ACADEMIC COMPETITION FEDERATION

ACF NATIONALS 2022

FINALS 2

Packet by

The Editors

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TOSSUPS

1. A Chinese god of this domain was nursed by a fairy after hatching from an egg that was discovered in the forest by a nine-eared dog. That god of this domain rewarded Fuxi and Nüwa for freeing him from a cage by gifting them one of his teeth, which grew into a gourd that protected them during a flood. A winged, blue-skinned god of this domain married a mortal woman who became the mirror-wielding goddess Dianmu. In the *Kojiki*, eight *kami* of this domain appear on the rotting corpse of Izanami and pursue Izanagi as he flees the underworld. The primary *kami* of this domain had a weasel or badger-like companion that left scratch marks on trees. In addition to Lei Gong, gods of this kind included a deity who traveled with a bag-carrying god of a related domain, with whom he saved Japan from the Mongol invasions. For 10 points, what weather phenomena were produced by the *kami* Raijin?
ANSWER: **thunder** [accept *léi* before "Lei Gong" is read; accept *kaminari*; accept **lightning** or **storm**s; prompt on weather]
<Mythology/Legends>

2. This letter denotes a quantity adapted to seasonal environments by Nicolas Bacaër ("bah-kah-AIR") and Souad Guernaoui ("soo-AHD gair-nah-WEE"). A quantity denoted by this letter equals "negative log-s-infinity, over one-minus-s-infinity," in a simple case of the final size equation. This letter denotes the largest eigenvalue ("EYE-gun-value") of the next-generation matrix. This letter labels a population that strictly increases with time in the Kermack–McKendrick model, which is based on the work of Ronald Ross. This letter labels the final stage of simple three-compartment models, in which it follows stages labeled S and I. Herd immunity is achieved at a vaccination rate of "one, minus one-over-" a parameter denoted by this letter, which should itself be less than one to avoid exponential spread of a disease. For 10 points, name this letter that, with a subscript zero, represents an epidemic's basic reproduction number.
ANSWER: **R** [accept R_0 ("R-nought")]
<Misc. Science>

3. A 2017 Molly Crockett paper is titled for outrage described by this adjective "in the digital age." A dual-system model with this adjective in its name was devised by Fiery Cushman, whose lab at Harvard has this adjective in its title. Jesse Graham and Craig Joseph co-developed a model partly named for this adjective, in which only two of five components are highly salient to liberals. Studying veterans who were traumatized by what they had done or seen led Jonathan Shay to coin a term for this kind of "injury." A model named for this adjective is frequently applied by asking subjects to react to a story in which a man with a sick wife steals medicine; that model's highest level is called "post-conventional." For 10 points, give this adjective in a "foundations" theory by Jonathan Haidt ("height") and a six-stage model of development by Lawrence Kohlberg.
ANSWER: **moral** [or **moral** judgment, or **moral** injury, or **moral** foundations theory, or **moral** development]
<Social Science>

4. Radical students who opposed a conservative shift during this ruler's reign were bayoneted on Saint Daniel's Night. Mass executions of prisoners who opposed this ruler's legitimacy were halted by the Lord Eliot Convention. The "Westminster Legion," also called the "British Legion," supported one of this ruler's regents in battles against the Moderate faction that dominated the so-called "Moderate Decade." In a diplomatic affair, this ruler chose a spouse preferred by François Guizot ("fran-SWAH ghee-ZOH") over one preferred by Lord Palmerston. The Democratic Sexennium ("seck-SEN-ium") began after this non-British ruler was deposed in the Glorious Revolution orchestrated by Juan Prim ("h'WAN PREEM"). This "Queen of Sad Mischance" gained the throne via a Pragmatic Sanction issued by her father Ferdinand VII ("the-seventh"). For 10 points, name this Spanish queen opposed by the Carlists.
ANSWER: **Isabella II** [or **Isabel II**, or **Elizabeth II of Spain**; prompt on Queen Isabella; prompt on Maria Christina by asking "Who was she serving as regent for?"; reject "Elizabeth II"]
<European History>

5. An author with this first name wrote a novel that opens with a retired military officer attending the funeral of his teenaged daughter, who was executed by Ayatollah Khomeini's regime for distributing pamphlets. A poem by a different author with this first name lists "ten wounded," "twenty homes," and "fifty olive trees" among the losses caused by the title event. An Iranian author with this first name wrote the novels *Missing Soluch* and *The Colonel* and has the last name Dowlatabadi. In a poem by an author with this first name, a woman soldier asks "Didn't I kill you?", and the speaker replies "I forgot, like you, to die." That author with this first name warned "Beware / Of my hunger / And my anger" in a poem beginning "Write down! / I am an Arab," titled "Identity Card." For 10 points, give this first name of a Palestinian poet with the last name Darwish.
ANSWER: **Mahmoud** [accept Mahmoud **Dowlatabadi**; accept Mahmoud **Darwish**] (The penultimate poem is "In Jerusalem.")
<World Literature>

6. Across six years, this conductor led seventeen contemporary classical concerts in small venues in Greenwich Village in his "Prospective Encounters" series. Besides Georg Solti ("george SHAWL-tee"), this man was the only conductor to record a complete Mahler symphony cycle with the Chicago Symphony Orchestra. This conductor succeeded Leonard Bernstein as music director of the New York Philharmonic in 1971, and conducted Patrice Chéreau's ("pah-TREESS shay-RO's") 1976 production of the Ring Cycle for the centenary of the Bayreuth ("by-ROYT") Festival. This founder of the *Ensemble intercontemporain* ("ANN-ter-con-tem-po-RAN") also founded a music research institute attached to the Centre Pompidou ("pom-pee-DOO") called IRCAM ("eer-KAM"). This man wrote a piece subtitled "Portrait of Mallarmé ("mal-lar-MAY")", and a piece with multiple movements titled for "L'Artisanat furieux" ("lar-tee-zah-NAH f'yoor-YUH"). For 10 points, name this French serialist composer of *Pli selon pli* ("plee suh-LAWN plee") and *Le Marteau sans maître* ("luh mar-TOH sawn MET-ruh").
ANSWER: Pierre (Louis Joseph) **Boulez** ("boo-LEZZ")
<Classical Music>

7. In a play by this author, a character says that Americans aren't knighted, because Brits only think "fuck you" to the person knighting them, whereas Americans would say it out loud. In that play by this author, a man makes a joke about Chopin's ("sho-PAN's") Nocturnal Emission in C-sharp minor, after pointing out the semen stain on the pajamas of a blind man, whose foot he is bandaging due to a cut from a broken milk bottle. That blind man cheats on an aging choreographer with the Puerto Rican dancer Ramon in a play by this author in which eight gay men gather at a country house over three summer weekends. This author wrote a play in which Jesus and his Apostles are gay men living in Texas, and one in which sopranos Sophie and Sharon are coached by Maria Callas. For 10 points, name this American playwright who died in 2020 and wrote *Master Class* and *Love! Valour! Compassion!*
ANSWER: Terrence **McNally** (The play about Jesus and the Apostles in Texas is *Corpus Christi*.)
<American Literature>

8. This present-day country's site of Idehd ("ih-dead") contains a midden of turtle shells, which were offered by priests to a great eel. A city in this country was conquered by a hero born to the thunder god Nan Sapwe ("nahn sahp-way"), named Isokelekel ("ee-soh-keh-leh-kel"), and was built as an altar to the god of agriculture by two sorcerers named Olosohpa ("oh-loh-soh-pah") and Olosihpa ("oh-loh-sih-pah"). By tradition, the man Anagumang ("ah-nah-goo-mahng") taught people in this country to use quarried rock from foreign lands to make large wheel-shaped objects. The Saudeleur ("saw-deh-lur") dynasty ruled a city in this country which was linked by canals built atop that city's central lagoon. Another group in this country created *rai*, large stones used as money. It contains the site of Nan Madol, known as the "Venice of the Pacific." For 10 points, name this country which contains the islands of Yap, Pohnpei, and Chuuk and whose capital is Palikir.
ANSWER: Federated States of **Micronesia** [or **FSM**]
<World History>

9. An aside near the end of this essay uses a mathematical sign in writing out "two nonmasters does not equal two dead." This essay reuses phrases from its author's earlier essay on "ways out," or "Sorties." Keith and Paula Cohen translated this essay, which claims that men have made "an anti·narcissism" and "constructed a logic of anti·love." This essay says in italics that a metaphorical *dark continent is neither dark nor unexplorable*." Its last line, "In one another we will never be lacking," rejects Jacques Lacan's ("lah-KAHN's") view of women as "lack." A so-called "other bisexuality" is discussed in this 1975 essay, which calls its title figure "not deadly" but "beautiful," and names Jean Genet ("john juh-NAY") and Joyce's *Ulysses* as precursors to an undefinable new "women's writing," or *écriture* ("ay-kree-t'YOOR") *feminine*. For 10 points, what essay by Hélène Cixous ("sick-SOO") is partly titled for a mythical monster woman?
ANSWER: "The **Laugh of** the **Medusa**" [or *Le **Rire de la Méduse**]
<Philosophy>

10. These compounds are compared against a potassium chloride reference line on a Walden plot. Functionalizing these compounds with chemical handles makes them "task-specific." In biorefineries, ligno·cellulose can be pre·treated using even-carbon examples of these compounds, rather than acids and bases. These compounds establish a bi·phasic ("by-FAY-zick") reaction for alkene ("AL-keen") coupling and product purification in the same pot, which allows the Heck reaction catalyst to be recycled. Deep eutectics ("yoo-TECK-ticks") are biodegradable alternatives to these substances, which remain popular in green chemistry. These compounds are often comprised of chloro·aluminates and alkyl-imid·azolium ("AL-kill-ih-mid-uh-ZOL-ium") derivatives like EMIM ("EE-mim"), and they retain high conductivity below 0 degrees Celsius. For 10 points, name these solvents that exist as molten organic salts at room temperature.
ANSWER: **ionic liquid**s [or **IL**s; prompt on liquids; prompt on solvents until it is read; accept deep **eutectic** solvents or **eutectic**s until it is read; reject "electrolytes"] (Deep eutectic solvents are sometimes classified as a type of ionic liquid.)
<Chemistry>

11. Soldiers arrange rocks into a circle inscribed with one of these symbols in *Riverbed at Todorovo*, a mural painted by Stanley Spencer for the Sandham Memorial Chapel. A model poses behind a frosted glass emblazoned with one of these symbols in a Vogue cover photo by Erwin Blumenfeld. Ypres ("EEP-ruh") burns in the smoky background of a painting by Romaine Brooks that shows one of these symbols stitched on a woman's black cloak. One of these symbols appears on the gray felt that covers the titular instrument in Joseph Beuys's ("BOYCE's") *Homogeneous Infiltration for Grand Piano*. Piero della Francesca's *Resurrection* shows Christ holding a flag marked with one of these symbols. One of these symbols represents the Order of Santiago and appears on an artist's shirt in a painting that depicts a Spanish princess. For 10 points, name this symbol shown on Diego Velázquez's chest in *Las Meninas*.
ANSWER: **red cross** [accept **red plus** sign or **red X**; prompt on cross or plus sign or X by asking "What color is it?"]
<Painting/Sculpture>

12. In a 1998 paper, Jack Goldstone treats use of this two-word term as a "terrible error" and suggests replacing it with the acronym AOS, meaning "advanced organized societies." John Nef and Sir George Clark popularized this term, which was coined in an 1869 lecture by "Eton Boating Song" composer William Johnson. This term, whose German equivalent is *Frühneuzeit* ("FRUE-noyt-syte"), names a period that partly titles the first book by Natalie Zemon Davis, which is about "Society and Culture" in France during it. That non-numeric era of this name began with a "communications revolution," per Elizabeth Eisenstein's book about Johannes Gutenberg, and is sometimes considered the most recent "pre-industrial" era. For 10 points, what two-word phrase commonly denotes the 15th to 18th centuries, and implies that they had incipient features of more recent eras?
ANSWER: **early modern** [or **early modernity**, or **early modern** world, or **early modern** period/era; accept "The Problem of the Early Modern World"; accept "The Early Modern Muddle"; prompt on Frühneuzeit before "Frühneuzeit"]
<Other History>

13. Those who seek healing eat the boiled meat of these animals in a sacrifice called *pory* practiced by the Khanty people. In the 1840s, migrations that followed groups of these animals spread the revival of Laestadianism ("lay-STAD-ianism"), a Pietist movement that accommodated indigenous customs such as offerings at *seida*s ("SAY-duzz"). The Gwich'in ("gwee-chin") people and the U.S. government jointly manage a group of these animals that lives along the Porcupine River and belongs to their barren-ground subspecies. Managing the Taimyr ("tye-MURR") group of them is the primary economic activity of the Nenets. The Dolphin-Union population of these semi-domesticated land animals seasonally migrates to Victoria Island in Canada. The Lapponian ("lap-POH-nian") dog was bred to help manage these animals by the Sami, who herd them in northern Sweden and Norway. For 10 points, name these hoofed animals exemplified by the caribou.
ANSWER: **reindeer** [or *Rangifer tarandus*; accept **reindeer** herding; accept **caribou** or barren-ground **caribou** before "caribou"; accept Santa's **reindeer**; prompt on deer]
<Geography>

14. In Mexico, this disease can accelerate into a vasculitis ("VASS-kew-LYE-tiss") called Lucio's phenomenon. Thalidomide treats type 2 inflammatory reactions in this disease, which can cause a namesake form of erythema nodosum ("airy-THEE-muh noh-DOH-sum"). This disease can be diagnosed by finding antibodies to PGL-1. This disease shows foamy histiocytes ("HISS-tee-oh-SYTES") called Virchow ("FEAR-koh") cells and clumps called globi when using a Fite–Faraco stain. Borderline forms of this disease are the center of the Ridley–Jopling scale. Its causative agent infects Schwann cells and macro·phages, and it is treated with a triple therapy of clofazimine ("kloh-FAZ-ih-meen"), dapsone, and rifampicin ("rye-FAM-pih-sin"). This disease's symptoms include leonine facies ("LEE-uh-nine FAY-sheez") and hypo·pigmented numb skin patches. Red squirrels harbor this disease in the U.K., whilst its U.S. reservoir is the nine-banded armadillo. For 10 points, name this myco·bacterial disease whose sufferers used to be isolated in colonies.
ANSWER: **leprosy** [accept tuberculoid **leprosy** or lepromatous **leprosy** or **Hansen**'s disease]
<Biology>

15. A poem titled for this place states "The childhood shows the man, / As morning shows the day," which may have inspired Wordsworth's line "The child is father of the man." A starving protagonist of a poem named for this place dreams of ravens feeding the prophet Elijah. In a poem named for this place, a character declares "So farewell, hope; and with hope farewell, fear; / Farewell, remorse! all good to me is lost" and advises waging war "by fraud or guile" because "Who overcomes / By force, hath overcome but half his foe." This place names a four-book epic depicting Jesus's temptation in the wilderness. A poem titled for here asks the Spirit that "satst brooding on the vast Abyss / And mad'st ("made-st") it pregnant" to help the speaker "justify the ways of God to men." For 10 points, what place titles two epics by John Milton, including one about "Man's first disobedience"?
ANSWER: **Paradise** [prompt on Garden of Eden]
<British Literature>

16. A law passed in [emphasize] *this year* included a section named for Jacob Wetterling, who had disappeared in Minnesota five years prior, as well as the Driver's Privacy Protection Act, intended to stop the use of state databases to track and harass abortion providers. This was the [emphasize] *last full* year in which Robert Michel ("michael") of Illinois was House Minority Leader. A document written in this year begins by offering a "written commitment with no fine print," and proposes a vote on term limits, a balanced budget amendment with a line-item veto, and eight other laws. In this year, a federal "three strikes" law and the Violence Against Women Act were passed as part of a "crime bill" sponsored by then-senator Joe Biden. For 10 points, the "Contract with America" presaged huge gains for Newt Gingrich's Republicans in what year's midterms?
ANSWER: **1994** [accept Violent Crime Control and Law Enforcement Act of **1994**; prompt on 94]
<American History>

17. Victoria Olsen's biography of this photographer takes its title, *From Life*, from the phrase that this artist used to sign negatives. In a photo by this artist, a white-haired man closes his eyes and stands entranced in front of an oak tree as a woman points to him. This artist etched a semicircle onto the collodion of a photograph of Mary Hillier with two children to create a halo-like effect. Foliage frames the head of a girl with flowers in her hair in this artist's photo *Pomona*, which depicts Alice Liddell. This woman's Isle of Wight home is depicted in *Freshwater*, a play written by her grand-niece Virginia Woolf. *Vivien and Merlin* and *The Passing of King Arthur* are two of this photographer's illustrations for Tennyson's *Idylls of the King*. For 10 points, name this artist known for ethereal soft-focus photos of Victorians like Charles Darwin and John Herschel.
ANSWER: Julia Margaret **Cameron**
<Other Fine Arts>

18. This person names a phase of the 2+1 ("two-plus-one")-dimensional abelian Higgs model whose unbroken U(1) ("U-one") symmetry admits an associated massless particle. The Darwin Lagrangian ("luh-GRANJ-ian") corrects a law named for this person to order "v-squared." A condition named for this person yields apparently-instantaneous potentials, alongside fields that propagate at the speed of light and respect causality. For static sources, Jefimenko's ("YEFF-ee-MEN-koh's") first equation reduces to a law named for this person. Electromagnetic radiation is usually derived in the transverse gauge ("gay'j") named for this man, in which the divergence of the vector potential is zero. This man proposed his namesake law after building a torsion balance to measure the forces between charged pith balls. For 10 points, identify this French physicist who names the inverse-square law of electrostatic forces.
ANSWER: Charles-Augustin de **Coulomb** ("KOO-lom") [accept **Coulomb** phase or **Coulomb**'s law or **Coulomb** gauge]
<Physics>

19. This ethnic group issued a resolution honoring Franciscan friar Berard Haile, who distinguished their "rites" from their rattle-accompanied chants which typically last two, five, or nine nights. After fasting for days, a girl of this ethnic group helps bake a cake in a circular hole in the ground, but may not eat from it, in a *kinaalda* ("kee-NAL-dah") honoring her first period. Warriors of these people exorcise ghosts with a ceremony at which cars have lately replaced horses, called the "Enemy Way." These practitioners of the "Blessing Way" identify the cardinal directions and the edges of their land with four sacred mountains. These non-Maya people bless dwellings called *hogan*s ("HO-gunz") and venerate two sons of White Shell Woman who are called their "Hero Twins." For 10 points, name this Native American tribe whose reservation in the Four Corners region of the U.S. is the largest of any Native nation.
ANSWER: **Navajo** [or **Diné**; prompt on Native American before "Native"; prompt on American Indian or Indigenous American]
<Religion>

20. This man published a piece set in a "Forest of Estrangement" that later appeared in a larger work. This man encouraged "imagining an orgasm with Man A while copulating with Man B" in one text's "Advice to Unhappily Married Women." This man wrote that life's great tragedies include having read *The Pickwick Papers*, because one can't go back and read it a first time. This man wrote several fragments set during rainy days in the fourth-floor apartment of a man whose boss is named Vasques ("VASS-kess"). Many "Dolorous Interludes" dot an English translation of writing by this man which was compiled from over 500 sheets in a suitcase after his 1935 death. Richard Zenith translated a "factless autobiography" by this man credited to bookkeeper Bernardo Soares. For 10 points, name this man who ruminated on unease in *The Book of Disquiet*, a Portuguese author with many "heteronyms."
ANSWER: Fernando **Pessoa** [prompt on Vicente <u>Guedes</u> before "imagining"; prompt on Bernardo <u>Soares</u>; reject all other heteronyms as none but these two are relevant to the question]
<European Literature>

BONUSES

1. For 10 points each, answer the following about the vermilion powder *sindoor* ("sin-DURE"), also known as *kumkuma*, in Hindu practice:
[10e] Traditionally, these markings are made with *sindoor*, though today many people wear small stickers instead. These dot-shape markings on the forehead indicate that a Hindu woman is married.
ANSWER: **bindi** dots [or **bindi**s]
[10m] Women try to smear each other with *sindoor* in a game played in Bengal on the last day of the puja dedicated to this deity, which coincides with Navratri ("nuh-v'RAH-tree") and celebrates the defeat of the demon Mahishasura ("muh-hish-AH-soo-ruh").
ANSWER: **Durga** [or Maa **Durga**; prompt on Shakti or Devi]
[10h] Worshippers cover idols of this other deity with *sindoor* of the highest quality, reflecting a story in which this deity reasoned that immersing himself in *sindoor* could grant immortality to his mortal companion.
ANSWER: **Hanuman** ("huh-noo-MAHN") (He was hoping to make Rama immortal.)
<Religion>

2. The complex rhythms of Afro-Cuban music largely derive from a few basic patterns. For 10 points each:
[10m] This is the general term for a fundamental rhythmic pattern in Afro-Cuban music. It shares its name with a percussion instrument that is commonly used to keep time.
ANSWER: *clave* ("KLAH-vay") [or *claves*]
[10h] The most common *clave* pattern, the *son* ("sohn") *clave*, begins with this rhythmic pattern. In this pattern, a measure of 2/4 ("two-four") is broken into asymmetrical groups of 3+3+2 rather than 2+2+2+2.
ANSWER: *tresillo* ("treh-SEE-yo")
[10e] The second-most common *clave* pattern, which begins with a 3+4+1 grouping, is named after this Cuban dance genre. This genre is not to be confused with its American ballroom-dancing offshoot, which is spelled with an added "h."
ANSWER: *rumba* (The American offshoot is *rhumba*.)
<Other Fine Arts>

3. The main character dreams of the title sweet foodstuff flowing out of a blue tin in one of these stories, titled "Condensed Milk." For 10 points each:
[10h] Name these stories that draw upon the time their author spent in labor camps from 1929 to 1951. They are collected in volumes that include *The Left Bank* and *The Virtuoso Shovelman*.
ANSWER: *Kolyma* ("kuh-lih-MAH") *Tales* [or *Kolyma Stories*; or *Kolymskiye rasskazy*]
[10m] Shalamov's final term of imprisonment was a punishment for publicly praising this author, the first Russian to win the Nobel Prize for Literature. The title character of his most famous short story is an American tourist who dies abruptly while on vacation in Capri.
ANSWER: Ivan (Alekseyevich) **Bunin** (That story is "The Gentleman from San Francisco.")
[10e] Perhaps the best-known account of Soviet labor camp life is this three-volume work by Aleksandr Solzhenitsyn ("sol-zhuh-NEET-sin"), which caused him to lose Soviet citizenship.
ANSWER: *The **Gulag Archipelago**, a history and memoir of life in the Soviet Union's prison camp system* [or *Arkhipelag GULAG*]
<European Literature>

4. This process can be done with distortions by using a spin echo pulse sequence on one nucleus and a selective population inversion on the other one. For 10 points each:
[10h] Name this general technique for enhancing the NMR signal from a nucleus with low gyro·magnetic ratio by *J*-coupling its resonance to a nucleus that has a smaller energy difference.
ANSWER: **polarization transfer** [or insensitive nuclei enhancement by **polarization transfer** or **INEPT**; or distortionless enhancement by **polarization transfer**; or **DEPT**]
[10m] Distortionless enhancement most often transfers and amplifies a proton NMR signal onto this other NMR-active nucleus. This isotope's natural abundance is 1.1%.
ANSWER: **carbon-13** [or **C13**; prompt on **C** or **carbon** by asking "Which isotope?"]
[10e] A carbon atom attached to this many hydrogens has a negative peak in the 135 degree DEPT ("dept") pulse sequence. The internal carbons in a linear alkane are attached to this number of hydrogen atoms.
ANSWER: **two**
<Chemistry>

5. Families who rose to prominence in this district include the Sarkies, which produced three brothers who developed Singapore. For 10 points each:
[10h] Name this district of Isfahan ("ESS-fah-HAHN") created in the early 17th century by Shah Abbas I ("the-first"), who populated it with resettled Armenians from throughout the Safavid ("SAFF-uh-vid") empire.
ANSWER: **New Julfa** ("JOOL-fuh") [or **Now Jolfā**, or **Jolfâ-ye Now**, or **Nor Jugha**; reject "Julfa"]
[10e] In Western Europe, the main outpost of Armenians from New Julfa was this French city, whose population is nearly 10% Armenian today. This city names a revolutionary song which declares "To arms, citizens!"
ANSWER: **Marseille**s ("mar-SAY") [accept "La **Marseillaise** ("mar-say-YEZ")"]
[10m] In India, many New Julfan families settled in this city, where Armenian Street passes through the commercial district of George Town. The British settled weavers in this non-Calicut city who produced its namesake light cotton fabric.
ANSWER: **Madras** ("muh-DRASS") [or **Chennai**]
<World History>

6. Answer the following about the Irish Neoplatonic philosopher John Scotus Eriugena ("er-YOO-juh-nuh"), for 10 points each.
[10m] Eriugena was responsible for the best-known translations of and commentary upon this 5ᵗʰ-to-6ᵗʰ-century Neoplatonic philosopher, whose conventional name reflects his pretense that he was a certain Greek judge mentioned in the New Testament.
ANSWER: **Pseudo-Dionysius** the Areopagite ("air-ee-OP-ug-ite") [or Dionysius the **Pseudo-Areopagite**; prompt on Dionysius]
[10e] Eriugena posited this many "modes" of being and non-being. Thomas Aquinas's *Summa Theologica* runs through this number of "ways" to prove God's existence.
ANSWER: **five** [or *quinque*]
[10h] Stephen Gersh's study of the "Prehistory and Evolution of the Pseudo-Dionysian Tradition" is titled *From* [this thinker] *to Eriugena*. This Syrian Neoplatonic philosopher, born circa 245 CE, argued that theurgy ("THEE-er-jee") was necessary for salvation, directly opposing the ideas of his teacher, Porphyry ("POR-fih-ree").
ANSWER: **Iamblichus** ("eye-AM-blick-uss") [or **Yamlīkū**]
<Philosophy>

7. Yekaterinburg's Church on Blood was built on the former site of this building, honoring the sainthood of its occupants. For 10 points each:
[10h] Name this building where the Romanov family was massacred in July 1918. In a dark historical irony, it shares its name with a monastery where Michael, the first Romanov Tsar, was found hiding.
ANSWER: **Ipatiev** ("ih-PAH-t'yeff") House [or **Hypatia** House; accept **Ipatiev** Monastery or **Hypatian** Monastery]
[10e] Some popular theories claimed that this youngest daughter of Nicholas II escaped the massacre of her family, while others such as Anna Anderson tried to impersonate her.
ANSWER: **Anastasia** Nikolaevna [or Grand Duchess **Anastasia** Nikolaevna of Russia; or **Anastasia** Romanova]
[10m] This Soviet official ordered the demolition of Ipatiev House to commemorate the 60th anniversary of the October Revolution. Years later, he was found drunk outside the White House trying to catch a cab.
ANSWER: Boris **Yeltsin**
<European History>

8. Dwight Macdonald savaged this version as a "massacre," claiming that it made him wonder "where completeness ends and madness begins." For 10 points each:
[10h] Identify this version of a specific work, criticized for its descriptive approach. *The New Yorker* referred to its inclusion of the word "ain't" in this book by adding the caption "Dr. Gove Ain't In" to a cartoon.
ANSWER: **Webster's Third** New International Dictionary [or **Third** Edition of the Merriam-**Webster** dictionary or **W3**; accept answers that indicate the **third** edition of the dictionary first created by Noah **Webster**; prompt on Merriam-**Webster** dictionary; reject "dictionary"]
[10e] Houghton-Mifflin published a dictionary named for the "American" variety of this noun in 1969 in response to Webster's Third. A conservative think tank called this noun's "foundation" is symbolized by a blue bell.
ANSWER: **heritage** [accept American **Heritage** Dictionary or **Heritage** Foundation]
[10m] This French-American historian criticized Webster's Third in his article "What is a Dictionary?" He chronicled five hundred years of culture in his book *From Dawn to Decadence*.
ANSWER: Jacques **Barzun** ("BAR-zun")
<Other Academic>

9. For 10 points each, name some authors whose fiction featured appearances by Margaret Thatcher.
[10e] This author imagined an alternate history in which Thatcher died in office in her short story "The Assassination of Margaret Thatcher: 6 August 1983." She is better known for fictionalizing the life of Thomas Cromwell in novels such as *Wolf Hall*.
ANSWER: Hilary (Mary) **Mantel** [or Hilary **Thompson**]
[10m] The openly gay Nick Guest ends up dancing with Margaret Thatcher while high on cocaine in this author's 2004 Booker Prize-winning novel, *The Line of Beauty*.
ANSWER: Alan (James) **Hollinghurst**
[10h] In a satirical novel by this author, Michael Owen is commissioned to write a history of the rapacious Winshaw family, including the politician Henry, who served in the Oxford University Conservative Association under Thatcher.
ANSWER: Jonathan **Coe** (That novel is *What a Carve Up!*)
<British Literature>

10. These proteins' namesake type III ("three") domains are the basis for mono·bodies, and those domains of these proteins lack di·sulfide bonds and form a beta-sandwich structure. For 10 points each:
[10h] Name these dimeric ("dye-MER-ic") extra·cellular adhesion proteins that bind to integrins. Measuring the levels of a fetal form of this protein is used to rule out preterm labor.
ANSWER: **fibronectin**s
[10e] Integrins recognize a motif consisting of this amino acid, arginine ("AR-juh-neen"), and aspartate ("uh-SPAR-tate"). This simplest amino acid is achiral ("ay-KYE-ral"), has a hydrogen in its side chain, and has single-letter designation G.
ANSWER: **glycine** ("GLY-seen") [or **gly**]
[10m] Integrin binding to a ligand can activate a kinase ("KYE-nase") that phosphorylates ("foss-FOR-ih-lates") a derivative of this sugar. Phospho·lipase ("FOSS-foh-LYE-pase") C liberates a tri-phosphate derivative of this sugar from a membrane lipid.
ANSWER: **inositol** ("ih-NOSS-ih-tall") [or myo-**inositol**]
<Biology>

11. In one country, this system is modified by the "coat-tailing rule" which allows a party to gain seats even if its total percentage of votes falls below a 5% threshold. For 10 points each:
[10m] Give this term for the sort of electoral system used by Japan and Germany. This sort of system assigns some parliamentary seats on a first-past-the-post basis, and some based on the broad popular vote for parties.
ANSWER: **mixed-member proportional** representation [or **MMP** or **MMPR**; prompt on mixed electoral system; reject "proportional representation"]
[10e] The "coat-tailing rule" applies in this country, where a 1992 referendum adopted a mixed member system for electing parliament. This country adopted a "Zero Covid" policy under Jacinda Ardern's ("juh-SIN-duh AR-dern's") leadership.
ANSWER: **New Zealand** [or **Aotearoa**]
[10h] This country elects the 500 members of its Chamber of Deputies via an MMP system, in which 300 are chosen in single-district elections, while 200 are chosen via proportional representation. It also has 128 Senators.
ANSWER: **Mexico** [or Estados Unidos **Mexicanos** or United **Mexican** States; reject "Estados Unidos"]
<Current Events>

12. This poet, who theorized what she called "fractal poetics," wrote about the connection between science and faith in poems like "Cascade Experiment." For 10 points each:
[10h] Name this American poet of *Felt* and *Sensual Math*, whose work often features what she calls her "bride sign," which consists of a pair of equals signs.
ANSWER: Alice **Fulton**
[10m] Fulton has linked her use of the bride sign to the use of colons in the verse of this mentor of hers, who wrote "Corsons Inlet" and "Easter Morning."
ANSWER: A(rchie) R(andolph) **Ammons**
[10e] The bride sign was also inspired by Emily Dickinson's use of this punctuation mark, which ends each of the first three lines of "Because I Could Not Stop for Death."
ANSWER: **dash** [out of generosity, accept either en-**dash** or em-**dash**; reject "hyphen"]
<American Literature>

13. This language's developers describe it as a solution to the "two-language problem" of prototyping code in a high-level language, and then rewriting it in a low-level one for performance. For 10 points each:
[10m] Name this programming language common in scientific computing. An online notebook platform with a name reminiscent of a planet provides core support for this language, Python, and R.
ANSWER: **Julia** (The notebook platform is the Jupyter Notebook.)
[10h] LISP's legacy on Julia is seen in its support for this practice of treating code as a data structure. This practice can enable a program to manipulate itself, even while running.
ANSWER: **meta·programming** [accept **metaprogram**s or **metalanguage**s; accept **homoiconicity**]
[10e] Julia supports the Vega-Lite and Gadfly packages for this task, which is done in R with ggplot2 ("G-G-plot-two"). Edward Tufte's ("TUFF-tee's") 1983 book on principles of this task advocates maximizing the data–to–ink ratio.
ANSWER: data **visualization** [accept specific tasks like making **graph**s or **chart**s or **figure**s; accept *The **Visual Display** of Quantitative Information*; prompt on plotting]
<Misc. Science>

14. An artist working in this city celebrated and satirized it in four large paintings she called "cathedrals," each of which explores an aspect of this city's culture through a different location. For 10 points each:
[10m] Name this city that was home to Florine Stettheimer as well as Joseph Stella, who depicted a location here in his Futurist *Battle of Lights*.
ANSWER: **New York** City [or **NYC**]
[10h] In a painting by Stettheimer, this character wears a pink dress and perches on a stool next to her creator, whose initials are repeated on the frame. This character's face appears in the work *Belle Haleine, Eau de Voilette* ("bell ah-LEN, oh duh v'wah-LET").
ANSWER: **Rrose Sélavy** ("air-ROSE say-la-VEE") [accept either underlined part; reject "Marcel Duchamp"]
[10e] Stettheimer's sister Carrie created a dollhouse for which Marcel Duchamp contributed a three-inch version of this painting. It was called "an explosion in a shingle factory" after it was shown at the Armory Show.
ANSWER: *Nude Descending a Staircase*, No. 2
<Painting/Sculpture>

15. This territory's first appointed non-European governor was Félix Éboué ("fay-LEE ebb-WAY"), who later governed Chad during most of World War II. For 10 points each:
[10m] Name this overseas department of France. At the 1763 Treaty of Paris, Britain received Quebec in exchange for this sugar-producing island.
ANSWER: **Guadeloupe** ("gwad-LOOP") [or **Gwadloup**]
[10e] This general's successful slave revolt on Haiti prompted the French National Convention to abolish slavery on Guadeloupe in 1794.
ANSWER: François-Dominique **Toussaint** ("too-SAN") **L'Ouverture** ("loo-ver-t'YOOR") [accept either underlined portion]
[10h] After Napoleon restored slavery on Guadeloupe, this woman organized uprisings of maroons and freedmen under the motto "Live free or die!" until her execution in 1802.
ANSWER: **Solitude** [accept La Mulâtresse **Solitude**]
<Other History>

16. Many of Jascha Heifetz's ("YAH-shuh HYE-fets's") favorite encores were pieces that he transcribed or arranged himself. For 10 points each:
[10e] Heifetz made one of the most popular violin-and-piano transcriptions of this excerpt from Rimsky-Korsakov's *The Tale of Tsar Saltan*. For years, the Guinness World Record for fastest violinist used this as the test piece.
ANSWER: "**Flight of the Bumblebee**" [or "*Polyot shmelya*"]
[10m] Heifetz made numerous Rachmaninoff transcriptions, including one of this final song from Rachmaninoff's *14 Romances*, opus 34. Its title is a generic name for a wordless song.
ANSWER: "**Vocalise**," ("voh-kuh-LEEZ") Op. 34/14
[10h] One of Heifetz's best-loved showpieces was his arrangement of this dance piece by the Romanian composer Grigoraş Dinicu ("gree-goh-RASH DIH-nee-koo"), whom Heifetz claimed to be the best violinist he ever heard.
ANSWER: "**Hora staccato**"
<Classical Music>

17. Nigerian authors often invoke the gods of their ethnic groups. For 10 points each:
[10m] Kola works on a painting of the Yoruba god Ogun, who becomes a motif in this first novel by Wole Soyinka ("WOH-lay SHOW-ying-kah"). Its title characters include the journalist Biodun Segoe and ministry clerk Egbo.
ANSWER: The **Interpreters**
[10h] Christopher Okigbo described his poem "Heavensgate" as "an offering to" this Igbo ("EEG-boh") river goddess. "Heavensgate" opens "Before you, [this deity], / Naked I stand; Before your watery presence, A prodigal."
ANSWER: mother **Idoto**
[10e] Exact word required. Tanure Ojaide ("oh-JYE-day") repeatedly invokes the Urhobo poetry god Aridon in a 2016 poetry collection titled for this person. A Walt Whitman "song" of this person declares, "I loafe and invite my soul" and "I sound my barbaric yawp over the roofs of the world."
ANSWER: **myself** [accept *Songs of Myself*; accept "**Song of Myself**"]
<World Literature>

18. Answer the following about the physics of identical particles, for 10 points each.
[10e] The Gibbs paradox will result if you neglect to divide the partition function of *N* identical particles by this function of *N*. This function gives the number of possible particle permutations.
ANSWER: **factorial** function of *N* [or *N*-**factorial**]
[10m] This Princeton physicist suggested that all the universe's electrons and positrons could be seen as one electron moving back and forth in time. With two of his still-living students, he wrote the massive textbook *Gravitation*.
ANSWER: John Archibald **Wheeler** (His students were Charles Misner and Kip Thorne.)
[10h] To describe entangled identical particles, John Schliemann and others introduced the Slater rank, an extension of this expression. This expression is effectively a singular value decomposition of a state within a tensor product of Hilbert spaces.
ANSWER: **Schmidt** decomposition [accept **Schmidt** rank]
<Physics>

19. The use of this region in immigration law was ended by the McCarran-Walter Act of 1952, which introduced a host of new national quotas instead. For 10 points each:
[10h] Name this region whose western meridional boundary was set at the 50th meridian east, which runs through the Caspian Sea. It sometimes lends its name to the Immigration Act of 1917 which created it.
ANSWER: **Asiatic Barred Zone** [accept the **Asiatic Barred Zone** Act; prompt on Barred Zone]
[10e] The meridional boundaries of the Asiatic Barred Zone had distinct carve-outs to allow immigration from Iran and this other country. Frederick Funston fought against Moro rebels in this country.
ANSWER: The **Philippines** [or Republic of the **Philippines** or Republika ng **Pilipinas**]
[10m] A year after the Barred Zone was created, a Ghadar ("gudder") Party activist and U.S. soldier of this ethnicity tried to naturalize by arguing that his heritage made him white; the Supreme Court ruled against him in 1923.
ANSWER: **Punjabi** [accept **Sikh**; prompt on Indians; reject "Pakistanis"] (The man was Bhagat Singh Thind.)
<American History>

20. In a series of papers in the 1980s, Dilip Abreu showed that this strategy is inferior to two-stage punishment or "carrot and stick" schemes for sustaining collusion. For 10 points each:
[10m] Name this strategy from game theory in which a player initially cooperates, but then switches permanently to defecting once another player defects.
ANSWER: **grim** trigger [or **grim** strategy; prompt on trigger]
[10h] This theorem is commonly illustrated by assuming two players in an infinitely iterated game adopt a grim trigger strategy, then showing that neither will deviate if both of their discount factors are sufficiently low.
ANSWER: **folk** theorem
[10e] Robert Axelrod named a form of the grim trigger after an economist with this surname who proved the folk theorem. Anna Schwartz and an economist with this surname wrote *The Monetary History of the United States*.
ANSWER: **Friedman** ("freedman") [accept James **Friedman** or Milton **Friedman**]
<Social Science>