1. One character in this novel inwardly rages at how his colleagues talk about a woman, "degrading her to so much mutton," concluding, "what makes it worse, she thinks of herself as meat." The protagonist of this novel isolates himself in a lighthouse after confronting the World Controller Mustapha Mond. Set in the year 632 After Ford, this novel ends with the suicide of John the Savage. For 10 points, name this dystopian novel by Aldous Huxley.
ANSWER: *Brave New World*

014-12-70-14101

2. This poet wrote, "O all the instruments agree the day of his death was a dark cold day" in his "In Memory of W. B. Yeats." This poet claimed, "We must love one another or die" in a work beginning, "I sit in one of the dives on Fifty-Second Street uncertain and afraid." He was inspired by Brueghel's *Landscape with the Fall of Icarus* to write a poem stating, "About suffering they were never wrong, the Old Masters." For 10 points, name this British poet of "September 1, 1939" and "Musee des Beaux Arts."
ANSWER: W. H. **Auden** [or Wystan Hugh **Auden**]

014-12-70-14102

3. A creature from the second game in this series speaks in rhymed couplets of trochaic heptameter and is named Gravemind. The first game in this series features a beach invasion on the level The Silent Cartographer and has the subtitle *Combat Evolved*. The main character in this series is assisted by Cortana, but he did not appear in the games *Reach* or *ODST*. For 10 points, name this game series in which humans fight the Flood and the Covenant with the help of Master Chief.
ANSWER: **Halo**

023-12-70-14103

4. At this battle, Daniel Sickles lost his leg while his army was massacred at the Peach Orchard. Devil's Den and Culp's Hill were sites at this battle, in which James Longstreet attacked Little Round Top. One assault at this battle went up the middle of Cemetery Ridge. George Meade's army fended off the doomed Pickett's charge at this three-day Union victory. For 10 points, name this July 1863 battle in Pennsylvania that was followed by a short Abraham Lincoln address.
ANSWER: Battle of **Gettysburg**

104-12-70-14104

5. In 2012, a clip was released showing four soldiers in this country urinating on three corpses. Uniformed police officers and soldiers in this country have killed over 100 fellow servicemen in "green-on-blue" attacks. This country's poppy fields supply 90% of the world's illicit opium, which is used to fund its insurgency. Its president is Hamid Karzai. For 10 points, name this country where the Taliban is fighting coalition forces, which have been there since a 2001 invasion.
ANSWER: Islamic Republic of **Afghanistan**

080-12-70-14105

6. In one play by this author, Apollo defends the protagonist at a trial declared by Athena which results in the renaming of the title figures. This man is credited with introducing the second actor to the ancient theater. Classical writers attributed *Prometheus Bound* to this playwright, whose confirmed works include *Seven Against Thebes.* For 10 points, name this ancient Greek playwright of *Agamemnon,* the first of the only surviving trilogy of its kind, the *Oresteia.*
ANSWER: **Aeschylus**

7. This ruler helped put Stanislaw Poniatowski (POWN-yuh-TOHV-skee) on the throne of Poland. This ruler came to power with help from Grigory Orlov and apocryphally was shown fake villages constructed by Grigory Potemkin. A Cossack named Pugachev led a rebellion against this ruler while pretending to be this ruler's dead husband, Peter III. For 10 points, name this eighteenth-century German-born empress who helped westernize and add territory to Russia.
ANSWER: **Catherine the Great** [or **Catherine II** of Russia; or **Yekaterina Alekseyevna**; or **Yekaterina Velikaya**; or **Sophie Frederike Auguste**; prompt on **Catherine**]

8. The absence of this property in trans- isomers accounts for their lower boiling points as opposed to cis-isomers. The magnitude of this property is measured in debye units, or coulomb-meters (COO-lawm meters). Molecules with lone pairs on a central atom almost always have this property. Diatomic compounds of the same element never have this property. Bonds have this property if the relevant atoms have different electronegativities. For 10 points, name this property of a molecule with an uneven distribution of charge.
ANSWER: molecular **polar**ity [or nonzero **dipole moment**]

9. This god turned Caeneus (KIE-nee-us) into a male warrior after raping her. One story relates that he sent a monster to kill Hippolytus, the son of Theseus. This god lost a contest when the Athenians preferred Athena's gift of olive oil to the spring created by this god. This god of earthquakes is the father of the shape shifting Proteus and the Cyclopes Polyphemus. For 10 points, name this trident wielding brother of Zeus and Hades who rules the oceans in Greek mythology.
ANSWER: **Poseidon** [or **Neptune**]

10. This race was born from the union of Ixion and the cloud Semele, which had been given the form of Hera by Zeus. Some of them abducted Hippodamia on her wedding day, causing Pirithous and Theseus to fight them. That scene, and other depictions of their war with the Lapiths were depicted in the frieze of the Parthenon. The most famous member of this race was the teacher of Achilles. For 10 points, Chiron was an example of what half-horse half-man race from Greek mythology?
ANSWER: **centaur**s

11. Lane Turner wrote a song responding to this statement in which he described his "two rugged hands." Similar to a controversial speech given by Elizabeth Warren in 2011, this statement was uttered during a campaign stop in Roanoke. It was reversed in the motto of Day 2 of the RNC and refers back to a comment about "roads and bridges." For 10 points, name this soundbite of Barack Obama claiming that "if you've got a business," you received help from the government along the way.
ANSWER: "If you've got a business, **you didn't build that**" [or "**We Built It**" until "Warren" is read]

12. The libretto for this opera was written by Emanuel Schikaneder, who was in the same Masonic lodge as its composer. The antagonist of this opera must sing 30 high C's and 4 F's above high C in the aria "Der Holle Rache." In this opera, Sarastro overcomes the Queen of the Night and arranges tests for the bird catcher Papageno and the protagonist, Tamino. For 10 points, name this Wolfgang Amadeus Mozart opera about an enchanted musical instrument.
ANSWER: The *Magic Flute* [or Die *Zauberflöte*]

080-12-70-14112

13. This writer created the character of Mrs. Barker, a friend of Mommy who used to work for the Bye-Bye Adoption Service. In addition to writing *The American Dream,* this man wrote about Jerry impaling himself on a knife in *The Zoo Story.* The emotionally abusive relationship between George and Martha is the subject of one of his plays, in which Nick and Honey join them for a dinner party. For 10 points, name this American playwright who wrote *Who's Afraid of Virginia Woolf?*
ANSWER: Edward **Albee** [or Edward Franklin **Albee**]

030-12-70-14113

14. This controversy grew from violations of the Boland Amendment and was first reported by Lebanon's *Ash-Shiraa* magazine. One man who lied to Congress during this scandal later hosted a show about "War Stories" on cable TV. The Tower Commission outed Oliver North's role in this scandal, which revealed the source of funds for anti-Sandinista Nicaraguan rebels. For 10 points, name this scandal stemming from the Reagan administration's illegal sale of arms to a hostage-holding Islamic Republic.
ANSWER: **Iran-Contra** affair [or obvious equivalents involving arms sales to **Iran** to fund the **Contra**s]

104-12-70-14114

15. The four properties that guarantee reliable transactions within these systems are atomicity, consistency, isolation and durability. Common types of cardinality in these systems are one-to-one, one-to-many and many-to-many. Their unique identifiers are known as primary keys. They most commonly adhere to the relational model, in which foreign keys are used to relate multiple tables; the most popular language for that model is SQL. For 10 points, identify these systems used to store data in rows, known as records.
ANSWER: relational **database**s

066-12-70-14115

1A. What opponent of the wave theory of light names a discrete probability distribution that can approximate a binomial distribution with large n and small p?
ANSWER: Siméon Denis **Poisson**

1B. What Walter Scott novel features Richard the Lion-Hearted and Robin Hood as minor characters but focuses on the title knight, who rescues the Jewish maiden Rebecca?
ANSWER: ***Ivanhoe***

2A. This is a 20-second calculation question. Consider a jar with 5 red marbles, 3 green marbles, and 8 blue marbles. What is the probability of randomly picking two green marbles, if the marbles are not replaced after being picked?
ANSWER: **1/40** [or **0.025**]

2B. This is a 20-second calculation question. Solve for x in 3*log(2)-log(4^2) = log(x).
ANSWER: **1/2**

3A. What event saw patriots dressed as Mohawks dump out the contents of the Dartmouth, Eleanor, and Beaver?
ANSWER: **Boston Tea Party**

3B. What psychological concept is measured by such tests as the MMPI and Myers-Briggs Type Indicator?
ANSWER: **personality**

4A. The capital cities of Buenos Aires and Montevideo sit on opposite sides of what busy estuary on the eastern coast of South America?
ANSWER: the **Rio de la Plata**

4B. What French playwright wrote about an imposter who infiltrates house of Orgon in his comedy *Tartuffe*?
ANSWER: **Molière** [or Jean-Baptiste **Poquelin**]

5A. What tropical disease, once treated by quinine and DDT, is transmitted by the *Plasmodium* protest via mosquitos?
ANSWER: **malaria**

5B. What astronomer created a tuning fork for galaxy classification and names a space telescope?
ANSWER: Edwin **Hubble**

6A. What adjective describes analogues of the trigonometric functions in which e is raised to a real power, instead of an imaginary one?
ANSWER: **hyperbolic** functions

6B. This is a 30-second calculation question. What is the area of a triangle with side lengths of 5, 7, and 8?
ANSWER: **10 root 3** square units [or **10 radical 3** square units; prompt on square **root** of **300** square units]

7A. This is a 30-second computation question. What is the sin of 75 degrees in simplest terms?
ANSWER: **root 6 + root 2 over four** [or **one fourth times the quantity root 6 + root 2**]

7B. What doctor of theoretical physics is the roommate of Leonard Hofstadter on the CBS sitcom *The Big Bang Theory?*
ANSWER: **Sheldon** Cooper [or Sheldon **Cooper**]

8A. What school lost consecutive men's basketball championship games to Duke and Connecticut in 2010 and 2011?
ANSWER: **Butler** University

8B. Name the Andrew Wyeth painting which shows a disabled girl in a pink dress turning towards a farmhouse.
ANSWER: *Christina's World*

9A. The Jackson Hole resort and Grand Teton National Park are found in what least populous U.S. state?
ANSWER: **Wyoming**

9B. What Chinese-born American architect designed the Museum of Islamic Art in Doha as well as the glass pyramids outside the Louvre?
ANSWER: I. M. **Pei** [or Ieoh Ming **Pei**]

10A. What Greek letter denotes cells in the Islets of Langerhans that secrete glucagon, as well as a type of radioactive decay that releases a helium nucleus?
ANSWER: **alpha**

10B. Name the Catholic monarchs who initiated the Spanish Inquisition and supported the voyages of Christopher Columbus.
ANSWER: **Ferdinand and Isabella** [accept in either order; or **Ferdinand** II of Aragon and **Isabella** I of Castile; or **Ferdinand V of Castile and Isabella** I; prompt on partial answer]

1. This river forms three sides of a rectangular loop named for the Ordos Desert; the fourth side of that loop is made by the Wei (WAY) River, which, with the Fen River, serves as this river's largest tributaries. This river ends in the Bohai Sea after traveling nearly 5,500 kilometers, which makes it the second-longest river in its country. For 10 points, loess (LESS) picked up by what Chinese River gives it its name and distinctive color?
ANSWER: **Yellow** River [or **Huang** He; or **Hwang** Ho]

023-12-70-14117

2. In Mandarian Chinese, this item is called a "xiangjiao" (shee-ONG-JOW). The Arabic word for this item is "moza," which inspired its neo-Latin scientific name. Another Arabic word, for "finger," is a possible source of this item's English name. Though this English word has an identical cognate in Spanish, many Mexican speakers refer to the sweet varieties as "plátanos" (PLAH-tahn-os). For 10 points, identify this fruit, which Spanish and English speakers distinguish in different manners from a plantain.
ANSWER: **banana**

019-12-70-14118

3. Shirakawa discovered a conducting variety of these substances after doping with iodine. These substances can be called isotactic or syndiotactic, either quality making them stereoregular. A solution of these substances can be modeled using Flory-Huggins theory, and one class of compounds used to synthesize these substances work via the Cossee-Arlman mechanism and are titanium-based heterogeneous catalysts known as Ziegler-Natta catalysts. Common examples of these substances include PET, PVC, and nylon. For 10 points, name these molecules that consist of repeating units called monomers.
ANSWER: **polymer**s

201-12-70-14119

4. A "pastorale ad libitum" closes a "Christmas" composition of this type by Corelli, an example of the "grosso" form popular in baroque music. A Bartok piece mocking a Shostakovich symphony was known as the one "for orchestra." Mozart composed twenty-seven of a subcategory of these works. The Romantic period involved the fleshing out of the three major kinds of these works: the cello, the violin, and the piano. For 10 points, name these types of compositions written for an orchestra and a solo instrument.
ANSWER: **concerto**s [or **concerti**; accept *Christmas Concerto*, **concerto grosso**, **violin concerto**, **piano concerto**, and **cello concerto** before their respective mentions]

014-12-70-14120

5. The medical condition astigmatism occurs in this organ. Oxidation of vitamin A results in the production of the pigment-bearing portion of rhodopsin, which is found in this organ. This organ contains the fovea, which is found at the center of the macula and contains a high concentration of cone cells. The name given to this organ also names the calm weather found at the center of cyclones, such as hurricanes. For 10 points, identify this organ that detects light and allows sight.
ANSWER: **eye**

066-12-70-14121

6. One version of this effect formed the basis for the Ives-Stillwell experiment; that version was predicted by special relativity and is the transverse form. This effect is responsible for blueshift and redshift, which is an increase and decrease, respectively, in the frequency of light depending on whether the source is moving away from, or towards, an observer, respectively. For 10 points, name this effect that causes the frequency of a siren to increase as it approaches an observer.
ANSWER: **Doppler** effect [or relativistic **Doppler** effect; accept **shift** in place of **effect**]

7. This author was good friends with the opera singer Olive Fremstad, who was the basis for Thea Kronborg in her novel *The Song of the Lark.* She wrote about a Pittsburgh high school student who runs away to New York and throws himself in front of a train in "Paul's Case." In one novel, she wrote about Jim Burden's experiences with the Bohemian Shimerda family. For 10 points, name this novelist who wrote pioneer stories about the Nebraska prairies such as *My Antonia.*
ANSWER: Willa **Cather** [or Willa Sibert **Cather**]

8. The protagonist of this novel meets Nicholas Schliemann at a party thrown by the millionaire Fisher. Its protagonist is imprisoned for attacking his wife's boss Phil Connor after learning that he had raped her. Ona dies giving birth to her second child in this novel, pushing Jurgis Rudkus further towards socialism. This novel inspired legislation with its depictions of the Chicago meatpacking industry. For 10 points, name this muckraking novel by Upton Sinclair.
ANSWER: *The **Jungle***

9. The radius of gyration for one of these objects is equal to I over mass times radius, while two pi times the square root of I over mass times radius times the local gravitational acceleration is equal to the period for one of these objects, which Galileo believed was independent of starting point. One of these objects was used to show that the Earth rotates by Foucault. For 10 points, name these objects that are made up of a swinging mass at the end of a rope.
ANSWER: **pendulum**

10. Some adherents of this religion put honey in a newborn's mouth and whisper divine names into its ear. Its followers light bonfires and throw colored powder at each other during the holiday of Holi. Works held to be scriptures in this religion include the Puranas, Upanishads (oo-PAH-nee-shods), and the Vedas. Some of its followers worship a "trimurti" that includes a destroyer god, a preserver god, and a creator god. For 10 points, name this Indian religion whose adherents might worship Shiva, Brahma, and Vishnu.
ANSWER: **Hindu**ism

11. *Fletcher v. Peck* forbid this state from canceling contracts after the Yazoo land fraud. The Cornerstone Speech was delivered by this state's governor Alexander Stephens. Samuel Worcester was arrested in this state, leading to a Supreme Court case that failed to stop the removal of the Cherokee from this state on the Trail of Tears. This state was founded as a prison colony for debtors by James Oglethorpe. For 10 points, name this Southern state home to Newt Gingrich and Jimmy Carter.
ANSWER: **Georgia**

12. The main drug used to treat this disease is activated by the KatG catalase-peroxidase and inhibits an enoyl-acyl carrier protein reductase; that drug is often given alongside ethambutol and rifampicin and is called isoniazid. Its causative agent has mycolic acids in its cell wall. This disease causes caseous necrosis and granulomas to appear in the target organ, and it is caused by a mycobacterium. It is often detected using a skin test. For 10 points, name this disease that affects the lungs and causes a bloody cough.
ANSWER: **tuberculosis** or **TB**

13. During this dynasty, the military was divided into the Eight Banners. This dynasty included the longest-reigning Chinese emperor, whose grandson was in power at the time of the White Lotus Rebellion. Including the Kangxi (KONG-shee) and Qianlong (CHYAN-lawng) emperors, this dynasty also defeated the forces of Hong Xiuquan (SHEE-oo-CHEW-on) in the Taiping Rebellion. This dynasty was established by the Manchus after the fall of the Ming Dynasty. For 10 points, name this final Chinese dynasty.
ANSWER: **Qing** Dynasty [accept **Manchu** Dynasty before read]
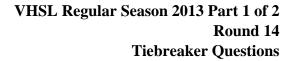
14. One of this man's poems begins, "While my hair was still cut straight across my forehead I played about the front gate." Another of his poems describes "the apparition of these faces in the crowd; petals on a wet, black bough." This author of "The River-Merchant's Wife: A Letter" and *Hugh Selwyn Mauberley* died without finishing his massive multilingual poem divided into the title sections. For 10 points, name this American poet of "In a Station of the Metro" and *The Cantos.*
ANSWER: Ezra **Pound** [or Ezra Loomis **Pound**]

15. The fifth of these vessels successfully carried Belka and Strelka out and back. The second of these vessels was created with a small cabin that eventually overheated, causing the death of its occupant of four days named Laika. The first of these crafts stayed in orbit for a total of three months. For 10 points, name this Soviet program of satellites that first launched on October 4, 1957, and which started both the Space Age and the Space Race.
ANSWER: **Sputnik** 5 [or **Sputnik** 2; or **Sputnik** 1]

1. These animals can climb or escape tight spaces with the inefficient "concertina" movement. Some of these animals have pits between their eye and nostril that allow them to see the infrared radiation from prey. These organisms collect air particles on their tongue, which then hits Jacobson's Organ to allow them to smell. Their mobile jaw bones allow them to swallow prey larger than their heads. For 10 points, name these insidious reptiles that include pit vipers and cobras.
ANSWER: **snake**s [or **serpents**; or specific types, such as **vipers**; or **cobras**; or **pythons**; etc.; prompt on **reptiles**]

080-12-70-14132

2. In meteorology, when this phenomenon is perpendicular to isolines, the greatest advection occurs. The Beaufort scale is used to characterize this phenomenon. Transport that occurs via this process is called aeolian, which can create loess. The speed of this phenomenon can be measured with an anemometer. For 10 points, identify this flow of air between areas of different pressure, caused by the uneven heating of the Earth.
ANSWER: **wind**

066-12-70-14133

3. In this novel, Nurse Duckett's relationship with the protagonist hurts her relationship with Nurse Cramer. The protagonist of this novel uses a parachute to cover the deep wounds of Snowden. All of Egypt's cotton is purchased by Milo Minderbinder's company in this novel. Other characters in this novel include Major Major Major Major. For 10 points, identify this novel about the pilot Yossarian, who faces the title paradoxical situation, written by Joseph Heller.
ANSWER: *Catch-22*

189-12-70-14134

4. These things can transfer DNA from one organism to another via transduction. Reverse transcriptase is used in the reproductive cycle of "retro" ones. They can be classified as "helical" or "icosahedral" depending on the shape of the capsid surrounding their genetic material. These things can reproduce by the lytic or lysogenic cycle, and more generally by injecting their DNA into a "host" cell's genome. For 10 points, name this infectious particles that cause diseases like West Nile and influenza.
ANSWER: **viruses** [or bacterio**phage**s, a subset; or **virions**]

080-12-70-14135

5. One poem about this conflict depicts a conversation between two dead participants and is titled "Strange Meeting." Robert Graves described this conflict in *Good-Bye to All That.* One poem about this conflict asks, "What passing bells for these who die as cattle?" Another poem about this conflict condemns "the old lie" told to its participants and describes the "ecstasy of fumbling" during a gas attack. For 10 points, name this conflict depicted by War Poets such as Siegfried Sassoon and Wilfred Owen.
ANSWER: **World War I** [or the **First World War**]

191-12-70-14136

This is a calculation question. If each interior angle of a regular polygon measures 150 degrees, how many sides does the polygon have?
ANSWER: **12**

What ragtime musician composed the "Maple Leaf Rag" and "The Entertainer"?
ANSWER: Scott **Joplin**