt on **CERN** or **European Organization for Nuclear Research**]

048-12-85-08122

BONUS: This is a 20-second calculation question. A certain raffle sells 1000 tickets, each for \$20. One winner is drawn, who will receive \$15,000. What is the expected value of buying a ticket?

ANSWER: **-\$5** [or **lose five** dollars; or equivalent for "lose"]

174-12-85-0810-1

23. One story tells of the Pierides (pee-ERR-uh-deez) being turned into magpies for being compared to this group. This group gathered at Mount Helicon and included such members as Erato and Melpomene (melk-PAH-muh-nee). They were the daughters of Mnemosyne (neh-MAH-zuh-nee) and also included Urania, who oversaw astronomy, and Clio, the patron of history. For 15 points, identify this group of nine Greek goddesses who also inspired epic poetry, song, and dance.

ANSWER: the **muses**

019-12-85-08123

BONUS: In 1976, what leader of the Viet Minh had his name applied to the city formerly known as Saigon?

ANSWER: **Ho** Chi Minh [or **Nguyen** Sinh Cung; or **Nguyen** Tat Tanh; or **Nguyen** Ai Quoc]

192-12-85-0810-1

24. One of these locations features a semicircular portion known as the Garganta del Diablo, or Devil's Throat. Another one of these sites starts on the Auyan-Tepui, or Devil's Mountain, and was named for an American who crash-landed his plane nearby. The largest one of these sites creates a mist that led it to be named "The Smoke that Thunders" and occurs along the course of the Zambezi River. Iguazu, Angel, and Victoria all name, for 15 points, what areas of rapidly descending rivers?

ANSWER: **waterfalls**

023-12-85-08124

BONUS: What structure guarded by Heimdall is a rainbow that connects Midgard and Asgard in Norse myth?

ANSWER: **Bifrost**

140-12-85-0810-1

25. 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 15 points, identify this ruling house of Scotland and England, whose rulers also included James I and Charles I.

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

019-12-85-08125

BONUS: James McInerney's *Bright Lights, Big City* and Italo Calvino's *If on a winter's night a traveler* both employ narration from what unusual perspective?

ANSWER: the **second person**

195-12-85-0810-1



26. This character resolves to have bloody thoughts after he passes a group of soldiers heading to Poland to dispute a worthless piece of land. This character decides not to kill his enemy at prayer, since that would send him to heaven. After shouting, "How now, a rat?" he blindly thrusts his sword through an arras, killing Polonius. This character declares Prince Fortinbras to be his successor as he dies in Horatio's arms after killing Claudius. For 15 points, name this Shakespearean Prince of Denmark.

ANSWER: Hamlet

153-12-85-08126

BONUS: What section of the digestive tract consists of the ileum, jejunum, and duodenum?

ANSWER: small intestine [prompt on intestine]

048-12-85-0810-1

27. Small-angle scattering of this kind of radiation is used to find the conformation and shape of some proteins. The broad iron K line is this type of radiation, whose emission is governed by the empirical Moseley's Law. It was originally discovered being emitted from a Crookes tube by William Roentgen (RENT-ghen), who used them to image his wife's hand. For 15 points, name this type of electromagnetic radiation with wavelength between ultraviolet and gamma radiation.

ANSWER: X-ray radiation

048-12-85-08127