1. This author wrote that men and women require of each other "the lineaments of Gratified Desire." This author wrote about a plant "weary of time" in his poem "Ah! Sunflower!" The speaker asks the title creature "Dost though know who made thee?" in his poem "The Lamb," which is contrasted with a poem that asks, "What immortal hand or eye dare frame thy fearful symmetry?" For 10 points, name this poet whose *Songs of Innocence and of Experience* includes "The Tyger."
ANSWER: William **Blake**

149-13-95-02101

2. The original owners of this team bought the rights to the song "Hail to the Redskins" in order to obtain a pro franchise for their city. This pro team, the only one Don Meredith played for, snared numerous draft picks by trading Herschel Walker to the Vikings. The only coaches to win college and pro national championships both did so with this NFL team, after it fired longtime head coach Tom Landry. For 10 points, name this NFL team that won three Super Bowls behind quarterback Troy Aikman.
ANSWER: Dallas **Cowboys** [or **Dallas** Cowboys]

052-13-95-02102

3. This metal is required for matrix metalloproteinases to function. This element was oxidized and dissolved in the original voltaic pile invented by Alessandro Volta, where it was combined with copper. Since it is the first one to fill both a d subshell and a valence s subshell, it technically isn't a transition metal. A thin layer of this element is laid over iron in the process of galvanization. This element is combined with copper in brass. For 10 points, name this element with atomic number 30 and symbol Zn.
ANSWER: **zinc** [or **Zn** before it is read]

190-13-95-02103

4. This event was followed by the six-hundred-year-old son of Lamech becoming part of the Rainbow Covenant. Japheth, Ham, and Shem survived this event, the end of which was signified by a dove returning with an olive leaf. During this event, a group landed on Ararat after their leader gathered seven pairs of each clean animal and one pair of each unclean animal. For 10 points, name this Biblical event caused by forty days and nights of rain, which killed everything not taken on the Ark by Noah.
ANSWER: Great **Flood** [or Biblical **Deluge**]

023-13-95-02104

5. One of this band's songs begins "All my life, I worshipped her, her golden voice, her beauty's beat" and takes its title from Salman Rushdie's novel *The Ground Beneath her Feet.* Another song by this band asks "How long must we sing this song...cause tonight, we can live as one." The Edge plays guitar for this band, which was founded by drummer Larry Mullen. For 10 points, name this Irish band that recorded "Sunday, Bloody Sunday" and "Vertigo" with singer Bono.
ANSWER: **U2**

080-13-95-02105

6. For a state variable, residuals are the difference between the variable's actual value and what the value would be for one of these substances. Their internal energy is independent of pressure, and they have a compressibility factor of 1. They have perfectly elastic collisions, negligible particle volume, and no intermolecular attractive forces according to the kinetic theory, an assumption that requires low pressures and high temperatures. For 10 points, name these substances that obey the equation PV = nRT.
ANSWER: **ideal gas**es [prompt on **gas**es]

7. In a story by this author, salesman Manley Pointer carries whiskey and birth control in his hollowed-out Bible. In that story by this writer, Hulga Hopewell has her artificial leg stolen. This author wrote about the cat Pitty Sing causing a car accident for the Grandmother and her family. In that story by this woman, a family traveling to Florida is massacred by a criminal called the Misfit. For 10 points, name this female author of Southern Gothic stories like "A Good Man Is Hard to Find."
ANSWER: Flannery **O'Connor**

8. These structures can be described by their surface, volume, and asymmetry energies in the Bethe-Weizsacker (BEET-uh VAYT-zahk-ehr) formula. Maria Goeppert-Mayer explained the "magic number" phenomenon of these structures. They are held together by the exchange of virtual mesons, the carriers of the residual strong force. Two of these structures in hydrogen are fused to form a helium one in the sun. For 10 points, identify these atomic structures composed of neutrons and protons.
ANSWER: atomic **nucleus**

9. In a novel set during this conflict, Robert Faehmel (FAY-mel) destroys St. Anthony's Abbey to clear a field of fire. Robert's memories of this conflict are described by Heinrich Boll in *Billiards at Half-Past Nine.* In a nonfiction book written during this conflict, the author says that she still believes "in spite of everything, that people are truly good at heart." For 10 points, Anne Frank wrote her diary during what conflict?
ANSWER: **World War II**

10. This god became the first to be tried for murder after killing a man who attempted to violate his daughter Alcippe (al-KIP-ee). This god became furious when his dragon was killed by Cadmus, who would later marry his daughter Harmonia. This god rescued Thanatos from Sisyphus, and he was caught with Aphrodite in a net created by Hephaestus (huh-FESS-tis). This god was stabbed by Diomedes (die-OH-meh-deez) during the Trojan War. For 10 points, name this Greco-Roman god of war.
ANSWER: **Ares** [or **Mars**]

11. This composer used "nested proportions" to determine structures meant to evoke the "rasa" of Indian music. To produce his *Music of Changes,* he consulted star charts and the *I Ching.* He was a pioneer in placing objects in between the strings and hammers of pianos to "prepare" them. His most famous piece consists of the ambient sounds heard by the audience as the performer sits at the piano. For 10 points, name this composer of *4'33"* ("four minutes, thirty-three seconds").
ANSWER: John Milton **Cage**, Jr.

12. A character created by this author climbs into a trash can when told to "hit the sack" in a play about Hugo Pludek's career at the Liquidation Office. This author of *The Memorandum* and *The Garden Party* was an early supporter of the Charter 77 movement, which brought him to political power following the Velvet Revolution. For 10 points, name this absurdist playwright, who became the leader of the anti-Communist opposition in Czechoslovakia and first president of the Czech Republic.
ANSWER: Vaclav **Havel**

13. This mountain range was mythically home to spirits called "apus." The highest mountain in this range features the Polish glacier, and another mountain in it is farther from the center of Earth than any other location on the planet's surface. This mountain range features such native animals as chinchillas and the alpacas. It is home to mountains such as Chimborazo and Aconcagua. For 10 points, name this long mountain range on the west coast of South America.
ANSWER: **Andes** [or **Andean** range]

14. In describing this family, a narrator says, "if ever mortal painted an idea, that mortal was" a male member of this family. That member compares "the death cry of the dragon" to the inhuman sounds of his sister. A friend of this family reads the novel *The Mad Tryst* to one of its members. That member, Roderick, buries his sister Madeline alive before their mansion collapses. For 10 points, name this family whose house's fall is described in an Edgar Allan Poe story.
ANSWER: **Usher**

15. One over j times angular frequency times this quantity is a formula for impedance. This quantity equals the derivative of charge with respect to potential. This quantity can be increased by adding barium titanate or other dielectrics, and for two thin plates it is proportional to area and inversely proportional to their separation. This quantity adds in parallel, unlike resistance and inductance. For 10 points, identify this electrical quantity, measured in farads.
ANSWER: **capacitance**

1A. What Romanian dictator was served by the police force known as the Securitate (SEH-coo-ree-TAH-tay) and was executed on Christmas Day 1989?
ANSWER: Nicolae **Ceausescu** (chow-CHESS-kyoo)

1B. Identify the Washington Irving short story in which Ichabod Crane is haunted by the Headless Horseman.
ANSWER: "The **Legend of Sleepy Hollow**"

2A. No two electrons that have the same value for what quantity can occupy the same orbital due to the Pauli exclusion principle?
ANSWER: **spin**

2B. What Greek term denotes the use of excessive exaggeration as a figure of speech?
ANSWER: **hyperbole**

3A. This is a 20-second calculation question. What is the difference between the mean and the median of the set of five numbers: 0, 2, 4, 6, and 13?
ANSWER: **1**

3B. This is a 20-second calculation question. What is the product of all roots between negative pi to pi of the equation 1 plus the sine of x equals cosine of x?
ANSWER: **0**

4A. What first major battle of the Civil War pitted P.G.T. Beauregard against Irvin McDowell and gave Stonewall Jackson his nickname?
ANSWER: Battle of **First Bull Run** [or **First Manassas**; prompt on partial answer]

4B. What Umberto Eco novel follows William of Baskerville's investigation of a murder at a medieval abbey?
ANSWER: *The **Name of the Rose***

5A. Adam's Bridge lies between what island country and the continental mainland?
ANSWER: **Sri Lanka**

5B. What American painter caused scandal with his portrait of Virginie Gautreau called *Madame X*?
ANSWER: John Singer **Sargent**

6A. What phenomenon, a consequence of Le Chatlier's principle, occurs when NaCl (read out letters) is added to a solution of PbCl2 (read out letters/numbers), causing the PbCl2 to precipitate?
ANSWER: **common ion** effect [or **CIE**]

6B. What daughter of Henry VIII was nicknamed "Gloriana" and became queen of England in 1558?
ANSWER: **Elizabeth I** [prompt on **Elizabeth**]

7A. What Russian composer helped inaugurate musical modernism with his ballets *Petrushka* and *The Rite of Spring*?
ANSWER: Igor **Stravinsky**

7B. What type of control flow statements includes the if-else construct and allows one to execute code based on a boolean constraint?
ANSWER: **condition**al statements [or **conditional** expressions; or conditional **construct**s; or **selection** in place of "conditional"]

8A. What American IT specialist fled to Hong Kong and then Russia after leaking details of the NSA Prism spy program in 2013?
ANSWER: Edward **Snowden**

8B. What is the first-person singular pronoun in Mandarin Chinese?
ANSWER: **wo**

9A. This is a 30-second calculation question. What is the value of the tangent of fifteen degrees squared minus the secant of fifteen degrees squared?
ANSWER: **-1**

9B. This is a 30-second calculation question. A quadratic polynomial P with real coefficients has the root 1 plus i. If the value of P at 1 is 3, what is the value of P at 0?
ANSWER: **6**

10A. Name the artist who produced *The Sleep of Reason Produces Monsters* and *The Third of May 1808.*
ANSWER: Francisco Jose de **Goya** y Lucientes

10B. The value of an hexadecimal digit is multiplied by what number raised to some power to obtain its decimal representation?
ANSWER: **sixteen**

1. This lake is the site of Northerly Island, once the home to Meigs Field airport. It is traversed by the *SS Badger,* which runs from Manitowoc to Ludington. This lake contains an island that was once a Mormon kingdom run by James Strang. The Sleeping Bear Dunes National Lakeshore is located on this lake, which contains Beaver Island and is the only Great Lake located entirely within the U.S. For 10 points, name this lake that Chicago is found on, located to the west of its namesake state.
ANSWER: Lake **Michigan**

052-13-95-02117

2. This man wrote the lines "Everybody knows where you go when the sun goes down" and "I wasted my time when I would try, try, try." Another song by this man describes a train "rollin' 'round the bend," heard by a man who "shot a man in Reno, Just to watch him die." Those songs were sung by Joaquin Phoenix in a biopic of this man's romance with June Carter. His signature song opens "I keep a close watch on this heart of mine." For 10 points, name this country musician who wrote "I Walk the Line."
ANSWER: John R. "Johnny" **Cash** [or J.R. **Cash**]

020-13-95-02118

3. A complex found in this organelle has the Ycf4 (read out letters/numbers) domain and evolved from green sulfur bacteria. Another enzyme found in this organelle transfers electrons between four manganese atoms in the Kok ("KOHK") cycle. A membrane in this organelle contains centers called P700 and P680. This organelle has lamellae (LUH-mell-ee) connecting grana (GRAH-nuh), which are stacks of thylakoids. For 10 points, name this organelle that conducts photosynthesis in the plant.
ANSWER: **chloroplast**s [prompt on **plast**ids]

048-13-95-02119

4. This president signed the Employment Act, which established the Council of Economic Advisors. His seizure of steel mills was ruled unconstitutional by the Supreme Court after he left office. He criticized the "Do Nothing Congress" that was in session during his administration and passed the Taft-Hartley Act over his veto. Universal health care was an unsuccessful part of his "Fair Deal." For 10 points, name this President who succeeded Franklin Roosevelt.
ANSWER: Harry S. **Truman**

121-13-95-02120

5. A peptide derived from this virus with the sequence Y-P-Y-D-V-P-D-Y-A is commonly used for protein purification. This virus requires the M2 channel for uncoating. It undergoes antigenic shift when its 8 RNA strands shuffle, and it has neuraminidase (NUHR-am-in-uh-dayse) and hemagglutinin on its surface. Oseltamivir is a treatment for this virus. For 10 points, name this virus that comes in swine, bird, and Spanish varieties and causes a cold-like illness.
ANSWER: **influenza** virus [or **flu** virus]

048-13-95-02121

6. This language is most closely related to Khanty and Mansi, which are spoken along the Ob river in Russia. It uses many Turkish words relating to horse riding. Its two difficult palatal stop consonants are written "t-y" and "g-y." This language has over two dozen noun cases, and it follows vowel harmony. Like Finnish and Estonian, this European language is part of the Finno-Ugric (OO-grik) family. For 10 points, name this most-spoken non-Indo-European language of Europe, often heard in Budapest.
ANSWER: **Hungarian** [or **Magyar**]

7. This author disguised herself as an Abyssinian nobleman touring a British flagship in the Dreadnought Hoax. She fictionalized her relationship with fellow writer Vita Sackville-West in a novel about a nobleman who lives hundreds of years and changes genders. One of her novels describes the suicide of Septimus Smith along with the title woman's arrangements for her party. For 10 points, name this twentieth-century British modernist and feminist who wrote *Orlando* and *Mrs. Dalloway.*
ANSWER: Virginia **Woolf**

8. Travertine is one kind of this rock deposited by mineral springs, while tufa is another kind found in columns around Lake Mono. This rock consists primarily of aragonite (ah-RAH-guh-nite) and calcite. Karst topographies are most commonly formed from dolomite or this rock, which reacts with acid to release carbon dioxide. For 10 points, name this sedimentary rock consisting of calcium carbonate, often from marine organisms.
ANSWER: **limestone**

9. Chancellor Li Linfu led a series of purges during this dynasty. Buddhism was suppressed during the Hu-chiang (hoo-CHONG) period of this dynasty, which fought against the Abbasid Caliphate at the Battle of the Talas River. This dynasty was interrupted by the reign of Empress Wu Zetian. This dynasty defeated An Lushan's rebellion, and it was the time of poets such as Li Po and Du Fu. For 10 points, name this Chinese dynasty founded by Emperor Gaozu (gow-ZOO) that followed the Sui (SWEE) dynasty.
ANSWER: **Tang** dynasty

10. A character in this novel reads a book called *Kidney Troubles and Their Cure.* The narrator of this novel is working on an engineering project at Corbury Junction, and the main character unsuccessfully attempts to procure a loan from Andrew Hale. Ultimately, the protagonist's hypochondriac wife Zeena takes care of him following a "smash up." For 10 points, name this novel in which the title character and Mattie Silver attempt suicide via sled crash, written by Edith Wharton.
ANSWER: *Ethan Frome*

11. The T locus in mice is responsible for a type of "drive" named for this process. In ciliates, the micronucleus undergoes this process before fusing as part of conjugation. During this process, the synaptonemal complex forms chiasmata. Nondisjunction during it can result in aneuploidy (AN-uh-ploy-dee) in offspring, and it is divided into two halves, which allows it to create four haploid cells from a single diploid precursor. For 10 points, name this type of cell division that occurs in sex cells.
ANSWER: **meiosis** [or **crossing over**; do not accept "mitosis"]

12. The only remnant of this object is a key that prevented communication between the battery and transmitter. Sent to measure the temperature of the upper atmosphere, it was designed and launched after Object D took longer than expected to build. It was followed by a craft that flew the dog Laika into space. Designed as a metal sphere with four antennae attached, its launch began the Space Race between the Soviet Union and the United States. For 10 points, name this first object to be launched into Earth's orbit.
ANSWER: **Sputnik 1** [or **PS-1**; prompt on **Sputnik**]

13. This man encouraged his followers to "cast down your bucket where you are" and assured conservatives that "in all things purely social we can be as separate as the five fingers." He used the Hampton Institute as the model for the school he founded, the Tuskegee Institute. This man delivered the Atlanta Compromise speech and wrote the autobiography *Up From Slavery*. For 10 points, name this early twentieth century African-American educator who promoted job training over political action.
ANSWER: Booker Taliaferro **Washington**

14. The killer in this event was slain in revenge by a being who grew to adulthood in a day after being conceived by a giantess. After it happened, a being named Thokk refused to weep. The killer in this event was the blind Hoder. The victim in this event was invulnerable to everything but mistletoe, thanks to the efforts of his mother, Frigg. For 10 points, name this event in Norse mythology where a beloved son of Odin is killed thanks to the machinations of Loki.
ANSWER: **death of Baldr** [or descriptive answers such as **Baldr** being killed by mistletoe, etc.; anything that squares with the info in the question and mentions **Baldr** is right]

15. In ANOVA, a capital X symbolizes the "grand" form of this quantity. Cumulative distribution functions evaluated at this point equal 0.5, and this value will always have a Z-score of 0. An approximation for this number is found at the center of a confidence interval. Standard error is calculated by squaring the difference between this value and each element in the sample. It is defined as the sum of a sample divided by the number of elements. For 10 points, name this value, the average of a sample of data.
ANSWER: **mean** [or **sample mean**; or **population mean**]

1. This poet left his home country in the wake of scandal caused by his relationship with his half-sister Augusta. He fictionalized his travels through Europe in the poem that made him famous overnight, the four-canto *Childe Harold's Pilgrimage.* This poet reimagined a Spanish legend as a man constantly seduced by women, and he died fighting in the Greek War of Independence. For 10 points, name this English Romantic poet of "She Walks in Beauty" who wrote the comical epic *Don Juan.*
ANSWER: Lord **Byron**

014-13-95-02132

2. After this event, a crash-landed pilot received aid from three locals on the island of Niihau. A fourteen-part message was unable to be transcribed before this event occurred. Over one thousand people died in the explosion of the *Arizona* during this event. This event prompted Franklin Roosevelt to proclaim that its date "will live in imfamy." For 10 points, name this event that occurred in Hawaii on December 7, 1941.
ANSWER: Japan's attack on **Pearl Harbor** [or obvious equivalents mentioning **Pearl Harbor**]

185-13-95-02133

3. The twenty-third chapter of this book jumps out of narrative to describe a gold rush at Odendaalsrust (oh-den-DAHLS-rust). At a trial in this book, Matthew gets off scot-free, partly because his father John can afford a good lawyer, unlike Mr. Carmichael, who takes the case *pro bono.* At this novel's conclusion, the protagonist prays atop a mountain near Ndotsheni (en-DOT-shen-ee). For killing James Jarvis, Absalom is sentenced to death in this novel. For 10 points, name this novel about Stephen Kumalo by Alan Paton.
ANSWER: *Cry, the Beloved Country*

190-13-95-02134

4. The absolute maximum of the function x to the power one over x occurs when x equals this number. The nontrivial solution to the differential equation y prime equals y always includes this number. It is the sum of one over n factorial, as n goes from zero to infinity. As n goes to infinity, this number also equals one plus one over n, raised to the n power. The natural logarithm of this number is one. For 10 points, name this irrational number equal to about 2.718.
ANSWER: **e** [or **Euler**'s number; or **Euler**'s constant; do not accept "Euler-Mascheroni constant"]

190-13-95-02135

5. This city besieged Saguntum to break a peace. A politician who hated this city showed its proximity by spreading fresh figs on the Senate floor, and added to the end of every speech that it "must be destroyed." This city, founded by Phoenician traders, lost at Zama to Scipio Africanus after the failure of elephants under a general from its prominent Barca family. For 10 points, name this loser of the Punic Wars to Rome that had forces commanded by Hannibal.
ANSWER: **Carthage** [or **Carthago**; or **Kart-hadasht**]

104-13-95-02136

What female South African novelist and Nobel Prize winner wrote *The Conservationist* and *July's People*?
ANSWER: Nadine **Gordimer**

This is a calculation question. What is the volume of a cube whose space diagonal has length 30?
ANSWER: **3000sqrt3**