## PRISON BOWL IX

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## Round 09

## Tossups

1. Qasim Amin is known as the father of the Arab branch of this philosophical movement and, in 1956, Anwar Sadat enacted a "state" form of it. One proclaimed follower of this movement, Carol Hanisch, coined the phrase "The Personal is Political." A report to the French National Assembly about educational policy prompted Mary Wollstonecraft to write an early work in this movement, and other proponents of this movement include members of its "second wave," like Betty Friedan and Simone de Beauvoir, who wrote The Second Sex. For 10 points, identify this belief that men and women should have equal rights and opportunities.
ANSWER: feminism [prompt on women's rights or equivalents; do not accept or prompt on "equalism" or any other stupid things] <CL>
2. The Roggenmark solution to one instance of this phenomenon was rejected due to the unpredictable price of rye. To prevent events of this type after World War II, France created laws based on the Law of the Maximum, and Franklin Delano Roosevelt established the OPA. Some nations purposefully caused this process with "beggar thy neighbor" policies, an issue addressed by the Bretton Woods system. In the Weimar Republic, people were reported to bring wheelbarrows to the supermarket due to the "hyper" type of this. For 10 points, name this phenomenon wherein money becomes devalued.
ANSWER: inflation [accept hyperinflation] <CL>
3. One character in this novel has an affair with the Reverend Whitfield, and another character is forced to give up the money she was saving to use for an abortion by her father, who uses it to buy new teeth. One entire chapter in this novel reads, "My mother is a fish," and that chapter is narrated by the infant Vardaman. The novel opens with one of the characters watching her son build her own coffin, in which she is later transported to her hometown of Jefferson, Mississippi for burial. For 10 points, name this novel with multiple narrators by William Faulkner about the Bundren family.

## ANSWER: As I Lay Dying <CC>

4. When a quantity used to describe this phenomenon changes, beams of light will undergo self-focusing. An unusual form of this phenomenon will occur when both the permittivity and permeability of a material are negative, while one can derive a law governing it by setting the derivative of Fermat's principle of least time to zero. Plastics under mechanical stress or other optically anisotropic materials will undergo the "double" type of this process, also known as birefringence. The sines of the angles of incidence are related to the indices of this phenomenon in Snell's law. For 10 points, name this phenomenon where light bends when passing through two different mediums.
ANSWER: refraction <AT>
5. One of this artist's works depicts a billboard reading "There's no way like the American way". Another work by this artist displays a scene of sand and tumbleweed with a lone Texan house in the background. A work by this artist was cropped in order to highlight the expression on a man's face; that work was the claustrophobic Ditched, Stalled, and Stranded. This artist of "The White Angel Breadline" depicted Florence Owens Thompson in a work where two children weep into the shoulders of the title woman. For 10 points, name this artist who frequently depicted scenes from the Dust Bowl and Great Depression, the American photographer of Migrant Mother.
ANSWER: Dorothea Lange <GA>
6. This author's Rambles was a travelogue, and though not Roald Dahl, this author described a father confessing his incestuous love for his daughter in Mathilda. This author wrote about Lionel Verney, the only survivor of a worldwide plague, in The Last Man. The character Lord Raymond from that novel is modeled on Lord Byron. Another character created by this author is a "man of gigantic stature" whose team of sled dogs is observed by Captain Walton. Her most famous character watches a family through a hole in a wall and declares, "If I cannot inspire love, I will cause fear!" The subtitle of that novel is The Modern Prometheus. For 10 points, name this author of the Gothic novel Frankenstein.
ANSWER: Mary Wollstonecraft Shelley [accept Mary Wollstonecraft Godwin; prompt on Shelley; do not accept "Mary Wollstonecraft"] <AL>
7. The government of a man with this title agreed to the Armistice of Salonica, ending that ruler of this type's participation in World War I. That man was Ferdinand I. During a stint as heir apparent, one future ruler of this type was the target of an assassination attempt with a saber in the Otsu Incident. Bulgaria notably had rulers of this title, and one ruler in a different country with this title strengthened his "service nobility". Another of these rulers sent Generals Kar and Mikhelson to fight Pugachev's Rebellion. The boyars advised these rulers, and a zemskii sobor chose these rulers in Russia. For 10 points, name this title that derives from the Latin word Caesar, often used by autocratic Eastern European rulers.
ANSWER: Tsars or Czars (generously prompt on King or Emperor anywhere in the question; accept Tsar of Bulgaria or King of Bulgaria until "Otsu Incident", afterwards do not accept an answer that specifies a country) <LT>
8. An intellectually disabled man with this surname became infamous for inexplicably smashing beetles between rocks. The defeat of a rebellion by one of this family's vassal houses was celebrated in the folk song "The Rains of Castamere," and after killing his monarch by stabbing him in the back, a member of this family became known as the "Kingslayer." A young boy was defenestrated after witnessing the incestuous relationship between two of this family's members. This house's sigil is a lion, and members from it supposedly always pay their debts. For 10 points, name this fictional Game of Thrones house, with members Cersei, Jaime, and Tyrion.
ANSWER: Lannisters <AT>
9. The auditorium in this play is described as a bog by one character. That character in this play cannot finish a certain joke without urinating and sings a round about a dog's death but forgets the lyrics. A character in this play who dances "The Net" eats chicken bones dropped by Pozzo, and the second time he appears, the rope around his neck is shorter. That character is Lucky. Two other characters in this play contemplate hanging themselves, but don't because of logistics, and are named Vladimir and Estragon. For 10 points, identify this absurdist play by Samuel Beckett in which the title character never arrives.
ANSWER: Waiting for Godot [accept En attendant Godot] <CL>
10. Angular rocky masses called nunataks protrude from these formations, and a byproduct of these formations are unstable columnar seracs. These entities are responsible for the formation of "rock flour," and exhibit distinct coloration due to OH stretching. In prehistoric times, these entities caused a flow of viscoelastic mantle material and rebounding uplift of land mass. They exhibit alternating light and dark bands known as ogives, and parallel configurations of them result in an arete. Because the movement of these entities instigates plucking and ablation, they create U-shaped valleys. For 10 points, name these flowing masses of ice. ANSWER: glaciers (prompt on ice sheets or ice) <AT>
11. It's not mathematics, but the "method of averages" was made for use in this field. Eudoxus of Cnidus wrote On Speeds, a work about this field. Aristarchus of Samos proposed one theory in this field which the Almagest addressed. Epicyclic motion along deferents was a theory in this field of study, which the work Sidereus Nuncius superseded. Salviati and Simplicio debate in a work about this field called the Dialogue Concerning the Two Chief World Systems. That work was by Galileo, who disproved the Ptolemaic or heliocentric model of the solar system. For 10 points, name this field of science that studies the universe.
ANSWER: astronomy (do not accept "astrology")
12. In music theory, a Neapolitan chord is denoted by a flat and the roman numeral form of this number. A Tchaikovsky symphony of this number borrowed themes from Ukrainian folksongs, and was known as the "Little Russian." A quarter eighth eighth quarter quarter motif is prominent in this number movement of Beethoven's 7th symphony. This number is found in both the top and bottom of the cut time meter, and a piano concerto of this number by Rachmaninoff opens with bell-like tolls and oscillating arpeggios. This is the number of sharps in the D major scale. For 10 points, a string quartet contains how many violins?
ANSWER: $\underline{2}$ (or second) <DM/AT>
13. One early turnpike in this city replaced the Great Conestoga Road. The Federalist William Cobbett chastised the "fiery frenchified dames" of this city. This city was the site of the 1742 Bloody Election. One man from this city said that men should be "Republican machines". That man was the physician Benjamin Rush. Farmlands west of this city were called its state's "Dutch country" because of their German Mennonites. An incident in this city caused the defeat of the Proprietary Party by the Quaker Party, and that event was chronicled by resident Benjamin Franklin. For 10 points, name this Pennsylvania city that was the site of both Continental Congresses. ANSWER: Philadelphia <AG>
14. Works in this style include Ivan the Terrible and His Son and a painting where a couple blissfully holds hands during high tide, What Freedom. This style of Ilya Repin was also used in a self-portrait of a "desperate" man clutching his hair and looking at the viewer. A practitioner of this art form depicted seven years of his "artistic and moral life" in his The Painter's Studio, and painted grieving peasants in an artwork depicting a burial occurring in Ornans. This style was used to create works like The Sower and The Gleaners. Practiced by Gustave Courbet and Jean-François Millet, for 10 points, name this artistic movement that sought to depict everyday subjects.
ANSWER: Realism (accept Russian Realism before "desperate") <GA/AT>
15. Combining apatite and this molecule yields phosphoric acid in a "wet process." Alcohols are oxidized to carboxylic acids and ketones by a solution of chromium trioxide and this molecule, the Jones reagent. In a method of creating this molecule, nitrous acid serves as an oxidizing agent to produce nitrous oxide and it. This solvent in oleum can also be formed when its precursor is combined with a vanadium pentoxide catalyst. Produced by the lead chamber and contact processes, it functions as the electrolyte in car batteries. For 10 points, name this diprotic strong acid with formula H2SO4.
ANSWER: sulfuric acid (accept H2SO4 before mention) <AT>
16. One myth about this deity states that he introduced the concept of permanent death to humans by throwing a stone into a lake. This figure's son was bitten by a rattlesnake during a foot race, after which he shed the first tears. The star Arcturus was created when one of this deity's eyes got stuck in the sky while he was juggling them. A Nez Perce story tells of this figure's interactions with the "shadow people" in order to resurrect his wife. This deity is sometimes referred to as "Old Man," and he allegedly created mankind by kicking a ball of mud. For 10 points, name this mammalian trickster deity in Native American folklore.
ANSWER: Coyote <JK>
17. [MODERATOR NOTE: Make it clear the quote in the first line is a quote, using air quotes or another method.]

In February, this figure said that the death penalty "definitively" denied criminals "the possibility of rehabilitating themselves" one week after visiting a Mexican jail. This figure took off his shoes in Bangui, and lamented global warming in Laudato si'. President Obama joked about this man's use of Twitter to share encyclicals before this man said, "As a son of an immigrant family, I am happy to be a guest in this country, which was built by such families," in a speech given during his first trip to the United States in September 2015. For 10 points, name this successor of Benedict XVI, whose Twitter handle is @Pontifex.

ANSWER: Pope Francis I [accept Jorge Mario Bergoglio, prompt on The Pope] <CL>
18. This man was inspired to write Hear the Wind Sing when third baseman Dave Hilton hit a double. That book, along with A Wild Sheep Chase and a book about a translator briefly obsessed with pinball, is in his Trilogy of the Rat. In a work by this writer, the title protagonist has an alter ego called "the boy named Crow." Another character created by this writer named Nutmeg is attracted to a blue-black mark, and appears in a book which opens with Toru and Kumiko's search for their cat. For 10 points, name this Japanese author of The Wind-Up Bird Chronicle, Kafka on the Shore, and a novel titled after a George Orwell work, 1Q84.
ANSWER: Haruki Murakami <CL>
19. Members of this phylum begin life as ciliated veliger larvae, and transfer reproduction-aiding hormones via "love darts." Some of this phylum's organisms have a water retention-aiding operculum. This phylum's organisms have either two or three main nerve cords that surround the esophagus, and possess protective tissue with a periostracum outer layer and nacreous inner layer. These organisms that possess a muscular "foot" have a cavity used for excretion and respiration, which is covered by a mantle. Bivalves and gastropods are classes in, for 10 points, which phylum that includes snails, clams, and oysters?
ANSWER: Mollusca (accept mollusks) <AT>
20. This work distinguishes between direct and indirect taxes, and also states, "It is not very unreasonable that the rich should contribute to the public expense." One section of this work discusses lifestyle after the fall of the Roman Empire, and another details the "Advantages which Europe has derived from the Discovery of America." This work posits that the allocation of capital to the countryside and slow urban development produce a country's "natural progress of opulence." It also explains division of labor with the example of a pin factory, and says that individuals are guided by an "invisible hand." For 10 points, name this work by Scottish economist Adam Smith.
ANSWER: An Inquiry into the Nature and Causes of the Wealth of Nations <CL>
TB. This statement can be derived by inserting non-commuting observables into the canonical commutation relation, and a thought experiment attempting to disprove this statement involved weighing a box while a photon escaped from it. A simple form of it includes two standard deviation terms, the product of which is greater than or equal to $h$ bar over two. According to this statement, the probability of a location containing energy can only infinitely approach zero. For 10 points, name this statement asserting that it is impossible to determine both the position and momentum of a particle to exact certainty.
ANSWER: Heisenberg Uncertainty Principle (prompt on Heisenberg or Heisenberg Principle) <AT>

## Bonuses

1. During this conflict, soldiers were delivered to one battle in taxicabs. For 10 points each:
[10] Name this war between the Triple Entente and the Central Powers, with battles at the Somme and Verdun.
ANSWER: World War I or WWI
[10] "Going over the top" referred to leaving these WWI military structures. The tactics of "creeping barrages" and stormtroopers were used to capture them.
ANSWER: trenches
[10] This "legend," promoted by Erich Ludendorff, said that civilians lost WWI for Germany. People who believed this idea called its perpetrators "November Criminals".
ANSWER: stab in the back legend or Dolchstoßlegende for the ambitious (prompt on descriptive answers) <LT>
2. In order to descend into the underworld and revive her lover Tammuz, this goddess had to cast off an article of clothing at each of its gates. For 10 points each:
[10] Name this Assyro-Babylonian goddess of war and love. All her ex-lovers infamously met bad fates at the hands of this goddess herself.
ANSWER: Ishtar
[10] This man rejects Ishtar's advances toward him because of her mistreatment of her past lovers. He's the namesake of an epic poem where the wild man Enkidu assists him in finding the flood-survivor Utnapishtim.
ANSWER: Gilgamesh (accept The Epic of Gilgamesh)
[10] To punish Gilgamesh for his defiance, Ishtar sent this creature to kill him. Enkidu shook the haunches of this creature's corpse at Ishtar, threatening to do the same to her if she further interfered in his affairs.
ANSWER: Gugalanna (or the (Great) Bull of Heaven) <AT>
3. In the beginning of this book, an inexperienced sheepdog drives Gabriel Oak's flock off a cliff. For 10 points each:
[10] Identify this novel about Bathsheba Everdene, her admirer William Boldwood, and the object of her infatuation, Sergeant Troy. At this novel's climax, the supposedly drowned Troy turns out to be alive, but is soon shot by Boldwood.
ANSWER: Far from the Madding Crowd
[10] Far From the Madding Crowd is the fourth novel by this author of Jude the Obscure. He also wrote about Alec's rape of the title character in Tess of the d'Urbervilles.
ANSWER: Thomas Hardy
[10] Hardy also wrote this book in which Wildeve plunges into the water after Eustacia Vye before Diggory Venn gives up his life as a reddleman in favor of dairy farming.

## ANSWER: The Return of the Native <CL>

4. These two laws state that not A and B equals not A or not B , and not A or B equals not A and not B . For 10 points each:
[10] Name these laws commonly applied in the field of logic.
ANSWER: De Morgan's laws
[10] De Morgan's laws are useful in this form of algebra, where variables are either true or false. In computer science, a type of variable with only true or false values is given this name.
ANSWER: Boolean algebra (or Booleans)
[10] This type of logic gate will output true only when both inputs differ, for example, if one is true while the other is false. It is often symbolized by a cross enclosed in a circle.
ANSWER: exclusive or (or XOR) <AT>
5. This book was dedicated to Edmund Husserl "in friendship and admiration." For 10 points each:
[10] Identify this 1927 book which its author, Martin Heidegger, described as following a phenomenological method. Husserl's idea of intentionality influenced this work's concept of Sorge, which means care or concern.

## ANSWER: Being and Time [accept Sein und Zeit]

[10] In Being and Time, Heidegger claimed the sense of being had been overlooked by traditional ontology, a sub-branch of this larger philosophical field studied by Immanuel Kant. An Aristotle work shares a name with it.

## ANSWER: metaphysics

[10] This term from Being and Time is defined as "that entity which in its Being has this very Being as an issue," and literally translates to "being-there." Heidegger said this concept's potential for authenticity is linked to the possibility of choosing heroism, and it is sometimes translated as merely "existence."
ANSWER: dasein <CL>
6. The fifth "Knee Play" of an opera by this man features a chorus that counts to eight and the repeated line "these are the days my friends." For 10 points each:
[10] Name this 20th century minimalist composer of Einstein on the Beach. He adapted Kafka's Metamorphosis into a five-movement piano cycle, and attempted to make his music more accessible with his namesake "Works."
ANSWER: Philip (Morris) Glass
[10] Philip Glass used lines from the Pyramid Texts in this opera, which centers on the title Egyptian pharaoh. This opera is found in the Portrait Trilogy, along with Einstein on the Beach and the Gandhi-centric Satyagraha.
ANSWER: Akhnaten (accept Akhenaten)
[10] Philip Glass composed the score for this 1982 film, which simply consists of footage from American landscapes and cities juxtaposed with music. This film is subtitled "Life Out of Balance."
ANSWER: Koyaanisqatsi (KOY-ah-nis-COT-see) <AT/CL>
7. Authors seem to have a habit of giving their characters tuberculosis. Bummer. For 10 points each:
[10] Name this character whose death is partly caused by Mr. Brocklehurst's mismanagement of Lowood Institution. She dies in the arms of her younger friend at Lowood, Jane Eyre, whom she convinces to trust God.
ANSWER: Helen Burns [accept either]
[10] In this author's The Bell Jar, Buddy Willard is diagnosed with tuberculosis, causing Esther to delay ending their relationship despite the fact that he is not a virgin.
ANSWER: Sylvia Plath
[10] This man and his cousin, Joachim Ziemssen, both develop tuberculosis and stay in the sanitorium in Davos atop the title Magic Mountain in a Thomas Mann book. After seven years there, this man leaves to volunteer for the military.
ANSWER: Hans Castorp [accept either] <CL>
8. To calculate the energy of one of these entities, one can use the Born-Haber cycle. For 10 points each:
[10] Name these substances exemplified by ice and water. Auguste Bravais proved that they can exist in fourteen possible configurations, like triclinic, monoclinic, and orthorhombic.
ANSWER: crystals (accept crystal lattices, prompt on lattices )
[10] This crystal configuration features molecules located at each of the vertices of a cube, as well as an additional molecule on each of the faces. It's contrasted with the primitive cubic and body-centered cubic crystalline systems.
ANSWER: face-centered cubic
[10] Many crystal classes without inversion symmetry posses this property, the accumulation of electric charge in response to mechanical stress. Quartz strongly exhibits this phenomenon.
ANSWER: piezoelectricity (accept piezoelectric effect) <AT>
9. Saint Mark established the Coptic Church of this religion in Egypt. For 10 points each:
[10] Name this religion, which was paired with Commerce and Civilization, as one of the three C's that David Livingstone popularized. Many missionaries of this religion to Africa got funding by working against slavery.
ANSWER: Christianity [do not accept or prompt on anything more specific]
[10] The Axumite emperor Ezana introduced Orthodox Christianity to this country. Philip the Evangelist notably converted an official from this country, which is sometimes identified as the first Christian nation.
ANSWER: Federal Democratic Republic of Ethiopia
[10] Diogo Cão ("cow") became the first Portuguese man to enter this country in 1483. Nzinga a Nkuwu was one ruler from this kingdom to convert to Christianity, and King Afonso I of this nation was a noted Christian who protested the slave trade in a letter to the King of Portugal.
ANSWER: Kingdom of Kongo [accept Kongo dya Ntotila or Wene wa Kongo or Reino do Congo] <CL/RN>
10. Because the Supreme Creator Bondye is too far removed from humankind, these spirits are summoned by the Houngan or Bokor to act as intermediaries. For 10 points each:
[10] Name these spirits who include Agwe, who rules over the sea, and Erzulie, whose various aspects are associated with love and beauty.
ANSWER: loa
[10] Loa appear in this syncretic religion which incorporates aspects of West African religion and Roman Catholicism, among others. It is primarily practiced in Haiti and Haitian communities.
ANSWER: Vodou [Accept Vaudou, Vodun, Vodoun, and Voodoo]
[10] This loa usually appears as an old man with a cane and straw hat. He speaks all human languages and is the first loa to be invoked in a Vodou ceremony.
ANSWER: Papa Legba <CC>
11. This man wrote about a generational divide in his first major play, The Swamp Dwellers. For 10 points:
[10] Name this author of many plays produced by the Royal Court Theatre, including The Lion and the Jewel. Other notable works by him include Requiem for a Futurologist and Aké: The Years of Childhood.
ANSWER: Wole Soyinka
[10] Soyinka is from this African country, also home to the author of Arrow of God who described Okonkwo in Things Fall Apart, Chinua Achebe.
ANSWER: Federal Republic of Nigeria
[10] This Soyinka play is based on a historical event and focuses on Simon Pilkings' prevention of the ritual suicide of Elesin after a ruler dies. Olunde commits suicide instead, to restore the order of the universe.
ANSWER: Death and the King's Horseman <CL>
12. This man prominently featured an organ in his third symphony, and included pieces like Tortoises, Aquarium, and Wild Asses in a musical suite of fourteen movements. For 10 points each:
[10] Name this composer of The Carnival of the Animals.
ANSWER: Camille Saint-Saëns
[10] Saint-Saëns used one of these instruments to imitate the sound of rattling bones in the Fossils movement in The Carnival of the Animals. He also attempted to achieve the same effect in his Danse Macabre.
ANSWER: xylophone [do not accept "vibraphone" or "marimba"]
[10] This movement from The Carnival of the Animals that depicts a title avian is perhaps the most famous. It was originally scored for solo cello accompanied by two pianos.
ANSWER: The $\underline{\text { Swan }}$ [accept le $\underline{\text { Cygne }]}<\mathrm{AT}>$
13. This company's former CEO was labeled "The Most Hated Man in America" after he spiked the price of a drug by 5,500\%. For 10 points:
[10] Name this pharmaceutical company known for producing the drugs Daraprim and Vecamyl.
ANSWER: Turing Pharmaceuticals
[10] This man, the aforementioned former CEO of Turing Pharmaceuticals, refused to testify about his controversial business tactics in Congress. In November 2015, he bought the Wu-Tang Clan album Once Upon a Time in Shaolin.
ANSWER: Martin Shkreli
[10] Daraprim treats toxoplasmosis, to which people with this sexual transmitted disease are especially prone. This disease was first identified in 1981, and caused a major national scare in the ensuing decade.
ANSWER: AIDS (accept acquired immune deficiency syndrome, do not accept "HIV") <AT>
14. A proposed method to conduct this process involves isothermal and adiabatic expansions of a gas at different temperatures. For 10 points each:
[10] Name this theoretical thermodynamic process that converts heat into work in the most efficient way possible.

## ANSWER: Carnot cycle

[10] The amount of thermal energy transferred by a system can be calculated by taking the derivative of temperature with respect to this quantity. This measure of the disorder of a system is symbolized $S$.
ANSWER: entropy
[10] This theorem attempted to mathematically represent the Second Law of Thermodynamics, stating that for any cyclical systems like the Carnot cycle, net changes in heat energy can only be less than or equal to zero.
ANSWER: Clausius theorem <AT>
15. In 1862, this currency was created by the Legal Tender Act, and the Pendleton Plan tried to pay federal bonds off with it. For 10 points each:
[10] Name this form of paper currency used until the Resumption Act of 1875. It named an 1874-1889 political party that was absorbed by the Populists.
ANSWER: greenbacks
[10] The Soft vs. Hard or Cheap vs. Sound money debates occurred during this man's presidency. This Union General accepted Robert E. Lee's surrender.
ANSWER: Ulysses S. Grant
[10] The Coinage Act of 1873 occurred in the same year as this scandal, which implicated Henry Wilson, Schuyler ("SKY-ler") Colfax, and James G. Blaine.
ANSWER: Credit Mobilier ("mo-bee-lee-AY") scandal
16. Vachel Lindsay wrote a poem about this figure walking at midnight. For 10 points each:
[10] Name this 16th President of the United States, who himself wrote poems like "My Childhood Home I See Again." Whitman penned "When Lilacs Last in the Dooryard Bloom'd" for this man.
ANSWER: Abraham Lincoln
[10] This 1891 Walt Whitman poem, an elegy for the death of Lincoln, commands the title figure to "rise up and hear the bells." The narrator of this poem describes a figure "fallen cold and dead" as well as a "vessel grim and daring."
ANSWER: "Oh Captain! My Captain!"
[10] "Oh Captain! My Captain!" was published in Whitman's collection Leaves of Grass alongside this ten part elegy which describes a "husky-noised sea" murmuring the "low and delicious word DEATH."
ANSWER: "Out of the Cradle Endlessly Rocking" <LG/CL>
17. It was discovered in the Nile Delta by a French soldier in 1799. For 10 points each:
[10] Name this stone slab on which the same text is written in three different scripts. Today its name is a metonym for the essential clue to understanding a given topic.
ANSWER: Rosetta stone
[10] The Rosetta stone contains an Egyptian script called Demotic, hieroglyphs, and this language, which was known when the stone was discovered.
ANSWER: Ancient Greek
[10] This other script, discovered in Knossos, Crete, by Arthur Evans in 1900, wasn't cracked until 1953. Another alphabeticallypreceding version of the script has yet to be deciphered.
ANSWER: Linear B [prompt on Linear]
18. The extrinsic pathway of this process is theorized to be initiated by the tumor necrosis factor, or Fas ligand. For 10 points:
[10] Name this process where the nucleus fragments and cell membrane blebs, destroying the cell. It's contrasted with necrosis.
ANSWER: apoptosis
[10] During apoptosis, a cascade of these proteins is activated. Members of this family of cysteine proteins have been termed "executioner" proteins due to their roles in apoptosis, necrosis, and inflammation.

## ANSWER: caspases

[10] An over-occurrence of apoptosis can lead to this condition, the wasting away of a part of the body. This condition occurs in muscles when they are disused for a long period of time.
ANSWER: atrophy (accept atrophying) <AT>
19. The first one of these conflicts was concluded by the Treaty of Nanjing. For 10 points each:
[10] Name these conflicts between the United Kingdom and China over the trade of a certain addictive good. The first of these conflicts resulted in Britain receiving the "most favored nation" status.

## ANSWER: Opium Wars

[10] The Second Opium War is also known by this specific name which refers to a vessel that served as its starting point. During this conflict, forces under Lord Elgin won the Battle of Canton.

## ANSWER: Arrow War

[10] This man strongly opposed opium trade, which helped to spark the First Opium War. He was later blamed by the Daoguang Emperor for the conflict. His anti-opium measures in Guangdong resulted in more than 1,700 arrests.
ANSWER: Lin Zexu [accept Yuanfu; prompt on Zexu] <CL>
20. Pliny the Elder may have written about this "prototypical icon of human agony" in his Natural History. For 10 points each:
[10] Name this Hellenistic sculpture depicting the title figure writhing in agony alongside his two grown-up sons, Antiphantes and Thymbraeus, who are shown to be half the size of their father.
ANSWER: Laocoon and His Sons [accept The Laocoon Group]
[10] This Italian Renaissance artist carved a woodcut that parodied Laocoon by replacing the human figures with monkeys. He's more famous for paintings like Sacred and Profane Love and Bacchus and Ariadne, as well as a namesake red pigment.
ANSWER: Titian Vecellio
[10] In Laocoon and His Sons, the title characters are bound and constricted by these creatures. In Michelangelo's Sistine Chapel ceiling, a man resembling one of these creatures tempts Adam and Eve.
ANSWER: snakes [accept sea serpents or specific varieties of snakes] <GA>

TB. Edwin Chadwick and the "sanitary school" helped reform this infrastructure in London in 1848. For 10 points each:
[10] Name this system, which opened into and darkened the Seine River in Paris twice daily until Eugene Belgrand, under the aegis of Baron von Haussmann, helped reform it.
ANSWER: sewer (prompt on "water" utilities)
[10] Hausmann's reforms of Paris included using gas and later electricity to supply these permanent fixtures. Louis XIV tried using hanging oil-lit lanterns, but that rarely worked.
ANSWER: streetlights (accept word forms and descriptions)
[10] The first of this type of business was Au Bon Marché ("oh bone mar-SHAY"), and most were called grands magasins ("grawn ma-gah-ZAN") in Paris. They succeeded the magasins de nouveautés ("ma-gah-ZAN deuh noo-voh-TAY").
ANSWER: department stores

