**Tossups**

1. During the rule of this government, the New Life movement attempted to counter both external and internal threats with a combination of Christianity and traditional beliefs. The founder of this government promulgated the Three Principles of the People: democracy, nationalism, and livelihood of the people. This government reunified its country by defeating a rival government in the Northern Expedition. This government experienced over a decade of instability in the “Warlord Era,” and was established after the 1911 Xinhai Revolution, which overthrew Manchu rule. For 10 points, name this government that overthrew the Qing Dynasty and was replaced by the communist People’s Republic.

ANSWER: **Republic** of China [or **Republic**an China; or *Zhonghua* ***Minguo***; accept **R**epublic **o**f **C**hina; prompt on China]

1. A character created by this author opens himself “to the gentle indifference of the world”, and hopes that a large crowd will attend his execution. This author was fictionalized as the editor Henri Perron in *The Mandarins.* In a novel by this author, an unnamed character follows a judge-penitent home from a bar, and is shown a stolen panel of the *Ghent Altarpiece.* The narrator of another novel by this author visits Masson’s bungalow, where the intense heat on the beach compels him to brutally shoot an Arab. That novel by this author opens with the sentence: “Maman died today.” For 10 points, name this French author of *The Fall,* who wrote about Meursault in *The Stranger.*

ANSWER: Albert **Camus**

1. This artist held his namesake “Seven Americans” show in his “Intimate Gallery.” One of this artist’s collections includes over 200 depictions of clouds. This artist collaborated with Clarence H. White on a series of works featuring nude and clothed people. One of this artist’s photographs features a carriage being pulled down a snowy street. Along with Edward Steichen, this artist opened the gallery "291" in New York. This publisher of *Camera Work* created a photo featuring a gangplank dividing the decks of a ship. For ten points, identify this photographer of *The Steerage* as well as many photos of his wife Georgia O’Keeffe.

ANSWER: Alfred **Steiglitz**

1. Both of Muhammad’s wives named Zaynab were noted for their actions of this type, which earned Zaynab bint Khuzayma the motherly nickname of *Umm al-Masakin*. The eight groups most affected by this action include al-Gharimin, al-Fuqara, and ibnu al-Sabil, the last of which is usually translated as “wayfarers.” The refusal to perform this action after Muhammad was succeeded by the first caliph, Abu Bakr, sparked the Ridda Wars. A voluntary action of this type called *sadaqah* may be performed after a mandatory form of it that is one of the Five Pillars of Islam. The *zakat* tax is a mandatory form of, for 10 points, what Islamic practice that benefits the poor?

ANSWER: **alms**-giving [or **charity**; accept **giving to the poor** or similar answers mentioning donations to the indigent; accept ***zakat*** before “*zakat*”; accept ***sadaqah*** before “*sadaqah*”; prompt on “paying taxes” or similar answers]

1. The nonstandard amino acid hypusine is found in a protein that initiates this process. It begins with the identification of a Kozak sequence in eukaryotes or a Shine-Dalgarno sequence in prokaryotes. Thermostable and thermo unstable elongation factors hydrolyze GTP during this process. Antibiotics like tetracycline or erythromycin inhibit this process. Inosine can be used for wobble base-pairing during it. In this process the ribosome translocates between E, P and A sites as the ribozyme peptidyl transferase catalyzes peptide bond formation. For 10 points, name this process in which a protein is assembled from an mRNA transcript.

ANSWER: **translation**

1. This author wrote that philosophical inquiry serves to “sooth the imagination” in his *History of Astronomy*. This writer argued that moral norms come from imagining whether an “impartial spectator” would sympathize with one’s circumstances. This man is the subject of the third chapter of Robert Heilbroner’s popular textbook *The Worldly Philosophers*. This man wrote *The Theory of Moral Sentiments*, and his best known book describes a pin factory that benefits from the division of labor, and claims that society benefits from selfish interests thanks to an “invisible hand.” For 10 points, name this Scottish philosopher who wrote *The Wealth of Nations*.

ANSWER: Adam **Smith**

1. One of these objects is in the possession of King Janaka until a hero picks it up and accidentally breaks it. Vurna gives one of these objects named Gandiva to a warrior who is attempting to help Agni burn down a forest. That character later uses one of these objects to make a deathbed for his mentor Bhisma. One of the Pandavas uses one of these objects while staring at a pool of water to win Draupadi’s hand in marriage. Kamadeva is generally depicted holding one of these objects made of bees and sugarcane, and the warrior who rides in Krishna’s chariot during the war in the Mahabharata specializes on this weapon. For 10 points, what is the primary weapon of Arjuna?

ANSWER: **bow**s [or **bows and arrow**s; prompt on just “arrows”]

1. This artist anticipated cubism with his painting of a plaster cast of Cupid on a tilted floor. One of the very few paintings that this artist signed has the viewer looking down beyond a path and towards the titular House of the Hanged-Man; that painting was inspired by this artist’s friend Camille Pissarro. A man with a cane gazes up at the title figure in this artist's response to a Manet work, *A Modern Olympia*. Trees lean together to form a triangle in this artist’s *Large Bathers*. This artist of many still lifes featuring fruit frequently used a landmark near Aix-en-Provence as an artistic subject. For ten points, identify this French Post-Impressionist who painted many depictions of Mont-Sainte Victoire.

ANSWER: Paul **Cezanne**

1. In the Frenet-Serret formulas, the binormal vector can be obtained by performing this operation on T and N. The seventh dimension is the only other dimension than the third in which this operation returns a meaningful result. The Lorentz force is equal to the charge times this function of the velocity and magnetic field. The magnitude of this operation applied to “a” and “b” is equal to the magnitude of “a” times that of “b” times the sine of the angle between them. For 10 points, name this operation which, when performed on two vectors gives a third vector which is perpendicular to both.

ANSWER: **cross product**

1. Fred Shuttlesworth, a co-founder of the SCLC, was targeted by a bombing in this state after his role in a campaign against a law eventually struck down by *Browder v. Gayle*. A protest march in this state commemorating Jimmie Lee Jackson was attacked on the Edmund Pettus Bridge. Four black girls were killed after the 16th Street Baptist Church was bombed by white supremacists in this state’s most populous city. The infamous “Stand in the Schoolhouse Door” was made in order to stop the integration of this state’s flagship university by its segregationist governor George Wallace. For 10 points, name this state, which was the site of a landmark bus protest in its capital city of Montgomery.

ANSWER: **Alabama** [accept University of **Alabama**]

1. The penultimate movement of this piece is a scherzo in 6/4 time that begins with four trumpets and three trombones playing four *fortissimo* dotted whole notes. Its final movement includes parts for two harps and two SSA choruses, and is written in 5/4 time. This piece ends with a fadeout produced by a women’s chorus in an adjoining room. It begins with low strings using the wooden part of their bow to tap out a march rhythm in 5/4 time. The melody of “I Vow to Thee, My Country” is taken from this piece, whose seven movements have subtitles such as “The Bringer of War.” For 10 points, name this suite by Gustav Holst which depicts bodies such as Mars and Jupiter.

ANSWER: *The* ***Planets***

1. A philosopher of this tradition argued that it is difficult to separate the notions of touching and being touched, opposing traditional dualism for what he called chiasm. The formulator of this philosophy later expanded it by situating its focus in the contexts of the life-world. According to this philosophy, all experience is characterized by intentionality and can be divided into real and ideal content, *noesis* and *noema*. The founder of this philosophy advocated “bracketing” the real content of experience through *epoché*. For 10 points, name this field of philosophy developed by Edmund Husserl that focuses on the study of consciousness and individual experience.

ANSWER: **phenomenology**

1. One of this man’s conquests was to subjugate the nomadic Avars of the Pannonian plains. This ruler created the Spanish March as a buffer area protecting against the Moors to his empire’s south. As part of his war against Widukind, this ruler beheaded nearly 5,000 Saxons in the Massacre of Verden. After destroying Pamplona, this man’s army was ambushed by Basque forces at the Battle of Roncevaux Pass. A revival of culture occurred under the scholar Alcuin of York at this ruler’s capital of Aachen. On Christmas Day, 800, this eldest son of Pepin the Short was praying in Rome when Pope Leo III suddenly placed a crown on his head. For 10 points, name this “great” Frankish king.

ANSWER: **Charlemagne** [or **Carolus Magnus**; or **Charles** the **Great**; or **Charles I** of **France**; prompt on Charles]

1. A retired butcher created by this author constantly speaks ill of his deceased wife Jessie, and abuses his taxi driver brother Sam. This playwright’s works were described by Irving Wardle as “comedies of menace.” One play by this author treats Emma and Jerry’s affair in reverse chronology, while in another, Ruth refuses to return to the United States with her husband Teddy. Argument over the semantics of the phrase “put on the kettle” versus “light the kettle” occurs in another play this author, which ends with the implication that Ben is to shoot his fellow hitman Gus. For 10 points, name this British author of *Betrayal,* *The Homecoming* and *The Dumb Waiter.*

ANSWER: Harold **Pinter**

1. Particles that interact similarly with the strong force but have different charges are said to have different values of the “iso-” form of this quantity. A set of three complex, unitary matrices used to calculate it are named for Wolfgang Pauli. Ortho and parahydrogen are isomers that differ in this quantity. Bosons have integer values for this quantity while fermions have fractional values. It existence was first confirmed by firing silver atoms through a magnetic field in the Stern-Gerlach experiment. It is represented by either +½ or -½ in the fourth or, magnetic quantum number. For 10 points, name this quantity, a form of intrinsic angular momentum.

ANSWER: **spin** [prompt on angular momentum]

1. One song on this album ends with the confession “Oh, I’ve missed you my love”, while another sees the singer say of her tears “May the last one burn into flames”. The only mention of this album’s title appears in a recording of a speech made by Hattie White on her 90th birthday. Its lead single was performed at the 2016 SuperBowl and includes references to Red Lobster, Givenchy dresses, Roc necklaces and a hypothetical “black Bill Gates”. That song, “Formation”, is one of the few songs on the album that don’t directly address the alleged infidelity of the artist’s husband. For 10 points, identify this album containing “Hold Up” and “Sorry” by Beyonce.

ANSWER: **Lemonade**

1. After one character tears away the paper obstructing a light bulb, this character gasps and exclaims: “I don’t want realism! I want magic!” This character falsely recalls an incident on Biscayne Boulevard involving an an imaginary oil tycoon from Texas. This character unsuccessfully attempts to defend herself with a broken wine bottle before being raped by her sister’s drunk Polish husband. Before being carted off to a mental asylum, this character tells the doctor: “Whoever you are, I have always depended on the kindness of strangers.” For 10 points, name this sister of Stella Kowalski, the fallen Southern belle in Tennessee Williams’s *A Streetcar Named Desire.*   
   ANSWER: **Blanche** DuBois
2. In Marcus theory one term in this equation is replaced by the difference of the delta G of inner sphere electron transfer and the delta G of outer sphere electron transfer. One quantity in this equation is equal to the product of the steric factor and collision frequency. One modification of this equation, which uses the term “Boltzmann’s constant times temperature divided by Planck’s constant” as a replacement for this equation’s pre-exponential factor, is named for Eyring. It states that the rate constant is proportional to the exponential of the negative of the activation energy divided by the ideal gas constant and temperature. For 10 points, name this equation which can be used to calculate the dependence of a reaction rate on temperature.

ANSWER: **Arrhenius** equation

1. This country operated a prison camp for political opponents at Tarrafal nicknamed “The Camp of the Slow Death.” Jawaharlal Nehru launched Operation Vijay to retake a colony of this country, which relinquished another territory with the Alvor Agreement. This country justified the holding of its overseas colonial empire with the ideas that it was a multi-continental state and that it was a benevolent master, known as “pluricontinentalism” and “lusotropicalism,” respectively. This non-Brazilian country’s authoritarian regime was called the Estado Novo, which was overthrown in the 1974 Carnation Revolution. For 10 points, name this Iberian country, ruled for many years by Antonio Salazar.

ANSWER: **Portugal**

1. Most of this city’s public transportation is centered on Britomart Transport Centre on the main waterfront. In this city, an obelisk stands at the top of One Tree Hill in Cornwall Park to honor its country’s indigenous peoples. A large park called this city’s Domain contains its War Memorial Museum and is situated near the crater of Pukekawa. This city is located on a dormant volcanic field, whose largest and most recently active volcano was Rangitoto. Its Sky Tower is the tallest structure in the Southern Hemisphere. This city borders Manukau Harbor, which opens into the Tasman Sea. For 10 points, name this city on the North Island, the largest city in New Zealand.

ANSWER: **Auckland** [or **Ākarana**; or **Tāmaki Makaurau**]

1. The speaker of one poem says that he will give one of these objects to both his “true friend / Who offers his frank hand to me” and to his “cruel [friend] whose blows / Break the heart by which I live.” In another poem, the “dark secret love” of an “invisible worm” destroys one of these. In the poem “Sacred Emily,” one of these objects is successively mentioned four times. Jose Marti wrote about a “white” one of these objects, while William Blake wrote about a “sick” one. In a poem titled for one of these objects, the speaker promises to love his “bonnie lass” until the seas dry up. For 10 points, that Robert Burns poem compares his love to what “red, red” flower?

ANSWER: **rose**s [accept “I Cultivate a White **Rose**” or “The Sick **Rose**” or “A Red, Red, **Rose**”; or **Rose** is a Rose is a Rose is a Rose]

**Bonuses**

1. Answer the following about Charles Ives’s orchestral piece *The Unanswered Question*, for 10 points each.

[10] Throughout the piece, a group of these wind instruments attempts to “respond” to the trumpet’s solo with increasingly atonal phrases.

ANSWER: **flute**

[10] This is the number of flutes that respond to the trumpet’s solo in *The Unanswered Question.* This many beats are found in a measure of common time, the most standard and ubiquitous time signature in Western music.

ANSWER: **four**

[10] Ives originally paired *The Unanswered Question* with this dissonant, atmospheric piece that quotes such popular tunes as “Hello! Ma Baby” and “The Washington Post.”

ANSWER: ***Central Park in the Dark***

1. Answer the following about biodiversity hotspots around the world, for 10 points each.

[10] The only universally-recognized hotspot within the United States is the Floristic Province named for this state. Sequoias and Coast Redwoods are some of the large trees endemic to this state’s flora.

ANSWER: **California** [or **California Floristic Province**; prompt on “CFP”]  
[10] Mammals endemic to this island, which is often listed as an independent biodiversity hotspot, include the Aye-Aye and all tenrecs. Its Tsingy de Bemaraha National Park is home to some gorgeous Karst topography.

ANSWER: **Madagascar** [or Republic of **Madagascar**]

[10] The Fynbos [“fin-bush”] is part of a biodiversity hotspot in this country. Its Kreuger National Park is home to all of the so-called “Big Five” mammals, and the ornamental plant genus *Protea* is native to Australia and this country.

ANSWER: **South Africa**

1. Physical features on the surface of this object are named after places in Gulliver’s Travels like Laputo Regio and Lagado Planitia. For 10 points each:  
   [10] Name this larger of the two satellites of a certain planet. Much of its surface is covered by the Stickney crater and it has an 85 meter monolith named after it on its surface.

ANSWER: **Phobos**

[10] Phobos and Deimos are the two satellites of this fourth planet from the sun.

ANSWER: **Mars**

[10] Phobos has an unusually low amount of this property, which ranges from 0 to 1 and describes how much reflecting power a surface has.

ANSWER: **albedo**

1. For 10 points each, answer the following about American snipers.

[10] Famous sniper Carlos Hathcock killed an enemy sniper by shooting him through his scope during this war. American involvement in this Southeast Asian war escalated after the Gulf of Tonkin incident.

ANSWER: **Vietnam** War

[10] Gary Gordon was a sniper who was killed helping protect soldiers extracting the crew of a downed Black Hawk in this city. The United States attempted to oust dictator Mohamed Farrah Aidid, who ruled from this city.

ANSWER: **Mogadishu**

[10] The Beltway sniper attacks, which killed 10 people near Washington, D.C., was carried out by John Allen Muhammad, who was part of this organization. Malcolm X was a member of this organization before he repudiated it in 1964.

ANSWER: **Nation** of **Islam** [do not accept or prompt on Islam]

1. This duo’s first collection was published in 1812. For 10 points each:

[10] Identify these German brothers who collected and retold various folk tales, such as those of Hansel and Gretel, Sleeping Beauty, and Snow White.

ANSWER: Jacob and Wilhelm **Grimm** [accept “The Brothers **Grimm**” or any other clear equivalents]

[10] This American author included “The Unicorn in the Garden” in his 1940 collection *Fables for Our Time.* This author’s best-known story recounts the mundane life of a man who experiences several heroic daydreams.

ANSWER: James **Thurber**

[10] This English author of *Nights at the Circus* drew inspiration from Charles Perrault’s fairy tales in writing her magical realist collection *The Bloody Chamber.*

ANSWER: Angela **Carter**

1. According to the Poisson equation the electric field is equal to the negative of this operator applied to the electric potential. For 10 points each:

[10] Name this operator equivalent to taking the divergence of the gradient of a function.

ANSWER: **Laplacian**

[10] The quantum mechanical operator for this quantity can be written as negative h-bar squared divided by two m times the Laplacian. This quantity can also be calculated as one half m-v squared.

ANSWER: **kinetic energy** [prompt on energy]

[10] The sum of a system’s kinetic and potential energy, known as the Hamiltonian, appears in this equation central to quantum mechanics which states that when the Hamiltonian is applied to a wave function, the result is equal to a constant energy times the original wave function.

ANSWER: **Schordinger** equation

1. This artist included a scene from Mark in which the Apostles fail to cure a boy of demons in his final painting, a depiction of the *Transfiguration*. For 10 points each:

[10] Identify this artist who depicted a woman in an Oriental headscarf in *La Fornarina.* The words “Causarum Cognitio” appear in a tondo in one of this artist’s works that is hung opposite his *The Disputation of the Sacrament*.

ANSWER: **Raphael**

[10] Raphael’s Masterpiece is this work currently held in the Vatican’s Apostolic Palace. Figures in this work include Plato, Aristotle, and a self portrait that Raphael inserted.

ANSWER: *The* ***School of Athens***

[10] Both *The School of Athens* and *the Disputation of the Sacrament* are located in this room in the Apostolic Palace. This first of the four “Raphael” rooms also includes his *Parnassus*.

ANSWER: ***Stanza della Segnatura***or the **Room of the Segnatura**

1. Different theologies regarding the nature of this rite include the doctrines of real presence, pneumatic presence, and memorialism. For 10 points each:

[10] Name this Christian sacrament that commemorates the Last Supper, in which participants take bread and wine. The liturgy devoted to this sacrament is the second half of Catholic mass, following the Liturgy of the Word.

ANSWER: **Eucharist** [or **Lord’s Supper**; or Holy **Communion**]

[10] This is the term for the Catholic interpretation of the Eucharist, which teaches that the bread and the wine are transformed into the Body and Blood of Christ. How the transformation occurs is considered a mystery of faith.

ANSWER: **transubstantiation** [do not prompt on or accept “consubstantiation”]

[10] This Protestant branch believes in the doctrine of sacramental union, which holds that the Body and Blood of Christ are united with and present alongside the bread and the wine, even for non-Christians who consume it.

ANSWER: **Lutheran**ism

1. A lot of important naval battles occurred in 480 BC. Answer some questions about them, for 10 points each:

[10] This naval commander managed to decisively defeat the Achaemenid Persian fleet at this naval battle, fought shortly after the Battle of Thermopylae. As a result, Xerxes I was never able to conquer all of Greece.

ANSWER: **Themistocles**

[10] The female commander Artemisia, who was queen of this city, skillfully commanded a contingent of ships at the Battle of Salamis and the earlier Battle of Artemisium. Herodotus was from this city, the home of a notable mausoleum.

ANSWER: **Halicarnassus** [accept Artemisia of **Halicarnassus**; accept Herodotus of **Halicarnassus**; accept Mausoleum of **Halicarnassus**]

[10] The city of Syracuse defeated this North African power at the Battle of Himera in 480 BC. This power would later produce military commanders such as Hannibal Barca.

ANSWER: **Carthage**

1. Answer the following about Stephen Crane’s *The Red Badge of Courage*, for 10 points each.

[10] The novel is about Henry Fleming, a soldier in this war. Michael Shaara wrote about a battle from this war in *The Killer Angels*.

ANSWER: American **Civil** War

[10] Henry rationalizes his decision to desert by observing that one of these animals runs away when he throws a pinecone at it.

ANSWER: a **squirrel**

[10] Henry is profoundly affected by the death of this friend of his, who is sometimes called “the tall soldier.” His initials suggest that he is meant to serve as a Christ figure.

ANSWER: **Jim** Conklin [or Jim **Conklin**]

1. On his way to catch the Erymanthian Boar, Heracles stopped by the home of one of these creatures, Pholus. For 10 points each:

[10] Name these half-man, half-horse creatures, many of which Heracles later had to kill after they got drunk. During the fight, he also accidentally shot Chiron, one of these creatures.

ANSWER: **centaur**s [or ***kéntauros***]

[10] Heracles later killed this centaur who tried to carry off Deianira after offering to carry her across a river. As he died, he told Deianira to collect his blood to use later as a love potion.

ANSWER: **Nessus**

[10] Centaurs started a war with the Lapiths after getting drunk at this man’s wedding to Hippodamia. This man later enlisted Theseus to try to kidnap Helen and Persephone.

ANSWER: **Pirithous**

1. Children in this novel are born in hatcheries and educated by the hypnopaedic method. For 10 points each:

[10] Name this dystopian novel by Aldous Huxley.

ANSWER: ***Brave New World***

[10] In *Brave New World*, areas which aren’t controlled by the World State are known by this name. One example is Malpais in New Mexico, where John the Savage lives.

ANSWER: savage **reservation**s

[10] This character is a lecturer at the College of Emotional Engineering, but after he reads his students a poem in praise of solitude, he is exiled to the Falkland Islands.

ANSWER: **Helmholtz** Watson [or Helmholtz **Watson**]

1. Oxidation of the massive amount of sulfur dioxide released by Mount Pinatubo’s 1991 eruption increased the concentration of this class of particles by an order or two of magnitude in the stratosphere. For 10 points each:

[10] Name this class of particles that includes all solid and liquid particles suspended in the atmosphere. This class of particles provides nucleation sites for cloud condensation.

ANSWER: atmospheric **aerosol**s [prompt on **colloid**s]

[10] The largest atmospheric aerosols are in the coarse mode and are rapidly removed from the atmosphere by this dry deposition process. This process is the settling of particles due to gravity.

ANSWER: gravitational **sedimentation**

[10] Atmospheric aerosols are often divided into natural aerosols and this type of aerosol, which can be created by fuel combustion and industrial emissions.

ANSWER: **anthropogenic**

1. This country experienced about a century of instability and infighting during its Zemene Mesafint, or Era of the Princes. For 10 points each:

[10] Name this country that was ruled until 1974 by members of the Solomonic Dynasty. Along with Liberia, it was one of only two nations to resist colonization during the Scramble for Africa.

ANSWER: **Ethiopia** [or **Abyssinia**]

[10] The last member of the Solomonic line was this emperor, who was overthrown by a communist government called the Derg. This ruler is worshipped by Rastafarians, whose name comes from this ruler’s pre-regnal name.

ANSWER: **Haile Selassie** (his pre-regnal name was Ras Tafari)

[10] A secret pact between this man and British Foreign Secretary Samuel Hoare gave Mussolini most of Ethiopia. This prime minister during the Vichy regime was executed for collaboration with the Nazis.

ANSWER: Pierre **Laval**

1. Answer the following about comics who made their name on Jon Stewart’s *The Daily Show*, for 10 points each.

[10] This comic used to activate the “God Machine” in the *Daily Show*’s “This Week in God” segment. His own Comedy Central show included segments like “The Word”, and he recently took over from David Letterman at “The Late Show.”

ANSWER: Stephen **Colbert**

[10] In an early episode of his “Last Week Tonight”, former *Daily Show* correspondent John Oliver ripped into the corruption in this world sports organization that was then led by Sepp Blatter. Its 2022 World Cup will inexplicably be held in Qatar.

ANSWER: **FIFA** [or **Fédération Internationale de Football Association**; or **International Federation of Association Football**]

[10] This former *Daily Show* correspondent controversially called Barack Obama “my n-word” at the 2016 White House Correspondents dinner. He briefly hosted the now-cancelled *Nightly Show*.

ANSWER: Larry **Wilmore**

1. In the Cahill cycle this molecule is converted to alanine before being transported to the liver from muscle. For 10 points each:

[10] Name this three-carbon compound that is produced from PEP in the last step of glycolysis. It is decarboxylated by its namesake dehydrogenase complex to produce acetyl CoA.

ANSWER: **pyruvate**

[10] When oxygen is lacking, pyruvate can undergo this type of process, commonly used to produce cheese or wine, to yield lactic acid or ethanol.

ANSWER: **fermentation**

[10] In the first step of this pathway, pyruvate is carboxylated by a carboxykinase enzyme to generate oxaloacetate. This pathway occurs in the liver and generates glucose from precursors like glycerol during fasting.

ANSWER: **gluconeogenesis**

1. *Anna Svärd* is the final novel of this author’s *Ring Trilogy*. For 10 points each:

[10] Identify this winner of the 1909 Nobel Prize in Literature. The title child mounts a goose and explores this author’s native country in her book *The Wonderful Adventures of Nils.*

ANSWER: Selma **Lagerlof**

[10] Lagerlof fellow countrywoman, Astrid Lindgren, is best-known for writing three novels about this incredibly strong red-headed girl.

ANSWER: **Pippi** **Longstocking** [accept either name]

[10] Selma Lagerlof and Astrid Lindgren both hailed from this Scandinavian country, whose more recent literary output includes *The Girl with the Dragon Tattoo*, by Stieg Larsson.

ANSWER: Kingdom of **Sweden**

1. Daryl Bem’s self-perception theory attempts to explain how this phenomenon occurs. For 10 points each:

[10] Name this phenomenon that Leon Festinger described in his book *When Prophecy Fails*, which is the discomfort one feels due to conflicting beliefs.

ANSWER: **cognitive dissonance**

[10] During World War II, the U.S. government employed Festinger’s mentor, Kurt Lewin [“Levine”] to convince the public to eat organ meats. They also employed this anthropologist who wrote *Coming of Age in Samoa*.

ANSWER: Margaret **Mead**

[10] Lewin’s studies of group dynamics were influential in this field of psychology, which applies psychology to corporate work environments like human resources and management.

ANSWER: industrial-**organization**al psychology [or **I-O** psychology]

1. A ruler of this empire became the youngest king ever when a crown was placed on his mother’s belly, thus crowning him before he was even born. For 10 points each:

[10] Name this powerful Persian empire which lasted from the 3rd century to the 7th century. In its conflicts with Rome, this empire’s ruler Shapur II captured Roman emperor Valerian and turned him into a footstool.

ANSWER: **Sassanid** Empire [or the **Sassanian** Empire; prompt on Persia]

[10] The Sassanid Empire was annexed into this growing Muslim caliphate after it was defeated at the Battle of al-Qadisiyyah. This empire was ruled by the “four rightly guided caliphs.”

ANSWER: **Rashidun** Caliphate

[10] This leader built a pair of crossed swords forming an archway to commemorate the Battle of Qadisiyyah. This Iraqi dictator was overthrown during the United States invasion in 2003, and was subsequently executed.

ANSWER: Saddam **Hussein**

1. Answer the following about the use of found objects in art, for 10 points each.

[10] *Prelude to a Broken Arm*, which is a snow shovel with a painted-on dedication, and *Fountain*, which is a urinal signed "R. Mutt", are two of this Dadaist artist's "readymades".

ANSWER: Marcel **Duchamp** [or Henri-Robert-Marcel **Duchamp**]

[10] A stuffed goat with an automobile tire ringing its torso is the most prominent feature of *Monogram*, one of the "combines" created by this proto-pop-artist.

ANSWER: Robert **Rauschenberg**

[10] Toy cars and an unrolled spring make up parts of *Baboon and Young*, a sculpture by this artist who also designed the huge unnamed steel sculpture in Chicago's Daley Plaza. He and George Braque coined the term *collage*.

ANSWER: Pablo **Picasso** [or Pablo Ruiz y **Picasso**; or Pablo Diego José Francisco de Paula Juan Nepomuceno María de los Remedios Cipriano de la Santísima Trinidad Ruiz y **Picasso**]

1. A historian with this surname names a special collections and rare books library at the University of California, Berkeley. For 10 points each:

[10] Name this surname of the Secretary of the Navy who established the United States Naval Academy. His *magnum opus* as a historian is his work *History of the United States, from the Discovery of the American Continent*.

ANSWER: **Bancroft** [accept Hubert Howe **Bancroft**; accept George **Bancroft**]

[10] George Bancroft served as Secretary of the Navy under this president, who won the Election of 1844 as a “dark horse” candidate. This president led the United States into the Mexican-American War.

ANSWER: James K. **Polk**

[10] Polk belonged to this American political party, which opposed the Whigs from the 1820s to the 1850s. Andrew Jackson also belonged to this party, which took as its symbol a donkey.

ANSWER: **Democratic** Party