Fall Open 2019
Written by Itamar Naveh-Benjamin, Jason Golfinos, Aseem Keyal, Jonathen Settle, Kenji Shimizu, Klaus Llwynog, Jack Mehr, Samir Khan, and Nick Collins

Tossups

1. In *The Female Thermometer,* Terry Castle described how this writer emasculated "George," the subject of a scandal "not fit to be mentioned." This writer is commonly attributed as the author of *The Golden Rump*, of which no copies survive, and which may or may not have existed. This writer published an anonymous, wildly popular pamphlet about the "Surprising History" of the transvestite Mary Hamilton, titled *The Female Husband.* This author borrowed the pseudonym "Conny (*) Keyber" to publish a burlesque "apology for the life of a" former prostitute who manipulates her way into marriage with the idiotic master of Booby Hall. This author, who frequently wrote under the pseudonym "Captain Hercules Vinegar," responded to a contemporary novelist's lengthy book about "virtue rewarded" with a satire published in 1741. For 10 points, Samuel Richardson's *Pamela* provoked what author to write *Shamela,* which was published eight years before his novel *Tom Jones*?
ANSWER: Henry **Fielding**
<INB, Long Fiction>

Note to players: Description acceptable.
2. This event affected a complex that, sixteen years earlier, was renamed from Wheelus to Okba Ben Nafi after its previous owners withdrew. Three years after this event, the body of one of its casualties, Fernando Ribas-Dominicci, was returned with Pope John Paul II serving as a middle man. A call from fellow socialist head of state Bettino Craxi ("CRACK-see") warned this action's target of its impending occurrence. This action was preceded by aircraft crossing the "Line of Death" in the Gulf of (*) Sidra. This action inspired a leader to add the adjective "Great" to his country's name, which already included the words "Socialist" and "Jamahiriya." That leader claimed that his adopted daughter Hana was killed by this action, which served as retaliation for the bombing of the La Belle discothèque in Berlin. For 10 points, identify this action codenamed Operation Eldorado Canyon, in which Ronald Reagan ordered a raid on a country led by Muammar Gaddafi.
ANSWER: **bombing** of **Libya** [accept answers indicating an American air **raid** on **Libya**, **Tripoli**, or Muammar **Gaddafi**; accept Operation **Eldorado Canyon** until it is read]
<KS, Other History>

3. Competing reconstructions of a proto-language spoken in this region have been published by John Wolff and Robert Blust. This region's most widely-spoken indigenous language uses an orthography in which the caret represents the glottal stop, and the apostrophe represents the epiglottal stop. The Sinckan manuscripts are among the earliest written records of its native languages, which today include Atayal, Amis, and (*) Seediq ("seh-EH-dack"). One of this island's major languages is transcribed using Pėh-ōe-jī ("PEH-weh-jee"), while its prestige language is predominantly taught in school using the Bopomofo system of transliteration. The easternmost of the Min Chinese languages is spoken on this island, whose former English name comes from the Portuguese word for "beautiful." For 10 points, name this island whose majority language shifted from Hokkien to Mandarin in the aftermath of the Chinese Civil War.
ANSWER: **Taiwan** [or **Formosa**; prompt on East Asia, Asia, or Greater China]
<KL, Linguistics>

4. A theme from the Adagio movement of one of this composer's pieces is quoted in the "On the Summit" section of Richard Strauss's *An Alpine Symphony*. A violin concerto by this composer begins with a low timpani roll on G, then a soft woodwind statement in thirds, and then a short cadenza marked *ad libitum*. In an E-flat major piece by this composer, the solo violin and the harp introduce the fourth movement finale, marked Allegro guerriero. This composer's aforementioned Violin Concerto No. 1 in (*) G minor has a first-

movement prelude titled Vorspiel ("FOR-sh'peel"), and was described as "the richest, most seductive" by one of four German Romantic composers. This composer quoted folk songs such as "Hey Tuttie Tatie" in his *Scottish Fantasy*. For 10 points, name this composer who was inspired by the title Aramaic declaration to write *Kol Nidrei*.
ANSWER: Max **Bruch**
<KL, Classical Music and Opera>

5. **Anthony Rossi founded a company best known for this product as a side venture to a distribution company that supplied the Waldorf-Astoria. A spokesperson for this product was pied in the face by Thom Higgins at a press conference in Des Moines ("dih MOYN"), causing her to remark "At least it's a fruit pie." Kearny, New Jersey is the destination of a "Great White" train of 150 insulated boxcars that regularly ships this product northward. A widespread 1970s boycott against this product responded to the anti-LGBT (*)** Save Our Children campaign began by one-time country star Anita Bryant. A confrontation over this product led to the death of Latasha Harlins during the lead-up to the 1992 L.A. riots. The Major League Baseball stadium with the lowest seating capacity, located in St. Petersburg, is named after a manufacturer of this beverage, which is combined with vodka in a screwdriver. For 10 points, name this drink rich in vitamin C and often sold without pulp by Tropicana.
ANSWER: **orange juice** [accept **Tropicana** until it is read; prompt on partial answers]
<KS, General Knowledge>

6. **This is the main, named organization whose violence is documented by the "Refusing to Forget" project. Twenty members of this group were held hostage in 1877 by striking salt miners. This organization was targeted by the 1919 Canales ("kah-NAH-less") investigation, which revealed its role in the Porvenir Massacre. It re-formed in 1935 after being basically disbanded for backing Ross Sterling in a gubernatorial election against the winner, Miriam "Ma" Ferguson. This organization gained national acclaim by foiling an (*)** assassination attempt on President Taft and Porfirio Diaz at the last second. This group apprehended John Wesley Hardin, and its member Frank Hamer led the squad that killed Bonnie and Clyde. George Trendle and Fran Striker based their best-known creation on this group, whose horseback use of revolvers helped subdue the Comanche ("co-MAN-chay"). For 10 points, name this state police group, the basis for the silver bullet-shooting partner of Tonto.
ANSWER: **Texas Ranger** Division [prompt on partial answer; prompt on answers like the police or the cavalry and prompt again if only "Texas" is added]
<JG, US History>

7. **Before the advent of flow cytometry, a disorder caused by a mutation in the *PIGA* gene was diagnosed by detecting this process in either the Ham test or the sugar water test. Protein S inhibits this process by inducing a hydrophilic ("hydro-philic") transition in a partially formed protein complex. HRF and CD59 ("C-D-fifty-nine") protect cells from this process in an example of homologous restriction. Jules Bordet ("bor-DAY") discovered that adding fresh serum to heated antiserum restored the ability to induce this process. The (*)** C5b ("C-five-B") fragment initiates the assembly of a complex that causes this process. Immune clearance, inflammation, phagocytosis ("FAY-go-sye-TOH-siss"), and this process are the central functions of the complement system. In addition to secretion, exotoxins ("exo-toxins") can also be released by this immune process. The membrane attack complex creates a 100-angstrom pore to induce this process in invading microbes. For 10 points, name this process in which a disruption of the plasma membrane causes a cell to burst.
ANSWER: **lysis** [accept **hemolysis**; accept **cytolysis**; accept osmotic **lysis**; prompt on activation of the membrane attack complex or activation of the MAC with "What process is the MAC responsible for?"; prompt on descriptions of disrupting the cell membrane; prompt on descriptions of creating holes in the cell membrane; prompt on complement system before mentioned with "what process carried out by the complement system?"; do NOT accept "autolysis", "oncolysis", "radiolysis", or "plasmolysis"] (The first sentence refers to paroxysmal nocturnal hemoglobinuria)
<JS, Biology>

8. **Cristanne Miller cited this author's use of the past perfect tense in the third stanza of one poem as an indication of an alliance with "catastrophic power" over "sexual intimacy." In the fourth stanza of that poem by this author, the speaker is heralded as superior to a "Deep Pillow" made of eider duck feathers. A poem by this author is about "possession by the daemon," according to an Adrienne Rich article whose title riffs on the poem's comparison of a smile which produces "cordial light" to pleasure let through by a (*)** "Vesuvian face." When the speaker of a poem by this author produces noise in "Sovereign Woods," an echo is heard as the "Mountains straight reply." In the closing stanza of that poem by this author, the "deadly" speaker declares, "For I have but the power to kill, / Without — the power to die —." For 10 points, identify this reclusive author of "My Life had stood — a Loaded Gun."
ANSWER: Emily **Dickinson** [or Emily Elizabeth **Dickinson**]
<INB, Non-epic Poetry>

9. **The founder of a faith found mainly among this ethnicity was born when a bird pecked a pomegranate seed into a virgin's mouth. That faith has elders split nutmeg into five parts on a child's head in its initiation rite and was founded by the God-incarnate "Sultan Sahak." Holy stones called *berat* are collected by a faith among this ethnicity from a place where they hold the Earth to have formed from a pearl and that is visited in the "Autumn Assembly." The Yārsānī or "Ahl-e Ḥāqq" faith is found mainly among this ethnicity. A (*)** faith found among this ethnicity believes they are descended from Adam alone, while outsiders descend from Adam *and* Eve. That faith among this ethnicity avoids lettuce and the color blue for pragmatic reasons related to a figure who reconciled with God after his tears put out hell's fires, Melek Taus. For 10 points, name this mostly Muslim ethnic group, among whom reverence of the "Peacock Angel" has led to persecution of its Yazidi minority.
ANSWER: **Kurd**ish People [accept sub-groups like **Kurmanj**i, **Sorān**ī, **Gorān**ī, or **Zaza**; prompt on any of Azeri, Persian, Turks, or Armenians due to national borders and cultural affinities being an issue here; anti-prompt on Kakāʾī, Ahl-e Ḥāqq, Yārsānī, or until the latter two are mentioned; anti-prompt on Yazidi until mentioned]
<JG, Religion>

10. **This musical's title is represented by the following seven-note motif: "D-flat, F, A-flat, C, B-flat," then a faster "A-flat, F." This musical's lyricist denied any influence by the story *Germelhausen* ("GURR-mel-HOW-zen"). In a dance in this musical, men are told to "spin 'til you're nothing but a screaming wind" while stepping increasingly quickly around quadrants formed by two namesake objects. This work's male lead "looked and I thought to myself with a sigh / there but for you go I" after a disastrous wedding that includes a "Sword Dance" created by (*)** Agnes de Mille. Love interests in this musical sing, "there's a smile on my face for the whole human race/it's almost like being in love." In this musical, Mr. Lundie explains, "you must really love her; you woke us up," causing a "miracle" that lets the New Yorker Tommy Albright reunite with Fiona even though the title place prayed to stay frozen in time 200 years ago. For 10 points, name this Lerner and Loewe ("low") musical about a magical Scottish village that appears once every century.
ANSWER: *Brigadoon*
<JG, Theater>

11. **The "partial *p*" procedure is a method for analytic continuation first applied to this theory that inserts a unit differential operator into an integral over momentum space. This theory predicts a phenomenon that is observed in the highly forbidden 6s ("6-s") to 7s ("7-s") transition in cesium. The fact that this theory's rho parameter is very close to one corresponds to the fact that it predicts the ratio of two masses to be equal to the cosine of the mixing angle. The 1999 Nobel Prize in Physics was awarded to Veltman and 't Hooft ("teh hooft") for showing that this theory is (*)** renormalizable. The detection of neutral currents at Gargamelle provided evidence for this theory, whose gauge group is "SU-two-sub-L cross U-one-sub-Y." The development of this theory by Glashow, Salem, and Weinberg earned them a Nobel Prize in Physics. For 10 points, grand unified theories attempt to unify the strong force with what interaction combining two fundamental forces?

ANSWER: **electroweak** theory [or **electroweak** interaction; accept G**WS** theory or Glashow-**Weinberg-Salem** theory in any order before "Salem"; prompt on <u>Standard Model</u> before mentioned with "What sector?"; do NOT accept or prompt on "electromagnetic" or "weak"] (The second clue refers to atomic parity violation)
<JS, Physics>

12. **This play, which its author viewed as an "epilogue" to his previous ten, prompted a contemporary critic to uncharacteristically proclaim that its author's "magic is nowhere more potent" than in it. The main character of this play describes an object decorated with "dimly-suggested animal-faces" to a woman who stands behind him nervously sheathing and unsheathing a knife. Three months after completing this play in 1899, its 72-year-old author suffered the first in a series of strokes that forced him to quit writing. A "triumphant song" sounds at the end of this play as a (*)** "sister of mercy" shrieks, signs the cross and exclaims, "Pax vobiscum!" In this play's final act, a pair of characters traipse past a shoddy hut owned by the bear hunter Ulfheim, disappear among the clouds, and reappear briefly as an avalanche buries them in snow. For 10 points, Irene and her old flame, the sculptor Rubek, appear in what final play by Henrik Ibsen?
ANSWER: *When We Dead Awaken*
<INB, Drama>

13. **An "exposition" of this figure's myth by Fabius Fulgentius presents it as an allegory of moral growth over stages of life. Christian exegetes like John of Salisbury translate this figure's name as "in-dweller" to treat him as an allegory for the soul. In one speech, this figure claims that he never "held out wedding torches" while arguing, "it is divine law that we both seek far-off kingdoms." This figure comforts his companions by telling them "perhaps one day it will be (*)** joyous to recall even this." This figure is shown spirits waiting to drink the waters of Lethe ("LEE-thee") to be reborn as figures like Torquatus and Marcellus by his father, and then exits via a gate of horn. This figure finds a mural of his home's destruction in a city whose queen he tells of events like his wife Creusa's ("kree-OO-suh's") ghost ordering him to escape with his father Anchises ("an-KYE-zeez"). For 10 points, name this hero, who recounts his escape from Troy to Dido in a namesake epic by Vergil.
ANSWER: **Aeneas** [or **Eneas**]
<JG, Mythology>

14. **This artist created an annotated preparatory sketch of an imprisoned Guy de Lusignan ("l'yoo-see-n'YAN"), and copied the pose of *The Creation of Adam* for his painting *The Captive.* This artist included the orator Silius Italicus in one of his many paintings of Virgil's tomb, while Claude Vernet's landscapes informed his numerous depictions of Mt. Vesuvius. Paintings by this artist that include a view of the moon through a window in the top right may reference his membership in a group called the Lunar Society. This artist depicted three men examining a reproduction of the (*)** Borghese ("bor-GAY-zay") Gladiator in one painting. During his "candlelight period," he painted a group portrait in which two brightly lit children stare into an apparatus made of several interlocking rings. A girl shields her eyes in a tenebrist group portrait by this artist that depicts a white cockatoo trapped in a glass chamber. For 10 points, name this artist of the Industrial Revolution who painted *An Experiment on a Bird in the Air Pump*.
ANSWER: Joseph **Wright** of Derby
<AK, Painting and Sculpture>

15. A lover of a king of this name supposedly broke up with him by laying their baby at his feet and yelling, "There, take back your property!" That king of this name maintained two bigamous morganatic wives *in addition* to his mistress Wilhelmine Enke ("VIL-hel-mee-nuh EN-kuh"). The Stein-Hardenberg reforms ended serfdom under a king of this name. A king of this name presided over religious persecutions led by the Rosicrucian ("rosy-KROO-shun") Johann Cristoph van Wöllner ("verl-ner"). The wife of a king of this name was called "the soul of national virtue" for trying to extract better terms from (*) Napoleon. Johann Gottfried Schadow ("SHAD-off") served two kings of this name. A ruler of this name joined Leopold II to issue the Pillnitz

Declaration. A ruler of this name created a troop of "Potsdam Giants" and forced his son to watch him execute the tutor Hans Hermann von Katte ("KAT-tuh"). A ruler of this name was called "the Great Elector." For 10 points, give this name of a Prussian "Soldier King" who was succeeded by Frederick the Great.
ANSWER: **Frederick William** [or **Frederick Wilhelm**; do not accept or prompt on "Frederick" or "William" alone] (the "soul of national virtue" is Frederick William III's wife, Louise of Mecklenburg-Strelitz)
<JG, European History (Continental)>

16. **The matrix that minimizes a data-fit term plus the sum of this function applied to the entries of the matrix approximates the precision matrix of a multivariate normal sample. That method is the graphical version of a method that introduces a penalty involving this function to linear regression to promote sparsity and perform variable selection. That method using this function is known as basis pursuit denoising in compressed sensing, while in statistics it is called LASSO ("lasso"). This function appears in the exponent of the density of the (*)** Laplace distribution. Uses this function as a loss function in regression tends to give more robust estimators because this function has a bounded derivative. This special case of the *L*-one norm is used to express the triangle inequality between real numbers. This function is not differentiable at zero because its graph is V-shaped. For 10 points, name this function of *x* that gives the distance from *x* to zero on the number line.
ANSWER: **absolute value** [accept **L-1 norm** until mentioned]
<SK, Math>

17. **Twenty-six World Wildlife Fund researchers were held on this island in the Mapenduma Hostage Crisis by forces led by Kelly Kwalik. The KIK ("K-I-K") enforced a monopoly on copra production on this island. This island saw a 2012 constitutional crisis in an election between Peter O'Neill and Michael Stormare, whose protégé was deposed in the Sandline Affair. Peter Lawrence's classic study *Road Belong Cargo* follows a movement on this island led by the reformer Yali, who asked a question that inspired (*)** *Guns, Germs, and Steel*. *Raskol* gangs terrorize several cities on this island. Natives of this island were called "Fuzzy-Wuzzy Angels" by Allied soldiers defending it in World War II. A Japanese naval strike on this island's capital was averted by the Battle of the Coral Sea. Sukarno invaded the western half of this island. For 10 points, name this island divided between Indonesia and a country governed from Port Moresby ("MORZ-bee").
ANSWER: **New Guinea** [accept **Irian** or **Papua**; but do NOT accept or prompt on "Papua New Guinea"]
<JG, European History (Commonwealth, Ancient, Historiography)>

18. **In one novel, a character in this city marvels at a "lone pomegranate tree" that seems to grow on the blood of corpses he washes. That novel's author depicts Mahā's clashes with an optimistic uncle she shelters with in this city in a novel titled *The* [this city] *Eucharist*. A woman in this setting of most novels by Sinān Anṭūn ("SIN-ann ANN-toon") says that two dogs she beats are in fact her sisters to a man who himself tells of how a "Magnetic Mountain" pulled the nails from his ship. That man is one of "Three (*)** Qalandars ("calendars")" held hostage with a porter in this city. An official in this city solves the murder of a woman found chopped up in a chest in the river and finds that his slave caused her death by stealing one of the title objects of the "Tale of the Three Apples." The official Jaʿfar ibn Yaḥyā ("JAH-fer ib-en YAH-yah") lives in this city, and it or Baṣrā ("BAS-rah") is home to Sindbād. For 10 points, name this city, which is often patrolled in the *Thousand and One Nights* by a disguised Hārūn al-Rashīd ("hah-ROON al-rah-SHEED"), an ʿAbbāsid ("ab-BASS-id") caliph who ruled from it.
ANSWER: **Baghdād** [accept **Medīna**t **al-Salām** or **City of Peace**, one supposes]
<JG, Miscellaneous Lit>

19. **A thinker of this family name declares both of his feuding students correct in the "Colloquy at the Tianquan Bridge." A thinker of this family name held that all ghosts should be naked since clothes don't have souls in his *Lunheng* ("loon-hung"), which accurately describes the water cycle. A thinker of this family name presents the sage not as emotion-free but as unmoved by emotion in third-century commentaries on the *Yijing* and *Dao De Ching*. A thinker of this family name promoted the idea of *liangzhi* ("l'yang-jee") or "innate**

knowing" and the "unity of thought action" while creating an (*) "intuitionist" alternative to Zhu Xi's ("joo shee's") Neo-Confucianism. This family name was shared by a "Dark Learning" pioneer named Bi ("bee"), and the Ming-era scholar Yangming. A thinker of this family name invented the "Eight-Legged Essay," created the *baojia* ("bao-jah") system as part of his "New Policies," and was the archrival of Sima Guang. For 10 points, give this family name of a Song Dynasty reformer with the given name Anshi.
ANSWER: **Wang** (the unnamed author of *Lunheng* is Wang Chong)
<JG, Philosophy>

20. **A non-negativity condition and the finiteness of this quantity are imposed to avoid unphysical results in the Levy-Lieb constrained search formulation. The density of this quantity is an input to TPSS and other meta-GGAs, which extend the generalized gradient approximation. One-eighth times the integral of "del-rho-squared over rho" is a correction to this quantity introduced by Weizsäcker. Corrections to the electron-electron interaction energy and this quantity are given by the (*)** exchange-correlation energy. In the Kohn-Sham scheme, this quantity is a sum over its expectation values, which are equal to the integral of the following: "phi-star" times "negative-h-bar-squared over two-m" times the Laplacian of phi. The rigid rotor Hamiltonian operator is simply the operator corresponding to this quantity because the distance between the particles doesn't change. For 10 points, the letter T represents what form of energy associated with motion?
ANSWER: **kinetic energy** [or just **kinetic** after "energy"; prompt on KE or T; prompt on just energy; do NOT accept or prompt on "potential energy" or "exchange-correlation energy"]
<JS, Chemistry>

Bonuses

1. The grocer Manuela Beltrán helped trigger this revolt by tearing down tax hike notices, and it was part of a wave of unrest in South American colonies in the 1770s and 1780s with Tupac Amaru II's revolt. For 10 points each:
[10] Name this colonial tax revolt led by Beltrán and José Antonio Galán against the Viceroyalty of New Granada. It shares its name with a revolt of Castilian city councils in support of Joanna the Mad and against Charles V ("the-fifth").
ANSWER: Revolt of the **Comunero**s [accept translations like Revolt of the **Communities** and word forms]
[10] The South American Comuneros revolt was a backlash against a set of reforms named for this ruling house, which took power in Spain after the War of the Spanish Succession and the death of Charles II.
ANSWER: House of **Bourbon**
[10] Two rebels with this surname, a reformist Quechua ("KETCH-wah") and an Aymara ("aye-MAH-rah"), also revolted in the 1770s and 1780. The latter declared, "Today I die, but I will return as millions" before his execution, and led to Bolivian indigenous movements being called an "-ismo" ("EEZ-mo") derived from this surname.
ANSWER: **Katari** [accept Tomás **Katari** or Túpac **Katari**; accept **Katarismo**; prompt on Julián Apasa Nina (the Aymara mentioned) with "who took what surname to honor the earlier Quechua rebel Tomás?"]
<JG, Other History>

2. This family's domineering matriarch Varvara argues that, unlike mugs or pencils, Raphael's *Sistine Madonna* has no use and is admired only by "inveterate old men." For 10 points each:
[10] Identify this family whose opulent estate is located in Skvoreshniki ("sk'VO-resh-NEE-kee"). A member of this family half-heartedly engages in a duel with a hot-tempered man whose father he had dragged around by the nose in a fit of insanity.
ANSWER: the **Stavrogin**a ("stav-ro-GHEE-nah") family [accept Varvara Petrovna **Stravogin**a or Nikolai Vsevolodovitch **Stavrogin**]
[10] After he learns of Liza's death, Nikolai Stavrogin hangs himself at the end of this author's novel *Demons.* Svidrigailov ("s'vee-dree-GUY-loff") kills himself with Dunya's revolver in this author's earlier novel *Crime and Punishment*.
ANSWER: Fyodor **Dostoyevsky** [or Fyodor Mikhailovich **Dostoevsky**]
[10] In *Demons,* Stavrogin's companions Shatov and Kirillov spend some time living in this place in order to "try out the life of the… worker." In *Crime and Punishment*, Svidrigailov informs a soldier dressed in an Achilles helmet that he's headed for this place before he shoots himself in the head.
ANSWER: **America** [or the **U**nited **S**tates of America]
<INB, Long Fiction>

3. We live in a society, specifically a "risk society" according to Ulrich Beck. Answer some questions about Beck's sociological theories, for 10 points each:
[10] Beck describes social networks, biography, and a contradictory mode of scientization as acquiring this property, which he describes as "becoming its own theme."
ANSWER: **reflexive** [or **reflexivity**]
[10] Beck described this concept as reflexive in a "risk society." Zygmunt Bauman theorized the "liquid" form of this concept, which is *succeeded* by a period of skepticism towards metanarratives according to Jean-Francois Lyotard.
ANSWER: **modernity** [do not accept or prompt on "postmodernity"]
[10] This thinker developed the idea of a "risk society" along with Beck, and also introduced the concept of memory traces as part of his theory of structuration. This man developed Tony Blair's "Third Way" political framework.
ANSWER: Anthony **Giddens**
<AK, Sociology>

4. Answer the following about people who, in varying ways, challenged gender norms in the medical field, for 10 points each.
[10] Margaret King, who cross-dressed to study at the University of Jena, was mentored as a teenager by this philosopher who wrote *A Vindication of the Rights of Women*.
ANSWER: Mary **Wollstonecraft**
[10] South African prime minister J. B. M. Hertzog was named in honor of this surgeon, who performed the first successful Caesarean section in Africa. None of his colleagues knew of his birth sex until after his death.
ANSWER: James **Barry** [or James Miranda Steuart **Barry**] (Barry was assigned female at birth, but kept this a secret throughout his life.)
[10] The all-male student body of Geneva Medical College unanimously voted to accept this woman, who worked with Sophia Jex-Blake and T. H. Huxley after becoming the first woman in the U.S. to receive a medical degree.
ANSWER: Elizabeth **Blackwell**
<KS, European History (Commonwealth, Ancient, Historiography)>

5. Linear-time parsers exist for these grammars which have disjoint predict sets. For 10 points each:
[10] Name these grammars that necessarily lack left recursion and common prefixes. A type of these grammars that only requires one lookahead token is ideal for top-down parsing.
ANSWER: **LL**(*k*) ("L-L-K") grammars [or **Left** to **right**, **Leftmost derivation** grammars, lookahead k; accept any integer for k, e.g. **LL(1)**]
[10] LL(1) ("L-L-one") grammars are a subset of the grammars with this property for which parsing runs in cubic time. Grammars with this property form the second smallest set in the Chomsky hierarchy.
ANSWER: **context-free** grammars [or **CFG**]
[10] Although they allow for rather efficient parsing methods, context-free grammars can be ambiguous. A prototypical example of ambiguity arises when a grammar allows the else statement following this type of conditional statement to be optional.
ANSWER: **if** statement
<JS, Computer Science>

6. In the 1950s, this company dumped hundreds of millions of gallons of wastewater tainted with chromium-6 in the town of Hinkley. For 10 points each:
[10] Name this company that declared bankruptcy in January 2019. This company was also responsible for the explosion of a pipeline in San Bruno in 2010, killing eight people.
ANSWER: **PG&E** [or **Pacific Gas & Electric**]
[10] A faulty power line owned by PG&E in Butte County may have been the cause of one of these events in November 2018, the deadliest in Californian history. PG&E also shut off power to millions of homes during a string of these disasters in October in 2019.
ANSWER: wild**fire**
[10] By reselling power from San Francisco for a profit, PG&E has been continually violating the Raker Act. The act was passed in 1913 to dam this valley in Yosemite National Park, despite the efforts of John Muir.
ANSWER: **Hetch Hetchy** Valley
<AK, Current Events>

7. One of these works was created by Masaccio's brother *lo Scheggia* ("SKEJ-jah") to commemorate Lorenzo de Medici and is titled *Triumph of Fame*. For 10 points each:
[10] Name these wooden objects used in domestic rituals. Masaccio ("mah-SATCH-cho") himself is the attributed artist of another one of these objects that depicts a trumpeter under an arched colonnade; that one of these objects is his *Berlin Tondo*.
ANSWER: **birth tray**s [or ***desco da parto***; prompt on trays or *deschi*]

[10] Among the wealthy, wooden birth trays gradually fell out of favor as they were replaced by *maiolica* ("MYE-oh-LEE-kah") bowls. *Maiolica* ("MYE-oh-LEE-kah") is a type of this general material that is coated with a white tin glaze after being fired in a kiln.
ANSWER: **ceramic** [accept **clay**; accept **pottery**; accept **porcelain**]
[10] Other Italian domestic artworks include *cassone*, or elaborately decorated examples of these objects that were modeled on Roman sarcophagi and gifted in marriage. One of them appears prominently in Titian's *Venus of Urbino*.
ANSWER: marriage **chest**s (Massaccio's brother *lo Scheggia* is also known as the Master of the Adimari Cassone)
<AK, Painting and Sculpture>

8. HASTE ("haste") imaging utilizes this technique, which produces images in which the CSF is much brighter than those produced by its counterpart. For 10 points each:
[10] Name this technique in medical imaging that uses a longer repetition time and time to echo, which is utilized in a technique called FLAIR ("flair").
ANSWER: **T2-weighting** [accept word forms; prompt on **TWI** or **T2WI**]
[10] T2-weighting is one of the sequences that can be used in this medical imaging technique, which uses strong magnetic fields to visualize anatomical structure.
ANSWER: **MRI** ("M-R-I") [or **magnetic resonance imaging**]
[10] T1-weighted MRI's often use contrast agents containing this highly paramagnetic element. By lowering the T1 relaxation time, complexes of this element appears bright on those scans.
ANSWER: **gadolinium** [or **Gd**]
<AK, Biology>

9. Act Two of this composer's ballet *Spartacus* concludes with an Adagio depicting the flight of the title character and his wife Phrygia. For 10 points each:
[10] Name this Armenian-born Soviet composer of the *Masquerade* suite and the ballet *Gayane* ("gah-yah-NEH"), which concludes with the "Sabre Dance."
ANSWER: Aram **Khachaturian** [or Aram Il'yich **Khachaturian**]
[10] Armenian-American composer Alan Hovhaness wrote the *Mysterious Mountain* Symphony under commission from this director of the Philadelphia Orchestra, who conducted for the 1940 film *Fantasia*.
ANSWER: Leopold **Stokowski** [or Leopold Anthony **Stokowski**]
[10] Alfred, a composer of this surname, wrote a wind suite of *Armenian Dances*. This surname also belonged to Thomas, whose namesake productions revived English theatre and launched the careers of Gilbert and Sullivan.
ANSWER: **Reed** [accept **German Reed**]
<KL, Classical Music and Opera>

10. In *Reading for the Plot*, Peter Brooks defined these two concepts as the "Voice of Truth" and "Voice of the Empirical." For 10 points each:
[10] Identify *both* of these "sequential" codes, which work together to create tension in a story. The first builds mystery by leaving something unexplained, while the second is an action which necessitates another action.
ANSWER: **hermeneutic** AND **proairetic** ("pro-air-etic") codes
[10] Peter Brooks focused on the proairetic and hermeneutic codes used by this 1970 book, which also utilizes semantic, symbolic and cultural codes to meticulously examine Honore de Balzac's story "Sarrasine" ("sara-SEEN").
ANSWER: *S/Z*
[10] This French semiotician and literary theorist wrote *S/Z*. In an influential essay rejecting authorial intent, he concluded, "The birth of the reader must be ransomed by the death of the author."
ANSWER: Roland **Barthes**
<INB, Miscellaneous Lit>

11. This writer rebutted H. D. P. Lee's insistence that translators of Plato must "discover what he means," because "if one hurries too quickly "behind" Plato's speech, one loses the sense of the surface." For 10 points each:
[10] Identify this scholar who thus produced an acclaimed 1968 "literal translation" of Plato's *Republic.* He provided commentary on Seth Benardete's translation of the *Symposium* in a 2001 book.
ANSWER: Allan **Bloom** [or Allan David **Bloom**]
[10] In the preface to the second edition of his translation of *The Republic,* Bloom observed that, to modern audiences, the "allegory" of this subterranean place represents "truth substituted for myth."
ANSWER: the **cave** [or the Allegory of the **Cave**]
[10] Bloom argued that this character's "blush" is "as important as any of his theoretical arguments." In Book One of *The Republic,* Socrates completely demolishes this Sophist's definition of justice as the "advantage of the stronger."
ANSWER: **Thrasymachus**
<INB, Philosophy>

12. The speaker watches Batman reruns when he gets a call informing him of his dad's death in a Richard Michelson poem titled for "Counting to [this number]." For 10 points each:
[10] Identify this number which partly titles a poem that opens, "My life is the gardener of my body." In that poem, the speaker states that he is neither a member of a group of this many people, nor "even among the survivors."
ANSWER: **six million** [accept "Counting to **Six Million**" or "I Wasn't One of the **Six Million**: And What Is My Life Span? Open Closed Open;" accept **6,000,000**]
[10] Yehuda Amichai ("ah-mee-kye") alluded to this event's Jewish casualties in his poem "I Wasn't One of the Six Million."
ANSWER: the **Holocaust** [or **Shoah**; prompt on World War II]
[10] Amichai explained that "death is when someone keeps calling you… and you no longer turn around to see / who it is" in a poem titled for losing one of these objects. A different poet repeated the instruction "Write down" in a poem titled for one of these objects.
ANSWER: **identity card**s [accept "Losing My **Identity Card**" or "**Identity Card**;" accept **ID card**]
<INB, Non-epic Poetry>

13. A metaphysical school of Buddhist philosophy named for this concept posited a form of consciousness that arises from "storehouses" of mental seeds. For 10 points each:
[10] Name this concept. In the *Bhagavad Gita*, Krishna explains a threefold division of this concept into *jnana* ("juh-n'YAH-nuh") , *dharma*, and *bhakti* forms. Another form of this concept can involve *pranayama* and arrangements called *asanas* ("ASS-nuh").
ANSWER: *yoga* [accept **Yogacara** school]
[10] The title sage explains many concepts of Vedanta in the *Yoga Vasistha* ("vuh-SHISS-tuh") by Valmiki, who also wrote this epic, in which Ravana kidnaps Sita.
ANSWER: *Ramayana* [or *Ramayan*]
[10] Patanjali's *Yoga Sutras* draw on the dualist philosophy of the Samkhya ("SAM-k'yuh") school by describing two concepts: an abstract masculine conception of consciousness and a material feminine conception of nature. Name either.
ANSWER: *purusha* or *prakriti*
<AK, Religion>

14. Using a derivative of this compound instead of 2-mercaptoethanesulfonate ("two-mercapto-ethane-sulfonate") can speed up the native chemical ligation of peptides. For 10 points each:
[10] Name this compound. A derivative of this compound substituted with three fluorine atoms is used to cleave a Boc protecting group in one method of solid phase peptide synthesis.

ANSWER: **acetic** ("uh-SEE-tic") acid [or **ethanoic** acid; or **CH3COOH**]

[10] In native chemical ligation, one of these functional groups in the N-terminal cysteine attacks a C-terminal thioester ("thigh-oh-ester") of another peptide. These functional groups are the sulfur analogue of alcohols.

ANSWER: **thiol**s [or **mercaptan**s] ("THIGH-olz")

[10] This German chemist names another method of chemical ligation that has traceless and non-traceless types and was developed by Bertozzi et al. to label cancer cells.

ANSWER: Hermann **Staudinger**

<AK, Chemistry>

15. *Norris v. Alabama*, brought by one of the Scottsboro Boys, ruled that barring African-Americans from juries violates this amendment. For 10 points each:

[10] Name this amendment. *Obergefell v. Hodges* rests on this amendment's Equal Protection and Due Process Clauses, and this reconstruction amendment contains the Citizenship Clause providing birthright citizenship.

ANSWER: **Fourteenth** Amendment

[10] This case ruled that using peremptory challenges to exclude potential jurors solely based on race violated the Equal Protection Clause, creating a namesake "challenge" to stop such racial *voir dire* ("v'wahr deer") machinations.

ANSWER: ***Batson*** v. Kentucky

[10] Federal Rule of Evidence 606(b), rather than the Equal Protection Clause, came into play in 1987's *Tanner v. US*, which held that Tanner's conviction could not be overturned based on the fact that his jury had this quality.

ANSWER: the quality of being **drunk** [accept being **high**; accept answers that specify **alcohol**, **marijuana**, and/or **cocaine**; accept that jurors **sold drugs**; accept obvious equivalents of any of the above but do NOT accept answers that give any other drugs; prompt on "asleep" and equivalents or on "in a sort of giggly mood" (direct quote) with "on account of what else?"]

<JG, US History>

16. This film's director described it as a series of Persian miniatures, one scene featuring a man peering into a Turkish bath and seeing a woman's breast covered by a conch shell. For 10 points each:

[10] Name this film about the life of an Armenian poet. Its frequent religious imagery includes a shot of a Catholicos being buried with his staff and many shots of red dye seeping into cloth.

ANSWER: The ***Colour of Pomegranates*** [accept ***Tsvet granata*** and ***Sayat Nova***]

[10] The cinematic stream of consciousness in Sergei Parajanov's ("para-YAN-off's") *Colour of Pomegranates* parallels that of this film, told from the perspective of Alexei, that includes a scene of a woman sitting on a well watching her family's barn burning down.

ANSWER: The ***Mirror*** [or ***Zerkalo***]

[10] *The Mirror* was a work of this enigmatic Soviet filmmaker who also directed *Ivan's Childhood*, *Stalker*, and *Solaris*.

ANSWER: Andrei **Tarkovsky** [or Andrei Arsenyevich **Tarkovsky**]

<JM, Film>

17. This quantity is a natural variable of the Helmholtz free energy. For 10 points each:

[10] Name this quantity. The bulk modulus can be defined as negative this extensive quantity times the partial derivative of pressure with respect to this extensive quantity.

ANSWER: **volume** [prompt on $\underline{V}$]

[10] The Helmholtz free energy is given by the Legendre ("luh-JAHN-druh") transform of the internal energy. Internal energy is related to heat and work by this law of thermodynamics that restates the conservation of energy.

ANSWER: **first** law of thermodynamics

[10] In three dimensions, the internal energy of these systems is proportional to the polylogarithm ("poly-logarithm") of the fugacity with order five-halves. The chemical potential of these systems must always be less than the ground state energy.
ANSWER: free **Bose gas** [or free **boson gas**; do NOT accept "Bose-Einstein condensate"]
<JS, Physics>

18. This plant's "tightly wound and knotted arms" overwhelm the front façade of an old house whose haunted appearance charms a pair of young couples into renting it. For 10 points each:
[10] The bejeweled skeleton of a young mother appears caught in the "strangling grasp of the roots" of what title plant of a chilling horror story by Charlotte Perkins Gilman?
ANSWER: a giant **wisteria** [or "The Giant **Wistaria**"]
[10] A "conjure woman" places a curse that affects anyone who eats from the title plant of this African-American author's first published story, "The Goophered Grapevine."
ANSWER: Charles W. **Chesnutt** [or Charles Waddell **Chesnutt**]
[10] A vine-covered trellis extends beyond the window of an abbey in this author's story "Ligeia" ("lye-JEE-uh"). The "dreadfully nervous" narrator of another story by this author obsesses over the pale blue "vulture eye" of an old man.
ANSWER: Edgar Allan **Poe**
<INB, Short Fiction>

19. Louis of Gruuthuse added illustrations to this text, including one that shows the gruesome execution of Hugh Despenser the Younger. For 10 points each:
[10] Identify this text, which was produced by the court poet of Philippa of Hainault ("hay-NO"). Its author may have used a biographical poem by the Chandos Herald as his source for its descriptions of Edward the Black Prince.
ANSWER: Jean Froissart's ("fwah-SAR's") ***Chronicles*** [or ***Chroniques***]
[10] Froissart made a dubious claim that Jack Straw participated in this 1381 rebellion against Richard II, which several historians see as the culmination of socio-economic unrest caused by the Black Death.
ANSWER: **Peasants' Revolt** [or Wat **Tyler**'s Rebellion; or the **Great Rising**]
[10] Froissart described Parisian rioters armed with *maillotins* ("mayo-TAN") whose rebellion coincided with this similar uprising of Rouen's drapers' guilds, which were both instigated by the reinstatement of the *gabelle* ("gah-BEL") salt tax.
ANSWER: **Harelle**
<KS, European History (Continental)>

20. The Akkadian word *nibiru* means "crossing" or "equinox," but is used in a mythical, mystical sense to denote one of these locations. For 10 points each:
[10] Name this type of place exemplified by Kolob in the Mormon Book of Abraham.
ANSWER: **planet** [or **star**]
[10] Past fools such as Edmond Halley and John Quincy Adams have suggested that this planet is hollow, while today fools contend that it is flat.
ANSWER: **Earth** [or **Gaia**; or **Terra**; or **Sol III**]
[10] In theosophy, this kingdom with a Sanskrit name is ruled by the lord of Earth at the ninth level of initiation. In Tibetan Buddhism, Kalki emerges from this land to conquer the Muslim barbarians and begin a Buddhist paradise.
ANSWER: **Shambhala** ("SHUM-buh-luh") [or **Śambhalah**]
<KL, Mythology>