



ACADEMIC  
COMPETITION  
FEDERATION

# ACF NATIONALS 2019

## PACKET 9 (TIEBREAKER)

Packet by

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## Tossups

1. Shots of a toy soldier on a map are interspersed with interviews with members of this organization in a 2018 documentary directed by Duki Dror. One of the so-called "private" counterparts to this organization, which led a failed 2016 campaign to secure the reelection of Parmod Kumar to a hospital board in Tulare, California, is known as "Psy-Group." This organization faced international backlash in 2010 after Dhahi Khalfan, the Lieutenant General of Dubai, spliced together CCTV footage of their movements and posted the video online. Former members of this organization, working for the company Black Cube, were revealed in a *New Yorker* piece by Ronan Farrow to have recorded meetings with actresses such as Rose McGowan on behalf of their abuser, Harvey Weinstein. Mahmoud Al-Mabhouh, the weapons procurer of the al-Qassam Brigades, was killed in a 2010 operation by, for 10 points, what overseas intelligence agency of Israel?

ANSWER: **Mossad** [or Ha**Mossad** leModi'in uleTafkidim Meyuhadim; or the **Institute** for Intelligence and Special Operations]

<Current Events>

2. Herodotus writes that Cleomenes I of Sparta refused this city's offer to form an alliance in a scheme to make Thebes hostile to Athens. According to Thucydides, the Spartans forced surrendering soldiers from this city to say whether they had helped Sparta and its allies during the Peloponnesian War, and killed all of them when they answered "No." In one of the first actions of the Peloponnesian War, 300 Theban soldiers snuck into this city, publicly asked its citizens to become allies, and were all murdered. This city supplied 1000 hoplites to fight alongside the Athenians at the battle of Marathon. The spiraling Serpent Column commemorates a victory close to this city, where Arimnestus killed the opposing commander with a stone. A victory in the area of this city by allied forces under Pausanias took place around the same time as the naval battle at Mycale. For 10 points, name this Boeotian city that provides its name to the 479 B.C. land battle where allied Greek forces defeated Mardonius' Persian army.

ANSWER: **Plataea**

<European History>

3. This artist's signature use of a worm's-eye-view to create the impression of an "upward glance" is examined in a monograph by Frima Fox Hofrichter. The restoration of a painting by this artist revealed the presence of a skeleton holding an hourglass, who stares at a man chugging a tankard. This artist subverted lascivious renditions of a scene popular among the Caravaggisti by painting a woman sewing by candlelight, who completely ignores a man touching her shoulder to try to pay her for sex, in *The Proposition*. In 1892, the Louvre identified a monogram consisting of this painter's initials struck through with a five pointed star in *The Carousing Couple*, which had, like most of this artist's work, up to that point been misattributed to Frans Hals. This artist pauses from painting a violinist and turns to look at the viewer in her best-known self portrait. For 10 points, name this female genre painter from the Dutch Golden Age.

ANSWER: Judith (Jans) **Leyster**

<Painting and Sculpture>

4. Comparing  $L_3$  and  $L_2$  peaks produces the "white-line" ratio used to estimate this quantity for a sample when using EELS, although this method suffers from dependency on sample thickness. Information about the spin state and this quantity may be obtained by analyzing isomer shifts and quadrupole splittings and comparing them to results pre-populated on a table. Ligands with ambiguous values for this quantity are known as "suspect" or "non-innocent". An increase in this quantity causes an increase in absorption edge energy in XANES due to changes in the shielding environment. Spectroscopic methods for finding this quantity are often x-ray based due to probing the electronic environment of the nucleus. The highest known value for this quantity has been found in the iridium tetroxide cation with a value of nine. For 10 points, name this quantity which is assumed to be -2 for most oxygens, which represents how many electrons have been added or removed from an element.

ANSWER: **oxidation state**

<Chemistry>

5. A speaker standing in one of these places asks a “wily painter” “what is it you mean in that wide gesture of the lifting arms?” before seeing old women whose “poor arms are too tired for more than this” in the first poem of Thom Gunn’s *My Sad Captains*. The last stanza of a poem about these places claims that “someone will forever be surprising a hunger in himself to be more serious” by gravitating to this sort of place, where “all our compulsions meet / Are recognised and robed as destinies.” That poem set in one of these places contemplates a “A shape less recognisable each week / A purpose more obscure.” The speaker takes off his “cycle-clips in awkward reverence” before entering one of these places that he decides “was not worth stopping for” and leaves an Irish sixpence in a Philip Larkin poem titled for “going” to one of these buildings. For 10 points, a Larkin line about “Mute glorious Storyvilles” references a Thomas Gray poem set outside what sort of building?

ANSWER: **churches** [or **chapels**, **cathedrals**, or other approximate synonyms; accept specific parts of a church like an **apse** or a **pew** before “building” is read and prompt after; accept “**Church** Going”]; (the Thom Gunn poem is “In Santa Maria Del Popolo”)

<British Literature>

6. Conditions for when the graded algebra of one type of these structures is infinite or finite is given by the inequality at the center of the Golod-Shafarevich Theorem. A theorem about the properties of these structures relies on using proof by contradiction to show that  $I$ , a set generated from one of these is finitely-generated; that theorem gives conditions for when these specific structures contain elements which terminate when they are sorted. One of these structures is Noetherian if it is defined over a Noetherian ring according to Hilbert’s basis theorem. The members of these structures are said to be irreducible if they are not divisible with respect to the coefficients drawn from the underlying algebraic structure. By taking linear combinations of monomials, one can generate the elements of, for 10 points, what kind of algebraic structure whose elements are characterized by their degree and leading coefficients?

ANSWER: **polynomial ring** [prompt on **polynomials** or **rings**; prompt on **polynomial algebras** by asking “they are algebras, but we need a specific kind of algebraic structure;” accept **free algebra** before “Noetherian”]

<Other Science>

7. A 12th-century scholar who emphasized the “interconnectedness” of this place authored a short text which contains a part that translates as “one practice is all practices, all practices are one practice;” that text emphasizes the *Yuzu* aspect of doctrines surrounding this place. Another 12th-century scholar started a school named for this place after he left Mt. Hiei and was disavowed by fellow priests since he ate meat and had several children when he broke his vow of celibacy. The monk Shinran wrote several treatises about this place in a vernacular language called *wasan*, and started the school named for the “true” form of this place. Practitioners that follow the works of Honen repeatedly chant the nianfo to access this place. By reciting that text about the Buddha of Infinite Light, one gains the power to enter, for 10 points, what paradise which gives its name to a branch of Mahayana Buddhism?

ANSWER: **Pure Land** [prompt on **Buddhist paradise**]

<Religion>

8. This book’s ninth chapter concludes that, “rather like religion, nationalism has a bad name in the modern world, and, rather like religion, it more or less deserves it.” This book’s eighth chapter, which was first published in a 1964 anthology edited by David Apter, traces a title concept through Webster’s dictionary, the “interest” and “strain” theories, and a paradox identified by Karl Mannheim. The first chapter of this book pulls twelve definitions from Clyde Kluckhohn’s *Mirror of Man* before arguing for a “semiotic” understanding in which things are “essentially contestable.” This book, which includes the chapter “Ideology as a Cultural System,” opens with a passage that paraphrases Max Weber’s claim that “man is an animal suspended in webs of significance he himself has spun” before building on a concept proposed by Gilbert Ryle. For 10 points, name this collection that contains “Thick Description,” “Deep Play: Notes on the Balinese Cockfight” and 13 other essays by Clifford Geertz.

ANSWER: *The **Interpretation of Cultures*** [or *The **Interpretation of Cultures: Selected Essays***]

<Social Science>

9. In an essay for *The Atlantic*, an author from this state says “*This is your shitty playground. You earned it.*” while explaining why she chose to return there to raise her children. A novel set in this state is partly narrated by the ghost of a 12-year-old boy, who recounts the vision of a white “snake-bird” he had while in prison. The fictional town of Bois Sauvage [bwah soh-vahzh] is located in this state, which is the setting of a novel about a pregnant girl who compares herself to Medea named Esch, and a novel about Jojo, who is taken by his mother Leonie to pick up her white boyfriend from prison. *Sing, Unburied, Sing* and *Salvage the Bones* by Jesmyn Ward are set in this state. After one character moves *away* from this state to attend college, he repeats “I don’t hate it! I don’t hate it!” when his Harvard roommate asks him, “Why do you hate the South?” For 10 points, name this state home to William Faulkner’s Yoknapatawpha County.

ANSWER: **Mississippi**

<American Literature>

10. A leader with this surname used an iron fan to deflect eight sword strikes of a rival ruler who had snuck into his camp to assassinate him. That ruler with this surname often carried a flag with the motto “Wind, Forest, Fire, Mountain,” a reference to Sun Tzu’s *The Art of War*. This family, whose symbol was four diamonds arranged to form a larger diamond, had their trademark cavalry charge strategy stymied by zig-zagging wooden stockades and heavy fire from arquebusiers at a 1575 battle. The Fuji River was dammed by a leader from this family, who was known as the “Tiger of Kai” and fought several battles at Tanawakajima against his rival Uesugi Kenshin. The most famous member of this family was the famously-honorable *daimyo* Shingen. For 10 points, name this Japanese clan that was defeated at the Battle of Nagashino by Oda Nobunaga.

ANSWER: **Takeda**

<World History>

11. A definition of one type of this concept opens a text that argues the discovery of the Archimedean point and Cartesian doubt were followed by the reversal of the “hierarchical order” between two forms of this concept. This is the *first* noun in the title of a text expanded from the first Gifford Lecture delivered by a woman, whose last part, *Judging*, was left incomplete at its author’s death. A type of this concept has been exposed to the “structure of exception” and is described as overwhelmingly biological in Agamben’s *Homo Sacer*, which discusses this concept’s “bare” form. This word opens the epigraph to a work about the “sphere of consumption of late capitalism” and the “melancholy science”; that work, *Minima Moralia*, is subtitled “Reflections from damaged” one of these. Labor, work, and action are parts of the “active” type of this thing according to *The Human Condition*, which contrasts it with the “contemplative” one. For 10 points, name this concept, whose “meaning” is a stereotypical philosophical question.

ANSWER: **life** [accept word forms like **living**; accept **vita** activa or **vita** contemplativa; accept bare **life**, active **life**, contemplative **life**, or damaged **life**; accept **leben** or **bios** or **zoē**]

<Philosophy>

12. These particles are predicted to form as non-Abelian excitations in fractional quantum hall systems with a filling factor of  $5/2$ . Fu and Kane proposed that these particles can form in vortices created by the proximity effect between a strong topological insulator and a superconductor. Linking these particles together and tuning the couplings to connect these particles only to a single neighbor leads to the Kitaev chain, in which these particles are zero-energy edge modes of a p-wave superconductor. These particles are described by purely real spinors in conjunction with a purely imaginary representation of the gamma matrices. It is suspected that neutrinos may be this kind of fermion, which would allow for neutrinoless double beta decay because these particles’ creation operators square to zero. For 10 points, identify these hypothetical fermions that are their own antiparticles.

ANSWER: **Majorana** fermions [or **Majorana** zero modes; or **Majorana** particles; prompt on “anyons” before “Fu”]

<Physics>

13. In a story in this language, a woman slits her husband's throat when he isn't able to get an erection, leading the dying man to confess to carrying off a dead girl during a riot. A native speaker of this language paid homage to one of its poets in the poem "Not All, Only a Few Return" from his book *Call Me Ishmael Tonight*. A Milton-inspired "Complaint" against God and an "Answer to the Complaint" spoken by God were written in this language by the so-called "Poet of the East." The story "Thanda Gosht" was written in this language by an author who described an insane asylum inmate lying down between lines of barbed wire during a population transfer in the story "Toba Tek Singh." This language's most famous poet, Mirza Ghalib, was a master of the Persian *ghazal* form. For 10 points, name this language used by Saadat Hasan Manto, Agha Shahid Ali, Muhammad Iqbal, and other Pakistani-born authors.

ANSWER: **Urdu**

<World Literature>

14. In honor of this event, its organizer received a Limoges bowl and presidential plates of Millard Fillmore and Chester Arthur from diplomat Anthony Quainton, who had to inform him that aid was being halted because of this event shortly afterwards. This event was held in a basketball arena after Pope Paul VI refused to preside over it in a replica of Notre Dame. The only aristocrat to attend this event was Prince Emmanuel of Liechtenstein, and Cardinal Achille Silvestrini was sent as a papal emissary to this event. Its subject commissioned an ermine cape and a two-ton, solid gold throne shaped like an eagle for this event in emulation of his hero Napoleon. The \$20 million cost was partly bankrolled by the government of its organizer's elephant hunting buddy Valéry Giscard d'Estaing. Two years after this event, its subject was overthrown in Operation Barracuda by David Dacko. For ten points, name this December 4, 1977 event that created a new position of royalty in the Central African Republic.

ANSWER: the **coronation** of Jean-Bedel **Bokassa** [accept descriptions of Jean-Bedel **Bokassa** declaring himself **emperor** or **Bokassa I**]

<World History>

15. The cult of this type of figure was the subject of a 2018 exhibition for which a single shelf containing 2,500 books was designed by artist Theaster Gates to wrap around an entire gallery of the Kunstmuseum Basel. A liberation theology "shrine" named for this type of figure was established in 1967 in Detroit by civil rights leader Albert Cleage. The scar-faced, knife-wielding loa Erzulie Dantor, who was summoned by mambo Cécile Fatiman at a ceremony just before the Haitian Revolution, is typically depicted as this type of figure. Many members of Solidarity wore lapel pins picturing an icon of one of these figures, which is kept at the Jasna Góra monastery in the city of Częstochowa, a popular pilgrimage site in Poland. The distinctive appearance of these icons is attributed to deterioration of pigments, years of accumulated smoke or grime, or attempts to copy the facial features of ethnic minorities. For 10 points, name this type of icon depicting the mother of Jesus with dark skin.

ANSWER: **Black Madonna** [or **Black Virgin**; or **Black Madonna** of Częstochowa; or **Black Mother**; or **Matky Boží**; or **Czarna Madonna**; prompt on **Our Lady**; prompt on **Madonna**; prompt on **Mary**]

<Other Academic>

16. A regulator of this property, which exists in an inactive complex with MecA and ClpC, is part of a bicistronic operon responsible for inducing the "late" form of this property in *Bacillus subtilis*. Commonly used laboratory strains that possess this property include TOP10 and DH10B. A seventeen amino acid "stimulating peptide" named for this very transient property acts as a pheromone for quorum sensing in *Streptococcus pneumoniae*. Resuspension in a solution of calcium chloride or insertion of a cuvette into an electroporator are two common benchtop methods for preparing cells that exhibit this property. After addition of the vector, cells with this property are commonly incubated on ice before a brief heat shock step during transformation experiments. For 10 points, name this specialized state in which bacteria have stopped growing and are capable of uptaking naked DNA, such as plasmids, from the surrounding environment.

ANSWER: genetic **competence** [accept word forms like **competent** cells/bacteria; accept late **competence**; prompt on answers like **DNA uptake** or **transformation** before mentioned]

<Biology>

17. A group visiting this place finds such artifacts as the skeleton of an escaped orangutan and the embroidered sheet a man had taken from his aristocratic lover. This place is called a “cynic” that “tells everything” in a novel in which the protagonist escapes drowning in a “fontis” in this place before encountering a man who demands “half shares.” The maxim “feed the plains and you feed mankind” appears in an impassioned call for reuse of this place’s contents that occupies the chapter “Land Impoverished by the Sea.” Chapters on this place’s “Present Progress” and “Future Progress” feature in a lengthy digression about this place that begins after a man is wounded in the Corinth wine-shop. In a climactic sequence, the protagonist evades patrols in this place before giving all his money to Thénardier [tay-nar-dyay] in exchange for passage out of this place through a grate. For 10 points, the unconscious Marius is carried by Jean Valjean through what foul-smelling setting in Victor Hugo’s *Les Misérables*?

ANSWER: the **Paris sewers** [prompt on partial answer]

<European Literature>

18. A bandleader with this surname released *Nippon Soul*, the first live jazz album recorded by an American in Japan. Another man with this surname recorded an album that features both a bassist and an additional cello on its title track, *Work Song*. An album recorded by a bandleader with this surname was actually recorded in front of a studio audience, despite being named *Live At “The Club.”* One song recorded by a man with this surname opens with a monologue about how Joe Zawinul would say the title phrase in response to adversity. Two siblings with this last name collaborated on the hit single “Mercy, Mercy, Mercy” nine years after one of them played on Miles Davis’ *Kind of Blue*. For 10 points, give this surname of trumpeter Nat and his saxophonist brother Julian, who went by the nickname “Cannonball.”

ANSWER: **Adderley** [accept Nat or Julian “Cannonball” **Adderley**]

<Other Fine Arts>

19. This event interrupted the efforts of Thomas Jefferson’s nephews Lilburne and Isham Lewis to destroy the evidence of their brutal murder of a slave named George. The first wedding aboard a steamship was officiated on the *New Orleans* after this event, which was being tested by its builder Nicholas Roosevelt and his wife Lydia Latrobe during it. This event won many supporters for the pro-war party of Josiah Francis and Peter McQueen since it seemed to confirm a man’s threat that he would destroy Tuckabatchee from Detroit. This natural event was widely believed to have been caused by the contemporaneous Great Comet. This event created Reelfoot Lake and seemingly confirmed the legitimacy of the prophet Tenskwatawa. Jay Feldman’s *When the Mississippi Ran Backwards* is titled for one of the reported effects of this disaster. For 10 points, name this 1811 natural disaster named for a Missouri town that was exponentially stronger than a 1906 one in San Francisco.

ANSWER: the **New Madrid Earthquake(s)** [accept the **Earthquake(s)** of **1811** or **1812** until “1811” is read]

<American History>

20. Toru Takemitsu wrote a piece for orchestra partially titled for these things after meeting with Jiří Kylián in the Northern Territory of Australia and meeting with indigenous dancers. The third section of a piece for piano titled for these things begins with pedal tones on middle C while the right hand arpeggiates A-flat major chords from E-flat to C and down again. Repeated C minor chords in the right hand begin a *mélodie* for voice and piano, which slowly crescendos to the anguished “Hélas,” in a piece titled for the time “after” one of these things by Gabriel Faure. These things appear in the last word of the title to a piece in which strings imitate the braying of a donkey. Liszt’s *Liebestraume* evokes the feelings of “love” during, for 10 points, what type of occurrence, which a piece of incidental music by Felix Mendelssohn depicts as happening on a “Midsummer Night”?

ANSWER: **dreams** [accept word forms or **Dream Time**; or *A Midsummer Night’s Dream*; or “After a **Dream**”; or “Après un **rêve**”; or “**Dreams** of Love”; accept *Liebesträume* before “*Liebestraume*”]

<Music>

## Bonuses

1. In 2000, the laboratory of Zhong-Yin Zhang used the “inverse” form of this technique to assess the substrate specificity of protein-tyrosine phosphatase 1B. For 10 points each:

[10] Name this technique which determines the contribution of a specific residue to a protein’s stability or function by using site-directed mutagenesis to change it to the namesake amino acid with a chemically inert, methyl side chain.

ANSWER: **alanine scanning** mutagenesis [or **alanine-stretch scanning**]

[10] Alanine scanning was first introduced in a 1989 *Science* paper which used it to identify a dozen residues in this hormone that strongly modulated binding to its receptor. The somatotrophic cells in the anterior pituitary gland produce this hormone, whose deficiency may cause short stature.

ANSWER: human **growth** hormone [or **hGH**; or **somatotrophin**]

[10] A 2000 study, which found that only seven side chains contribute significantly to the binding between human growth hormone and its receptor, combined alanine scanning with this technique, in which a virus that infects bacteria is engineered to express a protein of interest on its surface.

ANSWER: **phage display**

<Biology>

2. Luminaries such as John Stuart Mill and Victor Hugo supported an organization founded to advocate a peaceful end to this crisis, the League of Peace and Freedom. For 10 points each:

[10] Name this 1867 crisis that erupted over Napoleon III’s offer to buy the namesake territory from Belgium. At the end of this crisis, the fortifications of the “Gibraltar of the North” were torn down.

ANSWER: **Luxembourg** Crisis

[10] The Treaty of London that ended the Luxembourg Crisis also provided for Luxembourg to join this German customs union.

ANSWER: **Zollverein**

[10] The provision of the 1816 Treaty of Paris that allowed the refurbishing of the fortress of Luxembourg on France’s dime also led to the construction of this German city’s massive fortress. Karl Mack’s army was captured at a battle near this city.

ANSWER: **Ulm**

<European History>

3. The European Commission’s Open Science Monitor project has drawn controversy for partnering with this organization. For 10 points each:

[10] Name this academic publisher which runs the Scopus database. The Cost of Knowledge movement is an ongoing boycott against this company’s practices, such as exorbitant fees for journal subscriptions.

ANSWER: **Elsevier**

[10] Some computer scientists have boycotted the recently launched Machine Intelligence spinoff of this other journal. Along with its competitor *Science*, this is considered the highest-impact journal in the sciences.

ANSWER: **Nature**

[10] In 2018, Science Europe launched this campaign, which requires scientists funded by the participating agencies to make their publications open-access from 2020 onward.

ANSWER: **Plan S**

<Other Academic>

4. In a series of pieces by Tony Conrad, this material is pickled in a jar of vinegar or stir-fried with vegetables before being tossed at a screen. For 10 points each:

[10] In the 1960s, many artists began experimenting with the physical form of what material, the most commonly-used variety of which has four perforations per frame and a gauge of 35 mm?

ANSWER: film stock [or film base; or film strip]

[10] The length of the film stock provides the title to and determines the runtime of *10 Feet*, a film by the founder of this artistic community, George Maciunas. Nam June Paik and Yoko Ono affiliated with this avant-garde movement, whose name reflects its aim to show how art and life “flow” into one another.

ANSWER: Fluxus

[10] This American director gathered decomposing film stock from an archive in South Carolina and edited the footage into his 2002 collage film *Decasia*. He recounted the 1978 discovery of hundreds of silent film reels in a small town in the Yukon territory in his 2016 documentary, *Dawson City: Frozen Time*.

ANSWER: Bill Morrison

<Other Fine Arts>

5. In one novel by this author, Guy Crouchback is “saved” by the murderous Ludovic. For 10 points each:

[10] Name this author who wrote about Crouchback in a trilogy that includes *Unconditional Surrender*.

ANSWER: Evelyn Waugh

[10] In *Unconditional Surrender*, Ludovic becomes the best-selling author of *The Death Wish*, a “gaudy tale of romance and high drama” that is typically read as a satire of this other novel by Waugh about the Flyte family.

ANSWER: Brideshead Revisited

[10] Waugh decided to give Crouchback a childless marriage, writing in a letter to this author: “No nippers for Guy.” This member of the “Bright Young People” wrote *Love in a Cold Climate*, while her sister wrote *The American Way of Death*.

ANSWER: Nancy Mitford [prompt on Mitford; prompt on Nancy]

<British Literature>

6. In a painting that decorates this building, a figure holding a horn of plenty reclines beneath a bare-breasted woman who wears a feathered headdress, carries a bow, and rides a crocodile. For 10 points each:

[10] Name this palace which includes the largest ceiling fresco in the world, showing Apollo presiding over allegorical depictions of Europe, Asia, Africa, and America.

ANSWER: Würzburg Residence [or Würzburger Residenz]

[10] After spending three years painting the frescoes at the Würzburg Residence, Giovanni Tiepolo returned to this city, where he painted yet another monumental ceiling fresco for the Palazzo Labia. Tiepolo first made his name by decorating the Palazzo Ca' Dolfin along this city's Grand Canal.

ANSWER: Venice [or Venezia; or Venexia]

[10] Though Tiepolo, for once, chose a small scale for his 1734 painting *The Chariot of Aurora*, this earlier Baroque Italian painter from Bologna covered the entire ceiling of the Casino dell'Aurora in Rome with a fresco showing the goddess leading Apollo in his chariot.

ANSWER: Guido Reni

<Painting and Sculpture>



7. In 1909 this town's founder established an "Industrial School" for orphaned children where boys would do farmwork and learn trades such as woodworking and plumbing. For ten points each:

[10] Name this Pennsylvania company town where dairy farmers were employed to violently end a 1937 sit down strike.

ANSWER: **Hershey**, Pennsylvania [or **Hersheytown**, Pennsylvania]

[10] Milton Hershey had earlier established a company town known as "Central Hershey" in this country. Hershey's economic success in the country was bolstered by the passage of the Platt Amendment, which helped establish U.S. relations toward it.

ANSWER: **Cuba**

[10] In addition to the Platt Amendment, a treaty with this name signed by the US and Cuba in 1903 helped Hershey's economic success in Cuba. An earlier 1875 treaty of this name allowed duty-free import of Hawaii sugar to the United States in exchange for US economic privileges.

ANSWER: **Reciprocity** Treaty [accept the **Reciprocity** Treaty of 1875; or the **Reciprocity** Treaty of 1903]  
<American History>

8. Scholar B.H. Streeter grouped this possible work with two other hypothetical ones. For 10 points each:

[10] Name this hypothetical collection of Jesus' sayings, whose contents may have been incorporated into at least two canonical gospels.

ANSWER: **Q** source (or **Q** document or **Q** gospel)

[10] This majority view about the order of composition of the gospels is compatible with several theories involving the Q source hypothesis, including two-source and Q+ / Papias hypotheses.

ANSWER: **Marcan priority** [or any answer indicating that the Gospel of **Mark** came **before** the other gospels]

[10] This book, the only non-synoptic canonical gospel, does not include any exorcisms and is supposedly based off the testimony of a "the disciple whom Jesus loved."

ANSWER: Gospel of **John**

<Religion>

9. A chemist with this surname accidentally synthesized mauveine in a failed challenge to synthesize quinine. For 10 points each:

[10] Give the surname of William, who names a reaction for synthesizing cinnamic acids. Many laboratory spectroscopy devices are produced by a company co founded by Charles Elmer and a person of this surname.

ANSWER: **Perkin** [accept William Henry **Perkin**; accept Richard **Perkin**]

[10] William Henry Perkin's son of the same name developed his namesake "triangle" for performing this technique under low pressure. This technique separates the components of a mixture by boiling and condensing them.

ANSWER: **distillation**

[10] During azeotropic distillation procedures, one of these side-armed apparatuses may be placed under a condenser to collect water.

ANSWER: **Dean-Stark** trap

<Chemistry>

10. The title character of this poem laments "Their manhood was finished / In the class-rooms, / Their testicles / Were smashed / With large books!" For 10 points each:

[10] Name this poem whose title woman laments her husband Ocol's change in lifestyle after his Western education. In its original Acholi, it employs the "comic singing" style credited to its author, Okot p'Bitek.

ANSWER: **Song of Lawino**

[10] After attending a university in England, Obi Okonkwo rails against traditions that don't allow him to marry the *osu* Clara in this author's novel *No Longer at Ease*.

ANSWER: Chinua **Achebe**

[10] Kamibile's father, who studied in England in the '60s, pours boiling water on her feet after she spends time with her pagan grandfather in this novel by Chimamanda Adichie, which is titled for flowers that grow in Kamibile's yard.

ANSWER: **Purple Hibiscus**

<World Literature>

11. One work for this instrument ends with a long descending run that is playable as arpeggios, but are performed as glissandi. For 10 points each:

[10] Identify this instrument, for which Marcel Tournier composed solo works such as *Féerie*. Mikhail Glinka wrote a set of variations on a theme from *The Magic Flute* commonly played on either piano or this instrument.

ANSWER: **harp**

[10] This Russian composer wrote an impromptu for harp, as well as a harp concerto in E-flat major. His symphonic works include an 80-minute programmatic Symphony No. 3 about the hero Ilya Muromets.

ANSWER: Reinhold **Glière**

[10] Another harp concerto, *Concerto serenata*, was composed by Joaquín Rodrigo, a composer from this country. Manuel de Falla, a composer from this country, used a poem by Luis de Góngora for a piece for soprano and harp.

ANSWER: **Spain** [or Kingdom of **Spain**; or Reino de **España**] [The piece is *Soneto a Córdoba*]

<Music>

12. A 1999 article in the *Annals of Science* uses the author's successful prediction of the fall of the Berlin Wall to ground his logic in predicting the date of this event. For 10 points each:

[10] Name or describe this event which the astrophysicist J. Richard Gott claimed would occur within 5,100 and 7.8 million years with 95% confidence.

ANSWER: the **end of humanity** [accept equivalents suggesting that **humanity** goes extinct; prompt on **doomsday**; do not accept or prompt on "the end of the world" or any other answers]

[10] Gott's argument relies on this principle, which holds that any given human is a non-privileged observer of the universe. This principle is often conflated with the mediocrity principle, and had its name coined by Hermann Bondi.

ANSWER: the **Copernican** principle [or the principle of **Copernicus**]

[10] This American astronomer used the Copernican principle to argue that measurements of his namesake constant, which quantifies the expansion rate of the universe, should be constant from any point in the universe.

ANSWER: Edwin **Hubble**

<Other Science>

13. This poem describes holding a flashlight to the title character's eye and seeing "all dark pupil, an entire night itself" before "one tear, his only possession" slips from it. For 10 points each,

[10] Name this poem that begins "Here, above, [where] cracks in the buildings are filled with battered moonlight". This poem's title figure "emerges from an opening under the edge of one of the sidewalks" when he "pays his rare... visits to the surface."

ANSWER: "The **Man Moth**" (by Elizabeth Bishop)

[10] A Mary Oliver poem asks if this thing "is it tender and breakable, like the wings of a moth in the beak of the owl?" An Emily Dickinson poem calls hope as "a thing with feathers" that perches in this place.

ANSWER: the **soul**

[10] This American author described seeing a moth fly into a candle at her camp in the Blue Ridge Mountains in her essay "The Death of the Moth." Her best-known book describes a year she spent near the title body of water in Roanoke, Virginia.

ANSWER: Annie **Dillard**

<American Literature>

14. In 1996, four British women were found not guilty due to the Genocides Act of 1969 after they sabotaged a BAE Systems Hawk fighter jet intended for use in this conflict. For 10 points each:

[10] Name this event during which soldiers conscripted thousands of boys to make human chains around guerilla-occupied areas in the “fence of legs” strategy. International outrage over this event was raised by a 1991 massacre in the Santa Cruz cemetery.

ANSWER: Indonesian **occupation** of **East Timor** [accept equivalents of the Indonesian **invasion** of **East Timor** or the **East Timor genocide**]

[10] This Australian Labor Party PM’s foreign minister Gareth Evans claimed the Santa Cruz massacre was merely an “aberration.” This personal friend of Suharto served as PM from 1991 to ‘96.

ANSWER: Paul **Keating**

[10] On the eve of the invasion of East Timor, Suharto received approval for the operation from this American Secretary of State, who also greenlit the Argentine Dirty War in 1976.

ANSWER: Henry **Kissinger**

<World History>

15. A paper about this phenomenon discusses Vivek, a vain performer who wildly misreads his audience’s enthusiasm level. For 10 points each:

[10] Name this phenomenon that Susanna Siegel argues can be rational or irrational. D. M. Armstrong argues this phenomenon is a kind of belief-acquisition in “[This concept] and the Physical World.”

ANSWER: **perception** [accept visual **perception** or sense-**perception**; accept word forms like **perceiving**]

[10] This philosopher frequently collaborates with Zenon Pylyshyn on studies of visual perception. He put forth his theory of mental architecture in *Modularity of Mind*.

ANSWER: Jerry **Fodor**

[10] Siegel compares perceptual “hijacking” to the mistaken beliefs caused by these constructs. Fodor used one of these things named after Franz Carl Müller-Lyer, a picture of three arrows, to argue not all perception is theory-laden.

ANSWER: **illusions** [accept optical **illusions** or visual **illusions**]

<Philosophy>

16. This process may be responsible for rapid bursts of heat within the sun’s corona called nanoflares. For 10 points each:

[10] Name this process which converts the energy stored within the sun’s magnetic field into plasma motion.

ANSWER: magnetic **reconnection** [or **fast** magnetic **reconnection**]

[10] The MHD theory of reconnection predicts that nanoflares occur because of the effects of this quantity for the plasma, which allows the magnetic flux from either side of the boundary layer to diffuse through the current layer. This quantity also names an unstable “wall mode” in tokamaks.

ANSWER: electrical **resistivity** [prompt on **rho**]

[10] Another theory of nanoflare formation posits that they occur due to the heat produced by the underlying currents passing through a conductor, in an effect named for this scientist who also names the SI unit of energy.

ANSWER: James Prescott **Joule** [accept **Joule heating** or **Joule’s 1<sup>st</sup> law** or the **Joule-Lenz law**; prompt on **Ohmic heating** or **resistive heating**]

<Physics>

17. Since debuting in 1945, Giorgio Strehler's staging of this play has become the longest running stage production in Italian history. For 10 points each:

[10] Name this play whose most famous set piece requires the lead actor to juggle platters as he simultaneously serves two tables and steals food for himself. An adaptation of this Carlo Goldoni play entitled *One Man, Two Guvnas*, opened with James Corden as the lead in 2011.

ANSWER: *The Servant of Two Masters* [or *Il servitore di due padroni*]

[10] The protagonist of *The Servant of Two Masters*, Truffaldino, is based on Harlequin, one of the stock characters of this style of Italian theater.

ANSWER: *commedia dell'arte*

[10] In one scene of *The Servant of Two Masters*, Truffaldino can't stop himself from eating the bread that he's chewing to use for this purpose. The plot of Act IV of Pierre Beaumarchais's *The Marriage of Figaro* hinges on the Countess and Suzanne's use a pin for this purpose.

ANSWER: sealing a letter [accept obvious equivalents of clasping or closing a note]

<European Literature>

18. This issue takes its name from the Scottish constituency of Labour MP Tam Dalyell, who first discussed it in 1977. For 10 points each:

[10] Name this issue concerning whether legislators from Northern Ireland, Scotland, and Wales should vote on matters concerning only England. The McKay Commission's report on this issue recommended a policy of "English votes for English laws."

ANSWER: the West Lothian question [or the English question]

[10] The West Lothian question arose due to this process, in which Northern Ireland, Scotland, and Wales have been granted independent assemblies while retaining seats in Parliament.

ANSWER: devolution

[10] This politician coined the term "West Lothian question." He was dismissed from Edward Heath's Shadow Cabinet after giving a speech that cited several of his racist constituents in arguing for immigration restrictions.

ANSWER: Enoch Powell

<European History>

19. These places and the people who inhabit them are called "active participants in the drama of civilization versus barbarism" in a chapter linking them to "safety" from a 1961 book. For 10 points each:

[10] Name these urban locations that, according to the same book, are site of people who act in an "intricate ballet in which the individual dancers and ensembles all have distinctive parts which miraculously reinforce each other to compose an orderly whole."

ANSWER: sidewalks [do not accept or prompt on "street(s)"]

[10] This sociologist wrote about the "intricate ballet" of sidewalks in her book *The Death and Life of Great American Cities*, which attacked "rationalist" planners such as Robert Moses.

ANSWER: Jane Jacobs [or Jane Butzner]

[10] Robert Kanigel's biography of Jacobs is titled for this four-word phrase that Jacobs coined in the chapter about sidewalks and safety. Jacobs wrote that a city's safety depended on demarcation between public and private spaces, frequent use of sidewalks, and this concept that was developed into the "natural surveillance" strategy of crime prevention.

ANSWER: eyes on the street [accept eyes upon the street or *Eyes on the Street: The Life of Jane Jacobs*]

<Social Science>

20. In a bizarre poem by Thomas Chestre, this character is horrified when he sees a flying snake that has the head of a woman. When he kisses it, it turns into the Lady of Synadowne. For 10 points each:

[10] Name this knight. You can either provide his real name, his English name, his French name, or the English translation of his French name, which has become an eponym for characters whose courtly lineage and real name is hidden to them by their mothers, but who desire to become knights anyway.

ANSWER: La **Bel Inconnu** [or The **Fair Unknown** or **Libeas Disconus** or **Gingelaine**; no one's going to say it, but accept **Bewfy**]

[10] "The Fair Unknown" does not know he is the son of this knight. In a mock romance, "The Fair Unknown" is the child produced from the union of this knight and Lady Ragnell.

ANSWER: **Gawain** [or **Gawaine**]

[10] In *Le Morte D'arthur*, "The Fair Unknown" appears as Gingelaine, but only briefly when he is unceremoniously killed after assisting Mordred in exposing the affair between these two characters, one a knight and the other Arthur's wife.

ANSWER: **Lancelot** and **Guinevere** [accept in either order]

<Mythology>