1. In physics, this phenomenon is described using Faraday's law; it refers to the creation of an emf when the magnetic flux through a circuit changes. This term can also refer to the redistribution of electric charge in a neutral object when a charged object is brought near it. In mathematics, it refers to a type of proof in which a statement is assumed true for a number *n* and then shown to be true for an integer *n* plus one. For 10 points, identify this term that names a form of reasoning contrasted with deductive reasoning.
ANSWER: **induction** [or word forms; or specific types, such as electrostatic or electromagnetic or mathematical **induction**]

226-13-93-10101

2. This president sent in federal troops to deal with the Great Railway Strike. For supporting the temperance movement, his wife was nicknamed "Lemonade Lucy." Congress overrode this man's veto of the silver-purchasing Bland-Allison Act. After an Electoral Commission chose this man over his popular Democratic opponent Samuel Tilden, he was dubbed "his Fraudulency." For 10 points, name this Republican who became president after the controversial Election of 1876.
ANSWER: Rutherford B. **Hayes**

080-13-93-10102

3. An example of these organisms is responsible for the massive die-off of amphibians due to chytridiomycosis. These organisms form a symbiotic relationship with plant roots known as mycorrhizae. The cell walls of these organisms contain chitin. A mass of branching, filamentous hyphae in these organisms is known as the mycelium. A symbiotic relationship between these organisms and an algae is known as a lichen. For 10 points, identify this kingdom that includes molds and mushrooms.
ANSWER: **fungi** [or **fungus**]

066-13-93-10103

4. A law of this type which also established an income tax led to the *Pollock* case. William Howard Taft declared that the best one of these things was a controversial bill masterminded by Nelson Aldrich. During the 1920s, the Fordney-McCumber one was passed. One of these pieces of legislation named for Senators Hawley and Smoot provoked a trade war that intensified the Great Depression. For 10 points, name these protectionist laws that impose taxes on imports.
ANSWER: **tariff**s

080-13-93-10104

5. This director gave a lecture popularizing the "MacGuffin" technique. Characters in a film by this director include a sexy dancer nicknamed "Miss Torso" and the suicidal "Miss Lonelyheart." He made a film where a wheelchair bound photographer suspects his neighbor has committed murder. This director made a film where motel proprietor Norman Bates kills a woman in a shower. For 10 points, name this portly film director of movies like *Rear Window* and *Psycho*, the so-called "Master of Suspense."
ANSWER: Alfred **Hitchcock**

052-13-93-10105

6. This phylum includes anthozoans and hydrozoans, such as the *Hydra* genus. Organisms in this phylum have mesoglea between their endoderm and ectoderm and lack a mesoderm. The life cycle of organisms in this phylum commonly includes both a polyp and medusa stage. Members of this phylum can project nematocysts in self-defense, which can be deactivated with vinegar and are alternately called stinging cells. For 10 points, identify this phylum of jellyfish.
ANSWER: **Cnidaria** (NIGH-dare-EE-uh)

7. Yahya Jameh, the President of the Gambia, took his country out of this organization in October 2013. The site of its 2013 heads of government meeting was controversially located in Mahinda Rajapaksa's Sri Lanka. Its namesake 2014 games will be held in Glasgow, in the country of its head, Queen Elizabeth II. For 10 points, name this organization whose members are mostly former colonies of Britain.
ANSWER: **Commonwealth** of Nations [or British **Commonwealth**]

8. Electrons in these materials are excited from the valence band to the conduction band, generating an electron-hole pair. Recombination in these materials results in the emission of a phonon or a photon. Intrinsic ones have equal concentrations of holes and electrons, and they are classified into "P" and "N" types after doping. Common types of these are made using germanium and silicon. For 10 points, identify these materials with conductivities between those of conductors and insulators, which are used by companies such as Intel in making computer chips.
ANSWER: **semiconductor**s

9. This area was constructed following a campaign by Andrew Jackson Downing and William Cullen Bryant. Its plan was selected in a thirty-three way competition for a two thousand dollar prize, which was won by Calvert Vaux and Frederick Law Olmsted. This area is home to Cleopatra's Needle and the Metropolitan Museum of Art, as well as a zoo and the stage where Shakespeare is performed annually. For 10 points, name this large public park in Manhattan.
ANSWER: **Central** Park

10. Lamin filaments provide structural support for this organelle. A structure in this organelle is the site of ribosomal RNA transcription and ribosome assembly. The transport of molecules in and out of this organelle is allowed by namesake pore complexes that cross its envelope. It is the largest organelle in the animal cell and its presence differentiates eukaryotes and prokaryotes. For 10 points, identify this organelle that stores a cell's genetic material.
ANSWER: cell **nucleus**

11. In a story by this writer, Johnny is kidnapped by Bill and Sam in hopes of making some money. That story by this author ends instead with Ebenezer Dorset being paid to take his son back. This author of "The Ransom of Red Chief" also wrote a story in which twenty-one dollars is spent on a fob chain by Della after she sells her hair and her husband, Jim, sells his watch. For 10 points, name this American short story writer who used twist endings in such stories as "The Gift of the Magi."
ANSWER: O. **Henry** [or William Sidney **Porter**]

12. The first large use of shell guns in a naval fight happened during this war's Battle of Sinope. Francois Canrobert and Lord Raglan took part in this war's year-long siege of Sevastopol. Nicholas I died while his country fought in this war, which was ended by the Treaty of Paris. The Battle of Balaclava during this war included the Charge of the Light Brigade. For 10 points, name this mid-nineteenth century war lost by Russia to a European coalition and fought on the namesake peninsula.
ANSWER: **Crimean** War

13. This team was coached from 2005 to 2010 by Mike Brown, whom this team rehired during the 2013 offseason. This team selected UNLV forward Anthony Bennett in 2013 after its representative Nick Gilbert won the Draft Lottery for the second time in three years. In the 2013 offseason, this team signed Andrew Bynum. A star player for this team left it in 2010 to take his "talents to South Beach." For 10 points, name this team that was left by LeBron James and is currently led by Kyrie Irving.
ANSWER: **Cleveland** Cavaliers [or Cleveland **Cavaliers**; or **Cavs**]

14. Humphry Davy first isolated this element from lime and mercuric oxide in 1808. Portland cement is comprised almost entirely of this element's silicates and aluminates. Gypsum contains this element and sulfate, while apatite contains this element's phosphate. This element's carbonate appears in shells, marble, and chalk. For 10 points, name this alkaline earth metal whose mineralized form makes up bones and teeth.
ANSWER: **calcium**

15. During development of the opera based on this book, the names Aaron, Bernard, Bruno, Emile, Moishe and Tzippy were given to characters after the aunts and uncles they were based on. Along with *Outside Over There* and *In the Night Kitchen*, it forms a trilogy about children mastering feelings. In it, a wild rumpus occurs after a boy in a wolf costume is made king after staring into the monsters' eyes. For 10 points, name this book about the misadventures of Max by Maurice Sendak.
ANSWER: *Where the Wild Things Are*

1A. What former governor of Kansas and current secretary of Health and Human Services has faced criticism for the shortcomings of the healthcare.gov website?
ANSWER: Kathleen **Sebelius** [or Kathleen **Gilligan**]

1B. What phenomenon can be explained by the elastic-rebound theory and was quantified by the Richter scale?
ANSWER: **earthquake**s

2A. Maine and Louisiana are the two U.S. states where some counties feature over 20% of the population as primary speakers of what language?
ANSWER: **French**

2B. What Chilean island is known for its moai (MOH-eye) statues?
ANSWER: **Easter** Island [or **Rapa Nui**; or Isla de **Pascua**]

3A. Marina Abramovic is a practitioner of what type of art form, which is carried out directly in front of an audience?
ANSWER: **performance** art

3B. What German philosopher wrote *Thus Spoke Zarathustra* and examined the Dionysian and Apollonian dichotomy in *The Birth of Tragedy*?
ANSWER: Friedrich **Nietzsche**

4A. During the Second World War, which country was the site of the Altmark Incident and the rule of Vidkun Quisling?
ANSWER: Kingdom of **Norway** [or Kongeriket **Norge**]

4B. Name the Gabriel Garcia Marquez novel following the Buendia (bwen-DEE-uh) family in Macondo.
ANSWER: *One Hundred Years of Solitude* [or *Cien Anos de Soledad*]

5A. This is a 20-second calculation question. If P of x is a polynomial of degree 2 and Q of x is a polynomial of degree 3, what is the degree of the composition function, P of Q of x?
ANSWER: **6**

5B. This is a 20-second calculation question. What is the expected number of heads that show up in three independent tosses of an unfair coin that shows heads 60% of the time?
ANSWER: **1.8** [or **9/5**]

6A. With what power of the distance from a charge does electrostatic force vary, according to Coulomb's Law?
ANSWER: **-2** [do not accept "2"]

6B. Classical and operant are two forms of what technique that was used by Ivan Pavlov to make dogs salivate?
ANSWER: **conditioning**

7A. What type of conic section has an eccentricity greater than one and is the shape of the graph of x squared minus y squared equals one?
ANSWER: **hyperbola**

7B. Benjamin Franklin published an almanac using the name of what fictional person, who was nicknamed "poor?"
ANSWER: **Richard** [or **Saunders**]

8A. Which bloody Civil War battle fought between Robert E. Lee and George McClellan in Maryland saw fighting around a sunken road and a location that came to be known as Burnside Bridge?
ANSWER: Battle of **Antietam** [or Battle of **Sharpsburg**]

8B. Ununseptium might belong to what highly reactive group on the periodic table that is sometimes referred to by its first element, fluorine?
ANSWER: **halogen**s

9A. According to VSEPR, what is the molecular geometry has bond angles of one hundred and nine point five degrees?
ANSWER: **tetrahedral**

9B. What name is given to the sections into which many epic poems are divided, most famously those of Dante?
ANSWER: **canto**

10A. This is a 30-second calculation question. A cubic container with side length six feet is partially filled with water. When a cone with height three feet is placed into this cube, the water level rises by pi over four feet. What is the radius of the cone's base?
ANSWER: **three** feet

10B. This is a 30-second calculation question. If x squared plus x = 0, give all solutions for x.
ANSWER: x = **0** and x = **-1**

1. NusA binds to a G-C rich stem loop in rho-independent termination of this process. Factors promoting this process may bind to TATA boxes in eukaryotes. Retroviruses such as HIV can carry out this process in reverse. This process is followed by exon splicing and the addition of a three-prime poly-A tail. For 10 points, name this process in which RNA polymerase copies a segment of DNA into RNA.
ANSWER: RNA **transcription**

237-13-93-10117

2. A candidate in this Presidential election was disaffected at being fired as Secretary of Commerce for his pro-Soviet views two years earlier and made the last major Progressive Party bid. This election also featured Strom Thurmond carrying four states as the Dixiecrat candidate, and an erroneous *Chicago Tribune* headline announcing the victory of Republican Thomas Dewey. For 10 points, identify this election in which Harry Truman won a full term.
ANSWER: United States Presidential election of 19**48**

019-13-93-10118

3. One of these texts tells of how the thousand-headed "Primeval Man" cut his body up into the cosmos and the different classes of humans. The Samhitas are the first parts of these texts, which include three called the "threefold knowledge" and the fourth "Atharva" one. The Upanishads (oo-PAH-nee-shods) are commentaries on these texts, which contain *mantras*. The oldest of them, containing hymns to ten gods beginning with Agni, is the Rig. For 10 points, name these oldest Sanskrit Hindu texts.
ANSWER: the **Veda**s

080-13-93-10119

4. Near the beginning of this novel, the main character is comforted the servant Bessie after being locked in the red room where her uncle died. The protagonist of this novel is abused by Mr. Brocklehurst, the headmaster of the Lowood School. The title character goes to work at Thornfield Hall as a governess, a location eventually burned down by the master's crazy first wife, Bertha. For 10 points, name this Charlotte Bronte novel about the title woman and her love for Mr. Rochester.
ANSWER: ***Jane Eyre***

052-13-93-10120

5. This process may not occur to a solution if surface tension is sufficiently high in the "superheating" effect. Dichloromethane and hexane are commonly used as organic laboratory solvents because of how easily they undergo this process in a rotovap. This process is used to remove impurities from a compound in a distillation. For 10 points, name this phase transition which happens to water at one hundered degrees Celsius as it turns into steam.
ANSWER: **boiling** [or **evaporation**, or **vaporization**, do not accept "freezing"]

239-13-93-10121

6. He isn't Spanish, but this composer produced an orchestral triptych called "Iberia." This composer included "The Sunken Cathedral" and "The Girl with the Flaxen Hair" in his collection of twelve piano preludes. The third piece in this composer's *Suite bergamasque* depicts a Paul Verlaine poem about moonlight. Another of his pieces depicts a lustful mythical creature pursuing some nymphs. For 10 points, name this French composer of "Clair de Lune" and *Prelude to the Afternoon of a Faun.*
ANSWER: Achille-Claude **Debussy**

186-13-93-10122

7. Suriname is home to one of these constructs called Sranan. Another of these constructs is most common among the Geechee people on the Sea Islands off of South Carolina and Georgia. Exemplified by Jamaican Patois and Gullah, these constructs develop when a child adopts the Pidgin of their parents as a native language. For 10 points, give this term for a language mixed from two parent languages, as exemplified by the mixture of French and African tongues in Louisiana.
ANSWER: **Creole** languages [prompt on **language**s; prompt on **Pidgin**s until it is read]

8. One of this character's daughters is engaged to Haemon, whose father refuses to allow the burial this man's son. In a play titled for this character, he finds out that he is not actually the son of Polybus. This father of Ismene is able to answer the riddle of the Sphinx, which helps this character fulfill a prophecy that he will kill his father and marry his mother. For 10 points, name this father of Antigone who is *at Colonus* and *Rex* in a pair of dramas by Sophocles.
ANSWER: **Oedipus**

9. According to the Aeneid, a survivor of this event constructed golden doors near the home of the Cumaen Sibyl depicting it. That man, a father of this event's victim, used an ant to thread a string through a shell while staying with King Cocalus on Sicily. A "landscape with" this event in the background was painted by Breughel the Elder. For 10 points, identify this mythological event that occurred when Daedalus' son flew too close to the sun, causing his wings to melt.
ANSWER: **fall** of **Icarus**

10. In Jeffrey Eugenides's novel *Middlesex,* the hermaphrodite Callie reads one of these texts, only to find the word "MONSTER." A non-fictional example of these texts contains satiric verses credited to "that learned and ingenious cleric, Father Gassalasca Jape, S.J." The author of that text styles himself a "cynic" and describes lawyers as being "skilled in the circumvention of law." George and Charles Merriam won publishing rights to a series of early 19th century American ones. For 10 points, Ambrose Bierce created a satiric "devil's" version of what kind of reference book written by Noah Webster?
ANSWER: **dictionari**es [or **word book**s]

11. A smaller-scale version of this event occurred in 541-542 AD during Justinian's reign. The peak of this event coincided with the peak of the flagellant movement. Popular explanations for this event included the miasma theory and the poisoning of wells by Jews. This event began after a siege of Caffa in Crimea and its victims' bodies were often piled onto death carts. For 10 points, name this pandemic that killed between 30-60% of Europe's population in the 14th century.
ANSWER: **Black Death** [or **bubonic plague**]

12. The Sinyetha Party and the Dobama Asiayone were two members of this country's Freedom Bloc. The National League for Democracy in this country challenged the domination of the State Law and Order Restoration Council under Saw Maung. U Thant was a United Nations Secretary General from this country, which was led by the dictator Ne Win. For 10 points, name this country in which Aung San Suu Kyi lived for many years under house arrest.
ANSWER: Union of **Burma** [or Union of **Myanma**r; or Pyidaungzu **Myanma** Naingngandaw]

13. A poem by this writer describes some plums as "so sweet and so cold" after its speaker admits to eating them even though they were probably being saved for breakfast. This poet of "This Is Just To Say" wrote that there are "no ideas but in things" in his long poem *Paterson.* A title object in a poem by this writer is "glazed with rain water beside the white chickens." For 10 points, name this Imagist poet who claimed that "so much depends upon" the title object in "The Red Wheelbarrow."
ANSWER: William Carlos **Williams**

14. This actress played Sally's best friend Marie in *When Harry Met Sally,* and she wrote the book *Wishful Drinking* and the screenplay for *Postcards from the Edge.* In a film, this actress says "this bucket of bolt's never gonna get us past that blockade," and confesses her love for a man who replies "I know." In another film, she wore a gold bikini as one of the slaves of Jabba the Hutt. For 10 points, name this actress who played Princess Leia in *Star Wars.*
ANSWER: Carrie **Fisher**

15. The main character of this novel is afraid that she might end up in a situation similar to that of Annie Tyler and Who Flung. After kissing Johnny Taylor, this novel's protagonist is pressured by her grandmother to marry Logan Killicks. A hurricane in this novel leads to a character getting bit by a rabid dog, forcing the main character to shoot her third husband, Tea Cake. For 10 points, name this novel narrated in Eatonville, Florida, by Janie Crawford, which was written by Zora Neale Hurston.
ANSWER: ***Their Eyes Were Watching God***

1. This author wrote about the "bloomin' idol made o' mud-what they called the Great Gawd Budd" that the speaker encounters "on the road to Mandalay." In another poem, the speaker says "you're a better man than I am" to a heroic water bearer. This author wrote the poems "If" and "Gunga Din." In a story collection, this man wrote about the mongoose Rikki-Tikki-Tavi and a boy raised by wolves named Mowgli. For 10 points, name this English author of *The Jungle Book*.
ANSWER: Rudyard **Kipling**

052-13-93-10132

2. This quantity can be calculated as one over the square root of the permittivity times the permeability. When a charged particle exceeds this quantity in a medium, Cherenkov radiation is produced. The refractive index is equal to this quantity divided by the velocity in a particular medium. For an electromagnetic wave, it is equal to the product of frequency and wavelength, and Einstein famously equated energy with mass times the square of this quantity. For 10 points, identify this quantity equal to approximately three times ten to the eighth meters per second.
ANSWER: **speed of light** [or **c**]

226-13-93-10133

3. According to the biographer Proclus, this man taught at Alexandria during the rule of Ptolemy I. He is not Plato, but he wrote a book which concludes by explaining how to construct the five Platonic solids. This man put forth the "windmill proof" of the Pythagorean theorem and wrote axioms such as "given two points there is one straight line that joins them" in his book, the *Elements.* For 10 points, name this Greek "father of geometry."
ANSWER: **Euclid** [or **Eukleides**]

019-13-93-10134

4. In his first appearance, this character tells his housemate that he owns a bull pup and he gets up at "ungodly hours." Once engaged to the governess Mary Morstan, he was a veteran of the British army and is greeted with the question "You have been in Afghanistan, I presume?" This medical doctor shares the flat at 221B Baker Street with his friend, and he narrates books like *A Study in Scarlet*. For 10 points, name this sidekick of Sherlock Holmes.
ANSWER: Doctor John **Watson** [or **John**]

052-13-93-10135

5. A data structure used to efficiently perform this operation can use linear probing to implement open addressing or implement chaining to resolve collisions. That data structure used to perform this operation is a hash table. The linear, or serial, form of this operation simply steps through an array one item at a time while its binary form requires an array that has already been sorted. For 10 points, identify this operation in which an algorithm looks for a specified piece of data.
ANSWER: **search**ing [or obvious equivalents, such as **lookup**; prompt on **hash**ing]

066-13-93-10136

What artist created controversy over the exhibition of his paintings *Olympia* and *Luncheon on the Grass?*
ANSWER: Edouard **Manet**

This is a calculation question. If a line in the plane has slope negative three, what is cosine of the angle it makes with the x-axis?
ANSWER: **1 over** square **root** of **10** [or square **root** of **10**, **over 10**]