1. In a novel by this author, Dritto abandons his command during a pivotal battle in order to sleep with the wife of his unit's cook. The protagonist of that novel befriends Cousin after being disillusioned by the hardline Communist Red Wolf and lives with his sister, a prostitute known as "the Dark Girl of Long Alley." In another novel by this author, Silas Flannery is promised that a computer will finish writing his book titled *In a network of lines that enlace*. That protagonist visits the revolution-torn Ataguitania after meeting (*) Ludmilla in a bookstore while he was trying to return a defective copy of a book by this author. *The Path to the Nest of Spiders* is by, for 10 points, what Italian author who made you, the reader, the protagonist of his novel *If on a winter's night a traveler*?
ANSWER: Italo **Calvino**
<Grames, Literature - European>

2. The C# (C-sharp) programming language has a "unified" variety of this concept, allowing for all of these things to inherit the ToString (too-string) method. Anders Hejlsberg (HYLES-berg) developed a widely-used version of JavaScript named for this concept that handles interface classes using this concept's "duck" form. In general, polymorphism allows for a single interface to conform to (*) different forms of this concept. Languages like Java use the "static" form of this concept, in which the safety guaranteed by this concept is checked at compile time. In the language C, examples of this concept include "void," "char," and "long." "Integer" and "boolean" are other examples of, for 10 points, what concept or classification that describes how a language should consider a variable or data?
ANSWER: data **type**s [accept primitive **type**s, duck **typing**, or static **typing**; accept **TypeScript**; do NOT accept "objects"]
<Jose, Science - Computer Science>

3. Hubert Joseph Henry committed suicide in prison after he forged a letter by Alessandro Panizzardi about this person and was then exposed. The League of the Rights of Man was formed by supporters of this person, whom the League of Patriots opposed. The conflict between revisionists and anti-revisionists over this person was satirized in a *Figaro* cartoon depicting a brawl at a family dinner. His sword was broken in a ceremony at the (*) École Militaire. A document retrieved from a wastebasket describing the firing mechanism for a new type of cannon was supposedly written in this man's hand, but was actually written by Ferdinand Walsin Esterhazy. This person spent years on Devil's Island after being convicted of espionage. For 10 points, name this French Jew defended by Émile Zola in "J'Accuse!"
ANSWER: Alfred **Dreyfus** (dray-FUCE)
<Bentley, History - European>

4. A gateway named for this island opened during the Oligocene Epoch. The world's largest heath plant, the pandani, is endemic to this island. A type of pine tree named for a river on this island can live for up to 3,000 years and is known as the Huon Pine. Wild Eastern Quolls live only on this island. Hikers on this island often walk the Overland Track in its Cradle Mountain-Lake St. Clair National Park. A zoo in this island's capital housed the last known (*) thylacine. The southernmost peaks of the Great Dividing Range are on this island, whose earliest inhabitants likely crossed a land bridge across the Bass Strait and had a diet rich in wombats. For 10 points, name this Australian island home to a namesake "devil."
ANSWER: **Tasmania** [or **Van Diemen's Land**]
<Bentley, Geography - World>

5. A photographer from this country captured a woman sunbathing next to the treads of a construction vehicle in the book *The Last Resort*. Another photographer from this country popularized the term "pictorialism" and staged a scene of a young woman dying in *Fading Away*. A broom rests in front of an open door in an entry in *The Pencil of Nature*, an 1844 series by a photographer from this country whose calotype process allowed for infinite replications but was less sharp than the (*) French-made daguerreotypes. A monarch from this country holds a fan in the widely-distributed W. & D. Downey Diamond Jubilee portrait of 1893. For 10 points, name this home to photographers Martin Parr, Henry Fox Talbot and Roger Fenton, the last of whom frequently photographed its monarch, Queen Victoria.
ANSWER: **United Kingdom** [or **UK**; or Great **Britain**; accept **England**]
<Bentley, Arts - Photography>

6. One of these organisms known as "EHUX" (EE-hux) produces alkenones that are used to measure historical temperatures. The production of dimethyl sulfide by these organisms has a balancing effect on Earth's climate, according to the CLAW hypothesis. Iron fertilization aims to directly stimulate the growth of these organisms. The Redfield ratio measures the ratio of carbon-to-nitrogen-to-phosphorus in these organisms. Some of these organisms that produce plates of calcium carbonate are known as (*) coccolithophores. These organisms include diatoms (DYE-uh-toms), which produce a cell wall made of silica, and dinoflagellates. These primary producers are the major source of food for krill. For 10 points, name these microorganisms, a photoautotrophic type of plankton.
ANSWER: **phytoplankton** [prompt on plankton or coccolithophores or dinoflagellates or diatoms until read]
<Ramaswami, Science - Biology>

7. The relationship between "price" and this quantity was determined to be pro-cyclical in a 1986 paper by Robert Hall, who strongly rejected an efficiency relation between the two variables. The "shutdown zone" consists of points on the curve representing this quantity where it is less than the average expenditure on variable inputs. Unlike firms in perfect competition, monopolies are able to charge markups above this value in the long run. The curve representing this quantity intersects the (*) ATC curve where the slope of the ATC curve is zero. By definition, a firm can make a profit on sales up until the point where a quantity denoted "MR" equals this quantity. For 10 points, give this term for the cost of producing one additional good.
ANSWER: **marginal cost** [accept **marginal** after "cost" is read; prompt on cost or price]
<Alston, Social Science - Economics>

8. A verse that claims that Allah made every creature from this "stuff" distinguishes creatures that move on their bellies from those that walk on two and four legs. In 930 AD, the Qarmatians used corpses to desecrate a place where this stuff had appeared when an angel tapped his wing on the ground. When this stuff is absent, the act of *tayammum* can be performed. The ritual of traveling between the **(*)** hills of Safa and Marwa seven times commemorates Hagar's search to find this stuff for her infant son Ishmael. This substance is produced at Zamzam in Mecca. A procedure performed before *salat*, known as *wudu*, involves applying this substance. For 10 points, name this substance that is used in acts of ritual ablution and purification in Islam and other religions.
ANSWER: **water** [or **H2O**]
<Brownstein, RMP - Other Religion>

9. One of these objects titles a story whose narrator remembers the phrase "the best place to hide a leaf is in a forest" while seeking to rid himself of one that had been acquired from a Scotsman "on the outskirts of Bikanir." A fictional one of these things is the subject of the story "The Approach to Al'Mutasim." A month's pension and a blackletter Wycliffe Bible are traded for one of these things by a man who becomes obsessed with it. Another story describes highly sought-after ones called the **(*)** Vindications, as well as Purifiers who destroy many of them. Examples of these things in that story include *Axaxaxas mlö* and *The Combed Thunderclap*, which are among the millions of them stored in hexagonal rooms. For 10 points, name these objects, the contents of "The Library of Babel."
ANSWER: **book**s [accept "The **Book of Sand**"; accept **book**s in the Library of Babel after "Vindications"]
<Grames, Literature - World>

10. Literature of the *Naru* genre that is set in this kingdom includes *The Great Revolt*, *The Cutha Legend*, and a text in which the destruction of a temple by one of its kings prompts an invasion by the Gutian tribes. A king of this empire mysteriously "washed his weapons in the sea" after a military campaign. According to a text probably written in the Ur III Period, this kingdom fell after one of its rulers destroyed a temple of Enlil at Nippur. A ruler of this kingdom overthrew Ur-Zababa of **(*)** Kish. It reached its maximum extent under Naram-Sin. Like Sumerian, the namesake language of this empire used cuneiform, and became the native language of the later Assyrians and Babylonians. For 10 points, name this Mesopotamian empire founded by Sargon the Great.
ANSWER: **Akkad**ian Empire [or **Agade**]
<Brownstein, History - World>

11. An enzyme family named for this letter is classified into "conventional" or "novel" depending on whether the enzymes require both DAG and a calcium ion to function. The enzyme GULO, or L-gulono-lactone oxidase, catalyzes the last step in the biosynthesis of a molecule named for this letter. PIP2 is hydrolyzed by a phospholipase named for this letter to form IP3 and di-acyl-glycerol. This letter names a 31-residue-long peptide that is cleaved from **(*)** proinsulin to form insulin. A vitamin named for this letter is essential for the hydroxylation of proline and lysine to form collagen. The two ends of a polypeptide chain are named for N and for this letter. For 10 points, give this letter that represents a vitamin, also known as ascorbic acid, which can prevent scurvy.
ANSWER: **C** [accept Vitamin **C**, **C** peptide, protein kinase **C**, or **PKC**]
<Ramaswami, Science - Biology>

12. A member of this movement supposedly buried a tube of brown paint in his own garden after he learned that ancient Egyptian mummies had been pulverized to make it. That artist from this movement depicted a prince falling in love with the woman Penelophon in the painting *King Cophetua and the Beggar Maid*. Another member of this movement depicted an episode from a John Keats poem in his painting *Isabella and the Pot of Basil*, and created an allegory showing (*) Jesus knocking on a wooden door that has no handle. The paintings *The Awakening Conscience* and *The Light of this World* are from this movement. Edward Burne-Jones and William Holman Hunt were members of, for 10 points, what group of 19th-century British artists?
ANSWER: **Pre-Raphaelite** Brotherhood [or the **Pre-Raphaelite**s; or the **PRB**]
<Jose, Arts - Painting>

13. At his greatest military defeat, this man prepared his own funeral pyre with a heap of burning saddles. After this leader's death, his men "cut off part of their hair and disfigured their faces horribly with deep wounds" according to the historian Priscus. This ruler is represented in the Nibelungenlied as Etzel. He entered into negotiations with Theodosius II after his invasion of Greece was stopped at Thermopylae. He was defeated by a combined army headed by (*) *magister militum* Aetius, who stopped his forces on the Catalaunian Plains at the Battle of Chalons. A meeting with Pope Leo I supposedly convinced this man to leave Italy. Chroniclers gave this man the byname of "Flagellum Dei," or "Scourge of God." For 10 points, name this leader of the Huns.
ANSWER: **Attila** the Hun [or **Attila** Flagellum Dei]
<Bentley, History - European>

14. Devices used to measure this quantity include one based on high-density alkali vapor that isn't undergoing spin-exchange relaxation, (pause) and one that contains a sense component around a drive component around a core of mu metal. Another device for measuring this quantity arranges two Josephson junctions in a superconducting loop and is called a SQUID. This quantity equals the curl of the vector (*) potential, and changes in it can be detected by a Hall effect sensor. It is proportional to the line integral of "*I* times the differential length cross *r*-prime over the magnitude of *r* cubed" according to the Biot–Savart (byoh-sah-VARR) law, which gives the value of this quantity created by a current-carrying wire. For 10 points, name this vector field measured in teslas.
ANSWER: **magnetic field** [accept **magnetic flux density** or **B-field**; prompt on *B*; prompt on magnetic flux until "vector potential" is read, but not afterwards]
<Mukherjee, Science - Physics>

15. A character in this play has a dream anticipating his death, in which he is pushed off a ship to France and sees skulls with "reflecting gems" for eyes at the bottom of the sea. While following a hearse to St. Paul's, a woman in this play is met by her husband's killer, who gives her his sword and asks her to pierce his exposed chest. In this play's last act, the title character is visited by the (*) ghosts of his victims, including Buckingham, Hastings, and Clarence. The title character of this play declares, "Since I cannot prove a lover… I am determined to prove a villain" in a speech that opens, "Now is the winter of our discontent." For 10 points, name this Shakespeare play about a villainous hunchbacked king.
ANSWER: *Richard III*
<Bollinger, Literature - British>

16. Despite appealing to the President to raise an independent army to fight this battle, press-loving John McClernand was dismissed from command of the XIII (thirteenth) Corps during it. The losing side in this battle felled trees across Deer Creek to block David D. Porter's attempt to reach the Yazoo in the Steele's Bayou Expedition leading up to it. This overall campaign included engagements at Big Black River Bridge and **(*)** Champion Hill. At this battle, the Union Army of the Tennessee forced the surrender of the Confederate general John Pemberton. This battle's end on July 4th, 1863, allowed for the complete implementation of the Anaconda Plan. For 10 points, name this victory for Ulysses Grant, his successful siege of the namesake city on the Mississippi River.
ANSWER: Siege of **Vicksburg** [or **Vicksburg** Campaign]
<Jose, History - American>

17. The Annenberg Center developed a Flash game in which the players learn how the Tanner Proposal would change how this process works. A "Secret Plan" to gain control over this process was the subject of a 2016 book by *Salon*'s David Daley whose title begins with the word "Rat." The NDRC, led by Eric Holder, aims to reform this process. It is the subject of the Supreme Court case **(*)** *Gill v. Whitford*. This practice resulted in entities such as "Donald Duck kicking Goofy in the groin" that was overthrown by a court in Pennsylvania. REDMAP was a largely successful Republican plan to gain control over this process in 2010. Cracking and packing are used in this process, which follows a new census. For 10 points, name this practice where political boundaries are changed usually with the intent of favoring one's own political party
ANSWER: **redistrict**ing [accept partisan **gerrymander**ing; anti-prompt on cracking or packing until read]
<Bentley, Current Events - United States>

18. In a ballet by this composer, a ghost appears amid falling black-key and rising white-key glissandi. In another ballet, he quotes the fate motif from Beethoven's Fifth as the police knock on the door to arrest a farruca dancer. Miguel Llobet (yoo-BET) arranged for guitar this composer's setting of 7 short regional folk songs, such as the lullaby "Nana" and the lament "Asturiana," which Victoria de los Ángeles often sang. Melismatic *Ay!* (EYE) syllables introduce the **(*)** gypsy Candelas before a "Dance of Terror" in one of his ballets. For Arthur Rubinstein, he wrote *Fantasía Bética* and arranged the "Ritual Fire Dance." His ballet about the magistrate's lust for the miller's wife evokes flamenco music. For 10 points, name this Andalusian composer of *El amor brujo* (BROO-ho) and *The Three-Cornered Hat*.
ANSWER: Manuel de **Falla** (FAH-yah) (The "Seven Spanish Folksongs" are usually known as *Siete canciones populares españolas*.)
<Lifshitz, Arts - Music>

19. In one story, this god is scared into falling into a pit by some quail after convincing worms and bees to help him turn a conch shell into a working trumpet. An aspect of this god that was worshipped in round temples wore a cone-shaped hat and a mask with two tubes through which he blew the wind. This god shut himself in a stone chest, then set himself on fire, after accidentally drunkenly sleeping with his **(*)** sister. He went to the underworld to retrieve bones, which he then ground up and mixed with his own blood to create the humans of the fifth sun. The morning star and the evening star were represented by this god and his twin brother Xolotl (shoh-LOTTLE). Tezcatlipoca (tez-KAHT-lee-POH-kah) repeatedly clashed with, for 10 points, what Aztec god, usually represented as a feathered serpent?
ANSWER: **Quetzalcoatl** (ket-sull-koh-AH-tul) [accept **Ehecatl**] (Ehecatl is the wind-blowing aspect of Quetzalcoatl.)
<Grames, RMP - Other Myth>

20. In the first chapter of *Patriotic Gore*, Edmund Wilson points out that this character's "harsh humanity" is characteristic of his "native New England." In a "Key" to the novel in which this character appears, the author confesses "such depravity" could not exist in one man as that exhibited by this character. This character becomes enraged when he sees the title character's "devilish" silver dollar entwined by long fake hair. Cassy and Emmeline (*) escape from this man with the protagonist's help, leading this man to have his henchmen Sambo and Quimbo beat the protagonist to death. The title character is sold to this man after the death of Eva St. Clair and her father. For 10 points, name this vicious slave owner from *Uncle Tom's Cabin*.

ANSWER: **Simon** **Legree** [accept either underlined name]

<Jose, Literature - American>

21. A line from this poem titles a Miss Marple mystery that begins with Heather Badcock drinking a poisoned cocktail. Reapers "reaping early" hear the song of the title figure of this poem, which they ascribe to a fairy. A male character in this poem is introduced as having a "helmet and the helmet-feather" that "Burn'd like one burning flame together." Its title character resides in a place where "Four gray walls, and four gray (*) towers, / Overlook a space of flowers" and writes her name on her boat before dying. A mirror cracking from side to side indicates that "the curse is come upon me" in this poem, set on an island near "many-tower'd Camelot." For 10 points, name this Alfred, Lord Tennyson poem about a woman who dies before meeting up with "bold Sir Lancelot."

ANSWER: "The **Lady of Shalott**"

<Bentley, Literature - British>

1. Linus Pauling chose to append this scientist's name to a radius slightly larger than the covalent radius. For 10 points each:
[10] Name this scientist whose equation of state contains a value symbolized *b* that accounts for the volume that gas molecules occupy.
ANSWER: Johannes Diderik **van der Waals** [or **van der Waals** equation; or **van der Waals** radius]
[10] The weakest of the van der Waals forces is this intermolecular force between instantaneous dipoles.
ANSWER: **London dispersion** forces [accept either underlined portion]
[10] Using the van der Waals equation calculates this value to be equal to three-eighths for a gas at its critical point. This quantity is equal to one plus a power series of volume, according to the virial expansion.
ANSWER: **compressibility factor** [or **Z**; do not accept or prompt on "compressibility"]
<Prieto, Science - Chemistry>

2. Men whose claim on this title extended earlier than the Tokugawa Shogunate were known as *tozama*. For 10 points each:
[10] Identify this title of the men who controlled most of the land in Tokugawa Japan.
ANSWER: **daimyō** [anti-prompt on shinpan or fudai]
[10] During the Tokugawa period, the most profitable *han*s were controlled by the descendants of men who fought with Ieyasu at this battle. Ishida Mitsunari was defeated at this battle on October 21, 1600.
ANSWER: Battle of **Sekigahara**
[10] To reduce the possibility that they were planning rebellions, daimyō were required to spend half their time in this capital of the Tokugawa Shogunate, known as Edo at the time.
ANSWER: **Tokyo** [or **Tokyo** Metropolis]
<Bentley, History - World>

3. In the second movement of this piece, the pianist plays a cluster chord by pressing down on the keys with a 14-and-3/4-inch piece of wood. For 10 points each:
[10] Name this piece that quotes Beethoven's Fifth Symphony in all four movements. In its fourth movement, an optional flute enters playing the "Human Faith" theme, representing its subject playing the flute over a pond.
ANSWER: *Concord Sonata* [or **Piano Sonata No. 2**, Concord, Mass., 1840–60]
[10] This American modernist composed the *Concord Sonata*, the unfinished *Universe Symphony*, and *Three Places in New England*.
ANSWER: Charles **Ives**
[10] Ives once told his copyist "All [of these] are right. Just copy as I have. I want it that way." Prokofiev called Stravinsky's music "Bach" with these things, and dissonant minor seconds inspired this two-word nickname of Chopin's Étude in E minor, Opus 25 No. 5.
ANSWER: **wrong note**s [accept **incorrect note**s or equivalents; accept "**Wrong Note**" Étude]
<Bollinger, Arts - Music>

4. One character in this novel is tasked with writing a symphony to celebrate the upcoming new millennium. For 10 points each:
[10] Name this 1998 novel. In this novel, Vernon Halliday and Clive Linley visit the title city to carry out a pact to help each other commit suicide, which they had made after Molly Lane's funeral.
ANSWER: *__Amsterdam__*
[10] *Amsterdam* was written by this contemporary British author of *Saturday* and *Atonement*.
ANSWER: Ian __McEwan__ [or Ian Russell __McEwan__]
[10] *Amsterdam* won the Man Booker Prize, which has controversially been won by writers from this country in the last two years. Chicano literature is produced by authors of Mexican heritage in this country.
ANSWER: __United States__ of America [or __US__A; or __America__]
<Bentley, Literature - British>

5. Answer the following about the descendants of Nyx, the primordial goddess of night, for 10 points each.
[10] Hesiod's (HEE-see-ud's) *Theogony* notes that Aether (ee-ther) and Hemera (heh-MAIR-ah), the latter of whom is the personification of day, were the children of Nyx and this male personification of darkness.
ANSWER: __Erebus__
[10] Nyx also had many children alone, including this goddess of chaos who threw the Golden Apple of Discord into the party at the wedding of Peleus and Thetis.
ANSWER: __Eris__
[10] Nyx was also the mother of these three figures, whose names were Clotho, Lachesis (lah-KEE-siss), and Atropos; they were responsible for spinning, measuring, and cutting the threads of mortals' lives.
ANSWER: the __Fate__s [or the __Moira__i]
<Carson, RMP - Greco-Roman Myth>

6. A Keeper of the Heads lived in this structure's gatehouse and had the job of making sure the skulls of traitors were not vandalized. For 10 points each:
[10] Identify this structure erected in the 12th century. Men would "shoot" the narrow gaps in this structure, and houses covered it until Charles Labelye's 1762 renovation.
ANSWER: Old __London Bridge__
[10] Many boatmen died trying to pass under London Bridge due to the strong tides of this river, which the bridge spans.
ANSWER: __Thames__
[10] This man's daughter, Margaret Roper, retrieved her father's head for burial from London Bridge. He was canonized in 2000, almost 500 years after he was beheaded for refusing to take the Oath of Supremacy to Henry VIII.
ANSWER: Thomas __More__ [or Sir Thomas __More__; or Saint Thomas __More__]
<Bentley, History - European>

7. Answer the following about the Bernoulli equation, for 10 points each:
[10] The Bernoulli equation implies that if potential energy is held constant, an increase in this other value will result in decreased flow velocity.
ANSWER: **pressure**
[10] The Bernoulli equation applies when the fluid is in this idealized, layered flow regime contrasted with turbulent flow.
ANSWER: **laminar** flow
[10] While Bernoulli's equation ignores viscous effects, this equation for modeling laminar flow for incompressible fluids inside a cylindrical pipe takes viscosity into account.
ANSWER: Hagen–**Poiseuille** (pwah-ZUH-ee) equation [or Hagen–**Poiseuille** law]
<Raje, Science - Physics>

8. Robert Duncan wrote a poem imagining one of these people as a "falconress" and himself as a "gay falcon treading her wrist." For 10 points each:
[10] Name this familial relation of Sylvia Plath to Frieda Hughes, who wrote a forward to an edition of Plath's collection *Ariel*. In "Ariel," Plath alluded to having this role to Frieda with the lines "the child's cry / melts in the wall."
ANSWER: **mother**s [or equivalents like **mother**-daughter; do not accept or prompt on "daughter" alone]
[10] This author wrote about the whistling of his dying mother splitting the air "into nine levels" in his poem "Buckdancer's Choice." He also wrote the poem "Falling" and the novel *Deliverance*.
ANSWER: James **Dickey**
[10] Allen Ginsberg wrote "Strange now to think of you, gone without corsets & eyes" in this elegy for his mother Naomi, whose title references his Jewish background.
ANSWER: "**Kaddish**"
<Brownstein, Literature - American>

9. Jacob Rodrigues Pereira, the grandfather of two prominent French financiers, developed a method for teaching people with this condition. For 10 points each:
[10] Identify this condition. People with this characteristic were educated at the Clarke School in Massachusetts by Alexander Graham Bell.
ANSWER: **deaf**ness [or **deaf mute**; or **hard of hearing**]
[10] This man, another Frenchman, developed a namesake system of raised dots that could be used by the blind to read with their fingers.
ANSWER: Louis **Braille**
[10] This wheelchair-bound former senator took to the floor of the Senate in 2014 to convince his colleagues to ratify the UN Convention on the Rights of Persons with Disabilities.
ANSWER: Bob **Dole** [or Robert Joseph **Dole**]
<Bentley, Mixed/Other/General Knowledge>

10. Identify the following about the genre of Weltlandschaft (VELT-lond-shoft), landscape paintings made from birds-eye perspectives, for 10 points each.
[10] The genre was invented by Joachim Patinir, who depicted Christ's baptism in the left panel of his painting of the penitence of this saint. A skull rests on a windowsill in a master engraving of this saint.
ANSWER: Saint **Jerome** [or Eusebius Sophronius **Hieronymus**]
[10] One example of the genre is this circa-1560s painting in which a farmer is too focused on his plowing to notice that the title mythological figure has plunged into the sea in the bottom right of the painting.
ANSWER: *Landscape with the Fall of Icarus* [or De *val van Icarus* or La *Chute d'Icare*]
[10] *Landscape with the Fall of Icarus* is by this artist of *The Tower of Babel* and *The Hunters in the Snow*.
ANSWER: Pieter **Breugel** the Elder [or Pieter **Brueghel** the Elder]
<Bentley, Arts - Painting>

11. Al-Sayyid Ahmad's wife Amina suffers a broken collarbone when she is hit by a car while on her way to the Al-Hussein Mosque in a 1956 novel titled in part for one of these buildings. For 10 points each:
[10] Name this kind of building. It is the first word in the title of the first two novels of the *Cairo Trilogy*.
ANSWER: **palace**s [accept *Palace Walk* or *Palace of Desire*]
[10] The *Cairo Trilogy* was written by this Nobel-winning Egyptian author.
ANSWER: Naguib **Mahfouz**
[10] Elwan is horrified when his former fiancée Randa marries her boss Anwar in a Mahfouz novel titled for one of these political events. The title of Aravind Adiga's second novel refers to it being set between two of them in India.
ANSWER: **assassination**s [accept descriptive answers like a political **leader** being **killed**; accept *The **Day the Leader was Killed**** or *Between the Assassinations*]
<Carson, Literature - World>

12. This formula does not account for metallicity. For 10 points each:
[10] Name this relation stating that the logarithm of one of the namesake quantities is linearly proportional to the logarithm of the other namesake quantity. It was first given by Henrietta Swan Leavitt (LEV-it) after she examined a type of variable star.
ANSWER: **period–luminosity** relation [accept in either order]
[10] The period–luminosity relation was first derived by examining this kind of radially-pulsating variable star, which is named for the constellation in which they were first discovered.
ANSWER: **Cepheid**s [or **Cepheid** variable stars]
[10] This scientist used the period–luminosity relation to calibrate the cosmic distance ladder. His namesake "tuning fork diagram" classifies galaxies based on their shape.
ANSWER: Edwin **Hubble** [accept **Hubble**'s tuning fork diagram]
<Jose, Science - Astronomy>

13. Aristotle described these things as complexes of form and matter, and distinguished their essences, which they have by necessity, from their accidents. For 10 points each:
[10] Name this kind of thing. Descartes (day-CART) defined the "created" kind of these things as those whose existence depends on nothing but God. Medieval metaphysics often thought of these things as having "modes."
ANSWER: **substance**s
[10] As a mechanical philosopher, unlike Aristotle, Descartes believed that mental and physical substances were distinct, an example of this kind of ontology of mind.
ANSWER: **dualism** [accept word forms like **dualistic**]
[10] While Descartes argued that substances could have either extension or thought, but not both, this Jewish philosopher from Amsterdam argued in his *Ethics* that there is only one substance with many attributes, which he called God or Nature.
ANSWER: Baruch **Spinoza** [or Benedict de **Spinoza**]
<Kothari, RMP - Philosophy>

14. An organization named for these two men popularized the notion that hunters should offer their big-game prey a "fair chase." For 10 points each:
[10] Identify these two frontiersmen. One of them established a trail through the Cumberland Gap, and the other died at the Alamo.
ANSWER: Daniel **Boone** AND Davy **Crockett** [accept David **Crockett** in place of "Davy Crockett"; do not accept or prompt on incomplete answers]
[10] The Boone and Crockett Club was established by this future US President. The Smithsonian sponsored his expedition to Africa after he left the presidency to his successor William Howard Taft.
ANSWER: **T**heodore **Roosevelt** [or **T**eddy **Roosevelt**; or **TR**; prompt on Roosevelt]
[10] Roosevelt almost died exploring the interior of this country with Candido Rondon on a 1913 to 1914 expedition.
ANSWER: **Brazil** [or Federative Republic of **Brazil**]
<Bentley, History - American>

15. The corn-based drink *atole* (ah-TOH-lay) is particularly popular during this celebration. For 10 points each:
[10] Name this nine-day Christmas celebration in which people who play Mary and Joseph lead a procession that travels to a different house each night, where they are symbolically turned away until the final night.
ANSWER: Las **Posadas** [accept The **Posada**s]
[10] Las Posadas is most commonly celebrated in this country, where the Christmas season often begins by celebrating its patron saint, Our Lady of Guadalupe.
ANSWER: **Mexico**
[10] Las Posadas commemorates Mary and Joseph's journey to this city, where Jesus was born.
ANSWER: **Bethlehem** [or **Bayt Lahm**]
<Kothari, RMP - Bible/Christianity>

16. Before this action takes place, a character exclaims "Ecco un artista!" in response to a mock execution that she thought had gone flawlessly. For 10 points each:
[10] Name this operatic action that takes place in the Castel Sant'Angelo after Mario Cavaradossi dies, prefaced by the cry "O Scarpia, Avanti a Dio!"
ANSWER: Floria **Tosca** jumping to her **death** [accept Floria **Tosca** committing **suicide**; accept variants of both answers that include both of the underlined parts; prompt on partial answer]
[10] This Italian composer depicted the downfall of the title singer in his opera *Tosca*. His *La Bohème* (bo-EM) is about a group of poor Parisian artists.
ANSWER: Giacomo **Puccini**
[10] When he is given an hour to live, Cavaradossi decides to write to Tosca but is ultimately unable to do so, as he recounts in this aria.
ANSWER: "**E lucevan le stelle**" (ay loo-CHAY-von lay STEL-lay) [or "**And the stars were shining**"]
<Kalathiveetil, Arts - Opera>

17. This character says that tonight his "cheeks will be stained with red blood" in a monologue that he delivers before the entrance of a beggarwoman representing death. For 10 points each:
[10] Name this character from the play *Blood Wedding*. He is a young woodcutter who appears again just before two screams are heard as Leonardo and the Groom kill each other.
ANSWER: the **Moon** [or la **Luna**]
[10] *Blood Wedding* was written by this early-20th-century Spanish author of the play *Yerma* and the poem "Lament for the Death of a Bullfighter."
ANSWER: Federico García **Lorca** [or Federico del Sagrado Corazón de Jesús García **Lorca**]
[10] This other Lorca character tries to shoot Pepe, causing her daughter Adela to hang herself. She imposes eight years of mourning on her house when her second husband dies.
ANSWER: **Bernarda** Alba [prompt on Alba]
<Grames, Literature - European>

18. The textbook *Laboratory Experiments in the Social Sciences* advises picking these people from the original pool of subjects so that they blend in. For 10 points each:
[10] Give this term for actors in psychology experiments who pretend to be participating but have secretly been given other instructions.
ANSWER: **confederate**s [prompt on plants]
[10] Confederates in the Asch conformity experiment were coached to sometimes lie and say that one of these things was the same in length as a clearly different reference.
ANSWER: **line**s
[10] The aforementioned *Laboratory Experiments* textbook cites an example of prepping confederates for a status-construction experiment at this institution. Walter Mischel's marshmallow experiment was first conducted at this institution.
ANSWER: **Stanford** University [or Leland **Stanford** Junior University]
<Bentley, Social Science - Psychology>

19. The production of this molecule involves the polymerization of eight UDP-glucose molecules and their final reaction with a glycosyl-transferase. For 10 points each:
[10] Name this branched polysaccharide. This molecule is the main storage form of glucose in the human body.
ANSWER: **glycogen**
[10] Glycogen is an example of the complex type of these macromolecules, which generally have a 2-to-1 ratio of hydrogens to oxygens. These macromolecules include monosaccharides and polysaccharides.
ANSWER: **carbohydrate**s [or **sugar**s; prompt on saccharides]
[10] In this biochemical cycle, glycogen in the muscles is broken down into glucose and used for fermentation, and the lactate produced is generated back to glucose in the liver. This cycle was discovered by a pair of Czech-American scientists.
ANSWER: **Cori** cycle [prompt on lactic acid cycle]
<Ramaswami, Science - Biology>

20. The largest surviving medieval map, which hung on the wall of Hereford Cathedral, made use of a pattern named for these two letters. For 10 points each:
[10] Identify these two letters that name a type of medieval world map. The map style named for these two letters depicted Asia, Europe, and Africa ringed by the ocean.
ANSWER: **T** AND **O** [accept **T-and-O** map]
[10] A description of a T-and-O map appears in *Etymologiae*, an encyclopedia by a scholar named Isidore. Give the modern name for this scholar's home country. Moorish kingdoms in this modern-day country were targeted in the Reconquista.
ANSWER: **Spain** [or **Espana**]
[10] T-and-O maps are sometimes called Beatine maps after Beatus, a monk who served in the court of these people's Kingdom of Asturias. This tribe established what is now the French city of Toulouse as the capital of their kingdom on the Iberian peninsula.
ANSWER: **Visigoth**s
<Brownstein, History - European>

21. In 2010, a circus clown named Tiririca was elected to this country's Congress on the slogan "It can't get any worse!" For 10 points each:
[10] Identify this country, home to populist politician Jair Bolsonaro (ja-EER boh-soh-NAH-roo). Its president took office after his predecessor was impeached in 2016 in a scandal involving its national oil company.
ANSWER: **Brazil** [or Federative Republic of **Brazil**; or República Federativa do **Brasil**]
[10] Brazilian politicians João Doria and Roberto Justus (ho-BAIR-too JOOS-toos) both hosted local versions of this reality TV program. Donald Trump used the catchphrase "You're Fired" on this program.
ANSWER: *The **Apprentice*** [or *The Celebrity **Apprentice***]
[10] Trust in the Brazilian government has plummeted due to this operation, led by Sergio Moro (SAIRJ-yoo MOR-oo). Outside Brazil, Peru's former president, Ollanta Humala (oh-YAHN-tah oo-MAH-la), has been accused of bribery by this operation.
ANSWER: Operation **Car Wash** [or Operação **Lava Jato**]
<Bentley, Current Events - Foreign>