



1. This king's general Sagmandia captured Gao, the capital of a neighboring empire. He employed an architect from Granada named as-Sahili and had the Sankore (sahn-CORE-eh) and Djinguereber (JING-uh-ray-bare) mosques built. Writing twelve years after this man traveled through, al-Umari claimed that his visit was still being talked about in Cairo. He allegedly flooded Cairo's gold market during his extremely lavish hajj. For 10 points, name this fourteenth century ruler who served as the mansa of Mali.
ANSWER: Kankan Musa I [or Mansa Musa]

023-13-96-08101

2. A character in this novel confesses that while driving a wedding party sledge, he once saved his own life by tossing the bride and groom overboard. The second book of this novel, "The Hired Girls," recounts how the title character's employer Wick Cutter once tried to rape her, and describes her romantic rivalry with Lena Lingard. The narrator of this novel remembers how he and the title character took the same train to Black Hawk, Nebraska. For 10 points, name this Willa Cather novel about Jim Burden and his Bohemian childhood friend.
ANSWER: My Antonia

020-13-96-08102

3. This man showed the limitations of rationalism with self-evident contradictions he called "antinomies." He claimed rationalists and empiricists were unable to account for synthetic and "a priori" truths, whose existence he defended with transcendental arguments. In the *Groundwork of the Metaphysics of Morals*, he said that all moral actions should be such that we could will them to be universal laws, his categorical imperative. For 10 points, name this author of *Critique of Pure Reason*, a German transcendentalist philosopher.
ANSWER: Immanuel Kant

121-13-96-08103

4. A member of this family said his presidential campaign had "Big Mo," a reference to momentum, and used the phrase "voodoo economics" to denounce his party rival. That member of this family used the expression "a thousand points of light" to discuss civic involvement. Another member of this family was President when the Partial-Birth Abortion Ban Act, the No Child Left Behind Act, and the Patriot Act were passed. For 10 points, name this family which produced the 41st and 43rd Presidents of the United States, a father-son pair.
ANSWER: Bush

052-13-96-08104

5. A character in this poem encounters allegorical representations of Sin and Death, to whom he is related, who allow him to pass through a gate. This poem's author revised its ten-book version into a twelve-book version for its second edition in 1674. In this poem's second book, Moloch speaks at a council held in the city of Pandemonium, where a character presides who decides to fly to Earth to corrupt Adam and Eve. For 10 points, name this religious epic by John Milton.
ANSWER: Paradise Lost

014-13-96-08105

6. A disease resulting from a defect in this protein manifests in overly-bendy joints and is Ehlers-Danlos syndrome. Osteogenesis imperfecta is also caused by defects in this protein and manifests as brittle bones. Kidney basement membranes composed of this protein are misshapen in Alport syndrome. A motif in this protein features hydroxyproline, which requires Vitamin C for synthesis, explaining the degradation of this protein in scurvy sufferers. Glycine constitutes about a third of its amino acids. For 10 points, identify this triple-helical protein found in cartilage and blood vessels.

ANSWER: **collagen**

234-13-96-08106

7. This MLB team's ballpark has stands in left field called the Crawford Boxes. During the 1990s and early 2000s, this team's lineup included the "Killer Bs," comprised of Derek Bell, Lance Berkman, Craig Biggio, and Jeff Bagwell. Tal's Hill and a train on a track above left field are features of this team's Minute Maid Park. In 2013, this team drafted Mark Appel first overall and moved into the American League. For 10 points, name this MLB team that plays the Lone Star Series against its in-state rival Texas Rangers.

ANSWER: **Houston** Astros [or Houston **Astros**]

023-13-96-08107

8. At very low temperatures, this substance can form frazil, which can eventually accumulate into "pancakes". A tuya is a volcano found under this substance. The desiccant magnesium sulfate is used to remove this substance in the lab. This substance enters soil in the process of infiltration. The kilogram is defined as exactly one liter of this substance. In January 2014, this substance was discovered on the dwarf planet Ceres. For 10 points, identify this substance whose presence on Earth is studied by hydrologists.

ANSWER: **water** [or **H₂O**; or **steam**; or **ice**; prompt on **glaciers**]

239-13-96-08108

9. In a novel by this man, the maid Hepzibah owns a shop where a rebellious tenant practices daguerreotyping. In a short story by this author, Reverend Hooper refuses to remove the title garment. In one of his novels, Holgrave falls in love with Phoebe Pyncheon after she moves into the title house. In a novel by this author, Roger Chillingworth discovers that Reverend Dimmesdale is having an affair with his wife Hester Prynne. For 10 points, name this author of *The House of the Seven Gables* and *The Scarlet Letter*.

ANSWER: Nathaniel **Hawthorne**

186-13-96-08109

10. This organism contains vesicular structures called Berkeley bodies, which are involved in the CTV pathway. Its vacuoles contain phosphate-rich "dancing bodies". This organism releases A- and alpha-factors during mating, and since it cannot metabolize nitrate, this organism requires supplemental ammonia and urea to promote growth. This organism is one of the smallest in the phylum Ascomycota, and it was the first eukaryote to have its genome sequenced. For 10 points, identify this single-celled fungus commonly used to leaven bread and make beer.

ANSWER: Baker's **yeast** [or **Saccharomyces cerevisiae**]

234-13-96-08110

11. This organ is converted into a surrogate urinary bladder in the Mitrofanoff procedure. A "meso" form of this organ functions primarily as a lymphatic structure. Darwin related this organ's function to the cecum's in animals, and defects in this organ have been shown to increase *C. difficile* infection rates. The Alvarado score can indicate defects in this organ, and pain at McBurney's point is often used to indicate that this organ is inflamed. For 10 points, identify this worm-shaped, possibly vestigial, organ that is connected to the colon and is surgically removed when swollen.

ANSWER: vermiform **appendix** [or cecal **appendix**; or **vermix**]

234-13-96-08111

12. This crop fed the most beautiful prostitutes of the U.K., according to Adam Smith's *Wealth of Nations*. Frederick the Great's planting of it gave an alternate name to the War of the Bavarian Succession. This crop of South American origin caused millions to flee on "coffin ships" after the *Phytophthora infestans* (FEYE-tof-THOR-uh in-FES-tanz) fungus afflicted it with blight in the 1840s. For 10 points, name this tuberous staple crop whose failure caused famine in Ireland.

ANSWER: **potatoes** [or *Solanum tuberosum*]

104-13-96-08112

13. Kevin McKenzie created a danced prologue specifically to show the origin of this creature. Riccardo Drigo's score includes a "grand pas de deux" for this creature, which ceases to exist after two lovers commit suicide together and are seen ascending to heaven. A man freezes after aiming his crossbow at this creature, which in some productions has an evil "black" counterpart. Von Rothbart's sorcery caused Odette to transform into this creature. For 10 points, name this title animal of a Tchaikovsky ballet.

ANSWER: the **swan** from *Swan Lake*

020-13-96-08113

14. This woman included the refrain "Go, go, go, seek some other where, importune me no more," in her poem "When I Was Fair and Young." This woman was depicted as Gloriana, the title character of an allegorical epic poem by Edmund Spenser. This woman's expressed desire to see Sir John Falstaff fall in love was the apocryphal origin of *The Merry Wives of Windsor*. For 10 points, name this monarch during whose reign Shakespeare wrote most of his plays.

ANSWER: **Elizabeth I** [prompt on **Elizabeth**]

014-13-96-08114

15. The western part of this city is called the Tama Area, and it is the site of an amusement park called Sanrio Puroland. This city has many museums located in its Ueno (oo-EY-noh) Park, including the National Museum of Western Art. Shopping can be done in this city's commercial district called Ginza. The second-tallest structure in the world is this city's namesake Skytree. This city's Imperial Palace is in its Chiyoda ward, and Shibuya is the site of its Meiji (MAY-jee) Shrine. For 10 points, name this city that has the largest metropolitan area in the world and is the most populous in Japan.

ANSWER: **Tokyo**

023-13-96-08115



1A. What letter denotes the speed of light in physics and is given to a vitamin also known as ascorbic acid?

ANSWER: c

1B. What country announced that it had launched a monkey named Fargam into space in December of 2013?

ANSWER: Iran

2A. What Nazi Field Marshal was known as the Desert Fox for his tank warfare tactics in the North African theater of World War II?

ANSWER: Erwin Rommel

2B. What Shakespeare play begins with the line, "If music be the food of love, play on?"

ANSWER: Twelfth Night

3A. This is a 20-second calculation question. An angle in standard position has a terminal side that passes through (-12, 9). What is the cotangent of this angle?

ANSWER: -4/3

3B. This is a 20-second calculation question. If "f of $x = 3x + 2$ ", then what is "f-inverse of -4"?

ANSWER: -2

4A. What mountain is the highest peak in North Carolina and the highest point east of the Mississippi River?

ANSWER: Mount Mitchell

4B. What layer of the atmosphere lies above the troposphere?

ANSWER: stratosphere

5A. What name is given to solutions, used to maintain a stable pH, that consist of a weak acid and the acid's conjugate base?

ANSWER: buffer

5B. What Danish physicist proposed a model of the atom with electrons traveling in defined orbits around the nucleus?

ANSWER: Niels Bohr

6A. In what 1954 Alfred Hitchcock film does a wheelchair bound Jimmy Stewart witness a murder through binoculars?

ANSWER: Rear Window

6B. What Italian painted *The Last Judgment* and the ceiling of the Sistine Chapel?

ANSWER: Michelangelo di Lodovico Buonarroto Simoni

7A. What simple device used to simulate computer algorithms consists of a strip of tape and a read-write head?

ANSWER: Turing machine

7B. What German playwright and friend of Goethe (GUR-tuh) wrote *The Robbers* and *William Tell*?

ANSWER: Friedrich Schiller

8A. What South American country contains the cities of Cuzco and Machu Picchu?

ANSWER: **Peru**

8B. What shape is given by the simple formula $x^2 + y^2 = r^2$?

ANSWER: **circle**

9A. What son of Pepin the Short had his reign chronicled by Einhard?

ANSWER: **Charlemagne**

9B. What largest U.S. bank, which is led by CEO Jamie Dimon, agreed in 2013 to a record thirteen billion dollar penalty to settle claims over its mortgage backed securities?

ANSWER: **J.P. Morgan Chase**

10A. This is a 30-second calculation question. A heat in a swimming meet has 9 racers. If the top 3 swimmers in the heat qualify for the finals, how many different possible groups of finalists from this heat are there?

ANSWER: **84**

10B. This is a 30-second calculation question. What is the volume of a sphere that is inscribed in a cube of volume 216 cubic feet?

ANSWER: **36 pi** cubic feet



1. In this novel, Mikulitsyn (MEE-kool-EET-sin) takes charge of the old Krueger mansion, and Pasha assumes the nom de guerre of "Strelnikov." The cocaine addict Liberius leads a group of partisans known as the Forest Brotherhood in this book, in which Komarovsky is shot at the Sventitsky's Christmas party. The main character's brother Evgraf agrees to care for the main character's daughter Tania at the conclusion of this novel. For 10 points, name this novel about a physician and his love interest Lara, a novel by Boris Pasternak.

ANSWER: Doctor Zhivago

030-13-96-08117

2. Pieces originally for this instrument include "The Mysterious Barricades," by Francois Couperin. A piece originally composed for this instrument meant to help Count Keyserling (KAI-zer-ling) sleep consisted of an aria with 30 variations. A series of 555 sonatas for this instrument was written by Domenico Scarlatti. The Goldberg Variations were composed for this instrument by J.S. Bach. For 10 points, name this keyboard instrument popular in the Baroque period that produce music by plucking, rather than striking, their strings.

ANSWER: harpsichord

080-13-96-08118

3. On an NFPA label, the square of this color, located on the left, indicates health hazards. Light shining through a colloid produces this color in the Tyndall effect. Anhydrous cobalt chloride, used as a desiccant, is this color, as is solid hydrated copper nitrate. In basic solutions, bromothymol sulfone phthalein (THAY-lean) will turn this color. In a flame test, most alcohols will burn this color. In CPK modeling kits, nitrogen is represented with this color. For 10 points, name this color into which litmus paper turns in sodium hydroxide or other basic solutions.

ANSWER: blue

190-13-96-08119

4. The title character of a novel by this author is taken to Doune (DOON) Castle after being rescued by the Mac-Ivor clan. This author's formerly popular narrative poems include *The Lady of the Lake* and *Marmion*. He wrote about Jeanie and Effie Deans in his novel *The Heart of Midlothian* and created Rowena and Cedric of Rotherwood in his most famous novel. For 10 points, name this Scottish historical novelist of *Waverley* and *Ivanhoe*.

ANSWER: Walter Scott

014-13-96-08120

5. This publication contains such regular features as "Charlemagne," an opinion column on France, and "Bagehot" (BAA-jet), a column on Britain. This magazine has a longstanding policy of complete editorial anonymity, with even editor John Micklethwait's name absent. It was founded by James Wilson in 1843 to support the repeal of the Corn Laws. This publication's traditional liberal views led to it being dubbed the "European organ of the aristocracy of finance" by Karl Marx. For 10 points, name this English publication whose title reflects its general interest in monetary policy.

ANSWER: *The* Economist

052-13-96-08121

6. One of this country's Olympic teams was the subject of the film *Cool Runnings*. This country, the birthplace of brakeman Lascelles (luh-SELLZ) Brown, was the first tropical state to qualify for an Olympic bobsled competition. An unusually high percentage of this country's track and field athletes, including Asafa Powell and Veronica Campbell-Brown, tested positive for PEDs in 2013. For 10 points, name this Caribbean country, the home of sprinter Usain Bolt.

ANSWER: **Jamaica**

131-13-96-08122

7. This quantity can be calculated as the square root of the ratio of the permittivity to the permittivity of free space. A material that is birefringent (BYE-ruh-FRIN-jent) has multiple values for this quantity. Snell's law gives the ratio of the angles of incidence as a ratio of this quantity for two mediums. It is equal to the ratio of the speed of light in a vacuum to that in a particular medium. For 10 points, identify this quantity that is important to a phenomenon that makes straws appear bent in water.

ANSWER: **index of refraction** [or **refractive index**]

226-13-96-08123

8. A character in this novel lost a baby because a more powerful character refused to pay for milk. In this novel, Miss Ophelia teaches Topsy how to read. This novel includes the characters Prue and Sambo. In this novel, Tom Loker becomes a changed man after spending time in a Quaker settlement. Its title character saves Eva St. Clare from drowning and is whipped to death on the orders of his cruel master, Simon Legree. For 10 points, name this anti-slavery novel by Harriet Beecher Stowe.

ANSWER: **Uncle Tom's Cabin**

186-13-96-08124

9. A tribromide of this element converts alcohols into alkyl bromides. A triphenyl ylide (ILL-id) of this element is used to convert a ketone into an alkene in the Wittig reaction. The yellow allotrope of this element is pyrophoric, although the primary two allotropes of this element are colored red and white. The electron transport chain produces a molecule that contains three anions named for this element. For 10 points, identify this second element in the nitrogen family that is extensively used in fertilizers and has atomic symbol P.

ANSWER: **phosphorus** [or **P** until read]

239-13-96-08125

10. Craig Robinson's guest spot as Doug Judy on this TV show involved him tricking characters into thinking his Asian barber is the Pontiac Bandit. "Mouth feel" is a component of the pizza rankings sent out in e-mail blasts on this show by Boyle, who has a crush on, and takes a bullet for, Diaz. A mental breakdown following the birth of Cagney and Lacey occurred for this show's character Terry. In the first episode of this show, Peralta finds out that new captain Ray Holt is openly gay. For 10 points, name this Fox TV show starring Andy Samberg, about a New York police precinct.

ANSWER: **Brooklyn Nine-Nine**

023-13-96-08126

11. A song about this war begins with a wife noting "Reuben, Reuben, I've been thinking" before the response "how ya gonna keep 'em down on the farm?" A protest song about this war was called "I Didn't Raise My Boy to Be a Soldier." A George M. Cohan song about it begins with the lyric "Johnny, get your gun" and has a chorus noting "that the Yanks are coming." American forces in this war also sang "It's a Long Way to Tipperary." For 10 points, name this war during which the song "Over There" was written in 1917.

ANSWER: **World War I** [or the **First World War**; or the **Great War**]

052-13-96-08127

12. This American city shares its name with a 1939 German ocean liner filled with Jewish refugees that was denied entry to the United States. The notoriously poverty ridden Pruitt-Igoe urban renewal project was in this city. Dred Scott filed a lawsuit for his freedom from here. Led by the Choteau family for many years, this city was the departure point for the Lewis and Clark expedition. The Anheuser-Busch company is based here. For 10 points, name this Missouri city which lies directly across the Mississippi River from the Cahokia Mounds site.

ANSWER: **St. Louis**

052-13-96-08128

13. In rituals involving these items, the phrase "I'had'lik neir" (luh-HOD lick-NAIR) is used. A ritual involving two of these items uses one of them to fulfill the commandment "remember" and the other to fulfill the commandment "observe." A hand is waved over these items and then used to cover the eyes by a woman who uses them at the start of Shabbat. In another Jewish holiday, these items include the "shamash," and an additional one is used on each of eight days. For 10 points, identify these items which are placed in a menorah on Hannukah and lit.

ANSWER: **candles**

019-13-96-08129

14. This construction is generally used only in formal or written French, and is replaced by liberal use of "c'est" (SEH) or "ce" (SUH) to start sentences in most speech. This construction involves the preposition "par" when there is a specific action expressed, or "de" when a more general state of being is involved. This construction is formed by conjugating the verb "être" (ATE-ruh) with the past participle, which agrees in gender and number with the subject. For 10 points, identify this French verb voice which is used to express actions done to the subject by an agent.

ANSWER: French **passive** voice [or la voix **passive**]

019-13-96-08130

15. A location of this type included the House of Jaguars and the House of Bats. That location of this type was filled with obstacles such as a river of blood, a river of scorpions and a river of pus, and was the Mayan one, Xibalba (shih-BALL-buh). Aeneas uses the Golden Bough to visit his father Anchises (an-KAI-seez) in this location. One of these locations features the pits of Tartarus and the Elysian Fields. For 10 points, name this type of mythological region exemplified by Hades.

ANSWER: **underworlds** [or **hells**; or specific sites before they are read, such as **Xibalba** and **Hades**]

186-13-96-08131



1. In response to Mayor Levi Boone's restrictions on taverns in this city, the 1855 Lager Beer Riot broke out. Another of its mayors, Carter Harrison, was assassinated by a failed office seeker. Dr. Henry Howard Holmes killed numerous people in this city during a festival. As documented in the book *The Devil in the White City*, it hosted the 1893 World's Columbian Exposition. This city suffered a disaster legendarily caused by Mrs. O'Leary's cow kicking over a lantern. For 10 points, name this Illinois city severely damaged in an 1871 "great fire."

ANSWER: Chicago

052-13-96-08132

2. A boy assiduously tries to kiss every inch of his body in one of this author's novels, which draws on aspects of his commencement speech at Kenyon College and takes place in an IRS office. This author wrote about his depressing week aboard a cruise ship in "A Supposedly Fun Thing I'll Never Do Again." Prior to his 2008 suicide, this writer published a crowded novel set at the Enfield Tennis Academy, about the Incandenza family. For 10 points, name this postmodern author of *Infinite Jest*.

ANSWER: David Foster Wallace

020-13-96-08133

3. One type of these events is triggered by a drop in pressure caused by increased pair-production. The Phillips relationship describes the light curve of another type of these events, which were used by Reiss and Perlmutter to show that the expansion of the universe is accelerating. Yet other types occur after core collapse or when a star crosses the Chandrashekar (chohn-druh-shay-KAR) limit. The Crab nebula is the remnant of one observed in 1054. For 10 points, name these cosmic events in which a star explodes.

ANSWER: supernovae [or SN]

048-13-96-08134

4. A character in this play says that "the truth is rarely pure and never simple," and the observation, "this suspense is terrible, I hope it will last," is made in it during a search for birth records. The protagonist of this play uses the excuse of visiting an invalid friend named Bunbury to avoid engagements with his aunt, Lady Bracknell. In this play, romantic purposes lead both Algernon Moncrieff and Jack Worthing to claim the title name. For 10 points, name this comedy by Oscar Wilde.

ANSWER: *The Importance of Being Earnest*

014-13-96-08135

5. Reference frames that lack this property may be subject to so-called "fictitious" forces. Special relativity only applies to reference frames with this property, which must be non-accelerating. A rotational quantity named for this property is equal to MR^2 for a point mass and is known as its "moment". Aristotle misunderstood this concept, which allows for objects to keep traveling in straight lines. For 10 points, name this topic of Newton's first law, the tendency of a body to resist a change in motion.

ANSWER: inertia [or word forms such as inertial; prompt on non-accelerating until it is read]

132-13-96-08136

This is a calculation question. On a three-question multiple choice test, where there are four answer choices for each question, you guess randomly. What's the probability that you get exactly two of them right?

ANSWER: 9/64

What Platonic dialogue is a discussion of the nature of love featuring speeches by Eryximachus (eh-rick-SIM-uh-kiss) and Aristophanes (ah-ruh-STAH-fuh-neeZ)?

ANSWER: the *Symposium*