1. He claimed that his Three Principles of the People, namely, nationalism, democracy, and socialism, were inspired in part by Abraham Lincoln. Those principles, also called the San-min doctrine, were elucidated in a speech that also proclaimed a military government at Guangzhou and put forth the Five-Yuan Constitution. His successor served as the commandant of his Whampoa Military Academy. Revered in Taiwan as the father of the Republic of China, for 10 points, identify this leader, succeeded by Chiang Kai-shek, the founder of the Kuomintang.
ANSWER: **Sun Yat-sen** [or **Sun Yixian**; or **Sun Wen**; or **Sun Deming**; or **Nakayama** Sho; or **Nagao** Takano]

2. Paolo Uccello painted a fresco of this type of artwork in his portrait of Sir John Hawkwood, while Titian painted Charles V in this type of work. A Verrocchio piece of this type depicts Bartolomeo Colleoni, and a piece of this type stands on Capitoline Hill and depicts Marcus Aurelius. One executed by Falconet in St. Petersburg depicts Peter the Great and is done in bronze. For 10 points, name this type of monument exemplified by Donatello's *Gattamelata*, which depict a man riding a steed.
ANSWER: **equestrian** monuments [accept logical equivalents, like **statues of people on horseback**, etc.; prompt on **statue**s, **monument**s, or **sculpture**s]

3. This ruler faced a conspiracy from a less notable Lepidus, and his father died in Antioch under mysterious circumstances, accusing the governor of Syria, Gnaeus Calpurnius Piso, of poison. He aborted a campaign to Britain but celebrated a triumph for it anyway, and he really liked his sister Drusilla. This son of Germanicus was assassinated by the Praetorian Guard in 41 CE, and was followed by his uncle Claudius. For 10 points, name this Roman emperor whose name means "little boots," best known for being insane.
ANSWER: **Caligula** [or **Gaius** Julius Caesar Germanicus]

4. This author of a sonnet praising Kosciusko inspired the title of Asher Durand's painting "Kindred Spirits" with his sonnet "O Solitude! If I must with thee dwell." His other sonnets include "Bright Star, would I were steadfast as thou art" and "On sitting down to read *King Lear* once again," and he asked "Where are the songs of Spring? Ay, where are they?" in "To Autumn." His longest poem depicts a shepherd who loves Cynthia, and begins "A thing of beauty is a joy forever." For 10 points, name this British poet of *Endymion* and "Ode on a Grecian Urn."
ANSWER: John **Keats**

5. In Hindu tradition, the sixth avatar of Vishnu, Parasurama, used an axe to kill Jamadagni in a dispute over one of these that could feed an army. In Greek mythology, Daedalus built Pasiphae a giant wooden one of these. In Norse mythology, a primordial one named Audhumbla licks the ice of Niflheim and Cadmus founded Thebes where one of these came to rest. For 10 points, name this animal which Zeus transformed Io into and which is sacred in Hindu tradition.
ANSWER: **cow**s

6. This city was a merger between the towns Philadelphia and one founded by a group of Georgians, and it was the namesake of a railroad to West Point, Georgia. James Wilson occupied this city in 1865, and it would later be the site of a march over a drive to register black voters that began in Selma. This city was the site of the Secession Conference of the Civil War, where it was chosen to serve as the Confederate capital. The city where Rosa Parks refused to give up her seat, for 10 points, name this Alabama city where a bus boycott was held.
ANSWER: **Montgomery**

7. The amount of dispersion in these objects is related to the quantity of free electrons between them and earth, providing information about the warm ionized medium. The central object of the Crab nebula is one of these. Thomas Gold was the first to correctly classify these objects, which were dubbed "LGMs" by Hewish and Bell, who thought they were signals from extraterrestrials. The "lighthouse model" describes, for 10 points, these rapidly rotating neutron stars named for their periodically emitted radiation.
ANSWER: **pulsar**s

8. One of these by Paul Hindemith is entitled "Der Main," and one by Ives uses tone clusters in "Thoreau." That work, the "Concord" one, is a successor to works in this genre, like Schumann's *Concerto Without Orchestra*. One in A major by Mozart ends with the "Rondo alla Turca," while Beethoven composed the "Waldstein" one, as well as one that begins with C sharp minor arpeggios originally entitled "Quasi Una Fantasia." For 10 points, name this type of music, which Beethoven wrote thirty-two of and includes his "Moonlight."
ANSWER: piano **sonata**s

9. In one of his poems that takes place "along Paumanok's shore" a boy observes two birds and hears "the low and delicious word death." Another poem mourns "the great star early droop'd in the western sky," and in another poem the narrator "Look'd up in perfect silence at the stars" after leaving a lecture by the title "learn'd astronomer." For 10 points, name this American poet of "Out of the Cradle Endlessly Rocking" and "When Lilacs Last in the Dooryard Bloom'd," who included most of his poetry in the collection *Leaves of Grass.*
ANSWER: Walt **Whitman**

10. This band sang "I'm a pill on your tongue" in "Hong Kong," which appeared with "Rock It" on *D-Sides*. Their songs include "Slow Country" and "19-2000" as well as one that repeats "Push it real, push it," "Kids with Guns." Better known are a song that talks about sunshine in a bag and one that features De La Soul and says "love forever, love is free." For 10 points, name this Damon Albarn-created band known for recording "Clint Eastwood" and "Feel Good Inc." as well as for being animated.
ANSWER: **Gorillaz**

11. Constant utility is an assumption of the Hicksian form of this concept, which is in general less preferred than the Marshallian form if emprical data is available; the two forms are related by the Slutsky equation. The Marshallian version takes into account the income and substitution effects, and the shape of this curve is positive for Veblen and Giffen goods. For 10 points, name this concept that denotes an individual's willingness to buy a certain item given a particular price.
ANSWER: **demand** curve

12. In an essay on the "Intersection of [this concept] and Feminism," Jane Duran notes that it ignores generalities in favor of analysis of particulars and their relations. One founder of this branch of philosophy elucidated its central maxim in the essay "How to Make Our Ideas Clear," while another described it as a reconciliation between empiricism and religion. For 10 points, name this branch of philosophy associated with Charles Sanders Peirce and William James, which focuses on a hypothesis' practical consequences.
ANSWER: **pragmatism**

13. G-A-A-T-T-C is the recognition site for a sticky-end-producing restriction enzyme produced by this organism. Meselson and Stahl demonstrated the semiconservative nature of DNA replication in this organism, and Jacob and Monod used this organism to study the lac operon. Recombinant DNA techniques allow for commercial production of human proteins by this bacterium. For 10 points, name this prokaryotic model organism, naturally found in animals' guts, which causes food poisoning scares with undercooked red meat.
ANSWER: **E**schericia **coli** [accept **E**. **coli**; accept **EcoRI** before "organism"]

14. The subject of this work was also depicted *Drinking a Toast*, and a watercolor study for this work shows the subject seated on a blue chaise lounge with papers in her lap. The subject of this work holds a closed fan in her left hand, while her right rests on a small wooden table. The initial reception at the Paris Salon led the artist to reposition one of the jeweled shoulder straps that hold up her black dress. For 10 points, name this depiction of the pale Virginie Gautreau looking to her left, a work of John Singer Sargent.
ANSWER: Portrait of **Madame X**

15. A problem named after Hadamard asks to find the largest possible value for *this* given an arbitrary set of numbers. Finding eignevalues involves solving the characteristic polynomial generated by this function. It is often found through the technique of expansion by minors, and ratios of these are used to find solutions to a set of linear equations by Cramer's rule. A square matrix is invertible if this quantity is not zero. For 10 points, name this matrix operation, which for a two-by-two matrix *a b c d* equals *a d* minus *b c*.
ANSWER: **determinant**

16. The protagonist of this work pridefully forgets his *chi* and a man who lent him yams. The sequel to this novel sees its protagonist's grandson Obi convicted of fraud after buying Clara an abortion. This work sees newborn twins placed in earthen jars in the Evil Forest, and an accidental gunshot in this work leads to Ikemefuna's death. The protagonist's son Nwoye converts to Christianity, leading to the protagonist's suicide by hanging in Umuofia. For 10 points, name this novel in which Okonkwo hangs himself, by Chinua Achebe.
ANSWER: ***Things Fall Apart***

17. Ernest Augustus I united this former polity with Luneberg, and it incorporated the Bishopric of Osnaburck in 1803. It joined the the Zollverein in 1851 and was annexed by Prussia in the Seven Weeks' War, and in 1692 it became the ninth electorate of the Holy Roman Empire. It was once known as Great Britain's "Achilles Heel," and this state was dissolved after World War II and went on to form eighty percent of the state of Lower Saxony. For 10 points, name this former northwestern German state that produced four Georges and William IV as kings of England.
ANSWER: **Hanover**

18. In this novel, Old Sally is a beggar who steals the only evidence of the title character's parentage and Mr. Sowerberrry is a mortician who employs him as a mourner. The protagonist's stepbrother Monks plots with one character who kills Nancy and accidentally hangs himself. In addition to Bill Sikes, villains in this novel include the wily Artful Dodger and the greasy gang leader Fagin. For 10 points, name this novel by Charles Dickens.
ANSWER: **_Oliver Twist_**

19. Arruda-Boyce, Ogden, and Mooney-Rivlin models are all alternatives to this law, and another alternative assumes that that the work done on a solid is equal to the rate of change of Helmholtz free energy via a relation involving Cauchy stress and the stretch rate tensor. This law gives Young's modulus as the ratio of stress to strain. For 10 points, name this law the governs the motion of springs and is typically written as F equals negative $k x$.
ANSWER: **Hooke**'s Law

20. The protagonist of this novel disguises himself as a clerk of the Thomson and French Company to rescue the financially failing Morrell family, and as Lord Wilmore he is a kindly Englishman. For seven years he is known as Number 34, and during this time he meets Abbe Faria who teaches him languages, the location of a secret treasure, and tunnel digging after his imprisonment in the Château d'If. For 10 points, name this novel in which Edmond Dantes assumes the title persona to enact vengeance upon his enemies, a work of Alexandre Dumas.
ANSWER: The **_Count of Monte Cristo_** [or Le **_Comte de Monte-Cristo_**]

21. The Toiyabe and Desatoya Mountains are located along US route 50 in the center of this state, and in its northwest lies the Smoke Creek Desert. The Reese River and Mary's River are tributaries of the Humboldt River, which originates and ends in this state. The Lehman caves and Wheeler Peak are found in this state's Great Basin National Park, and the Great Basin is also home to the Pyramid Lake. With its western neighbor, it shares Lake Tahoe. For 10 points, identify this state home to cities like Reno and Las Vegas.
ANSWER: **Nevada**

22. A point between two of these is named after Wheland. Edward Thornton and Rudolf Marcus have expanded the original version of a hypothesis about the structure of one of these entities, the Hammond Postulate. In biochemistry they are roughly equivalent to the activated complexes. They occur at the highest point along the reaction coordinate, and the energy required to form them is the activation energy. For 10 points, name this highest-energy intermediate of a reaction.
ANSWER: **transition state** [prompt on "activated complex" before mentioned; prompt on "Hammond Postulate" before mentioned]

1. This author wrote about a slain sportsman in "Lament for the Death of a Bullfighter." For 10 points each:
[10] Name this Spanish playwright of the *Rural Trilogy*, including *Blood Wedding* and *Yerma*.
ANSWER: Federico Garcia **Lorca**
[10] Another *Rural Trilogy* play is about this type of structure, owned by Bernarda Alba. V.S. Naipaul wrote about one "for Mr. Biswas," and Sandra Cisneros wrote about the one "on Mango Street."
ANSWER: a **house** [or The **House of Bernarda Alba**; or **casa**; or La **casa de Bernarda Alba**]
[10] Garcia Lorca also wrote a play about this creature's "evil spell." David Hwang wrote a work called "M. [this creature]," based on a Puccini opera starring Benjamin Franklin Pinkerton.
ANSWER: a **butterfly**

2. Name these eighteenth century British novels for 10 points each.
[10] The title character is accidentally circumcised by a falling window in this comic novel by Laurence Sterne, which includes characters like Dr. Slop and Parson Yorick.
ANSWER: *The Life and Opinions of **Tristram Shandy**, Gentleman*
[10] The title character of this Daniel Defoe novel befriends a native named Friday after being shipwrecked on a Caribbean island.
ANSWER: *The Life and Strange Surprising Adventures of **Robinson Crusoe**, of York, Mariner*
[10] Another Daniel Defoe novel discusses the "fortunes and misfortunes" of this onetime thief, whose five marriages and transport to Virginia end with her religious conversion.
ANSWER: **Moll** **Flanders** [accept either]

3. Name some gods associated with storms, for 10 points each.
[10] This Greek god of the sea thwarts Odysseus's attempts to return home after the Trojan War by sending storms to wreck his ships.
ANSWER: **Poseidon**
[10] Deserts and storms were associated with this Egyptian god of chaos. Out of jealousy, he dismembered his older brother Osiris.
ANSWER: **Set**
[10] This Sumerian god was in charge of storms as well as being the leader of the gods, and he sent a flood that would have wiped out mankind, but Enki saved Utanapishtim.
ANSWER: **Enlil** [or **Ellil**]

4. In his novel *The Centaur,* George Caldwell and his son Peter bond after being trapped in a snowstorm. For 10 points each:
[10] Name this author who wrote four novels about former high school basketball star Harry Angstrom.
ANSWER: John **Updike**
[10] Harry Angstrom went by this nickname in novels titled about him *Rich,* and *at Rest.*
ANSWER: **Rabbit**
[10] In this Updike short story, Sammy quits his job at the title supermarket in a chivalrous gesture that goes unnoticed by three girls.
ANSWER: "**A & P**"

5. This religion is devoted to the worship of spirits known as kami. For 10 points each:
[10] Name this indigenous religion of Japan.
ANSWER: **Shinto**
[10] This book, which translates as "Record of Ancient Matters", details the Shinto creation story and is the most-well known of the Shinto scriptures.
ANSWER: **Kojiki**
[10] These traditional gates are often found at the entrance to a Shinto shrine.
ANSWER: **torii**

6. He was influenced by George Wishart, and wrote *History of the Reformation in Scotland*. For 10 points each:
[10] Name this man, who led the Reformation in Scotland.
ANSWER: John **Knox**
[10] John Knox wrote the tract *First Blast of the Trumpet Against the Monstrous Regiment of Women*, a work that prompted this ruler to bar Knox from England.
ANSWER: **Elizabeth I**
[10] Knox fled to Europe following the ascension of this ruler, the successor to Edward VI who attempted to restore the Catholic Church in England.
ANSWER: **Mary I** [or **Mary Tudor**; or **Bloody Mary**]

7. Amneris fears her love for the soldier Radames is unrequited. For 10 points each:
[10] Name this Guiseppe Verdi opera about an Ethiopian princess.
ANSWER: *Aida*
[10] Aida is captured during a war between Ethiopia and this neighboring country led by the father of Amneris.
ANSWER: **Egypt**
[10] Aida chooses to join Radames after he is sentenced to die by this method.
ANSWER: being **buried alive** [accept equivalents]

8. Larger-than-life figures dominate his controversial *Last Judgment*, and his other works include the tomb of Pope Julius II. For 10 points each:
[10] Name this painter of the Sistine Chapel ceiling.
ANSWER: **Michelangelo** Buonarroti [either or both names]
[10] Michelangelo created perhaps the most famous example of this type of sculpture, which shows Mary holding the dead body of Jesus.
ANSWER: **Pietà**
[10] This Michelangelo-designed building housed the reading rooms of the Medici. It included a curved staircase that was one of the earliest examples of Mannerist architecture.
ANSWER: the **Laurentian Library**

9. This puppet state's slogan was "Work, Family, Fatherland." For 10 points each:
[10] Admiral Francois Darlan was a leading figure in this state, which was set up after the French surrender to Germany during World War II.
ANSWER: **Vichy** France
[10] This man served as chief of state for the Vichy government, and was sentenced to die in 1945, but his sentence was commuted to solitary confinement for life in the Ile d'Ye.
ANSWER: Philippe **Petain**
[10] Before being discredited for heading the Vichy government, Petain was a military hero who was able to halt the German advance in this 1916 WWI battle in the namesake fortress town.
ANSWER: **Verdun**

10. She renewed Kalakaua's signing of the Reciprocity treaty, giving control of Pearl Harbor to the United States of America. For 10 points each:
[10] Name this queen of Hawai'i, who was overthrown in a coup by Sanford Dole.
ANSWER: Queen **Liliuokalani** [or Lydia **Kamakaeha**; or Lydia **Liliuokalani** Paki; or Liliu **Kamakaeha**]
[10] Liliuokalani appealed to this President, who ordered an investigation into the matter by James Blount. He is better known for having his two terms interrupted by Benjamin Harrison.
ANSWER: Grover **Cleveland**
[10] This man authored the Bayonet Constitution, becoming interior minister to Kalakaua and giving planters power. He helped lead a provisional government after Liliuokalani's deposition.
ANSWER: Lorrin Andrews **Thurston**

11. The "core" ones are known as H2A, H2B, H3, and H4. For 10 points each:
[10] Name these proteins that are at the center of DNA strands.
ANSWER: **histone**s
[10] Together with DNA, histones make up this condensed substance found in the nucleus during interphase.
ANSWER: **chromatin**
[10] Histones are not found in this domain of organisms, prokaryotes exemplified by *E. coli*.
ANSWER: **bacteria** [do not accept **archaea** or **archaebacteria**]

12. This playwright defended his choice of subjects in his essay "Tragedy and the Common Man." For 10 points each:
[10] Name this author who fictionalized himself as Quentin in his autobiographical play *After the Fall*.
ANSWER: Arthur **Miller**
[10] Miller contrasts Biff and Happy's belief in the American Dream in this play, which ends with the suicide of Willy Loman.
ANSWER: *Death of a Salesman*
[10] This friend of Willy Loman helps him out financially and offers him a job, which Willy rejects. His son Bernard becomes a successful lawyer.
ANSWER: **Charley**

13. Alphonso Jackson resigned from this post in April 2008 after allegations of misconduct. For 10 points each:
[10] Identify this cabinet position currently held by Steven Preston. It was created during President Lyndon Johnson's tenure, and oversees Fannie Mae and Freddie Mac.
ANSWER: **Housing** and **Urban Development** [or **HUD**]
[10] President Bush appointed this former CIA officer and President of Texas A&M University as Secretary of Defense in 2006.
ANSWER: Robert Michael **Gates**
[10] In October, this man claimed the transition to a new President may lead to new terrorist attacks; however, this Homeland Secretary did not have any specific information about those attacks.
ANSWER: Michael **Chertoff**

14. Sigismund I arranged to have their holdings transferred to private ownership. For 10 points each:
[10] Name this Germanic crusading order, which forcibly converted the pagan inhabitants of the Baltic and Eastern Europe.
ANSWER: **Teutonic** Knights [or House of the Hospitalers of Saint Mary of the **Teutons** in Jerusalem]
[10] The Teutonic Knights effectively had their power crushed at this battle, which saw their defeat by a coalition led by Wladyslaw II and Vytautus the Great.
ANSWER: First Battle of **Tannenberg** [or Battle of **Grunwald**]
[10] Albert I converted holdings of the Knights into the hereditary Duchy of Prussia, bringing to prominence this house that would rule Prussia and later the united Germany.
ANSWER: **Hohenzollern**

15. This creator of the *Neue Zeitschrift fur Musik* often wrote under the pseudonyms Florestan and Eusebius, who he composed works about in the *Davisbundler*. For 10 points each:
[10] Name this composer of the *Abegg Variations* and the collection of piano pieces *Carnaval*, whose wife Clara often performed his music publicly.
ANSWER: Robert **Schumann**
[10] Schumann's first symphony shares this nickname with a choral symphony by Benjamin Britten that sets poems like "Shine out, fair sun" and "Out on the Lawn I Lie in Bed."
ANSWER: **Spring** Symphony
[10] Schumann wrote an overture that includes a "Rasch-Langsam" section named after this Byron work that also inspired a symphony by Tchaikovsky.
ANSWER: *Manfred*

16. This 1899 book postulated that the opulent display of wealth was a Darwinian survival of a "barbarian" instinct. For 10 points each:
[10] Name this study, which introduced such phrases as "conspicuous consumption" in its indictment of the title group.
ANSWER: The **_Theory of the Leisure Class_**
[10] This author of *The Engineers and the Price System* and *The Theory of Business Enterprise* wrote *The Theory of the Leisure Class*.
ANSWER: Thorstein Bunde **Veblen**
[10] Veblen used this phrase to describe the attempt to match the outward signs of wealth displayed by one's peers.
ANSWER: "**pecuniary emulation**"

17. Nobody knows for sure what the large oxyphil cells in these structures are supposed to do. For 10 points each:
[10] Name these endocrine glands in the neck whose namesake hormone increases the concentration of calcium ions in the blood.
ANSWER: **parathyroid** glands
[10] Parathyroid hormone, or PTH, opposes the action of this other hormone produced by the thyroid gland. This hormone causes bones, intestines, and kidney tubules to reabsorb calcium.
ANSWER: **calcitonin**
[10] Both the actions of the thyroid and parathyroid glands are controlled by this master gland, a protrusion at the bottom of the hypothalamus. Its posterior portion produces oxytocin and ADH.
ANSWER: **pituitary** gland

18. Although the following bays are located in vastly different parts of the world, they all are loosely related. For 10 points each:
[10] The Loire, Adour, Dordogne, and Garonne rivers flow into this bay which is bounded on the east by the west coast of Franace and on the south by the north coast of Spain.
ANSWER: Bay of **Biscay**
[10] Lying between Greenland and its namesake island, this bay connects to the Atlantic Ocean to the south through the Davis Strait.
ANSWER: **Baffin** Bay
[10] Madras and Calcutta are among the ports located on this bay, which is bordered by Sri Lanka and India to its west and Myanmar and Thailand on the east.
ANSWER: Bay of **Bengal**

19. For 10 points each, identify these twentieth century Russian writers.
[10] This author of *Pale Fire* wrote about Humbert Humbert's obsession with a twelve year old in *Lolita.*
ANSWER: Vladimir Vladimirovich **Nabokov**
[10] This author of the poetry collection *My Sister Life* is best known for his novel set in revolution era Russia, *Doctor Zhivago*.
ANSWER: Boris Leonidovich **Pasternak**
[10] He wrote about the Turbin family in *The White Guard* and about the devil's visit to Soviet Moscow in *The Master and Margarita*.
ANSWER: Mikhail Afanasievich **Bulgakov**

20. It holds because the velocity of planet increases as it approaches closer to the sun. For 10 points each:
[10] Name this law which states that the line connecting a sun and a planet sweeps out equal areas in equal time.
ANSWER: **Kepler**'s **second** law [prompt on partial answers]
[10] Kepler's second law is a consequence of the conservation of this quantity which is equal to the mass times angular velocity.
ANSWER: **angular momentum** [do not prompt on "**momentum**"]
[10] This quantity is equal to the time derivative of the angular momentum. For a rotating body it is equal to the product of moment of inertia and angular acceleration.
ANSWER: **torque** [prompt on "**T**" or "**tau**"]

21. Women can do science, too! For 10 points each:
[10] She and her colleague Maurice Wilkins used x-ray crystallography to determine that DNA had a double helix structure.
ANSWER: Rosalind [Elsie] **Franklin**
[10] This woman is credited with being the first astronomer to observe a comet that could not be seen with the naked eye. She was also the first female member of a bunch of scientific societies.
ANSWER: Maria **Mitchell**
[10] Inge Lehmann, a Danish seismologist, discovered an unusual type of P-wave that is usually credited as the first evidence of the existence of this layer of the earth.
ANSWER: **inner core** [do not accept or prompt on "core"]

22. The lunar crater named for him is northwest of Blanchard and east of De Roy. For 10 points each:
[10] Name this Swedish chemist who suggested that acids produce hydrogen ions in solutions and whose namesake equation gives a certain quantity as an exponent of activation energy.
ANSWER: Svante August **Arrhenius**
[10] That quantity is this constant, which along with the orders of the reaction mechanisms determines the speed at which a product forms. Catalysts work to increase this constant.
ANSWER: **reaction rate** constant [prompt on **k**]
[10] The Arrhenius equation is notably reinterpreted in this theory posited by Trautz and Lewis, which suggests that the namesake events connect in a certain way to make reactions happen.
ANSWER: **collision** theory