1. Idunn guards some of these objects from the giant Thiazzi; those grant eternal youth. Hippomenes used three of these objects in order to win a footrace against Atalanta, and Atlas obtained one of these for Heracles while Heracles held up the sky for him. Hera received a tree full of these objects after marrying Zeus, which she placed in the garden of the Hesperides. For 10 points, identify these fruits, a poisonous one of which was eaten by Snow White.
ANSWER: **apple**s [or golden **apple**s]

227-13-90-09101

2. The creator of this show wrote a screenplay called *Prognosis Negative*, which was referenced several times on this show. The protagonist of this show earns renown as a bootlegger after taping the movie *Death Blow*. One character on this show hopes to see the comedy *Sack Lunch* due to her extreme dislike of *The English Patient* and is fired by J. Peterman. For 10 points, these fictional movies appear in what sitcom whose characters include George, Elaine, Kramer, and Jerry?
ANSWER: ***Seinfeld***

030-13-90-09102

3. Casey Wardynski created a video game for this group; the fourth entry in that series is subtitled “Proving Grounds.” James Montgomery Flagg created an advertising poster for it, which was based on a similar British one featuring Lord Kitchener. This group used the slogan “Be All That You Can Be.” A 1917 poster featured a white-bearded man saying “I Want You” to join this group. For 10 points, name this branch of the American military advertised in posters featuring Uncle Sam.
ANSWER: United States **Army** [prompt on United States **armed forces**; prompt on American **military** before read]

052-13-90-09103

4. One allotrope of this element superconducts at pressures of one million atmospheres, and a crystal containing nitrogen and this element behaves similarly to diamond. Though not gadolinium, this element's lighter stable isotope is used in neutron capture cancer therapies. This element is the metalloid component of neodymium-iron supermagnets, and its fluoride's reactivity is explained by its octet rule violation. For 10 points, identify this lightest metalloid element commonly found in the laundry additive Borax.
ANSWER: **Boron** [or **B**]

234-13-90-09104

5. This is the color of a stain used to visualize protein gels named for Coomassie. A complex of iron and cyanide named for Prussia has this color. This is the color of solutions of metals dissolved in ammonia. Arsenic give this color in the flame test, and this color is imparted to glass by cobalt. Solutions of copper sulfate have this color. A classic clock reaction that repeatedly oscillates between this color and colorless makes use of iodine. For 10 points, name this color used to note nitrogen atoms in standard molecular models.
ANSWER: **blue**

048-13-90-09105

6. One component of this scandal was the usage of the whitewings and the raptors. Primarily in response to this scandal and WorldCom, the Sarbanes-Oxley act was passed. The dissolution of Arthur Andersen occurred as a consequence of this scandal, whose chief culprits included Arthur Fastow, Jeffrey Skilling, and Kenneth Lay. For 10 points, name this early 2000s corporate scandal that led to the bankruptcy of a large Texas energy company.
ANSWER: **Enron** scandal

020-13-90-09106

7. This man opened one of his oratorios with a C minor overture without cadences at the ends of phrases, called "The Representation of Chaos." This composer wrote a symphony in which musicians snuff out a candle and leave the stage one by one. The second of this composer's twelve London symphonies contains a pianissimo section followed by an unexpected fortissimo chord. For 10 points, name this Austrian composer of the *Farewell* and *Surprise* symphonies, which are only two of his 104 symphonies.
ANSWER: Franz Joseph **Haydn**

153-13-90-09107

8. Whether the test condition is checked before or after the body of these structures determines if they are pre-test or post-test. The namesake counter variable for some of these structures, which is commonly a variable named i or j, is also called an iterator. These structures can be declared using the keywords for or while, and repeat a block of code. For 10 points, identify these programming structures that can run forever if their terminating condition is not met.
ANSWER: **loop**s [prompt on **iteration** until "iterator" is read]

066-13-90-09108

9. Carmine DeSapio was the last head of this organization to exert any real power. One member of it explained the difference between "honest graft" and "dishonest graft;" that man was George Washington Plunkitt. Thomas Nast criticized this group in his political cartoons where it was represented by a tiger, and in one cartoon he represented its leader as a man with a sack of money in place of a head. For 10 points, name this New York City political machine once run by "Boss" Tweed.
ANSWER: **Tammany** Hall

121-13-90-09109

10. John Hicks used this man's ideas to derive the IS/LM model in an article on this man "and the Classics." In his most famous work he argued hiring people to bury bottles full of banknotes would be a better use of resources than allowing them to sit unused. That book sought to disprove Say's Law and more generally the notion that unemployment was self-correcting. For 10 points, name this British economist who wrote *The General Theory of Employment, Interest, and Money*.
ANSWER: John Maynard **Keynes**

121-13-90-09110

11. In one work by this author, the failed marriage of Mr. Bounderby persuades Mr. Gradgrind to abandon utilitarianism. The ending of one of his works was changed to make Estella end up with Pip. This author wrote a novel about an orphan who learns from the Artful Dodger as well as one about a change of heart for Ebenezer Scrooge. For 10 points, name this English author of *Hard Times*, *Great Expectation*, *Oliver Twist* and *A Christmas Carol*.
ANSWER: Charles **Dickens**

153-13-90-09111

12. This philosopher warned against special interest legislation in *Considerations on Representative Government.* This man collaborate with his wife Harriet Taylor, and he wrote a defense of women's suffrage in *The Subjection of Women.* In one book, this man described the harm principle, and, with Jeremy Bentham, this man helped found a school of thought that attempts to maximize happiness. For 10 points, name this British philosopher who wrote *Utilitarianism* and *On Liberty*.
ANSWER: John Stuart **Mill**

030-13-90-09112

13. This man was the first African-American to appear on the cover of *Vogue*, although his pose with model Gisele Bundchen was criticized for resembling the film *King Kong*. Dan Gilbert called him "heartless" and "selfish" after this man told reporter Jim Gray in 2010 that he was going to "take my talents to South Beach." For 10 points, name this NBA player who has won two titles since making "The Decision" to leave Cleveland and join the Miami Heat.
ANSWER: LeBron **James**

052-13-90-09113

14. This scientist outlined a corpuscular theory of light and showed that light was composed of different colors in his *Opticks.* This scientist related the rate of heat loss of a body to the temperature difference between it and its surroundings in his law of cooling. In his best known work, he derived Kepler's laws of planetary motion and proposed a physical law which states that force is equal to mass times acceleration. For 10 points, name this scientist who outlined three laws of motion in his *Principia Mathematica.*
ANSWER: Isaac **Newton**

066-13-90-09114

15. This author created a character who causes Squeak to feel jealous when he dances with Sofia. In addition to Harpo, this author wrote about a character who befriends the mistress of her husband, Shug Avery. Shug teaches that character created by this author to stand up to her abusive husband, Albert. A novel written by this author includes letters that were written by Nettie to her sister Celie. For 10 points, name this American author who wrote *The Color Purple*.
ANSWER: Alice Malsenior **Walker**

023-13-90-09115

1A. What Central American country's former president Efrain Rios Montt was convicted in 2013 for genocide and crimes against humanity towards this country's Mayan population in the early 1980s?
ANSWER: **Guatemala**

1B. What family that included Lorenzo the Magnificent ruled for most of three centuries over Florence?
ANSWER: **Medici** family

2A. Which Bavarian city was the city of many Nazi rallies and, later, post-war trials of prominent German officials?
ANSWER: **Nuremberg** [or **Nurnberg**]

2B. Which fundamental force is mediated by gluons and holds together particles in the atomic nucleus?
ANSWER: nuclear **strong** force

3A. This is a 20-second calculation question. If y cubed equals 15, what is y to the sixth power?
ANSWER: **225**

3B. 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]

4A. What Edvard Munch painting depicts the red sky above a man clutching his head between his hands on a bridge?
ANSWER: *The **Scream*** [or ***Skrik***; or *The **Scream** of Nature*; or *Der **Schrei** der Natur*]

4B. What author of a modern retelling of the *Odyssey* also penned *Zorba the Greek*?
ANSWER: Nikos **Kazantzakis**

5A. What International Style skyscraper located in New York City was designed by Philip Johnson and Ludwig Mies van der Rohe?
ANSWER: **Seagram** building

5B. The Capture of Lisbon was the only successful action in what otherwise disastrous campaign, which took place in the 1140s, fifty years after Urban II called for its precursor?
ANSWER: **Second Crusade**

6A. What mountain in the Argentinian Andes has the highest summit in the western hemisphere?
ANSWER: **Aconcagua**

6B. What Afro-Cuban religion, also known as Lucumi or the Rule of Eight, permits animal sacrifice?
ANSWER: **Santeria**

7A. What California mountain in the Sierra Nevada has the highest peak in the contiguous United States?
ANSWER: Mt. **Whitney**

7B. What musician, while composing his *Sonatas and Interludes*, came up with the idea for his composition ("four minutes thirty-three seconds") *4'33"*?
ANSWER: John Milton **Cage**, Jr.

8A. What European language is the official language of the African countries Angola and Mozambique?
ANSWER: **Portuguese**

8B. Name the attribute that "blesseth him that gives and him that takes" according to Portia's soliloquy claiming that its quality "is not strained" in *The Merchant of Venice*.
ANSWER: **mercy**

9A. This is a 30-second calculation question. Circle A is inscribed in Circle B such that Circle A is tangent to both Circle B and segment CD, a diameter of Circle B. If segment CD has a length of 10 inches, what is the *maximum* diameter of Circle A?
ANSWER: **5** inches

9B. This is a 30-second calculation question. A bicycle with wheels of radius one foot is rolling down a ramp inclined at a 30 degree angle. What is the *vertical* distance traveled by the bicycle in three revolutions of its wheels?
ANSWER: **3 pi** feet

10A. What William Wordsworth poem is also known as “I Wandered Lonely As a Cloud” and describes the title flowers “Fluttering and dancing in the breeze,”?
ANSWER: **“Daffodils”**

10B. In which war fought from 1879 to 1883 did Bolivia lose its coastline on a namesake body of water?
ANSWER: War of the **Pacific** [or the Guerra del **Pacifico**]

1. The volume of the three-dimensional generalization of this shape is given by the vector triple product. One can visualize vector addition by drawing one of these shapes. The area of these figures equals the product of their side lengths times the sine of the angle between them. These are the most general quadrilaterals whose diagonals are guaranteed to bisect each other. For 10 points, identify these quadrilaterals which are called rhombuses when all their sides have equal length.
ANSWER: **parallelogram**

233-13-90-09117

2. The main character of this novel speaks to the private investigator Britten and tries to frame Jan Erlone for a crime. Bessie Mears hides for a time with the protagonist before he kills her and throws her body down an air shaft. The Communist Boris Max represents the protagonist of this novel in trial, which sentences that character to death for the murder of Mary Dalton, a young white woman. For 10 points, name this novel written about Bigger Thomas by Richard Wright.
ANSWER: ***Native Son***

023-13-90-09118

3. This region contains both a low-velocity and an ultra low-velocity zone. Peridotite is a major rock type in the upper part of this region. The bottom of this region is the D double prime layer. A shadow zone is created as a result of S waves traveling through this region, but not the region below it. The highly viscous upper part of this region is the asthenosphere, which is separated from the lithosphere by the Moho. For 10 points, identify this layer of the Earth found below the crust.
ANSWER: Earth's **mantle**

066-13-90-09119

4. Father Damien was sainted for ministering to a leper colony in this kingdom. European residents of this kingdom forced the Bayonet Constitution on its monarch. This place was named after the Earl of Sandwich by James Cook, who was killed by its native inhabitants. Grover Cleveland refused to annex this place, condemning the coup that overthrew its last monarch, Queen Liliuokalani. For 10 points, name this island kingdom united by King Kamehameha, which was annexed by the United States.
ANSWER: Kingdom of **Hawai'i**

080-13-90-09120

5. Although not Rotifera or Nemertea, this phylum's excretory system uses bundles of flame cells called protonephridia. Classes in this phylum include Monogenea and Turbellaria. This bilaterally symmetric phylum has no circulatory or respiratory organs or body cavity and excretes its waste through its mouth. This phylum's non-parasitic members include planarians, but it is better known for containing flukes and tapeworms. For 10 points, name this phylum of flatworms.
ANSWER: **Platyhelminthes**s [or **flatworms** until it is read]

066-13-90-09121

6. This poet wrote about a time when he “was young and easy under the apple boughs” in his poem “Fern Hill.” In another poem, he wrote how wise men do not perform the title action because “their words had forked no lightning” in a villanelle that exhorts his father to “rage, rage against the dying of the light.” For 10 points, name this Welsh poet of “Do not go gentle into that good night.”
ANSWER: Dylan **Thomas**

153-13-90-09122

7. Lise Meitner and Otto Hahn were part of the team that discovered this process. Barium and krypton are formed by one form of this process. In biology, this term denotes a type of asexual reproduction used by prokaryotes. When it releases multiple neutrons, such as occurs with uranium, it can create a self-sustaining chain reaction. For 10 points, identify this term that denotes splitting something into two or more parts, like the nucleus of an atom.
ANSWER: **fission** [or self-sustaining nuclear chain **fission** reaction; or binary **fission**]

066-13-90-09123

8. These two people are the subject of "A Tragic Episode, in Three Tabloids" by W. S. Gilbert. In another work, a character named "the Player" berates these two characters for not watching his Tragedians perform. Earlier, they bet on a coin that flips heads ninety-two times in a row. In another play, they look for the body of Polonius, and later the First Ambassador announces that they have been killed. For 10 points, name these two courtiers who are sent to England in *Hamlet*.
ANSWER: **Rosencrantz** and **Guildenstern**

232-13-90-09124

9. The junior senator from this state beat Richard Carmona in an election to replace Jon Kyl, and both senators from this state are part of the immigration Gang of Eight. Sheriff Joe Arpaio is elected in this state's Maricopa County, and Gabrielle Giffords represented this state's 8th district. For 10 points, name this US state currently represented in the Senate by Jeff Flake and John McCain.
ANSWER: **Arizona**

236-13-90-09125

10. This organ produces a hormone that reduces the levels of calcium in the blood, calcitonin. This organ overproduces hormones in Graves disease. The hormone TSH stimulates this organ's production of the hormones T_3 and T_4. The swelling of this butterfly-shaped organ swells in known as goiter, which is commonly combated by adding a certain element to table salt. For 10 points, identify this organ that requires iodine to function properly.
ANSWER: **thyroid** gland

066-13-90-09126

11. A constant named for this scientist is equal to e times h bar over 2 times the electron mass, and co-names a theorem that states that thermal average of magnetization is zero in classical mechanics. A model created by this scientist posited that a certain quantity takes on values equal to multiples of h-bar and recapitulates the Rydberg equation. For 10 points, name this Danish scientist who names a model of the atom with electrons moving in quantized circular orbits around the nucleus.
ANSWER: Niels **Bohr**

048-13-90-09127

12. Santiago Ramón y Cajal modified Golgi's black reaction to discover these cells. Groups of ribosomes in these cells are called Nissl bodies. Nodes of Ranvier are gaps in the myelin sheath of one part of these cells. They have sensory, or afferent, and motor, or efferent, types. These cells consist of a soma, dendrites and an axon, down which an action potential propagates. They transmit information via a synapse. For 10 points, identify these cells that transmit electrical impulses as part of the nervous system.
ANSWER: **neuron**s [or **nerve** cells until "nervous system" is read]

066-13-90-09128

13. In a novel by this author, Captain Winterbottom stops a fight involving a village led by Ezeulu. This author complained about the "dehumanization of Africa and Africans" by a "bloody racist" in his essay "An Image of Africa" about the book *Heart of Darkness*. A character created by this author beats his wife during the Week of Peace and lives in Umuofia. For 10 points, name this Nigerian author who wrote *Arrow of God* and a novel about Okonkwo called *Things Fall Apart*.
ANSWER: Albert Chinualumogu **Achebe**

023-13-90-09129

14. In this story, one character sews undergarments and another learns French and stenography following the main character's injury. That injury occurs to the protagonist of this story after his father lodges an apple into his back. Grete takes care of her brother in this story after he fails to show up for his job as a salesman one morning. For 10 points, name this story about a man who turns into a large bug and eventually dies, which was written by Franz Kafka.
ANSWER: "The **Metamorphosis**" [or "Die **Verwandlung**"]

023-13-90-09130

15. These things are described by the equations omega over k and partial omega over partial k, which respectively represent their phase and group velocities. The square of a function named for these things gives the probability that a particle exists in a given state, and that function symbolized psi is the eigenfunction in the Schrodinger equation. de Broglie proposed a duality in which matter behaves as both particles and as these. For 10 points, name these oscillations with a frequency and amplitude.
ANSWER: **wave**s [or wave **envelope**s; or **wavefunction**s]

190-13-90-09131

1. The arid Caatinga covers much of the northeast of this country, where the Araguaia and the Tocantins rivers have a confluence. The port city of Salvador is situated at All Saints' Bay in this country. The Rio Negro joins a larger river in this country south of Manaus. Its border with Argentina contains the cataracts that form Iguacu Falls. Pernambuco, Mato Grasso, and Bahia are among the states of this country. For 10 points, name this large, Portuguese-speaking country in South America.
ANSWER: **Brazil**

080-13-90-09132

2. As the number of elements increases, the probability that a permutation is a derangement approaches this number's reciprocal. This number equals the sum of the reciprocals of the factorials or the limit as n goes to infinity of 1 plus 1-over-n to the nth power. The function equal to this number raised to the power of x is unchanged upon differentiation. Euler's formula expresses complex numbers as powers of this number. For 10 points, identify this base of the natural logarithm, approximately equal to 2.718.
ANSWER: **e**

233-13-90-09133

3. Gravity Probe B measured the fine changes in the movement of four of the "London moment" devices of this kind. Yaw is detected with the MEMS form of these devices. The equation tau equals I times alpha governs the physics of these objects, which exhibit both nutation and precession. In ICBMs and inertial navigation systems, these objects are used instead of magnetic compasses. These objects have two gimbals, which generate a large angular momentum and minimize external torque, allowing it to stay fixed. For 10 points, name these spinning wheels that can assume any orientation.
ANSWER: **gyroscope**s

020-13-90-09134

4. She wrote that man must “....get his bread with pain and sweat of face” as a “....penalty imposed on his backsliding race,” in one of her “Contemplations.” She wrote the line, “If ever two were one, then surely we,” and also wrote, “Under thy roof no guest shall sit/Nor at thy table eat a bit.” A poem in homage to her was written by John Berryman, and she wrote “To My Dear and Loving Husband” and “Upon the Burning of Our House.” For 10 points, name this writer, one of the first poets of the English American colonies and author of *The Tenth Muse Lately Sprung Up in America*.
ANSWER: Anne **Bradstreet** [or Anne **Dudley**]

030-13-90-09135

5. One of this man’s novels describes a group of counterrevolutionaries known as the Black Hundreds who work for the titular totalitarian government. That novel is supposedly based on a manuscript written by Avis Everhard and is *The Iron Heel*. This man also wrote a novel in which the main character was originally cared for by Judge Miller, develops a rivalry with Spitz, and supposedly visits the grave of John Thornton according to Yeehat legend. For 10 points, name this author who wrote about Buck in *The Call of the Wild*.
ANSWER: Jack **London**

030-13-90-09136

What character from the Star Trek universe was portrayed by George Takei in the original series and has been played by John Cho in the two most recent Star Trek movies?
ANSWER: Hikaru **Sulu** [or **Hikaru** Sulu]

This is a calculation question. If you have a 3/4 chance of answering each question correctly on a 4-question quiz, and you need at least 3 correct answers to pass the quiz, what is the probability that you will pass?
ANSWER: **189/256**