

# **2023 ACF NATIONALS**

## **Playoffs Round 9**

Packet By

## The Editors (9)

Editors

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## TOSSUPS

 A work set in the aftermath of this event ends with a group of monks chanting a prayer beginning "Dirige, Domine" ("DEE-ree-jay DOH-mee-nay") after the rumbling of a cart dies away. In Michael Alexander's translation, a poem about this event begins with the fragmentary phrase "...would be broken." That poem about this event includes the oft-quoted lines "Thought shall be the harder, heart the keener, courage the greater, as our might lessens." Two characters retrieve the body of a man who had died in this event in an alliterative dialogue by J. R. R. Tolkien titled for that man's "homecoming." The word "pride" is a common translation of *ofermode* ("OVER-moh-duh"), which is used in a poem about this event to describe the state of mind of Byrhtnoth ("BEERT-noth") when he allows his opponents to cross a causeway onto the mainland. For 10 points, an Old English poem is titled for what real-life 991 battle between the Anglo-Saxons and the Vikings? ANSWER: Battle of Maldon [prompt on Viking raids or Viking invasions of England until "Vikings" is read; prompt on <u>battles</u> or <u>raids</u> or <u>invasions</u> or similar answers until "battle" is read] (Tolkien wrote *The Homecoming of Beorhtnoth Beorhthelm's Son.*)

<British Literature>

2. For a sequence of these functions " $t \sup n$ ," define " $s \sup n$ " as equal to " $t \sup n$ " whenever " $t \sup n$ " is greater than "n to the negative one-fourth power" and 0 elsewhere; Joseph Hodges showed that the sequence of these functions " $s \sup n$ " has better asymptotic performance than " $t \sup n$ ," but is highly irregular. The influence function obtained from Huber's psi function is used to construct a class of these functions denoted by the letter capital M. When these functions have a high breakdown point, they are robust. These functions' variance is greater than or equal to one over the Fisher information. These functions either output points or intervals. A common method of obtaining these functions finds the parameters that maximize the log-likelihood. The bias of these functions describes how far off their expected value is. For 10 points, name these functions that approximate the value of a population parameter.

ANSWER: <u>estimators</u> [accept any kind of <u>estimators</u>; accept statistical <u>estimation</u>, <u>estimates</u>, or maximum likelihood <u>estimation</u>; prompt on <u>statistics</u>] (The sentence about bounding estimator variance references the Cramér–Rao bound.)

<Other Science>

3. This philosopher wrote that we learn to swim without developing a theory of swimming to explicate his idea of "practical holism," which he used to describe the thought of people like Maurice

Merleau-Ponty ("mer-loh-pon-TEE"). A 1972 book by this philosopher distinguishes what it calls the biological, psychological, epistemological, and ontological assumptions that underlie a certain "persistent optimism." This philosopher's explication of Heidegger ("HIDE-uh-ger"), which is often given a portmanteau name, is contained in his book *Being-in-the-World*. This philosopher drew on Heidegger to critique the "good old-fashioned" approach to a certain field, arguing that its focus on abstract symbolic manipulations was unrealistic, in a book that was reissued with the word "still" added to its title. For 10 points, name this Berkeley philosopher who critique artificial intelligence in *What Computers Can't Do*.

ANSWER: Hubert **Dreyfus** [or Hubert Lederer **Dreyfus**] (The portmanteau name is "Dreydegger.") <Philosophy>

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4. According to legend, Alfred von Vacano ("AHL-fred foan FUH-kah-noh") sold a variety of this good under the name "Viennese" before its name was changed because it sounded too "bourgeois." Some people who sold this good were known as "kissers" because they kissed a cross when taking an oath not to steal. Production of a version of this good called *samogon* ("sam-uh-GOAN") caused extreme dry goods shortages. A country's production of this good was curtailed after the death of Prince Olaf in Vilnius at the start of World War I, exacerbating hyperinflation. A monopoly on selling this good through the *kabak* system provided a third of state revenue in the Russian Empire. In a yellow Soviet propaganda poster, a man in a blue suit declines this good by raising his palm and declaring "*nyet*!" A near-monopoly on this good in Moscow was controlled by P. A. Smirnov. For 10 points, the sale of what good was limited by Mikhail Gorbachev's so-called "dry law"?

ANSWER: **alcohol** [accept **vodka**, **beer**, **wine**, **spirit**s, hard **liquor**, **booze**, **moonshine**, **ethanol**, or ethyl **alcohol**; prompt on <u>drinks</u> or <u>beverages</u>]

<European History>

5. Description acceptable. This location, whose ceilings were shaped triangularly to be resistant to shockwaves, was lit by an early example of a light ring pendant. Cinematographer Gilbert Taylor asked Ken Adam to design lighting on a green table in this location to resemble a poker game. A film was originally supposed to end in this location with a massive custard pie fight. Actors in this location wore felt-covered shoes to avoid scratching the black floor, which caused George C. Scott to accidentally trip. After tackling an ambassador taking pictures of "the Big Board" here, a line about this location is delivered by President Merkin Muffley. After rising from his wheelchair in this location, a Nazi scientist yells "Mein Führer, I can walk!" For 10 points, a line beginning "Gentlemen! You can't fight in here" refers to what location in the Pentagon, the setting of a political satire by Stanley Kubrick? ANSWER: the **War Room** [accept descriptions of the **bunker** from **Dr. Strangelove** or the **Strangelove** or: How I Learned to Stop Worrying and Love the Bomb in place of "Dr. Strangelove"; prompt on the setting of <u>Dr. Strangelove</u> until "setting" is read; prompt on the <u>Pentagon</u> until read] <Other Fine Arts>

6. Matthew Edney compared this discipline to pornography, citing an image of the Virgin Mary created by Vincente de Memije. A scholar in this discipline becomes obsessed with his mistress's birthmarks in a "Fantastic" series by François Schuiten ("fran-SWAH SKOY-ten") and Benoît Peeters ("ben-NWAH PEE-ters"). The product of this discipline is compared to an "uneven dialogue" tilted to the elite in a Brian Harley paper on "Knowledge and Power." Photozincography allowed for the first major projects in this discipline by Britain's OS. Loxodromes are created in the marine subfield of this discipline by ECDIS. Modern deconstruction of this discipline criticizes plagiarism deterrents called paper towns and conformal images. This discipline inputs cadastral surveys into GIS software to produce images adjusted for projection. For 10 points, name this discipline of creating maps. ANSWER: **cartography** [accept gyno**cartography**; prompt on making <u>maps</u> or equivalents by asking "what is the name of the field?"; prompt on making nautical <u>charts</u> or equivalents; prompt on <u>geography</u>; prompt on <u>geoinformatics</u>; prompt on <u>survey</u>ing until "surveys" is read; prompt on <u>GIS</u> or Arc<u>GIS</u> by asking "used in what discipline?"] (de Memije's image depicted the Virgin Mary imposed over the Spanish Empire. The second sentence refers to *Cities of the Fantastic*. Harley wrote "Maps, Knowledge, and Power." The OS is the Ordnance Survey.) <**Geography**>

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7. Using letters written by his father Edward, Henry Woodman published a "History of" this site that details legal action taken by William Dewees and his family to win compensation for destroyed property. In a final diary entry from this site, surgeon Albigence Waldo warns "curse fortune for using you ill" to readers who "eat pumpkin pie and roast turkeys." After an occurrence at this site, Isaac Potts told his wife that he suddenly lost his belief that "no man could be a soldier and a Christian at the same time." A series of requests addressed from this site to Henry Laurens are signed "your most obedient servant." Anthony Wayne was passed over to lead a "Grand Forage" from this site in favor of Nathanael Greene. The "Blue Book" was a compilation of tactics taught at this site by Baron von Steuben. For 10 points, name this site outside Philadelphia where the Continental Army spent the 1777 winter. ANSWER: <u>Valley Forge</u> [prompt on <u>Pennsylvania</u> or <u>PA</u> until "Philadelphia" is read; prompt on <u>Chester</u> County or <u>Montgomery</u> County] (As told in Parson Weems's *Life of Washington*, Potts, a practicing Quaker, had encountered Washington praying in the snow at Valley Forge.)

8. In a novel by this author, seven men who ambush and stab a man in a courtyard fail to hear his body hit the water when they dump him in a nearby well. In a novel by this author, the djinn Mrs. Sweet and Mr. Bitter inform a fortune teller that her brother had impregnated her tattoo-artist younger sister, resulting in her poisoning him with a cyanide-laced yogurt dessert. Scenes about the Connecticut housewife Ella's affair with a Scottish Sufi alternate with scenes set in 13th-century Konya in a novel by this author that depicts the love between Shams of Tabriz and Rumi. This author, who is not Orhan Pamuk, was tried for acknowledging the Armenian genocide in a novel in which the Armenian-American Armanoush visits the all-woman Kazancı family. For 10 points, name this contemporary author who wrote *The Forty Rules of Love* and set *The Bastard of Istanbul* in her native Turkey. ANSWER: Elif **Shafak** [or Elif **Safak**]

<World Literature>

9. A Julian Kimble essay about the "polarizing nonsense" of logic in these locations appears in Antonio Johnson's 2020 photo book *You Next*. A Quincy T. Mills book examining these locations "Along the Color Line" discusses Bayard Rustin being barred from one at the University of Chicago. Puerto Rican knick-knacks called *chucherías* ("choo-chair-EE-ahss") appear alongside machismo ("mah-CHEES-moh") symbolism in one of these locations in a Pepón Osorio ("pay-POAN oh-SO-ree-oh") installation titled for "No Crying" in them. The permit labels CW and CC segregated these locations, whose "common" and "conjured" talk were examined by D. L. Shabazz as "cultural forums." The Tulsa Club preserved the tradition of a harmonic seventh chord nicknamed for these locations in performances like "My Wild Irish Rose" by Black a capella singers. For 10 points, name these locations where bloodletting and teeth pulling were advertised by a red, white, and blue pole.

ANSWER: **<u>barbershop</u>**s [or **<u>barberia</u>**s; accept **<u>barbershop</u>** quartets; accept **<u>tonsorium</u>**; accept *No Crying Allowed in the* **<u>Barbershop</u>** or *En la* **<u>barbería</u>**, *no se llora*; prompt on <u>haircutter</u>s; reject "salons" or "hair salons" or "beauty parlors"] (Mill's book is *Cutting Along the Color Line*.)

<Other Academic>

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10. After they are activated by trifluoroacetic acid, these compounds are the hydride source for ionic hydrogenation. Bifunctional coupling agents named for having these organic compounds as head groups are used to adhere polymers to inorganic surfaces. These compounds form adducts with active hydrogens to derivatize polar analytes before gas chromatography. In a process named for these compounds, they self-assemble on surface-exposed oxygens to form a monolayer that end-caps chromatography columns and renders glass chemically inert. Chlorinated and branched examples of these compounds, such as TBSCl ("T-B-S-C-L"), form ethers in the most common method to protect alcohols. One of these compounds bearing four methyl groups is assigned a chemical shift of 0 ppm in NMR. For 10 points, name these hydrocarbons that contain an atom of the element below carbon on the periodic table.

ANSWER: <u>silane</u>s [or organo<u>silane</u>s; or <u>organosilicon</u> compounds; or <u>silyl</u> groups; accept hydro<u>silane</u>s; accept chloro<u>silane</u>s; reject "silanols," "silyl ethers," "siloxanes," "silicon," or "Si"] <</th>

11. An artist claimed that his efforts to finish a painting inspired by this man were hindered by the "spirit of Titian" and the "infernal machine called Chiaro-Scuro." A painting in Chicago's Art Institute depicts this man with fleshy hands but a ghastly face as he sits cross-legged to the right of a girl sewing and another girl at a podium. A nude depiction of this man with his back to the viewer and raising his right arm appears on a frontispiece in which he stands among yellow and blue clouds. He's not Shakespeare, but this author inspired the Thomas and Butts sets of illustrations and an unpopular gallery spearheaded by Henri Fuseli, who painted him dictating to his daughter. A winged figure is shown upside-down plummeting to Earth in one of the illustrations of a poem by this author by Gustave Doré. For 10 points, what poet titles an epic poem illustrated by its author, William Blake? ANSWER: John <u>Milton</u> [accept <u>Milton</u>: A Poem in Two Books; accept <u>Milton</u> Gallery; accept <u>Milton</u> Dictating to His Daughter] <Painting & Sculpture>

12. A song whose title "devotes every breath" to a "drunken, red-robed" one of these people recounts lighting a fifth lamp in his honor. One of these people is said to have run through the streets carrying a torch and a bucket of water to put out the fires of hell and burn down Paradise; she also introduced a formulation of "real love." Some Hindus offer rose petals and sacred sheets at a monument to one of these people in Ajmer, which is a pilgrimage site for that man's *'urs* ("aw-OORS"). *Manqabat* pieces honor either 'Alī or one of these people and are performed by *qawwals* like Nusrat Fateh Ali Khan. Wahhabism forbids making pilgrimages to *dargahs* built over the graves of these people, whose acknowledgment orthodox Sunni scholars consider *shirk*. For 10 points, orders like the Naqshbandi and the Chishtiya venerate what "Friends of God" including Rābi'a Basri and Moinuddin Chishti? ANSWER: **Sufi saint**s [or *wali*; or *'awliyā'*; or *awliyāa* l-lahi; accept **Friends of God** or **Friends of Allah** until "Friends" is read; prompt on *pir, pir baba, hazrat*, or *khwaja* by asking "what kind of person does the honorific refer to?"; prompt <u>saint</u>s, Muslim <u>saint</u>s, Sunni <u>saint</u>s, or <u>Shia saint</u>s by asking "from what more specific tradition?"; prompt on <u>Sufi</u>s by asking "with what spiritual position?"] (The first clue references "Dama Dam Mast Qalandar," a qawwali song about Lal Shahbaz Qalandar. The second clue references Rābi'a al-'Adawiyya, also known as Rābi'a Basri, one of the first Sufi saints.) <Religion>

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13. In support of this cause, a fisherman known as "Sea Dragon" led a strike of *jangada* ("jun-GAH-duh") pilots. A lawyer who championed this cause mythologized his mother, Luisa Mahin ("mah-EEN"), as a leader of a movement whose white-robed participants wore leather amulets containing religious scrolls. Unenforced laws are still colloquially said to be "for the English to see" because a law enacted as part of this cause went unheeded until the passage of the Aberdeen Act. After this cause succeeded, many elites adopted the ideology of *branqueamento* ("brun-kee-ah-MEN-too") and formed societies to promote German and Italian immigration. Luiz Gama and Joaquim Nabuco were leaders of this cause, which was officially accomplished with an 18-word act signed by Princess Isabel that built on earlier efforts like the Sexegarian Law and the Law of the Free Womb. For 10 points, name this cause that was achieved with the passage of the Golden Law.

equivalent descriptions, such as <u>emancipation</u> of slaves in <u>Brazil</u> or <u>manumission</u> of <u>Brazil</u> an slaves; accept descriptions of <u>end</u>ing the <u>slave</u> trade to <u>Brazil</u>; prompt on <u>abolition</u> of slavery, <u>anti-slavery</u>, <u>manumission</u>, <u>emancipation</u>, or equivalents by asking "in what country?"] (The first sentence refers to Francisco José do Nascimento, or "Dragão do Mar." Luiz Gama wrote about Luisa Mahin's participation in the Malê revolt.) <World History>

14. At the end of Book One of a novel, a character stands near these things as her white dress shimmers in the moonlight, leading the narrator to stretch out his arms as she vanishes. The narrator of an 1823 poem hears the beckoning whispers of one of these things "at the well before the gate." Hans Castorp repeatedly plays a song named for one of these things and hums it heading into battle at the end of *The Magic Mountain*. A poem named for one of these things uses the word "tándaradéi" ("tahn-DEH-rah-DIE") to represent the call of a nightingale, the only witness to the narrator's tryst. These objects title the most famous *Minnelied* ("mih-nuh-LEEDT") by the medieval court poet Walther von der Vogelweide ("FOH-gull-VYE-duh"). A character who likes to read Homer under two of these objects often mentions them to his unrequited love Charlotte in an epistolary novel. For 10 points, after his suicide, Young Werther is buried under what type of tree?

ANSWER: <u>linden</u> trees [or <u>lime</u> trees; or <u>Linden</u>bäume; accept "Under the <u>Linden</u> Trees" or "Unter den <u>Linden</u>"; prompt on <u>trees</u>, plants, <u>Baum</u>, <u>Bäume</u>, or <u>Pflanzen</u> until "tree" is read by asking "what type?"] <European Literature>

15. The magazine *Punch* called this man's party the "surrey with the lunatic fringe on top." Each November 11th, this man rang a replica of the Liberty Bell inscribed with the words "I toll for justice, civilization, and Christianity" to celebrate his country's independence. This man's government authorized Operation Dingo and Operation Eland. This man's autobiography, republished as *Bitter Harvest* after being originally titled *The Great Betrayal*, recalled failed talks with Harold Wilson aboard the HMS *Tiger* and the HMS *Fearless*. This man's government employed brutal special forces known as Selous ("suh-LOO") Scouts. This man's government issued a 1965 "Unilateral Declaration of Independence," but his country did not formally separate from Britain until the 1979 Lancaster House Agreement. For 10 points, what white politician's government lost the Bush War, leading to Robert Mugabe's majority rule in former Rhodesia?

ANSWER: Ian <u>Smith</u> [or Ian Douglas <u>Smith</u>] <Other History>

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16. Laura Arbour's research with a group of these people revealed a novel *KCNQ1* mutation responsible for long-QT syndrome. This broad group of people is served by a BioData Consortium founded by Krystal Tsosie. The idea of "DNA on loan" informs a collection of these people's genetic data curated by the Silent Genomes project. In 2004, a group of these people received damages for research on inbreeding performed under false pretenses. The Human Genome Diversity Project and the Genographic Project aimed to collect genetic data from theoretically [emphasize] *un*admixed, isolated members of this broad group but came under fire by the IPCB for "vampiric" research practices. Attempts to use genetics to explain this broad group's prevalence of alcoholism have been criticized for ignoring colonialism's harms. For 10 points, generic research underrepresents what broad group that includes the Navajo?

ANSWER: <u>Native</u> American people [or <u>First Nations</u> people; accept <u>Indigenous</u> Americans; accept more specific answers like <u>Gitxsan</u> people or <u>Havasupai</u> people; accept <u>Navajo</u> or <u>Diné</u> people until "Navajo" is read; accept <u>Indigenous</u> Peoples Council on Biocolonialism]

<Biology>

17. This composer set a text by William Wennington beginning "Ah grief to think! Ah woe to name!" in an E-flat major canzonetta titled "La tiranna." A song by this composer unexpectedly erupts into a vivacious *Allegro molto* as the singer describes flowers growing on the grave of a dead poet. The end of the first movement of Schumann's *Fantasy in C Major* cadences with a quote of a song by this composer whose title translates as "Take, then, these songs." This composer of *Adelaide* set six romantic poems by his friend Alois Isidor Jetteles in a work often described as the first song cycle, *An die ferne Geliebte*. This composer included a lengthy Credo concluding with a fugue in a D major sacred vocal piece he dedicated to Archduke Rudolf of Austria. For 10 points, name this German composer who wrote an 1824 *Missa solemnis*.

ANSWER: Ludwig van Beethoven

<Classical Music>

18. A team at Heidelberg University demonstrated that when two of these substances are weakly coupled, they exhibit Josephson junction-like dynamics and macroscopic self-trapping. In these substances, the width of matter wave dark solitons ("SAHL-ih-tanz") and other nonlinear excitations is constrained by the healing length. Interactions within these substances are described by the *s*-wave scattering length in the standard nonlinear equation used to model these substances' behavior in cigar-shaped traps. In these substances, as chemical potential reaches its upper bound, the excited state occupation number becomes constant while the ground state occupation number goes to infinity. These substances were first created with ultracold gases of sodium and rubidium atoms. For 10 points, what substances form at low temperatures when the ground state is occupied by a large fraction of bosons? ANSWER: **Bose–Einstein condensate**s [or **BEC**s; accept **Bose condensate**s]

19. The speaker of a poem in this collection calls himself "free, black & forty-one" and laments never seeing his son. In a Ralph Ellison reference, a poem from this collection declares, "Shadow & act, shadow & act, / Better get white or you' get whacked." The speaker says, "Uncle Tom, sweep shut yo mouf" in a poem from this collection that notes it has been eight years since racial segregation was banned in schools. This collection begins with the speaker lamenting how "All the world like a woolen lover / once did seem" on the protagonist's side. The line "Life, friends, is boring. We must not say so," opens a poem in this collection, which contains 12 elegies to Delmore Schwartz. This collection often calls its protagonist "Mr. Bones" and includes the volume *His Toy, His Dream, His Rest.* For 10 points, name this confessional poetry collection about "Huffy Henry," written by John Berryman. ANSWER: *The <u>Dream Songs</u>* [accept <u>77 Dream Songs</u>; accept <u>His Toy, His Dream, His Rest</u> until read] <American Literature>

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20. A paper that explains this concept in terms of risk aversion uses the word "plungers" for people who have linear or convex upward indifference curves. That paper by James Tobin is titled for this concept "as behavior towards risk." The economist who theorized this concept argued that it is determined by the speculative motive, the precautionary motive, and the transactions motive. In the 1930s, it was widely debated whether a theory named for this concept was equivalent to the loanable funds theory. In a model partly named for this concept and developed by Hicks and Hansen, this concept is represented as a curve that decreases as the interest rate increases, with the equilibrium interest rate being the point where that curve intersects the money supply. For 10 points, what term referring to the tendency to hold easily convertible assets is the "L" in the IS–LM model? ANSWER: **liquidity Preference** [accept **demand for money** or **monetary demand** or **demand for cash**; accept "**Liquidity Preference** as Behavior Towards Risk"; prompt on <u>liquidity</u>]

<Social Science>

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## BONUSES

1. In modern performances of the ballet *La Bayadère*, Nikiya and Solor dance a *pas de deux* while holding one of these objects. For 10 points each:

[10h] Name these objects, an enchanted one of which kills the title character in August Bournonville's *La Sylphide*. The evil stepsisters ruin one of these objects in a fight in the first act of Sergei Prokofiev's *Cinderella*.

ANSWER: <u>scarves</u> [or <u>scarf</u>; accept <u>shawl</u>s; accept <u>wrap</u>s]

[10e] A dancer from this country died after her scarf was caught on the wheel of a car. Agnes de Mille choreographed the "Saturday Night Waltz" and "Hoedown" movements of a ballet from this country.

ANSWER: <u>United States</u> of America [or the <u>US</u>A; or <u>America</u>] (The dancer was Isadora Duncan. The ballet is *Rodeo*.)

2. Horace Newton Allen reformed the Chejungwon hospital under this ruler, whose regent Heungseon Daewongun led the development of a bulletproof vest. For 10 points each:

[10m] Identify this ruler who names a period of westernizing reforms that took off after the assassination of Queen Min in 1895. This final Joseon king proclaimed the Korean Empire.

ANSWER: <u>Gojong</u> [or <u>Kojong</u>; or <u>Gwangmu</u> Emperor or <u>Gwangmu</u>je or <u>Kwangmu</u>je; accept <u>Gwangmu</u> reforms] (The bulletproof vest was called the *myeonje baegab.*)

[10h] Despite abolishing hereditary classes, Gojong's Gwangmu reforms built on the expertise of this technocratic social class that included interpreters, doctors, and lawyers. Its station was just below that of *yangban*. ANSWER: *jungin* [or *chungin*]

[10e] Hyeon Chae was among the *jungin* who produced these educational items. In Japan, nationalists have challenged the portrayal of wartime atrocities in these things such as sexual slavery of Korean "comfort women." ANSWER: <u>textbook</u>s [or <u>schoolbook</u>s; accept history <u>textbook</u>s or <u>history book</u>s; prompt on <u>book</u>s]

3. This character fantasizes that her former suitor Shep Huntleigh will return to whisk her away. For 10 points each: [10e] Name this character who tells a doctor "I have always depended on the kindness of strangers." She has a breakdown after being assaulted by Stanley Kowalski.

ANSWER: Blanche DuBois ("doo-BWAH") [prompt on DuBois]

[10h] This actress from Alabama inspired Tennessee Williams to create his characters of Blanche DuBois and Princess Kosmonopolis. This actress inspired Cruella de Vil and topped the Hays Committee's "Doom Book" of "unsuitable" actresses for her "verbal moral turpitude."

ANSWER: Tallulah Bankhead [or Tallulah Brockman Bankhead]

[10m] Bankhead won the inaugural New York Drama Critics Award for her portrayal of this other character. In a play, Miss Somerset acts as this character, who works as the maid of a family facing an impending ice age.

ANSWER: Lily <u>Sabina</u> Fairweather [prompt on <u>Lily</u> or <u>Fairweather</u>] (She appears in Thornton Wilder's *The Skin of Our Teeth.*)

<American Literature>

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4. André Leroi-Gourhan's ("luh-RWAH-goo-RON's") coinage of this phrase was influenced by Marcel Mauss's ("moce's") work on total social facts. For 10 points each:

[10h] Give this two-word French term for all the processes and actions involved in the production and use of artifacts.

ANSWER: *chaîne opératoire* ("shen oh-pay-rah-TWAR")

[10e] The *chaîne opératoire* concept is often used to analyze the creation of stone tools, a process known as this kind of "reduction." With a prefix meaning "old," this adjective refers to a period that ended around 10,000 BCE. ANSWER: <u>lithic</u> [accept Paleo<u>lithic</u>; accept <u>lithic</u> reduction]

[10m] In this process of lithic reduction, flakes are broken off from flint or other similar rocks to fashion a tool. ANSWER: <u>knap</u>ping [accept flint <u>knap</u>ping]

<Social Science>

5. The eponymous member of this class of proteins is named for Christiane Nüsslein-Volhard's exclamation upon witnessing its mutation's effect on embryonic patterning. For 10 points each:

[10m] Name this class of innate immune proteins whose second and fourth members recognize both PAMPs and DAMPs like histones, biglycans, and heparan sulfate.

ANSWER: **toll-like receptors** [or **TLR**s; accept specific TLRs like **TLR**2 or **TLR**4; prompt on toll; prompt on receptors]

[10h] The discovery that TLRs and PRRs recognize DAMPs supported this theory proposed by Polly Matzinger. Contra the self/nonself model, this theory posits that distressed cells release eponymous signals to initiate immunity. ANSWER: <u>danger</u> model [or <u>danger</u> theory; accept <u>danger</u> signals]

[10e] TLR signaling's emerging role in early stages of these disorders characterized by reaction against self-antigens further supports the danger theory's argument that damage, not foreignness, activates immunity.

ANSWER: **<u>autoimmune</u>** disorders [or word forms like **<u>autoimmunity</u>**; prompt on <u>hypersensitivity</u> or <u>intolerance</u>] <Biology>

6. In one of Aesop's fables, one of these animals giving a ride to a supposedly Athenian monkey bucks him off after the monkey says "I know him very well" when asked if he knows the city Piraeus. For 10 points each:

[10m] Name these animals that love music and always answer to the name Vasili in Greek folklore. The musician Arion of Lesbos was saved from brigands by some of these animals.

ANSWER: <u>dolphin</u>s [accept specific species, such as bottlenose <u>dolphin</u>s; prompt on <u>cetaceans</u> or <u>whales</u>] [10e] After being captured, a disguised version of this Greek god turned a group of pirates into dolphins. This god is served by the Maenads.

ANSWER: Dionysus [or Dionysos; or Bacchus or Bacchos]

[10h] This man's corpse was legendarily recovered by dolphins after his murder in the grove of Nemean Zeus in Locria, whither he fled upon being told he would die in Nemea by the Delphic oracle.

## ANSWER: <u>Hesiod</u> [or <u>Hēsíod</u>os]

<Mythology>

Editors: Harvey, Apte, Evans, Golden, Karim, Kearney, Mao, Nediger, Peet, Settle, Silverman

7. If you treat a conjugated linear pi system as a particle-in-a-box, this quantity equals: "a dimensionless pre-factor, times the length of the pi system squared, divided by the electron Compton wavelength." For 10 points each:[10h] Name this molecular property that, empirically, starts at 214 or 253 of its standard units, and then increases by 30 with each additional double bond.

ANSWER: <u>lambda-max</u> [or <u>wavelength</u> of <u>max</u>imum <u>abs</u>orption; or <u>wavelength</u> of <u>max</u>imum <u>abs</u>orbance; accept any descriptive answers that include the words <u>wavelength</u> AND <u>max</u>imum AND <u>abs</u>orbance or <u>abs</u>orption; prompt on any descriptive answers that include 1–2 of the words <u>wavelength</u>, <u>maximum</u>, <u>abs</u>orbance, <u>abs</u>orption; prompt on <u>color</u> by asking "what specific quantity?"] (215 and 260 are the starting values when applying the Woodward-Fieser rules.)

[10m] For large pi systems, the pre-factor is this integer divided by the number of pi electrons. This number appears in the denominator of a particle-in-a-box's energy levels when they are written in terms of h.

## ANSWER: 8 [or eight]

[10e] For an isolated hydrogen-like atom, lambda-max can instead be calculated using this formula derived from the Bohr atomic model. It predicts the Balmer and Lyman series.

ANSWER: **<u>Rydberg</u>** formula [or **<u>Rydberg</u>** equation]

<Chemistry>

8. A graffito in this town says, "be healthy, Victoria; wherever you are, may you sneeze sweetly." For 10 points each:

[10e] Name this Roman town whose well-preserved graffiti, such as the oldest SATOR ("SAH-toar") magic square, are rivaled only by those of its neighbors Stabiae and Herculaneum.

## ANSWER: **Pompeii**

[10h] Pompeii's graffiti is primarily compiled in this comprehensive collection of Roman epigraphy. This epigraphic collection, which was established by Theodor Mommsen, currently comprises 17 volumes arranged geographically. ANSWER: *Corpus Inscriptionum Latinarum* [or *CIL*]

[10m] The *CIL* ("C-I-L") contains many *defixiones* ("day-feecks-ee-OH-nays"), which are this sort of inscription. 130 tablets bearing this sort of inscription were found in the city of Bath, where victims of thefts threw the tablets into Sulis Minerva's spring.

ANSWER: <u>curse</u> for <u>curse</u> tablets; or <u>curse</u> inscriptions; accept the Bath <u>curse</u> tablets] <Other History>

9. Answer the following about abstract art in Denver, Colorado, for 10 points each.

[10e] Denver's Clyfford Still Museum contains many jagged, black and yellow color field paintings created with this technique of thickly applying paint. This technique's Italian name refers to kneading.

## ANSWER: impasto

[10h] Many abstract sci-fi artworks appear in Denver's *Convergence Station*, an immersive, five-story art installation by this collective. This art collective also designed themed environments for Las Vegas's *Omega Mart* and Santa Fe's *House of Eternal Return*.

## ANSWER: Meow Wolf

[10m] A Denver museum dedicated to Vance Kirkland displays his series of paintings made up of these features, such as *The Energy of Explosions Twenty-Four Billion Years B.C.* Rows of these objects adorn pumpkins in a series by a Japanese artist.

ANSWER: polka <u>dot</u>s [accept <u>dot</u> paintings] (The Japanese artist is Yayoi Kusama.) <Painting & Sculpture>

Editors: Harvey, Apte, Evans, Golden, Karim, Kearney, Mao, Nediger, Peet, Settle, Silverman

10. In this modern-day country, a form of religious theater whose name translates as "sacramental play" was performed on two-story wagons during Corpus Christi. For 10 points each:

[10e] Name this European country where plays emphasizing the power of the Catholic Church were prevalent during its 16th- and 17th-century "Golden Age."

ANSWER: Spain [or Kingdom of Spain; or Reino de España; accept Spanish Golden Age]

[10h] *Autos sacramentales* during the Spanish Golden Age were preceded by these brief prologues. A Latin American author wrote an allegory in this form in which Religion spares two Aztecs named America and Occident during the Spanish conquest of Mexico.

ANSWER: <u>loa</u>s [accept <u>Loa</u> to Divine Narcissus, <u>Loa</u> to the Divine Narcissus, <u>Loa</u> to the Auto Sacramental of Divine Narcissus, or <u>Loa</u> para el divino narciso] (The author was Sor Juana Inés de la Cruz.)

[10m] This Golden Age dramatist and Catholic monk wrote more than 80 plays, but is now best known for originating the story of Don Juan in *The Trickster of Seville and the Stone Guest*.

ANSWER: <u>Tirso</u> de Molina [or Gabriel <u>Téllez</u>; prompt on de <u>Molina</u>]

<European Literature>

11. In her youth, this author trained to be an actress, which inspired her use of the name of an Ibsen character as a pseudonym. For 10 points each:

[10m] Name this author who wrote a nearly 1,200-page travel book detailing her 1937 trip to Yugoslavia, called *Black Lamb and Grey Falcon*.

ANSWER: Dame Rebecca West [or Dame Cicily Isabel Fairfield]

[10e] Despite calling him "the Old Maid of novelists" in a review of his novel *Marriage*, West later had a torrid affair with this author of *The War of the Worlds*.

ANSWER: H. G. Wells [or Herbert George Wells]

[10h] West's book *The Strange Necessity* concludes that "though [this novel] is ugly and incompetent, it is a work of art." Virginia Woolf called this book a novel "of the utmost sincerity" whose author understands that "life is not a series of gig lamps symmetrically arranged."

ANSWER: <u>Ulysses</u> (by James Joyce) <British Literature>

12. This woman "advance[s] toward destiny in chains" hearing "the voice of my mother in tears—in tears!" in a poem by Rosario Castellanos. For 10 points each:

[10e] Name this Mexican historical figure called the *Chingada*, or "the Mother forcibly opened" in an Octavio Paz essay titled for "The Sons of" this person.

ANSWER: La <u>Malinche</u> [or <u>Malintzin</u>; accept "The Sons of <u>La Malinche</u>" or "Los hijos de La <u>Malinche</u>"] [10m] A writer with this first name re-envisioned Malinche as a time-traveler in the story "Blame the Tlaxcaltecs." A Mexican journalist with this first name and surname Poniatowska wrote about the title massacre in *The Night of Tlatelolco*.

ANSWER: Elena [accept Elena Poniatowska; accept Hélène Poniatowska; accept Elena Garro]

[10h] An essay by this writer claims all Chicanas "suffer under [La Malinche's] name" even if they have never heard of her. This dramatist reimagined Medea as a bisexual ex-revolutionary in the play *The Hungry Woman*.

ANSWER: Cherríe Moraga ("sheh-REE moh-RAH-ghah")

<World Literature>

Editors: Harvey, Apte, Evans, Golden, Karim, Kearney, Mao, Nediger, Peet, Settle, Silverman

13. In December 2022, the U.S. National Ignition Facility achieved net energy gain with this process by using 192 lasers to heat a gold hohlraum that then bathed a fuel capsule in X-rays. For 10 points each:

[10e] Name this process that produces heavier elements by combining lighter ones.

ANSWER: nuclear **fusion** [accept laser **fusion**; accept, BUT DO NOT REVEAL, inertial confinement **fusion**] [10m] The NIF experiment achieved fusion using this method. This method of fusion satisfies the Lawson criterion for ignition by rapidly compressing fuel pellets.

ANSWER: inertial confinement fusion [or ICF]

[10h] To prevent mixing between the plastic capsule that undergoes this process and the DT fuel, the NIF experiment used a high-foot implosion. Inertial confinement fusion relies on the reaction force from this process to cause an implosion in the fuel pellet.

## ANSWER: **ablation** [accept laser **ablation**]

<Physics>

14. One of these performers initiates a quick ascending trumpet line by invoking a "Reveille when it still was dark" in a piece that concludes with a choir singing the *Shema*. For 10 points each:

[10m] Name this type of soloist who performs with an orchestra in A Survivor from Warsaw.

ANSWER: narrator [or reciter or speaker or talker; accept Sprechstimme performer or Sprechgesang

performer; accept <u>speak singer</u> or <u>spoken voice</u> accept descriptions of answers indicating someone <u>speak</u>ing or <u>reciting</u> a text; prompt on <u>vocal</u>ists; reject "singer" or "singing"]

[10e] This composer called for a less melodic narration style in *A Survivor from Warsaw* than he did decades earlier in his *Pierrot Lunaire*.

ANSWER: Arnold Schoenberg [or Arthur Schönberg]

[10h] Schoenberg set a reciter against a string quartet and pianist in this late chamber piece that sets a Lord Byron poem. In this piece, the theme from Beethoven's Fifth and the Marseillaise play simultaneously as the reciter mentions "the earthquake voice of victory."

ANSWER: <u>*Ode to Napoleon*</u> [or <u>*Ode to Napoleon*</u> Buonaparte; or <u>*Ode to Napoleon*</u> Buonaparte for String Quartet, Piano and Reciter; or <u>**Op. 41**</u>]

<Classical Music>

15. Mark Walrod Harrington was the first civilian head of this organization, where he built upon the work of Cleveland Abbe ("ab-ee"). For 10 points each:

[10h] Name this organization that unconventionally began to employ pilots like Joe Duckworth after World War II as part of an alliterative two-word squadron.

ANSWER: United States <u>Weather Bureau</u> [accept <u>National Weather Service</u> or <u>NWS</u>; prompt on <u>National</u> <u>Hurricane Research Project</u> or <u>NHRP</u>] (The "Hurricane Hunters" tried to seed hurricanes with silver iodide as part of Project Stormfury.)

[10m] The Weather Bureau lost credence with the American public after failing to foresee this 1900 disaster that killed around eight thousand people and devastated a city known as the "Wall Street of the Southwest."

ANSWER: **Galveston Hurricane** [or **Galveston Flood**; or 1900 **Galveston Hurricane**; prompt on Great <u>Storm of 1900</u>]

[10e] The Weather Bureau was slow to adopt thought from the Bergen School of meteorology because it was trying to explain this environmental disaster that damaged agriculture in the Great Plains in the 1930s.

## ANSWER: Dust Bowl

<American History>

Editors: Harvey, Apte, Evans, Golden, Karim, Kearney, Mao, Nediger, Peet, Settle, Silverman

16. This paper argues, contra J. L. Austin, that a performative utterance like "I hereby name this ship the *Generalissimo Stalin*" has truth conditions. For 10 points each:

[10h] Name this 1979 paper that draws a parallel between baseball and conversation.

ANSWER: "Scorekeeping in a Language Game"

[10m] "Scorekeeping in a Language Game" is by this philosopher, whose other contributions to the philosophy of language include the book *Counterfactuals*.

ANSWER: David Lewis [or David Kellogg Lewis]

[10e] Lewis borrowed the concept of a "language game" from this philosopher, who described a language game based on the words "block," "slab," "pillar," and "beam."

ANSWER: Ludwig Wittgenstein [or Ludwig Josef Johann Wittgenstein]

<Philosophy>

17. This theologian recalled his time living in isolation in Mount Pocono, Pennsylvania in his memoir *Living the Death of God*. For 10 points each:

[10h] Name this author of *The Gospel of Christian Atheism*. He gained notoriety in the 1960s for his many media appearances in which he explained Death of God theology.

ANSWER: Thomas J. J. Altizer [or Thomas Jonathan Jackson Altizer]

[10m] A 2006 book by Altizer examines this theological concept by comparing it to philosophical nothingness. This English term refers to the essence or substance of God, and the Trinity is often defined as "three persons" in "one" of this term.

## ANSWER: Godhead

[10e] Altizer's second book examined Mircea Eliade's ("MEER-chay-ah ay-lee-AH-day's") "dialectic of" this concept. In religious studies, transcendent referents known by this term are contrasted with worldly things known as "the profane."

ANSWER: the <u>sacred</u> [or <u>sacré</u> or <u>sacru</u>] <Religion>

18. Settlers in this region included wealthy "Undertakers" and war veterans called "Servitors." For 10 points each: [10m] Name this region whose "plantation" during James I's reign began after a failed rebellion in the Nine Years' War. The "Flight of the Earls" from this region marked the end of its old order.

ANSWER: <u>Ulster</u> [or <u>Ulaidh</u> or Cúige <u>Uladh</u> or <u>Ulstèr</u>; accept "Plantation of <u>Ulster</u>"; prompt on <u>Ireland</u> or <u>Éire</u> or <u>Airlann</u>]

[10h] The Nine Years' War, also called Tyrone's Rebellion, climaxed in 1601 at a siege of this city. At this city, Lord Mountjoy simultaneously besieged a Spanish expeditionary force under Juan del Águila and beat an Ulsterite relief force under Hugh O'Neill.

ANSWER: <u>Kinsale</u> [or <u>Cionn tSáile</u>; accept Siege of <u>Kinsale</u>, Battle of <u>Kinsale</u>, Léigear <u>Chionn tSáile</u>, or Cath <u>Chionn tSáile</u>]

[10e] Victory in Tyrone's Rebellion was this English monarch's last major military success. A decade prior, this monarch gave a speech to forces assembled at Tilbury soon after winning a tactical victory at Gravelines ("grav-LEEN").

ANSWER: <u>Elizabeth I</u> [or <u>Elizabeth Tudor</u>; accept Good <u>Queen Bess</u>; prompt on <u>Elizabeth</u>; prompt on <u>Bess</u>; prompt on <u>Virgin Queen</u> or <u>Gloriana</u>; prompt on <u>Tudor</u>]

<European History>

Editors: Harvey, Apte, Evans, Golden, Karim, Kearney, Mao, Nediger, Peet, Settle, Silverman

19. These bodies begin to form when dust grains in circumstellar disks agglomerate. For 10 points each: [10e] Name these bodies that can be detected outside of the Solar System using the radial velocity method or the transit method.

ANSWER: **planet**s [accept exo**planet**s or extrasolar **planet**s; accept proto**planet**s or proto**planet**ary disks; reject "dwarf planets"]

[10h] Images of protoplanetary disks taken by this instrument revealed that the disks have rings and gaps, which are not fully understood. This array of 66 radio telescopes is the Earth's largest ground-based astronomy instrument.

ANSWER: <u>ALMA</u> [or <u>Atacama Large Millimeter</u> Array; or <u>Atacama Large Millimeter/submillimeter</u> Array; or <u>Atacama Large Millimeter and Submillimeter</u> Array]

[10m] Rings and gaps in protoplanetary disks could be due to these features that demarcate the distance from a star where gaseous compounds solidify. In the Solar System, one of these features for water currently lies at about 5 AU. ANSWER: **snow** lines [or **frost** lines or **ice** lines]

<Other Science>

20. This country has attempted to secure the extradition of Bülent Keneş, whose *Today's Zaman* newspaper was linked to Fethullah Gülen. For 10 points each:

[10e] Name this country that, along with Hungary, begrudgingly ratified Finland's NATO membership bid, but has yet to admit Sweden over public Qur'ān burnings.

ANSWER: **Turkey** [or Republic of **Türkiye**; or **Türkiye** Cumhuriyeti]

[10m] Because of Erdoğan's stubbornness towards Sweden, US senators threatened to cancel the shipment of 40 of these jets to Turkey. This most produced fixed-wing military jet had the first digital fly-by-wire system and is made by Lockheed Martin.

ANSWER: <u>F-16</u> [or General Dynamics <u>F-16</u> Fighting Falcon; accept <u>Fighting Falcon</u>; prompt on <u>Falcon</u>] [10h] A trilateral memorandum between Turkey, Sweden, and Finland required the Nordic countries to stop supporting People's Protection Units and this leftist Kurdish party that currently controls Rojava in Syria. ANSWER: <u>PYD</u> [or <u>Partiya Yekîtiya Demokrat</u>; or <u>Democratic Union</u> Party; or Hizb <u>al-Ittihad al-Dimugrațiy</u>] <Current Events>