**Fall Open 2019**
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Tossups

1. **In Part Two of the *St John Passion*, an alto aria in this key, with viola da gamba obbligato, is titled "*Es ist vollbracht*" ("ESS ist FOL-brahk't"). A solo violin piece in this key pairs each movement with a variation marked "Double" ("doo-BLAY"), and concludes with a "Tempo di Borea" movement. This was the *original* key of the tenth piece in Vivaldi's *L'estro armonico*, which J. S. Bach later arranged as an A minor concerto for four harpsichords. A 2/4-time (\*)** Badinerie ("bah-dee-nuh-REE") for strings and solo flute concludes J. S. Bach's Orchestral Suite No. 2 in this key. Bach also used this key to write the *Overture in the French Style* and his solo violin Partita No. 1. A sacred piece in this key has a central movement aptly named "Crucifixus" within its larger Credo section, which is titled "Symbolum Nicenum ("nye-SEE-num")." In German, this key is called "h-Moll." The very last piece in the *Well-Tempered Clavier* is a prelude and fugue in this key. For 10 points, name this key in which Bach wrote a lengthy mass.
ANSWER: **B minor** [or **h-Moll** before read; prompt on <u>H</u>; do NOT accept "B"]
<KL, Classical Music and Opera>

2. **In a story set in this state, an eleven-year-old boy stumbles across a field of milky, cross-shaped "trees," before realizing they're actually made of human bones. A sudden blizzard prevents Miles Zegner from delivering a precious glass window to his neighbors in this state in Karen Russell's story "Proving Up." In another story set in this state, an elderly man tells his five sons about the goose he had devoured on Christmas as an impoverished youth in London. Doctor Ed Burleigh cares for a kindly farmer who dies of a (\*)** heart attack in this state in the story "Neighbour Rosicky." Georgiana travels from this state to New York to attend the title concert of the story "A Wagner Matinee." A novel set in this state ends as the narrator reminisces about his shared "incommunicable past" with the title character, who marries and has ten children with Anton Cuzak. For 10 points, which state's fictional town of Black Hawk serves as the setting of Willa Cather's *My Ántonia*?
ANSWER: **Nebraska**
<INB, Miscellaneous Lit>

3. **Artworks made of this substance are part of an ongoing project by Maria Cristina Finucci that began at UNESCO headquarters. The caption "Baaaaaaaaa bye" ("bah bye") accompanied a picture posted by Teodoro Locsin Jr. of a ship carrying this substance out of Subic Bay. Chronic Inc, a company that works with this substance, is often accused of violating the Basel Convention. Studying this substance is the main goal of Japan's Project Kaisei ("kye-say"). A U-shaped barrier and a "parachute (\*)** anchor" are parts of a device financed by Boyan Slat that successfully gathered this substance in October 2019. The Green Fence operation processed this substance in China, whose National Sword policy banned imports of it in 2018, leading to unprecedented pile-ups worldwide. On the demands of Rodrigo Duterte, Canada took back 69 containers of this substance previously left in the Philippines. For 10 points, identify this substance that composes a still-growing "patch" in the North Pacific Ocean.
ANSWER: **garbage** [accept **trash**, **waste**, **refuse** and other synonyms; accept answers that indicate materials used for **recycling**, especially **plastic**s]
<KS, Current Events>

4. **A type of these methods named for a "heatbath" relies on a slight variation of Glauber dynamics. The Fortuin-Kasteleyn theorem is the basis for one of these methods named for Wolff. That one of these methods is similar to the Swendsen-Wang method, which uses the Hoshen-Kopelman algorithm to identify clusters. Fluids can be studied with a class of these methods which are known as "off-lattice." The first n iterations of**

these methods are discarded in a technique called "burn in." Simple examples of these methods may suffer from problems due to percolation. These methods required importance (*) sampling to accurately model the Ising model. Detailed balance conditions are used to create the Markov chain for these methods when using the Metropolis-Hastings algorithm. For 10 points, what class of simulation algorithms that randomly sample a distribution to determine thermodynamic quantities are named for a casino in Monaco?
ANSWER: **Monte Carlo** methods [accept Markov chain **Monte Carlo** methods; prompt on MCMC or MC methods]
<AK, Physics>

5. **John Gay's cousin John Gay created an early form of this position in response to Hutcheson. The objection that this position lacks "publicity" is among a set of five attacks on it standardized by Louis Pojman. This position is attacked by a story where a botanist finds a captain about to execute protestors because it does not guide the *captain*. Sen's capabilities approach attacks "Rawlsian ("Rawls-ian") equality" and types of equality named for this position, which Sen attacks for "sum-ranking" and (*)** "welfarism." This position is attacked by "Jim and the Indians" in a book length debate on it between Bernard Williams and J. J. C. Smart. "Roko's Basilisk" refers to the fear that an AI adopting this position would punish those who did not help build it. Generally, "effective altruism" advocates adopt this position, which comes in "act" and "rule" forms and a "preference" form pioneered by Peter Singer. For 10 points, name this position that advocates "the greatest happiness principle."
ANSWER: **utilitarian**ism [accept word forms; accept "the **utility** principle"; accept "the **greatest happiness** principle" until mentioned; accept more specific answers until they are mentioned in the question; prompt on consequentialism and word forms] (Pojman's five arguments are probably best known for the "no rest" objection)
<JG, Philosophy>

6. **During a bout of insomnia, a character in this novel composes the opening and closing lines of a sonnet imagining his lover as a "chaste and pure" flower. This novel's narrator resists the urge to shout, "I am a man!" after combing his crush's hair and kissing her for the first time. In the frame story, this novel's narrator explains that he chose to write it instead of a "boring and time-consuming" *History of the Suburbs*. The "mere handkerchief" which fed (*)** Othello's growing suspicion of Desdemona mirrors the way in which this novel's narrator notices similarities between his recently drowned best friend and his own son. After this novel's narrator opts out of seminary school in favor of becoming a lawyer, he begins to suspect that his son Ezequiel is actually the product of his wife's adultery with Escobar. For 10 points, identify this novel about Capitu's "taciturn" husband Bentinho ("ben-TIN-yo"), written by Joaquim Machado de Assis.
ANSWER: ***Dom Casmurro***
<INB, Long Fiction>

*Note to players: Two answers required.*
7. **These two countries cooperated to develop the HRS-100 computer system at an institute named after Michael Pupin. A spy assuming the identity of a Costa Rican ambassador named Teodoro B. Castro was sent by one of these two countries on a cancelled mission to assassinate the other's leader. Alleged sympathizers of one of these two countries were some of the first occupants of the other's island prison of Goli Otok. These two countries were joined by (*)** Bulgaria in a victorious campaign at the Syrmian Front. A letter that read "stop sending people to kill me" was issued during tensions between these two countries that arose due to the nationalist tendencies of the CPY. The Informbiro Period began after the leader of one of these two countries expelled the other from the Cominform in 1948, eventually leading to the expelled party co-founding the Non-Aligned Movement. For 10 points, name these two former countries that underwent the Tito-Stalin split.
ANSWER: **Yugoslavia** AND the **Soviet Union** [accept **USSR** or **Union of Soviet Socialist Republics** in place of "Soviet Union"; prompt on constituent countries such as Russia for "Soviet Union" or Serbia for "Yugoslavia"]
<KS, European History (Continental)>

8. **This adaptation occurs in all but one species of the South American genus *Tachyeres* ("tacky-AIR-eez"), which has been linked to deactivation of the gene DYRK1A ("dirk-1-A"). This adaptation is studied by zoologist Mike Dickison. This adaptation characterises the clades *Vorombe* ("vo-ROM-bay") and *Phorusrhacidae* ("forus-RASSID-ay"), who were annihilated by our current mass extinction. The innovation of this adaptation by the family *Dromaeosauridae* ("DRO-mayo-SAURID-ay") is the subject of the (*)** BCF hypothesis espoused by humans such as Larry Martin and Gregory S. Paul. This adaptation arose independently in almost every branch of *Palaeognathae* ("paleo-g'NATH-ay"), whose members are collectively called the ratites ("RAT-ites"), and include the tinamou ("TIN-uh-moo") and the rhea ("RAY-uh"). The lack of a keel on the breastbone indicates this adaptation, which often co-occurs with terrestrial life, gigantism, and island habitation. For 10 points, name this adaptation found in birds with vestigial wings.
ANSWER: **flightlessness** [or obvious equivalents; do NOT accept "winglessness"]
<KL, Biology>

9. **In a painting whose title begins with this quality, the word "Bowling" appears next to a nude woman mounted on a pair of scissors. A "technical manifesto" which ends with a demand for the "total suppression of the nude in painting" contains nine numbered "declarations," the seventh of which insists that this "universal" quality be rendered in painting as "sensation." The text "T. 402" appears in a Natalia Goncharova painting which resembles another artist's depiction of this quality "of a (*)** cyclist." A painting partly titled for this quality drew inspiration from Etienne-Jules Marey for its depiction of what appear to be four metal chains in front of a woman's blurred feet. This quality's "plastic" form was defined as the "simultaneous motion" of an object "mixed with the transformation which the object undergoes" in a 1913 essay by Umberto Boccioni ("bo-CHO-nee"). For 10 points, identify this Futurist quality captured in a Giacomo Balla painting of a dog on a leash.
ANSWER: **dynamism** [or **dynamic**; or plastic **dynamism**; or *Dynamic Hieroglyphic of the Bal Tabarin*; *Dynamism of a Cyclist*; or *Dynamism of a Dog on a Leash*; or *dinamismo*]
<INB, Painting and Sculpture>

10. **A commander in this war won a critical naval clash despite getting knocked out twice, first by a broken boom and then by a decapitated sailor's head. During a battle in this war, the free black sailor Cyrus Tiffany likely repeatedly saved the life of the winner during a critical maneuver. David Porter's absurd scheme to attack Pacific commerce in this war mainly just entangled him in the local politics of Nuku Hiva. A battle in this war was called the "False Nile" for the tactics used on the (*)** *Confiance*'s squadron. The winning side at that battle won by hauling the *Saratoga's* undamaged port side around with cables. James Dacre lost a naval duel in this war to Isaac Hull. The winning commander of a battle in this war shifted his flagship under fire from the USS *Lawrence* to the undamaged USS *Niagara*. For 10 points, name this war, in which the note "we have met the enemy and they are ours" announced Oliver Hazard Perry's victory at the Battle of Lake Erie.
ANSWER: War of **1812**
<JG, US History>

11. **A *Nature* article by Marcus R. Munafò and George Davey Smith argues that responses to this phenomenon should focus on triangulation. In 2017, Susan Fiske drew controversy for alleging a form of "terrorism" by those writing about this phenomenon. This phenomenon is the focus of a "project" founded by Brian Nosek as well as an organization at Stanford led by Steven Goodman and John Ioannidis ("yo-ANN-id-iss"). This phenomenon is exacerbated by Robert Rosenthal's (*)** file-drawer problem, and has led organizations like the Center for Open Science to push for pre-registration measures. This phenomenon is most often attributed to p-hacking, high significance thresholds, and publish-or-perish mentality leading to a 36% success rate for a process in social psychology studies. For 10 points, name this ongoing problem in the social sciences of researchers failing to confirm the results of original studies.

ANSWER: **replication crisis** [or **reproducibility crisis**; accept any answers relating to a problem in replicating studies]
<JM, Psychology>

12. **A scandal in this decade inspired a satire where a judge says that believing "a transparent tissue of odious lies" about "one of the pretties-one of the most distinguished politicians" is "Entirely a Matter For You." In this decade, migrants to New Zealand were targeted by controversial "Dawn Raids." A "Lavender List" issued in this decade by a retiring PM proposed knighting the creator of his favorite Gannex raincoat. The Widgery Tribunal and the Miami Showband ambush occurred in this decade. The first (\*)** Stormont Agreement collapsed at the *start* of this decade, in which Liberal leader Jeremy Thorpe was accused of sending a hitman after his former gay lover. Robert Muldoon won his *first* term as PM of New Zealand in this decade. Lord Mountbatten was assassinated in this decade, during which protestors in Derry were shot on Bloody Sunday. For 10 points, name this decade, the final year of which also saw the election of Margaret Thatcher.
ANSWER: 19**70**s (while some of Thorpe's actions occurred in the 60s, the scandal entirely came to light in the 70s)
<JG, European History (Commonwealth, Ancient, Historiography)>

13. **A passage in these texts that tells its readers to "wander alone like a sword horn" is usually taken to refer to a rhinoceros. A commentary on these texts was written by a man whose name literally means "Voice of" their main figure and is titled "The Path of Purification." One monument has these texts carved, originally in gold, into 729 marble tablets housed in 729 *kyauksa gu*. Several mystical passages from these texts were excluded from Thomas Rhys Davids' seminal English translation of them. These texts were first written on fragile (\*)** "palm-leaf manuscripts," and part of them illustrates an extremely complex code of conduct called the *patimokkha* ("PAH-tee-moca") in the *Suttavibhanga* ("SOO-tuh-vee-BUNG-guh"). The *Khuddaka Nikaya* ("nee-KAH-yuh") in these texts is one of the major sources of the Jataka tales, and is found in a part that joins divisions named for *Abhidhamma* ("UH-bee-DUM-muh") and *Vinaya* ("VIN-uh-yuh") to form it. For 10 points, name these central texts of Theravada Buddhism, often named for "Three Baskets."
ANSWER: **Tripitaka** [or **Tipitaka**; accept the **Pali Canon** and prompt on partial answer; accept the **Three Basket**s until mentioned and prompt after; anti-prompt on jataka tales until mentioned]
<JG, Religion>

14. **The protagonist reminisces about one of these events from his childhood during which his mother performed a piece by Cecile Chaminade on the piano and his aunt screamed when she saw a stray black dog. A character arrives late to one of these events because she forgot her bicycle pump at home, and notes that she avoids red meat before these events because it "sometimes has an odd effect." That character consumes several dry martinis and plays the (\*)** gramophone record "Always" to prepare for one of these events. The pretext for hosting one of these events is to gather research material to aid an author writing *The Unseen.* The "control" Daphne helps during these events, one of which results in the sudden arrival of Elvira. For 10 points, during what sort of event does Madame Arcati summon Charles Condomine's deceased wife in Noel Coward's play *Blithe Spirit?*
ANSWER: **séance**s ("SAY-ance") from *Blithe Spirit*
<INB, Drama>

15. **The MOSCED model assumes this property holds, so calculations within it do not require experimental data. The dissociation constant of a weak electrolyte is proportional to the square of the ratio of the given molar conductivity to the value of the molar conductivity when this property holds. The assumptions of complete dissociation of electrolytes and this property are used to derive an equation that relates the log of the activity coefficient to the square root of ionic strength. Activity coefficients are usually calculated in the limit of (\*)** "infinite" this property. In ideal solutions with this property, chemical potential depends only on concentration. When creating solutions with this property from stock solutions, the volume of the resulting solution

is calculated using the equation "*M*-one times *V*-one" equals "*M*-two times *V*-two." For 10 points, solutions in which there is a large amount of solvent relative to solute have what property contrasted with concentrated?
ANSWER: **dilute** [or **dilution**; accept infinite **dilution**; accept **ideal-dilute**; accept **zero concentration**; accept **low concentration**; accept answers indicating the solution is **not concentrated**; do NOT accept "ideal"] (The second clue is based off of the Ostwald dilution law, and the third clue is referencing Debye-Hückel theory)
<JS, Chemistry>

16. **An apartment in this film contains a print of Wyeth's *Christina's World* as well as a foosball table where a child plays before her mother collapses in exhaustion on the bus. A hot-tempered character in this film follows a girl's tutor to her school and hits himself in the head upon discovering his wife was struck by a car. The central conflict of this film begins when a man is found with his arm tied to a bed and his oxygen tank on the floor. It opens with shots of a copier scanning passports and an extended POV ("P-O-V") shot of a (\*)** judge watching a man pleading to take care of his father with Alzheimer's while his wife wants to emigrate. This film ends with that couple on opposite sides of a glass partition waiting outside of a courtroom for their daughter, Termeh, to decide who shall receive custody. For 10 points, name this 2011 film about the divorce of Nader and Simin, by Iranian director Asghar Farhadi ("far-HAH-dee").
ANSWER: *A **Separation*** [or ***Jodaí**-e Nadér az Simín*]
<JM, Film>

17. **In Inuit myth, a figure named for these animals cuts off her own eyelids and adds them to a human stew. That woman named for these animals cuts a rock in half with her knife, creating sea ice, while the hero Kiviuq ("KEE-vee-ook") escapes. Tulum's "Descending God" motif is often associated with a god of these animals. The acts of one of these animals forces Kamrusepa ("kam-roo-shep-uh") to magically send a god's anger to the underworld. One of these animals found Telipinu ("tel-ee-pee-noo"), that missing Hittite vegetation god. Ah Muzen ("moo-SEN") (\*)** Cab is the Mayan god of these animals. A fight between these animals and an owl lets Polyeidos ("poly-AY-dos") locate a dead prince. In the Völsung saga, Signy keeps a she-wolf shapeshifter from killing Sigmund by putting a product from these animals on his face. Minos's ("MYE-nos's") son Glaucus drowned in a vat of that product of this animal, first kept in Greek myth by Aristaeus ("aris-TAY-us"). For 10 points, name this animal, whose namesake wax was used to keep Odysseus's crew from hearing the Sirens.
ANSWER: **bee**s [accept more specific types]
<JG, Mythology>

18. **The speaker urges one of these people to "come away… to the waters and the wild" in a poem set on a "leafy island / where flapping herons wake." Each of that poem's four stanzas ends by telling one of these people that "the world's more full of weeping than you can understand." In another poem, the speaker's heart is "driven wild" as he contrasts the sight of one of these people with his lover's hollow-cheeked "present image" crafted by "Quattrocento finger." The prefatory essay to *Gitanjali* ("ghee-TUN-juh-lee") concludes by quoting Tagore's "On the (\*)** Seashore," in which these people weave boats with "withered leaves" and "smilingly float them on the vast deep." These people title an eight-stanza *ottava rima* poem in which the sight of them reminds the aging speaker of Maud Gonne's ("mawd gawn's") "Ledaean ("lee-DAY-an") body" and which ends by asking "How can we know the dancer from the dance?" For 10 points, a visit to the Waterfront Convent inspired a W. B. Yeats ("yates") poem set "Among" which youthful subjects?
ANSWER: **child**ren [or school**children**; accept "Among School **Children**" or "The Stolen **Child**"]
<INB, Non-epic Poetry>

19. **A member of this family often assembled his entire court simply to ask a riddle about catching a catfish in a gourd. Thomas Conlan argues that political chaos after this family's decline did not actually start until the fall of a clan that dominated the "tally trade" begun under this family. This family, which often used *yūgen* or**

"mystery" as a governing ethos, created a "half-tax" that let *shugo* ("SHOO-go") keep half an area's tax revenue. Later nationalists vilified a member of this family for taking the title of (*) "king" for trade purposes. That member of this family built the "Flower Palace" and was Zeami ("ZAY-ah-mee") Motokiyo's lover and patron. This family seized power by ending the Kenmu Restoration, but thus began the "Northern and Southern Courts" period. Both Kinkaku-ji ("KEEN-kaku-jee") and Ginkaku-ji ("GEEN-kaku-jee") were built by this family, whose rule foundered in the Ōnin War. For 10 points, name this family, whose shogunate was founded by Takauji ("taka-ooh-jee") and whose decline triggered the Sengoku era.

ANSWER: **Ashikaga** clan [prompt on the Seiwa Genji or the Minamoto clan, which the Ashikaga are technically a branch of; if someone gives the Ming Dynasty/Zhu family, prompt with "who conducted the tally trade with what Japanese regime?"] (the clan mentioned in the second sentence is the Ōuchi; the answer to the riddle in the first clue is "it's already in the gourd," which is apparently a pun on words for "gourd" and "universe")

<JG, Other History>

20. **Penetrometers, which usually measure soil properties, can also be used to measure this quantity by inserting them at a constant force and measuring the speed of penetration. A standard method of estimating this quantity measures the change in height of the earth's surface during post-glacial rebound. The value of this quantity in the mantle increases significantly at a depth of 800 to 1200 kilometers. Jeffrey's equation sets the flow rate inversely proportional to this quantity. The build up of gas content in magmas with a large value for this quantity leads to (*) explosive eruptions. Pāhoehoe ("pah-HOY-hoy") and ʻaʻā ("AH-ah") basaltic lava** flows are characterized by their different values for this quantity. Due to its high silica content, felsic lava has a higher value for this quantity than mafic lava. The wide bases of shield volcanoes are created by lava that flows easily because it has a low value for this quantity. For 10 points, what quantity describes lava and other fluids' resistance to flow?

ANSWER: **viscosity** [accept mantle **viscosity**; accept magma **viscosity**; accept lava **viscosity**; accept kinematic **viscosity** or dynamic **viscosity**]

<JS, Earth Science>

Bonuses

1. Answer some questions about the use of the Diels-Alder reaction in total synthesis, for 10 points each.
[10] Lewis acid catalysts are used to reverse this property of the Diels-Alder reaction, as Kishi et al. did in their total synthesis of tetrodotoxin ("tetro-doh-toxin"). A reaction has this property if it favors bond formation at a particular atom over others.
ANSWER: **regioselectivity** ("regio-selectivity") [or **regioselective**; prompt on selectivity or selective; prompt on chemoselectivity; do NOT accept "regiospecific"]
[10] Synthetic equivalents of these functional groups like 2-chloroacrylonitrile ("two-chloro-acrylo-nitrile") are used in total synthesis requiring them because they will not undergo a Diels-Alder reaction directly. These functional groups favor a two-plus-two cycloaddition since they act as antarafacial ("an-TAR-uh-facial") partners for alkenes ("al-KEENZ").
ANSWER: **ketene**s ("KEE-teenz")
[10] The Diels-Alder reaction was applied to total synthesis by Woodward to form cholesterol and cortisone, which are in this class of lipids. This class of lipids with four rings also includes estradiol ("estra-DYE-ol") and testosterone.
ANSWER: **steroid**s
<JS, Chemistry>

2. A lengthy poem titled for an adherent of this philosophy follows "an old man with a two-bit axe." For 10 points each:
[10] Identify this "means of maintaining sanity in slippery times," which was proposed to serve as a "rejection of… solipsism" in the preface to the collection *The Double Axe*.
ANSWER: **Inhumanism** [or "The **Inhumanist**"]
[10] This Californian poet described his environmentalist philosophy of "Inhumanism" as a "shifting of emphasis… from man to not-man," and exemplified it with the line, "I'd sooner… kill a man than a hawk."
ANSWER: Robinson **Jeffers** [or John Robinson **Jeffers**]
[10] In a meta-poem set during this month and year, Jeffers wrote that "the day is a poem: but too much like one of Jeffers's… painful to excess, inhuman as a hawk's cry." The speaker sits "in one of the dives / on Fifty-second Street" in a W. H. Auden poem titled for this month and year.
ANSWER: **September** of **1939** [prompt on September with "of which year?"; accept "**September** 1, **1939**"]
<INB, Non-epic Poetry>

3. Ted Kaczynski ("kuh-ZIN-skee") has criticized the research of Fred McCarthy for misleading people into following this philosophy. For 10 points each:
[10] Name this school of thought that Murray Bookchin derisively referred to as "lifestylism." Its proponents like John Zerzan advocate a process of undoing domestication.
ANSWER: **anarcho-primitivism** [or **an-prim**; prompt on **"green anarchism"**]
[10] David Graeber lampooned Zerzan's rejection of agriculture in *Fragments Toward an Anarchist Anthropology*, instead advancing this concept of early brotherhood based on an "ethic of reciprocity" in *Debt*.
ANSWER: "**everyday communism**"
[10] This thinker laid the groundwork for social theories of reciprocity in *The Gift*, which analyzed the potlatch systems of tribal societies.
ANSWER: Marcel **Mauss** ("moce")
<JM, Anthropology>

4. A common iterative approach to solving problems of this type is known as FABRIK ("fabric"). For 10 points each:

[10] Name this task common in robotics and graphics that involves determining the parameters for an articulation such that the effector of a jointed chain reaches a given point.
ANSWER: **inverse kinematics** [prompt on IK]
[10] The solutions to inverse kinematics problems are often these values for each segment of the jointed chain. These values, often labeled lowercase-theta, are given in degrees or radians.
ANSWER: **angle**s
[10] This matrix and the transverse of the Jacobian can be used to solve inverse kinematics problems. For a matrix *A* of dimension "*a*-comma-*b*," this matrix with dimension "*b*-comma-*a*" can be multiplied by *A* to give the identity.
ANSWER: Moore-Penrose **pseudoinverse** [or **Moore-Penrose** matrix; do NOT accept or prompt on just "inverse"]
<AK, Engineering>

5. In a Japanese folk tale, one of these animals is rescued by some guy, and in return creates beautiful silk at the cost of her own health. For 10 points each:
[10] Name this sacred animal. In a Vietnamese legend, one of these animals is rescued by a tortoise from a flood, and later returns to rescue the tortoise from a drought.
ANSWER: **crane** [or *tsuru* or *tazu*; or *họ sếu*]
[10] Southern Chinese schools of this activity often evoke the motions of five animals, including the crane. Tai chi is a form of this activity based on the balance between yin and yang.
ANSWER: **martial arts** [or *wǔshù*; accept **kung fu** or *gōngfu* or *gūng fū*]
[10] The Chinese radicals for "man" and for this concept combine to form the word *xiān* ("sh'YEN"), variously translated as "sage," "immortal," or "hermit." Legendary examples are Kunlun ("koon-loon") and Penglai ("peng-lye").
ANSWER: **mountain** [or *shān*]
<KL, Mythology>

6. One essay argues that "the modern relation of the sexes made its appearance" during this period and that, contra Jakob Burckhardt, this period involved severe curtailment of women's freedom and status. For 10 points each:
[10] That influential essay by Joan Kelly asks "Did Women Have" this period, pointing to ideals of passivity in writings patronized by Lorenzo the Great and other Medici. The 1527 Sack of Rome ended its "High" part.
ANSWER: the (Italian) **Renaissance** [accept other sub-periods as long as "Renaissance" is included]
[10] The essay highlights the non-participation of Elisabetta, a duchess of this family, in activities in *The Book of the Courtier* over which she ostensibly presides. Isabella D'Este married into this ruling family of Mantua.
ANSWER: **Gonzaga** family
[10] Kelly's essay also highlights the contrasting sexual freedom in medieval "courtly love" works written under the patronage of this daughter of Eleanor of Aquitaine. This countess-consort patronized Andreas Capellanus and Chrétien de Troyes ("creh-tee-ANN duh TWAH").
ANSWER: **Marie** of **France**, Countess of **Champagne** [accept either of the second two underlined portions with "Marie" or **Countess of Champagne**; accept French equivalents] (this is not in fact the Marie de France famous for courtly love romances of her own)
<JG, European History (Continental)>

7. This composer's *Grande symphonie funèbre et triomphale* ("f'yoo-NEB-ruh eh tree-om-FAHL") is scored for a very large wind ensemble with optional strings and choir. For 10 points each:
[10] Name this composer whose requiem calls for a very large wind ensemble, this time with *obligatory* strings and choir, as well as four brass bands that represent the cardinal directions.
ANSWER: Hector **Berlioz** [or Louis-Hector **Berlioz**]
[10] This composer's Symphony in B-flat major, scored for a large wind ensemble and percussion, was premiered in 1951 by the U. S. Army Band. He also wrote *Kleine Kammermusik* ("KLYE-nuh KAH-mer-music") for wind quintet.

ANSWER: Paul **Hindemith**
[10] John Philip Sousa's ("SOO-suh's") many wind pieces in this militaristic genre include "The Thunderer" and "The Stars and Stripes Forever."
ANSWER: **march**
<KL, Classical Music and Opera>

8. The first volume of a four-book "geographical perspective" series by Donald Meinig opens in this decade. For 10 points each:
[10] Identify this decade. The environmental historian William Denevan wrote a 1992 article refuting the "pristine myth" associated with a year in this decade.
ANSWER: **1490**s
[10] This author explored civilization in the Americas before and after the voyages of Columbus in his enormously popular books *1491* and *1493,* respectively.
ANSWER: Charles C. **Mann**
[10] In December of 1492, Columbus established La Navidad where the *Santa Maria* ran aground on this island. He later returned to this island and established La Isabela, which was destroyed by hurricanes and rebuilt as Santo Domingo.
ANSWER: **Hispaniola**
<INB, Other History>

9. One of these animals was sensationalized as the murderous "Red Ghost." For 10 points each:
[10] Name these animals, which were introduced to the U.S. Army by a man nicknamed "Hi Jolly." Edward Fitzgerald Beale supported the idea of a "corps" of these animals that operated in Texas and New Mexico.
ANSWER: **camel**s
[10] This country's over 700,000 dromedary camels are descendants of ones introduced by Afghan traders in the 1860s. A train line named in honor of those Afghans connects Darwin and Adelaide ("AD-uh-laid") in this country.
ANSWER: **Australia** [or Commonwealth of **Australia**]
[10] A group of camels used in the Cariboo Gold Rush names the Bridge of the Twenty-Three Camels that crosses this river in Lillooet ("LIL-lo-et"). Debris from the CNRs construction blocked salmon from traversing this river's Hells Gate.
ANSWER: **Fraser** River (in British Columbia)
<KS, Geography>

10. Walter Liedke ("LEED-kuh") and Arthur Wheelock have criticized Philip Steadman's 2001 book about an artist's reliance on this technique. For 10 points each:
[10] Name this technique that is said to have supposedly brought about the increased realism of the Renaissance in the book *Secret Knowledge*, which was written by David Hockney.
ANSWER: *camera obscura*
[10] Vermeer's *camera obscura* led to his use of *pointillè* ("pwan-tee-YAY"), spherical drops of an opaque paint that are a type of this technique, in which paint is applied onto a canvas in thick layers to produce a textural effect.
ANSWER: *impasto*
[10] Many Vermeer genre scenes, such as his *The Art of Painting* and *Girl Reading a Letter at an Open Window*, use drapes for this technique with a French name, in which an object in the foreground frames the composition.
ANSWER: *repoussoir* ("reh-poo-SWAHR")
<AK, Painting and Sculpture>

11. A stream of dialogue in nearly incomprehensible slang appears near the end of this chapter, just before an entreaty to try on a "cough-mixture with a punch in it for you." For 10 points each:

[10] Identify this chapter whose prose mimics a variety of prose writers, ranging from Sallust to Paul Bunyan, as Mina Purefoy gives birth to a baby boy.
ANSWER: "**Oxen of the Sun**"
[10] The advertising pitch at the conclusion of "Oxen of the Sun" notes that waking up early is required to "diddle" this figure. In the chapter "Nestor," this figure is called a "shout in the street."
ANSWER: **God**
[10] Stephen Dedalus describes God as a "shout in the street" and history as a "nightmare from which I am trying to awake" in this novel set nearly entirely on June 16, 1904.
ANSWER: *Ulysses* (by James Joyce.)
<INB, Long Fiction>

12. This politician reused the title of her autobiography, *Unbought and Unbossed*, as a campaign slogan. For 10 points each:
[10] Name this politician whose visit to segregationist George Wallace during his recovery from an assassination attempt alienated some of her supporters during her 1972 campaign.
ANSWER: Shirley **Chisholm** [or Shirley Anita **St. Hill**; do NOT accept "Anita Hill"]
[10] This co-founder and first president of the National Organization for Women attempted to run as a New York delegate to support Chisholm's candidacy. She also wrote *The Feminine Mystique*.
ANSWER: Betty **Friedan**
[10] Chisholm defeated her mentor James Farmer, a co-founder of this group, in her first representative election. This group shifted towards conservatism and endorsed Richard Nixon under the 49-year leadership of Roy Innis.
ANSWER: **CORE** [or **Congress of Racial Equality**]
<KS, US History>

13. This writer argued that only the work of great artists could properly provide a "sudden insight into circumjacent conditions." For 10 points each:
[10] Identify this writer who propounded his theory of the "luminous detail" in the essay "I Gather the Limbs of Osiris."
ANSWER: Ezra **Pound** [or Ezra Weston Loomis **Pound**]
[10] Pound distilled the key points of his book on *How to* perform this action into a book titled for the *ABC of* this task. The New Criticism movement encouraged the analysis of text through the "close" form of this action.
ANSWER: **read**ing [accept *The ABC of **Reading*** or *How to Read*]
[10] Pound discarded his theory of "luminous detail" in favor of one focused on this object, which he defined as the "point of maximum energy." A movement named for this object was co-founded by Wyndham Lewis.
ANSWER: the **Vortex** [or **Vorticism**]
<INB, Miscellaneous Lit>

14. The protein tapasin ("TAP-uh-sin") facilitates the interaction between this complex and TAP, which receives short peptide fragments from the proteasome ("PRO-tee-uh-zome"). For 10 points each:
[10] Identify this protein complex present on the surface of all nucleated cells in the human body. It allows CD8+ ("C-D-eight-positive") cells to distinguish self from non-self.
ANSWER: **MHC** class **I** ("one") [or **M**ajor **H**istocompatibility **C**omplex class **I**; prompt on MHC; do NOT accept "MHC class II"]
[10] These cells undergo negative selection and apoptose if they react too strongly to self-antigens held by the MHC class I ("one") of epithelial cells. These cells, which mature in the thymus, come in "cytotoxic" and "helper" varieties.
ANSWER: **T** cells
[10] Though professional APCs typically display fragments of foreign antigens through their MHC class II ("two"), dendritic cells have this ability, which allows them to display internalized antigen fragments on their MHC class I.

ANSWER: **cross-presentation**
<INB, Biology>

15. Oberon Zell-Ravenheart's *Green Egg* magazine popularized using a "neo-" form of this term as a self-descriptor, though groups like *rodnovers* and Asatrú prefer terms like "native faith" or "heathenry." For 10 points each:
[10] Give this term describing religious groups that claim to revive pre-Christian religious practices like witchcraft or traditions suppressed by major world religions. Wicca is among the most prominent "neo" examples.
ANSWER: **pagan**ism [accept **Neo-pagan**ism, **Contemporary Pagan**ism or **Modern Pagan**ism]
[10] Many streams of Wicca emphasize connections to divine feminine forces frequently identified with Hecate or Diana, as in this central Wicca ceremony in which a High Priestess enters a divine trance before the coven. It titles a book by Margot Adler on Wicca in the U.S.
ANSWER: **Drawing Down the Moon** [accept semantic equivalents; accept **Drawing Down the Goddess**]
[10] This country and eastern-most center of *rodnovery* has been a key center of neo-pagan activity. The Chuvash people have led a major neo-pagan revival among ethnic minorities in this country, also home to Burkhanism.
ANSWER: **Russia**n Federation [accept the **USSR**, in part because its anti-organized religion stance was a major factor in Russia's modern glut of neo-paganism]
<JG, Religion>

16. A newlywed with this name feigns a smile as she struggles with the thought of her husband "kissing her with his thick damp lips, and that she had no right to prevent his doing so." For 10 points each:
[10] Give this name of an ambitious, teenaged wife from a story titled for her "on the Neck." In another story, the tears of a character with this name prompt her grey-haired lover to tell her, "You've had your cry; that's enough."
ANSWER: **Anna** [accept "**Anna** on the Neck" or **Anna** Sergeyevna]
[10] Anna Sergeyevna ("sergey-YEV-nuh") carries on an illicit affair with the banker Dmitri Gurov in this Russian author's short story "The Lady with the Dog," which Vladimir Nabokov called "one of the greatest stories ever written."
ANSWER: Anton **Chekhov** [or Anton Pavlovich **Chekhov**]
[10] In a Chekhov story titled for one of these places, Nadya entertains the idea of writing love letters to each of her suitors. In "The Lady with the Dog," Dmitri confronts Anna at one of these places hosting *The Geisha.*
ANSWER: **theater**s [or **opera** house; accept "After the **Theater**"]
<INB, Short Fiction>

17. Answer the following about jazz in Japan, for 10 points each.
[10] This musician's fusion style began with 1969's *In a Silent Way*, and continued with two concerts in Osaka released as the live albums *Agharta* ("uh-GAR-tuh") and *Pangaea*.
ANSWER: Miles **Davis** [or Miles Dewey **Davis** III]
[10] The Toshiko Akiyoshi – Lew Tabackin Big Band exemplified this style of early jazz music that peaked in the early 1940s. In the United States, Benny Goodman was called its "king."
ANSWER: **swing**
[10] In the past couple of years, this Japanese jazz pianist has gained posthumous fame due to YouTube algorithms relentlessly suggesting his albums *Scenery* and *My Favorite Tune*.
ANSWER: Ryo **Fukui** ("REE-yo FOO-koo-eeh") [or **Fukui** Ryo]
<KL, Jazz>

18. This book's author "revokes" the whole thing after 500-plus pages of it, and it refers to the failure to produce any advice that "essentially relates to existence" as "the scandal of modern philosophy." For 10 points each:
[10] Name this work allegedly by "Johannes Climacus," which distinguishes Religiousness A and the paradoxical Religiousness B while arguing that "living humanly" requires the realization that "subjectivity is truth."

ANSWER: ***Concluding Unscientific Postscript*** to *Philosophical Fragments* [or ***Afsluttende Uvidenskabelig Efterskrift*** *til de Philosophiske Smuler*; prompt on partial answer]

[10] *Concluding Unscientific Postscript* is by this philosopher, who further investigated humanity's relation to God and the "leap of faith" in works like *The Concept of Anxiety* and *Either/Or*.

ANSWER: Søren **Kierkegaard** ("KEER-kuh-gard") [or Søren Aabye **Kierkegaard**]

[10] *Concluding Unscientific Postscript* illustrates its point about subjectivity with a story about an escaped mental patient who tries to avoid detection by going around saying this objectively true fact. It doesn't work.

ANSWER: "Bang, the **world is round**!" [accept obvious equivalents; wording/translation doesn't actually matter here]

<JG, Philosophy>

19. During one battle, Archedemus roasted this general for merely raising his hands to the sky and praying for help while Archedemus himself charged at the enemy. For 10 points each:

[10] Identify this victorious general of the Laconian War. Late in his career, this general visited Prusias and stumbled across an aged Hannibal Barca, who promptly killed himself so as to avoid capture by the Romans.

ANSWER: Titus Quinctius **Flamininus**

[10] Flamininus proclaimed "freedom" for all Greeks two years after defeating this Macedonian king at the Battle of Cynoscephalae ("cyno's-cephaly"). Unfortunately, it just meant that Greece became a Roman client state.

ANSWER: **Philip V** of Macedon

[10] At Cynoscephalae, Flamininus exploited the weakness of this Greek military formation near a pair of hills known as the "dog's heads." The soldiers in these rectangular squadrons wielded *sarissa* spears.

ANSWER: **phalanx** ("FAY-lanks")

<INB, European History (Commonwealth, Ancient, Historiography)>

20. For 10 points each, answer questions about acousto-optic devices.

[10] Since they have high deflection velocities, acousto-optic deflectors are sometimes used for this process in lieu of mechanical devices. In one technique, coils are used to perform this process in a raster pattern with thermionically generated particles.

ANSWER: **scan**ning [accept **scan**ning electron microscopy]

[10] Acousto-optic tunable filters are used to multiplex fiber-optic cables based on different values of this quantity. This quantity measured from crest to crest is equal to wave speed divided by frequency.

ANSWER: **wavelength**

[10] This technique uses an acousto-optic modulator to couple out a laser pulse after intracavity power is built up in a resonator. This technique can sustain high pulse repetition with short pulse duration unlike Q-switching.

ANSWER: **cavity dump**ing

<JS, Physics>