



1. In November 2013, the BBC reported that this country had the right to get nukes delivered from Pakistan at will. In October 2013, this country was elected to, but turned down, a seat on the United Nations Security Council. This major backer of (*) Syrian rebels has controversial laws prohibiting women from driving. For 10 points, name this state that produces more barrels per day than another other OPEC state.

ANSWER: Kingdom of Saudi Arabia [or KSA; or Al-Mamlakah al-‘Arabiyyah as-Su’udiyah]

153-14-101-15101

BONUS: In which 1973 war did Egypt and Syria lead a surprise attack on Israel on the Jewish Day of Atonement?

ANSWER: Yom Kippur War

190-14-101-1510-11

2. Dicyanoacetylene and cyanogen are known for producing an extreme form of this phenomenon. In zero gravity, it has a spherical front because convection does not work. Sodium ions can be distinguished from potassium ones by using a test named for this entity, which is produced by a common laboratory (*) apparatus named for Robert Bunsen. This phenomenon sometimes consists of plasma formed from ionized gases, and it is the visible manifestation of combustion reactions. For 10 points, name this phenomenon that requires oxygen, heat, and fuel to appear.

ANSWER: fire [or flame]

020-14-101-15102

BONUS: A messenger of the king appears at the conclusion and prevents Orgon from losing his property after being duped by a clever vagrant in what comedy by Moliere about a religious hypocrite?

ANSWER: Tartuffe, or the Imposter

230-14-101-1510-11

3. This writer parodied Robert Southey in his poem *The Vision of Judgment*. This friend of Thomas Moore died at Missolonghi. The title character feels guilt for Astarte's death in his “metaphysical drama”, *Manfred*. This poet exclaims “A heart whose love is innocent!” about a woman whose eyes have “all that’s best of dark and bright”. This poet of (*) “She Walks in Beauty” also wrote a satire about a womanizing Spanish nobleman. For 10 points, name this Romantic poet of *Don Juan*.

ANSWER: Lord Byron [or George Gordon Byron, 6th Baron Byron]

232-14-101-15103

BONUS: The Super Bowl championship is named for what legendary coach of the Green Bay Packers, who won the first two Super Bowls?

ANSWER: Vince Lombardi

052-14-101-1510-11

4. This man put in an extended cadenza for the soloist in the first movement of his only concerto, a Violin Concerto in D minor. A tone poem by this composer uses an English horn to depict a swimming bird. That piece, *The Swan of* (*) *Tuonela*, is one of his many compositions influenced by the mythology of his home country. He produced a brass-heavy composition that he often renamed to evade Russian censors. For 10 points, name this composition of the unofficial national anthem *Finlandia*.

ANSWER: Jean Sibelius

142-14-101-15104

BONUS: What psychological experiment directed by John Broadus Watson caused a child to develop a fear of white rats?

ANSWER: **Little Albert** experiment

227-14-101-1510-11

5. **Optical power resulting from this phenomenon is maximized in an echelette grating. Von Laue pioneered the use of X-rays undergoing this phenomenon to study crystal structures. This phenomenon led to interference when electrons were fired at a nickel target in the (*)**

Davisson-Germer experiment. It also created dark and light spots from interfering light waves in the double slit experiment. For 10 points, name this phenomenon in which light bends around obstacles.

ANSWER: **diffraction** [or **interference** before mention]

190-14-101-15105

BONUS: In one of E. E. Cummings's most popular poems, what character "lived in a pretty how town"?

ANSWER: **anyone**

014-14-101-1510-11

6. **This man killed his music master Linus after Linus tried to correct him. This figure's corpse was placed on a funeral pyre on Mt. Oeta, and he married Hebe after reconciling with Hera. After killing Megara and her children in a fit of (*)** madness, this hero was forced to become a servant of Eurystheus.

This hero strangled two snakes in his cradle. For 10 points, name this strong Greek hero who seized Geryon's cattle and slew the Nemean lion as part of his twelve labors.

ANSWER: **Heracles** [or **Hercules**]

030-14-101-15106

BONUS: What chemist came up with namesake laws of diffusion that can be used to solve for the diffusion coefficient, D?

ANSWER: Adolf **Fick**

052-14-101-1510-11

7. **Epsom salts contain magnesium bound to this anion. Anhydrites such as gypsum are comprised of the calcium type of these salts. Along with water, a compound where lead is bound to this anion is created in a (*)** lead-acid battery. Vitriol salts contain this compound. It is formed after the complete dissociation of sulfuric acid. For 10 points, name this anion with a two minus charge, which consists of a sulfur atom bound to four oxygen atoms.

ANSWER: **sulfate** [do not accept "bisulfate"; do not accept "sulfite"]

140-14-101-15107

BONUS: Name the country that shares the Gobi Desert with its neighbor China.

ANSWER: **Mongolia** [or **Mongol Uls**]

023-14-101-1510-11

8. **In this city, Fred Shuttlesworth organized a series of confrontational demonstrations called "Project C." "Bull" Connor, this city's chief of police, became notorious for using water jets against protesters. Denise McNair, died in this city when four KKK members dynamited its (*)** 16th Street Baptist Church. An essay written in this city distinguishes between extremists for "hate" and "love." For 10 points, name this city in Alabama where Martin Luther King wrote an influential letter from jail.

ANSWER: **Birmingham**, Alabama

080-14-101-15108

BONUS: What regionalist American novelist wrote *O Pioneers!* and *My Antonia*?

ANSWER: Willa **Cather**

014-14-101-1510-11



SET A:

1. BONUS: Name the President during the Spanish American War who was assassinated by Leon Czolgosz (CHOLE-gosh).

ANSWER: William **McKinley**

020-14-101-1510-12

2. BONUS: In Greek myth, what type of object did Cronus mistakenly swallow, believing it to be his son Zeus?

ANSWER: **rock** [or **stone**; or same-knowledge equivalents]

190-14-101-1510-12

3. BONUS: This is a 20-second calculation question. Using a six-sided die and a fair coin, what is the probability of rolling an even number and flipping a head?

ANSWER: **1/4** [or **0.25**; or obvious equivalents]

066-14-101-1510-12

4. BONUS: In what condition can the spine appear curved in the shape of an S or question mark rather than straight and which is commonly tested by bending forward in the school nurse's office?

ANSWER: **scoliosis**

066-14-101-1510-12

SET B:

1. BONUS: This is a 20-second calculation question. What is the dot product of the vectors (1, 2, 3) and (5, 0, -2)?

ANSWER: **-1**

132-14-101-1510-12

2. BONUS: What type of galaxies, typically near the center of clusters, lack entirely the arms characteristic of spiral galaxies?

ANSWER: **elliptical** galaxies

233-14-101-1510-12

3. BONUS: What artist made use of gold leaf in paintings such as *The Kiss*?

ANSWER: Gustav **Klimt**

140-14-101-1510-12

4. BONUS: What animated film features the fictional corporation Buy 'n' Large and is partially set on a spaceship where passengers have become obese due to inactivity?

ANSWER: **WALL-E**

052-14-101-1510-12



9. A nineteenth-century queen of this country converted to Bahai. Prior to World War II, this country was home to the Legion of Archangel Michael, which became this country's Iron Guard. A leader of this country fell after attempting to evict Lazlo Tokes and issued the (*) July Theses. For 10 points, name this eastern European country that was governed by Nicolas Ceausescu from Budaphest.

ANSWER: Romania

149-14-101-15109

BONUS: What word is used to describe the bleak futuristic societies depicted in such novels as *Nineteen Eighty-Four* and *Brave New World*?

ANSWER: dystopian

014-14-101-1510-11

10. When looking at a Turner painting, this character says it looks like a “bloody big ship.” During a game of word association, he says “employment” after hearing the word “murder.” He mourns the loss of his lover, the traitorous (*) Vesper Lynd, and his ancestral estate in Scotland is besieged by Raul Silva. This character is the protagonist of the films *Quantum of Solace* and *Skyfall*. For 10 points, name this British secret agent code-named 007 (double oh-seven).

ANSWER: James Bond [or James Bond; or 007 until it is read]

052-14-101-15110

BONUS: A goat and a green-faced man face each other in what painting by Marc Chagall, which includes some upside-down houses?

ANSWER: I and the Village

140-14-101-1510-11

11. The title character of this novel becomes enraged after a chaplain tells him that his "heart is blind." In its first chapter, Thomas Perez sheds tears during a funeral at an old persons' home. The main character of this novel carries on an affair with Marie Cardona and in the course of assisting the pimp (*) Raymond Sintes gets drawn into a fight on the beach, during which he murders an Arab. This novel begins with the sentence "Maman died today." For 10 points, name this existential novel about Meursault, written by Albert Camus.

ANSWER: *The Stranger* [or *The Outsider*; or *L'Etanger*]

020-14-101-15111

BONUS: Proteins such as EcoRI are a part of what class of enzymes important in recombinant DNA technology, which cut DNA strands at specific recognition nucleotide sequences?

ANSWER: restriction enzymes [or restriction endonucleases]

226-14-101-1510-11

12. An annual prize named for this painter is awarded to the best artist under 50. He made a watercolor of the 1834 burning of the Houses of Parliament, which he then developed into two different paintings. In another painting by this artist, (*) sailors prepare for an approaching typhoon by throwing slaves overboard. This "painter of light" depicted a train on the Great Western Railway barreling into the foreground of one of his landscapes. For 10 points, name this painter of *Rain, Steam, and Speed*.

ANSWER: John Mallord William Turner

190-14-101-15112

BONUS: This is a 30-second calculation question. Find the inverse of the function "y = 2 x plus 3."

ANSWER: x equals quantity **y minus 3, over 2** [or x equals **one-half** quantity **y minus 3**; or x = **(y-3)/2**; or x equals **one-half y minus 1.5**]

020-14-101-1510-11

13. **This politician introduced the second reading of the Coal Mines Regulation Act, which limited miners to eight-hour workdays. This prime minister appointed Ernest Bevin as minister of labor and gave a speech that said he had "nothing to offer but (*) blood, toil, tears, and sweat."** This man's predecessor reached the Munich Agreement as part of a policy of appeasement. For 10 points, name this prime minister who succeeded Neville Chamberlain to lead Britain during World War II.

ANSWER: Winston Leonard Spencer **Churchill**

023-14-101-15113

BONUS: What animal's name was used as an acronym in the 1990s for four or five European economies with very large sovereign debts?

ANSWER: **pig** [or **PIGS**; or **PIIGS**]

190-14-101-1510-11

14. **This man was the president of the U.S. Olympic Committee in the 1928 Summer Olympics, and he sent troops to break up the Bonus Army. This man gave the "Old Soldiers Never Die" speech after being relieved of one post, and he stated (*) "I shall return,"** after evacuating the Philippines in World War II. For 10 points, name this man who oversaw the Southwest Pacific Theater in World War II and was dismissed as commander of UN forces in the Korean War after clashing with President Truman.

ANSWER: Douglas **Macarthur**

030-14-101-15114

BONUS: American involvement in what war was provoked by the promise of lost land to Mexico in the Zimmerman Telegram, as well as the sinking of the *Lusitania*?

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

080-14-101-1510-11

15. **In a reversible compression, this quantity equals RT times the log of the ratio of volumes. This quantity equals the negative integral of pressure with respect to volume, and the First Law of Thermodynamics relates the change in internal energy to (*) heat and this quantity.** This quantity is equivalent to the change of kinetic energy in a system, and like energy, is measured in joules. For 10 points, name this quantity equal to the dot product of force and displacement.

ANSWER: **work**

190-14-101-15115

BONUS: In 1893, a reporter admitted to making up the story about Mrs. O'Leary's cow being responsible for what kind of event in Chicago?

ANSWER: **fire**

121-14-101-1510-11

16. **The Betawi people are descended from residents of this city, which is home to a mosque named after the Arabic word for "independence," Istiqlal. The government of this city also administers the Thousand Islands. The streets of this city are home to a fried rice dish called Nasi Goreng. The (*) Dutch East India company operated out of this city when it was called Batavia. This city is the most populous in Southeast Asia.** For 10 points, name this largest city on Java, the capital of Indonesia.

ANSWER: **Jakarta**

080-14-101-15116

BONUS: Name the Imagist poet who claimed that "so much depends upon" the title object in "The Red Wheelbarrow."

ANSWER: William Carlos **Williams**

023-14-101-1510-11



17. **This character notes that his friend “jests at scars that never felt a wound” and wishes he was a glove upon his lover’s hand. This character is the addressee of a speech about the fairy’s midwife, Queen Mab. Friar John is detained from giving this (*) character a note, which causes him to kill Paris and take an apothecary’s poison while in his lover’s “crypt”. For 10 points, name this friend of Benvolio and Mercutio, a Montague “star-cross’d” lover of Juliet.**

ANSWER: **Romeo** Montague

190-14-101-15117

BONUS: What type of strong wind is defined as an 8 on the Saffir-Simpson scale, with wind speed up to 46 miles per hour?

ANSWER: **gale**

190-14-101-1510-11