1. Opposition to this person's policies was organized by the Secret Army Organization. This man was appointed Prime Minister by René Coty during the turbulent period of the Algerian question. The constitution that created the Fifth Republic was drafted by this man, who became that republic's first president. Earlier, this man led his country's opposition to the Vichy regime. For 10 points, name this man who, during World War II, led the Free French Forces against Nazi rule.
ANSWER: Charles André Joseph Marie **de Gaulle**

023-09-7-06101

2. In one short story by this author, ten high schoolers are blindfolded and sent into a boxing match won by Tatlock. That story became the first chapter of this man's only novel and is entitled "Battle Royal." Herbert Bledsoe is the president of the college, and a back-to-Africa supporter named Ras the Destroyer criticizes the Brotherhood, in that same novel by this author, who created a narrator living illegally in an all-white apartment building near Harlem. For 10 points, name this author of *Invisible Man*.
ANSWER: Ralph Waldo **Ellison**

027-09-7-06102

3. One application of this field is the creation of expert systems. The "strong" form of this was attacked by Searle in the Chinese Room Argument. Techniques used to create it include neural networks. Applications of it include natural language processing and computer vision. The ultimate benchmark in this field is the Turing test, in which a person attempts, by conversation, to tell a person apart from a computer. For 10 points, identify this area of research in computer science, which attempts to create software and robots that emulate human mental function.
ANSWER: **artificial intelligence** [or **AI**]

001-09-7-06103

4. The sixth ruler of this empire reinstituted the jizya (JEEZ-ya) tax and was named Aurangzeb (AH-rung-zeb). Another ruler of this empire lost most of its lands to Sher Shah Suri and was named Humayun (HOO-mah-yuhn). A mausoleum was built after the death of Mumtaz, the wife of this empire's ruler, Shah Jahan. This empire was founded by Babur and reached its greatest height under the rule of Akbar. For 10 points, name this Muslim empire that ruled over India.
ANSWER: **Mughal** Empire

023-09-7-06104

5. In Hindu myth, the fish Matsya (MAHT-sha) protected Manu from one of these events. In Norse myth, Bergelmir (BUR-gul-meer) and his wife founded Jotunheim (YO-tun-hime) after surviving one of these. In Babylonian myth, the gods decided to create one of these to punish humanity for being too loud, but Ea warned Utnapishtim (OOT-nuh-PISH-tim) about it. Archaeologists suggest that all of these myths may have been based on a real event that occurred around 5500 BCE. For 10 points, identify this kind of catastrophe, that was also survived by Noah.
ANSWER: great **flood**s [or great **deluge**s]

003-09-7-06105

6. One problem that occurs in this organ involves the blocking of its neck in Hartmann's pouch. Along with affecting the pancreas, the secretion of cholecystokinin (KOHL-uh-SIS-toh-KEE-nin) causes this organ to release its contents into the small intestine. This pear-shaped organ is located in a fossa, or a small depression, that places this organ directly beneath another with which it shares a common duct. For 10 points, name this organ that is found directly underneath the liver, and is responsible for the storage of bile.
ANSWER: **gallbladder**

7. In 1827, this composer wrote "The Hurdy Gurdy Man" as part of his song cycle of Wilhelm (VIL-helm) Mueller poems entitled *Winterreise* (vin-ter-ICE-uh). His song "Die Forelle" (for-ELL-uh) inspired another of his works that is scored for piano, violin, viola, cello, and double-bass. He also composed a symphony that quotes from his *Rosamunde* and contains only two complete movements. For 10 points, name this Austrian master of the lieder (LEE-der), who composed the *Trout Quintet* and his eighth symphony, the *Unfinished*.
ANSWER: Franz Peter **Schubert**

8. Before being executed, this man stated, "I did not wrong, but right." J. E. B. Stuart unsuccessfully attempted, under a flag of truce, to get this man to surrender. Two of this insurgent's twenty children were killed during his most famous operation, which was put down by United States Army Colonel Robert E Lee. Earlier, this man executed five members of the Law and Order Party at Pottawatomie Creek. For 10 points, name this radical abolitionist who tried to spark a slave revolt by attacking the armory at Harpers Ferry, Virginia.
ANSWER: John **Brown**

9. This rock is similar in composition to pegmatite and aplite, and it can be classified as I or S type. This rock is a common component of batholiths. It has relatively high sodium and potassium levels compared to magnesium and calcium. A finer-grained form is rhyolite. It is rich in alkali feldspars and quartz. It is less dense than basalt, which causes oceanic plates to subduct below tectonic plates made of this type of rock. For 10 points, name this light-colored felsic igneous rock which makes up a major portion of the continental crust.
ANSWER: **granite**

10. This man made a thirty-minute televised speech called "A Time for Choosing" in support of Barry Goldwater. This man was criticized for testing a live radio microphone with the joking statement "I've just signed legislation outlawing Russia forever. The bombing begins in five minutes." He fired thousands of striking air traffic controllers early in his Presidency, and he was shot by John Hinckley. For 10 points, name this politician, who defeated Jimmy Carter to win the presidency in 1980.
ANSWER: Ronald Wilson **Reagan**

11. In one song this artist asks "you don't know what it is, do you, Mister Jones?" Another song by this singer includes the character Mack the Finger and sees God tell Abraham to sacrifice Isaac in the title place. This singer of "Ballad of the Thin Man" advised "you better start swimmin' or you'll sink like a stone" in another song. This singer of "Highway 61 Revisited" and "The Times They are a-Changing" asked "how many times must the cannon balls fly?" in "Blowin' in the Wind." For 10 points, name this folk singer of "Like a Rolling Stone."
ANSWER: Bob **Dylan** [or Robert Allen **Zimmerman**]

12. This playwright wrote about a woman who forges her father's signature to get money from Krogstad. In one of this man's plays, waste pollutes baths that employ Dr. Thomas Stockmann. This man wrote a play where Judge Brack discovers the owner of a pistol that Eilert Lovborg used to kill himself. George Tessman;s wife shoots herself in a play by this author of *An Enemy of the People*. Torvald Helmer, a bank manager, is left by his wife Nora in another play by, for 10 points, what author of *Hedda Gabler* and *A Doll's House*?
ANSWER: Henrik Johan **Ibsen**

13. This goddess punished the stingy Alcinoe (al-SEE-know), who ultimately leapt into the sea. She caused the blindness of Tiresias (tye-REE-see-us), who had watched this goddess bathe. This goddess won a contest when her olive tree was deemed more useful than Poseidon's salty well. This daughter of Metis turned Arachne into a spider after losing a weaving contest. She was born when Hephaestus split Zeus's head open. For 10 points, name this Greek goddess of wisdom and war.
ANSWER: **Athena** [or **Minerva**; or **Pallas**]

14. Both James Dewar and Albert Ladenburg proposed incorrect structures of this compound. Fusing two molecules of these compounds together forms the primary ingredient in mothballs. Attaching a methyl group to this compound forms a product that is the second "t" in TNT. Friedrich Kekule (KEK-yool) determined the structure of this compound, which is a strong carcinogen and was replaced by tetraethyl (TET-ruh-ETH-ul) lead as an additive in gasoline. For 10 points, name this compound that is a six member ring with alternating double and single bonds, and has formula C_6H_6.
ANSWER: **benzene** [accept **C6H6** before it is read]

15. Though it is not the location of Vienna, this country was that home to the composer of "The Viennese Musical Clock," which is a movement in the *Hary Janos* (HAR-ee YAH-nos) Suite. One composer from here coined the term "symphonic poem" and wrote the *Dante Symphony*. Another composer from here composed *Music for Strings, Percussion, and Celesta* and *The Miraculous Mandarin*. "The Rakoczy (ruh-COX-ee) March" is quoted in one of the nineteen rhapsodies named for this country. For 10 points, name this home nation of Zoltan Kodaly (ko-DIE), Bela Bartok, and Franz Liszt.
ANSWER: **Hungary** [or **Magyar**orszag]

1A. This character unleashes his poison gas on a talk show audience after leaving Arkham Asylum in *The Dark Knight Returns*. Name this psychopathic clown from DC Comics.
ANSWER: The **Joker**

1B. The title track of his album *Sleep Through the Static* states "we went beyond where we should have gone." Identify this singer who also wrote "If I Had Eyes" and "Same Girl" on that album.
ANSWER: Jack **Johnson**

2A. These lepton particles have a charge of negative one. To move between energy levels in an atom, they give off or take in a photon. Identify these fermions.
ANSWER: **electron**s

2B. This inventor created a tinfoil phonograph when studying telegraph transmitters, and he also created the first motion picture. Name this inventor of the first practical incandescent lightbulb.
ANSWER: Thomas Alva **Edison**

3A. This element is found with calcium and silicate in asbestos, and when combined with calcium carbonate it can be found as dolomite. Name this element, which is also found at the center of the porphyrin (POOR-fuh-rin) ring in chlorophyll.
ANSWER: **magnesium** [or **Mg**]

3B. This member of the Vienna Secession painted an expensive portrait of Adele Bloch-Bauer (uh-DEL-uh BLOCK bow-er). Name this painter who used gold in his paintings of Judith and Holofernes (hall-AH-fer-nayz), and painted *The Kiss*.
ANSWER: Gustav **Klimt**

4A. This is a 10-second calculation question. Find three-fifths raised to the third power.
ANSWER: **27/125**

4B. This is a 10-second calculation question. Find the slope of the line with the equation $9x + 6y = -2$.
ANSWER: **-3/2**

5A. In French, this word means "I," as in "I am hungry." What is this word that, followed by the word "suis" (swee), means "I am?"
ANSWER: **je** (zhuh)

5B. Pepsin is an enzyme used in the gastric juices found in this organ. Identify this organ of the digestive tract, that has sphincters at the esophagus and the pylorus.
ANSWER: **stomach**

6A. This is a 20-second calculation question. Multiply 0.9 by 6.41.
ANSWER: **5.769**

6B. This is a 20-second calculation question. If y varies inversely with x, and y is 15 when x is 16, what is y when x is 12?
ANSWER: **20**

7A. What woman marries the Norman doctor Charles before having affairs with Rodolphe Boulanger and Leon Dupuis in a French novel?
ANSWER: Madame Emma **Bovary**

7B. Edmund Spenser names one form of this kind of poem. Identify this poetic form, which was used by Shakespeare for a poem that begins, "Shall I compare thee to a summer's day?"
ANSWER: **sonnet**

8A. Lolo National Forest can be found in this state, which is home to the city of Pocatello. Name this home state of Craters of the Moon National Monument and Boise.
ANSWER: **Idaho**

8B. This man contested a runoff election against Abdullah Abdullah in 2009 before Abdullah withdrew in protest. Name this president, who replaced Mullah Omar in 2001.
ANSWER: Hamid **Karzai**

9A. This is a 30-second calculation question. Convert the point (-6, 6 times the square root of 3) to polar form.
ANSWER: **(12, 120 degrees)** [or **(12, 2 pi/3)**]

9B. This is a 30-second calculation question. A population of four individuals have heights of 68, 62, 69, and 61 inches. Find the variance of this population.
ANSWER: **12.5**

10A. What technique involves using the same consonant sound repeatedly to begin all the stressed syllables in a line of poetry?
ANSWER: **alliteration**

10B. What linguist created the idea of a "Language Acquisition Device" as part of his theory of generative grammar?
ANSWER: Avram Noam **Chomsky**

1. In this country, a conspiracy to assassinate King Joseph I was crushed by the Marquis de Pombal. One dictator of this country was an economist who established the Estado Novo. This country, which was ruled by Antonio Salazar, was controlled by the Braganza Dynasty until the twentieth century. It was called Lusitania by the Romans and was given the land east of the line of demarcation in the Treaty of Tordesillas (tor-deh-SEE-yas). For 10 points, name this Iberian country which suffered a 1755 earthquake in its capital of Lisbon.
ANSWER: **Portugal**

015-09-7-06117

2. The enzyme adenylate cyclase (aa-DEN-uh-late SIK-laze) produces a "cyclic" secondary messenger from this molecule. This molecule is produced by an enzyme with a characteristic "gun barrel" structure, in which an axle-like structure turns and adds a phosphate group to another molecule. Glycolysis (gli-CAHL-uh-sis) results in the net creation of two of these molecules, which are also produced in the oxidative phosphorylation (FOS-for-uh-LAY-shun) step of the electron transport chain. For 10 points, name this molecule referred to as the "energy currency of the cell."
ANSWER: **ATP** [or **adenosine** 5-prime **triphosphate**]

026-09-7-06118

3. The third section of this poem features the Smyrna merchant Mr. Eugenides (yoo-JEN-id-eez). Other characters in this poem include Tiresias, who is described as having "wrinkled dugs," and Madame Sosostris. Its final section, "What the Thunder Said," ends with the repetition of the Sanskrit word "shantih." It also contains sections titled "The Burial of the Dead" and "A Game of Chess." For 10 points, name this poem which begins by characterizing April as "the cruellest month" and was written by T. S. Eliot.
ANSWER: "The **Waste Land**"

024-09-7-06119

4. In this war, operation Cedar Falls targeted the Iron Triangle and Operation Pegasus led to the battle of Khe Sanh (KAY sahn). During this war, Thich Quang Duc (thit kwon dee-OOK) immolated himself in protest of president Ngo Din Diem (NO din dee-EM). A surprise attack on the U.S. embassy occurred during this war's Tet Offensive. Henry Kissinger negotiated its end, which led to Saigon's renaming as Ho Chi Minh City. For 10 points, name this war that the United States fought in Southeast Asia in the 1960s and 70s.
ANSWER: **Vietnam** War

027-09-7-06120

5. One of this author's poems notes that the laurel "withers quicker than the rose." This author urged "Give crowns and pounds and guineas, but not your heart away" in his poem "When I was One and Twenty." This poet of "To an Athlete Dying Young" also wrote of a man who "eats his victuals fast enough." That poem by this author also states that "malt does more than Milton can to justify God's ways to man." For 10 points, name this poet of "Terence, this is stupid stuff," which is found in his collection *A Shropshire Lad*.
ANSWER: Alfred Edward **Housman**

026-09-7-06121

6. Arcangelo (ar-CAN-jel-oh) Corelli wrote this in kind of composition's "grosso" variant. Johannes Brahms's opus 102 is a "double" one for cello and violin. They are usually written in three movements that are fast, slow, and fast, and performers often improvise a cadenza in them. Mstislav (MIS-ti-slahv) Rostropovich was the dedicatee of two of these kinds of compositions by Shostakovich with a cello solo part. They are often written for a soloist to be accompanied by an orchestra. For 10 points, name these works, which include "Brandenburg" ones by Bach.
ANSWER: **concerto**s

7. One part of this work focuses on Prince Qamar (KAH-mar), who uses magical keys to fly a mechanical ebony horse. In the frame story of this work, one character collaborates with her sister Dunyazad to prolong her marriage to King Shahryar. Every evening in this work, that character breaks off her stories of such characters as Ali Baba and Aladdin to prevent her execution. For 10 points, name this collection of stories that are told by Scheherazade (shuh-HERR-uh-zod).
ANSWER: *The **Arabian Nights**' Entertainments* [or *The **Thousand and One** Arabian **Nights***; or ***Alf layla wa-layla***; accept anything reasonable that mentions both **nights** and either the number **1001** or some form of the word **Arabian** or both]

8. A military coup in this country installed a ruler who became one of the leading figures in Operation Condor. This country's independence movement was helped by the Battle of Chacabuco. This country's first supreme director fought in that battle and was named Bernardo O'Higgins. For 10 points, name this South American country that, in 1973, switched from the socialist rule of Salvador Allende (EYE-end-ay) to the dictatorship of Augusto Pinochet (PEE-noh-chayt).
ANSWER: Republic of **Chile** [or República de **Chile**]

9. In this work, Mr. Graves supplies a three legged stool. A popular belief amongst the townspeople in this work is that "corn be heavy soon." One character is seen at the beginning of this story guarding a pile. An important object in this work is supplied by the manager of the coal business, Mr. Summers. After names are drawn from a black box, Tessie Hutchinson screams, "It isn't fair," as she realizes her impending doom. For 10 points, name this short story by Shirley Jackson about the annual stoning in a small town.
ANSWER: "The **Lottery**"

10. Eighty percent of this country's population took a surname meaning "master of the blue wolf" after last names were re-legalized here in 1995. Following this country's 1924 proclamation of a Communist state, its capital received a new name meaning "Red Hero." The desolate areas of this country's west and south are dominated by the Altai Mountains and the Gobi Desert. For 10 points, name this Asian country, which is found south of Russia and north of China, and was the home of conquering horsemen in the late Middle Ages.
ANSWER: **Mongolia** [or **Mongol Uls**]

11. It is the result of the BPP formula and Machin-like formulas. Divided by four, it is equal to the Gregory series. When dividing it by two, it is the answer to Buffon's needle problem. It is multiplied times i in Euler's (OY-lurz) identity. Lindermann proved that it is transcendental, implying that the circle cannot be squared. It is equal to 180 degrees divided by one radian. For 10 points, name this number, equal to the ratio of a circle's circumference and its diameter, and symbolized by a Greek letter.
ANSWER: **pi**

12. Canadian Roy Brown is credited with killing this man at Amiens (AH-mee-EN), leading to this person's replacement as commander by Hermann Göring (GERR-ing). The whimsical decorations displayed by the unit he commanded, the Jagdgeschwader (YOG-GED-gesh-vah-dare), or Flying Group 1, earned his unit the nickname of "Flying Circus." This World war I ace had eighty kills and took his nickname from the color of his triplane. For 10 points, give this more common name for feared German pilot Manfred von Richthofen (RIK-toe-ven).
ANSWER: the **Red Baron** [or Der **Rote Freiherr**; or Der **Rote Kampfflieger**; accept Manfred von **Richthoften** before "more common name" is read; prompt on Manfred von **Richthoften** after "more common name" is read]

13. This man painted his childhood friend in a rowing competition in the Schuylkill (SKOO-kull) River in his work *Max Schmitt in a Single Scull*. He depicted nude bathers in *The Swimming Hole*. In one of his paintings, a woman shields her eyes below a scribe who sits on a raised desk taking operative notes. In that work by this artist, four assistants hold a retractor while a professor operates on a patient's femur at the Jefferson Medical College. For 10 points, name this Philadelphia artist of *The Gross Clinic*.
ANSWER: Thomas **Eakins**

14. This author wrote a novel in which the pages of a book by Aristotle are poisoned by Jorge (HOR-hay) of Burgos, in a scheme discovered by Adso of Melk and his mentor, William of Baskerville. Another novel by this author has the narrator study a manuscript by Colonel Ardenti which claims that the Knights Templar will take over the world in 1944. That novel by him sees Belbo, a friend of Casaubon, hanged from the titular device in the Musée des Arts et Métiers (myoos-AY days arts ay MAY-tee-ay). For 10 points, name this Italian author of *The Name of the Rose* and *Foucault's Pendulum*.
ANSWER: Umberto **Eco**

15. When graphing the results of this method, multiple transition regions can be seen when a chemical worked with is polyprotic. Those graphs of this method's curves can be used to approximate the equivalence point. Color changing substances such as methyl red and phenolphthalein (FEE-noll-thail-leen) are often used as indicators during this process. For 10 points, name this common chemistry lab experiment that uses a substance with a known pH to find the unknown pH or concentration of a solution, and often makes use of a buret (burr-ET).
ANSWER: acid-base **titration**

1. This man used the metaphor of the "tangled bank" in his most famous theory and later wrote about *The Formation of Vegetable Mould through the Action of Worms*. His ideas were later debated between Wilberforce and Huxley, who was known as this man's "bulldog." This author of *The Descent of Man* noticed variation in the beaks of Galápagos Finches while traveling on the *HMS Beagle*. For 10 points, name this British naturalist who described his theory of natural selection in *On the Origin of Species*
ANSWER: Charles Robert **Darwin**

001-09-7-06132

2. In the presence of a magnetic field, the energy separation between the most and least stable of these orbitals is two times the field magnitude in units of Bohr magnetons. Electrons delocalizing from these orbitals leads to resonance and aromaticity. Elements with this subshell partially filled include halogens, which have five electrons in it. Overlaps between examples of these orbitals, when left unhybridized, lead to pi bonds. For 10 points, give the letter that denotes the three orbitals that make up a namesake subshell that is filled following the 2s (two "s") subshell.
ANSWER: **p**

022-09-7-06133

3. This former resident of Antwerp embroiders gloves for Bellingham. This character plans on leaving her home on Election Day, but she doesn't make it. Earlier, this character's lover was driven to madness by a mysterious doctor who is finally revealed to be Chillingsworth, this character's husband. For 10 points, name this Massachusetts resident who is the lover of Dimmesdale, mother of Pearl, and wearer of the title object in Nathaniel Hawthorne's *The Scarlet Letter*.
ANSWER: **Hester** Prynne [or Hester **Prynne**]

062-09-7-06134

4. This figure is first mentioned in Luke 8:13. According to one tradition, she lived in a cave in France for the last decades of her life. According to some accounts, she is the same as an individual "from Bethany" and the sibling of Martha and Lazarus. Christ's feet were once anointed by this woman, who has seven devils expelled from her body. The Second Vatican Council removed the label of ex-prostitute from this apostle. For 10 points, identify this foremost female follower of Jesus, the first to see him after the resurrection.
ANSWER: **Mary Magdalene** [or **Mary of Magdala**; do not accept or prompt "Mary"]

063-09-7-06135

5. Lewis Mumford wrote a book about these entities "in History." Ernest Burgess included the CBD at the center of his concentric zone model of these. Lincoln Steffens attacked their inherent corruption in a book about "The Shame of" them. Joel Garreau listed Boomers and Greenfields as examples the "Edge" variety of these entities. Early examples of these include Çatalhöyük (chuh-tahl-HOOK), Eridu, and Mohenjo-daro. For 10 points, name these entities which are surrounded by suburbs.
ANSWER: **cities**

015-09-7-06136