

Chicago Open 2023

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Tossups

1. **The solid waste from this procedure is the usual input to a SNOX process plant. The initial project for Coolbrook's RotoDynamic system is to do this series of reactions using electricity as a major input. USY for use in one form of this process is created by acid removal of aluminum from faujasite. Largely superseded methods to do this process are the Shukhov and Burton processes. Producing a solid waste called (*) petcoke, this process in modern forms is the primary use of high-silica zeolite catalysts. When done in the presence of hydrogen gas, this industrial process produces relatively more LPG, naphtha, and diesel; therefore, the fluid catalytic form is used where gasoline is desired. For 10 points, name this usually high-temperature process of breaking long-chain hydrocarbons down into shorter ones.**

ANSWER: hydrocarbon **cracking** [prompt on oil refining or petroleum refining]

<Mike Sorice, Chemistry>

2. **This writer championed an aesthetic characterized by the "equivocal contrast" of "scallion green and peach pink" in the essay "Writing of One's Own." The "moon from thirty years ago" is said to be "larger, rounder, and whiter" at the opening of a story by this author, which concludes with a woman pushing a bracelet up her skeletal arm. In that story by this author, an embittered widow lies about her daughter's opium use to ruin her engagement. In a novella by this author whose title can be translated as (*) "colorful ring," a drama student enters a relationship with the collaborator Mr. Yee in order to assassinate him. "The Golden Cangue" is included in an *NYRB Classics* collection of this author's stories, titled for a novella that juxtaposes the courtship of Bai Liusu with the Japanese capture of Hong Kong. For 10 points, name this émigré Chinese novelist who wrote *Lust, Caution* and *Love in a Fallen City*.**

ANSWER: Eileen **Chang** [or **Zhāng** Àiling]

<Matt Bollinger, World Literature>

3. **A wall relief found in 2021 at the site of Sayburç ("sigh-boorch") depicts a man holding his penis between two of these animals. They aren't bulls, but a book called *[This animal's] Tale* by Ian Hodder documents his work at Çatalhöyük ("chah-TAHL-hey-yook"), where iconography of these animals is common, but not their remains. Pottery from the Khami culture is often found in the same archaeological layers as the more decorative ceramics of a culture named for these animals' "Kopje" ("kawp-yuh"). The Magerius Mosaic found in modern (*) Tunisia depicts four of these animals being killed in a *venatio* show. The Narmer palette depicts two long-necked beasts whose modern name combines that of these animals with "serpent." According to Pliny, these animals were a hybrid of a beast named for its mottled coat and a lioness. For 10 points, name these Old World big cats long thought to be distinct from black panthers.**

ANSWER: **leopards** [or *Panthera pardus*; accept **Leopard**'s Kopje; accept **serpopard** or **pard**; accept black **panther** before mention; prompt on cheetahs or *Acinonyx jubatus* by asking "what other animal was often conflated with the cheetah?"]

<Alex Fregeau, Other History>

4. While working at this company, Christian Holder was personally trained by Kurt Jooss for the role of Death in its revival of *The Green Table*. This was the first ballet company to appear on the cover of *TIME* magazine, which celebrated its new ballet *Astarte*. Christopher Wheeldon's choreography of *The Nutcracker* for this company transplants the setting to a fairground shack. Six graffiti artists spray paint the backdrop on stage in a ballet commissioned by this company that features songs like (*) "Got to Know the Woman" and "Cuddle Up." That Beach Boys ballet, *Deuce Coupe*, was Twyla ("TWIGH-luh") Tharp's first ever commission. In 1987, this company premiered Millicent Hodson's reconstruction of Vaslav Nijinsky's lost original choreography for *The Rite of Spring*. For 10 points, name this ballet company founded by Gerald Arpino and its namesake choreographer, located in Chicago.

ANSWER: Joffrey Ballet

<Sheena Li, Other Fine Arts>

5. This person described one of his theories in an interview as "just a name used, a boat to get one across, and... to be discarded and not carried on one's back." A posthumous book by this person compiled by his wife along with Gilbert L. Johnson and Dan Inosanto was originally written after a devastating accident left this person in a back brace for 6 months. The emblem for a theory created by this person consists of clockwise arrows around the Yin Yang symbol. A passage from a book by this person tells the reader to "be formless, shapeless, like (*) water" and says "water can flow, or it can crash." The "way of the intercepting fist" names this person's theory influenced by his teacher Ip Man, which titles his book *The Tao of Jeet Kune Do*. For 10 points, name this writer and martial artist who died at age 32 after starring in the Hong Kong films *Fist of Fury* and *Enter the Dragon*.

ANSWER: Bruce Lee [or Lee Jun-fan]

<Young Fenimore Lee, Other Academic>

6. A painting by this artist inspired the title of a Norman Bryson history that opens by analyzing its usage of a minister's daughter as a model. Margaret Oppenheimer correctly attributed a painting originally believed to be by this artist and which depicts a couple through a broken window. This artist started a craze for "ancient style" dresses with a painting whose foreground is dominated by a figure modeled on Greek (*) spear throwers. A female student of this artist hunches over a cardboard folder in a painting once thought to be by him. The book cover for *My Year of Rest and Relaxation* is a portrait attributed to this artist's workshop of a woman in a white gown. The correct attribution of Marie-Denise Villers's ("vee-LAYR's") *The Portrait of Charlotte du Val d'Ognes* ("DUN-yuh") came after MET curators realized this artist boycotted the 1801 Paris Salon. For 10 points, name this Neoclassical artist of *The Intervention of the Sabine Women*.

ANSWER: Jacques-Louis David

<Daniel Hothem, Visual Fine Arts>

7. In one play, this character is called a "poor cozened man" by a woman who declares "I despair / To have you whole, and scorn to take you half." This character enters that play with the line, "They tell me, 'tis my birthday, and I'll keep it / With double pomp of sadness." In that play, this character is warned to "touch not these poisoned gifts / infected by the sender" while being given a "ruby bracelet, set with bleeding hearts." While speaking to this character, a man notes that a woman "hath such a (*) celerity in dying" and "makes a shower of rain as well as Jove" in a series of double entendres. This man is the central character of John Dryden's *All For Love*. In another play, this character commands Eros to kill him, but Eros commits suicide instead; this character then falls on his sword but misses his heart. For 10 points, Enobarbus betrays what general, who in a Shakespeare play is romanced by Cleopatra?

ANSWER: Mark Antony [or Mark Anthonic; accept Marcus Antonius]

<Arya Karthik, British Literature>

8. A reaction that classically occurs in this tissue to produce “monstrous cells” was historically misclassified as cancer until Peruvian histologist Javier Arias Stella identified it as benign. Cells from this tissue can seed mesothelial infoldings called Allen-Masters windows. Damage to this tissue’s decidua basalis can generate scar tissue that forms adhesions in Asherman syndrome. A condition named for this tissue produces (*) “chocolate cysts,” as well as nodules whose implantation in the pouch of Douglas and posterior fornix can cause dyspareunia. This tissue layer is supported by arteries that elongate during the proliferative phase and spiralize during the secretory phase. Cancer of this tissue layer may manifest as a thickened “stripe” on ultrasound and cause abnormal bleeding in menopausal women. For 10 points, the withdrawal of progesterone causes what layer of tissue lining the uterus to shed during menstruation?

ANSWER: endometrium [or endometrial layer; accept endometriosis; prompt on uterus or uterine tissue by asking “what layer of tissue?”]

<Itamar Naveh-Benjamin, Biology>

9. A Larry Bartels paper titled for electoral continuity and change measures this process as the proportion of total variance generated and argues for a post-New Deal decline in this process until the 1970s. That paper updated a series of 1960s Donald Stokes papers on this process that contrasted the United States and Britain and found that this process increasingly strongly controlled electoral turnout. This process was “self-evident” to Dan Bongino in his run for Maryland's 6th Congressional district, according to a book that uses differential political engagement across races as evidence for this process; that book is Daniel Hopkins’s (*) *The Increasingly United States*. Along with polarization, this process is measured by the decline of split-ticket voting. A commonly cited example of this process is immigration becoming a more important issue to Iowa voters than agriculture. For 10 points, name this political process that is making Tip O'Neill's maxim "All politics is local" obsolete.

ANSWER: nationalization of politics [accept word forms; accept any answers indicating that politics or political issues are becoming national]

<Ryan Rosenberg, Social Science>

10. A military expedition sent to Táiwān by a ruler of this family led by Wèi Wēn and Zhūgé Zhí (“chu-guh chuh”) has been used to support modern Chinese ambitions towards the country. Sīmǎ Yán captured a ruler from this family and gave him the title Marquis of Guīmìng, or “he who resigns to his fate.” A woman from this family attempted to abscond with her stepson while her husband was fighting in Yì Province. A leader from this family was either killed by being shot with arrows or crushed by boulders while campaigning against (*) Liú Biǎo. For carving out a power base in Jiāngdōng, the epithet “Little Conqueror” was given to a warlord from this family with the personal name Cè (“tsuh”). A ruler with this family name allied with Liú Bèi to defeat Cáo Cāo (“tsao-tsao”) at the Battle of Red Cliffs. For 10 points, what is this family name of the rulers of the Three Kingdoms state of Wú, who claimed descent from the author of *The Art of War*?

ANSWER: Sūn [accept Sūn Quán, Sūn Hào, Sūn Péngzǔ, Lady Sūn, Sūn Shàngxiāng, Sūn Jiān, Sūn Cè, Sūnzǐ, or Sun Tzu]

<Alex Fregeau, World History>

11. When speaking to another country’s ambassador about US policy towards this country, Lyndon Johnson called this country and another “fleas” in comparison to America’s “elephant.” Terrorists in this country attempted to assassinate British governor Robert Armitage at a screening of *Forbidden Cargo*. A mustachioed guerrilla leader in this country said, “One does not use a tank to catch field mice — a cat will do the job better.” 25 British soldiers died due to car crashes and forest fires during (*) Operation Lucky Alphonse in this country. Ethnic violence that flared up in this country during 1963’s Bloody Christmas was temporarily resolved through the London–Zurich Agreement. This country was the subject of the oath of “enosis” taken by men such as Georgios Grivas and Archbishop Makarios III. For 10 points, name this country invaded by Turkey in 1974, much to the chagrin of Greece.

ANSWER: Cyprus [or Republic of Cyprus, Kypros, Kypriaki Dimokratia, or Kibris Cumhuriyeti]

<Jaskaran Singh, European History>

12. In 1980, these sort of people clashed with police in Vondelstraat riots and protested the accession of Queen Beatrix in the coronation riots. That occurred during a period of conflict in the Netherlands involving these people called the Krakersrellen. These sort of people clashed with police for nine days in 1986 in the so-called Battle of Ryesgade. A history of these people by Alexander Vasudevan titled *The Autonomous City* begins with the March 2007 tear-gas raid on Copenhagen's (*) Ungdomshuset. After two police officers were shot in 2016, a community founded by these sort of people closed the hash stalls on its Pusher Street. Many early movements of these people in Europe were inspired by Henri Lefebvre's concept of "the right to the city." For 10 points, Copenhagen's Freetown Christiania was founded by what sort of people who use adverse possession to acquire unoccupied property?
ANSWER: squatters [prompt on anarchists]

<Ethan Strombeck and Caleb Kendrick, Modern World>

13. Members of this ethnic group once poured hemp oil in each cardinal direction while praying to Moist Mother Earth. Wooden dwellings known as *continae* once served as these people's temples. The alleged migration of these people from the "land of seven rivers" to their current home is recounted in a literary forgery written on wooden planks that is a central text in their so-called "Native Faith." A three-tiered limestone idol likely built by these people in the 9th century portrays the faces of four deities, who may include (*) Mokosh and Lada. Kupala's Night is celebrated by these people, who built the Zbruch idol. These people, who revered forest spirits called *leshny*, may not have actually worshiped the debated "White" and "Black" gods Belobog and Chernobog. For 10 points, name these people whose pantheon includes Veles and Perun.

ANSWER: Slavic Peoples [or Slavs; accept Slavic Paganism or Slavic Neopaganism or Slavic Shamanism or Slavic Native Faith; accept Eastern, Western, Baltic, or Southern Slavs, or the Belarusians, Bosniaks or Bosnians, Bulgarians, Bunjevci, Croats or Croatians, Czechs, Goranis, Hussites, Kashubs or Kashubians, Lechs or Lechites, Lusatians, Macedonians, Montenegrins, Moravians, Poles or Polish, Russians, Rusyns, Serbs, Silesians, Šokci, Sorbs, Slovaks or Slovakians, Slovenes or Slovenians, Torbeši, Ukrainians, Wends or Wendish, or Yugoslavs or Yugoslavians] (The forgery is the *Book of Veles*. The Slavic Native Faith is also known as Rodnover.)

<Kevin Thomas, Beliefs>

14. *Specific term required.* The classical shadow protocol requires that an ensemble of unitary transformations define a set of measurements that is "complete" with respect to this technique, meaning that they comprise a "quorum" that forms an operator basis. A "quantum" form of this technique reconstructs a quantum state from measurements on an ensemble of identical quantum states. The inverse (*) Radon transform performs "reconstruction" from this technique, which is the task of estimating a multidimensional system from projections. The most common use of Hounsfield units is to report results from a form of this technique that rotates an X-ray tube around a patient. For 10 points, name this technique that involves imaging via sections and is "computed" in a CT scan.

ANSWER: tomography [accept quantum tomography or computed axial tomography scan; prompt on CT scan or CAT scan; prompt on scan by asking "what technique is employed in that scan?"]

<Daniel Hothem and David Bass, Physics>

15. The clergyman Clarence Wilmot leaves his family and takes solace in performing this action in the first part of John Updike's novel *In the Beauty of the Lilies*. After losing his family in a plane crash, a professor takes extensive notes while doing this action in order to write a book on Hector Mann in *The Book of Illusions* by Paul Auster. After returning from this action, the protagonist of a novel declares an end to his "vertical search." In that novel titled for a person who does this action, he finds meaning after the death of the pious, paraplegic character (*) Lonnie and his marriage to a manic-depressive he proposed to during Mardi Gras. A character who flirts with secretaries and does this action on the weekends quits his job at a New Orleans brokerage firm to marry his cousin, Kate Cutrer. For 10 points, name this action performed by Binx Bolling according to the title of a book by Walker Percy.

ANSWER: watching movies [accept any answers relating to seeing films or going to the movie theater or cinema; accept *The Moviegoer*]

<William Golden, American Literature>

16. This thinker likened human development to an “eccentric orbit” between poles he termed “aorgic” and “organic.” By devising a false etymology for the word “Urteil” (“OOR-tyl”), he defined judgment as the “arche-separation” in his fragmentary essay “Judgment and Being.” In a reading of a letter this man wrote to Casimir Boehlendorff, a later thinker asserted that humans become “homely” by being “unhomely.” An essay quotes this pre-20th-century writer’s claim that “where the (*) danger lies, also grows the saving power” in a consideration of “enframing,” or *Gestell*. This college roommate of Friedrich Schelling and G. W. F. Hegel was the subject of a 1942 lecture series that sought to discover the “essence of the river.” For 10 points, name this German Romantic poet of “The Ister,” the favorite poet of Friedrich Nietzsche and Martin Heidegger.

ANSWER: Friedrich Hölderlin [or Johann Christian Friedrich Hölderlin]

<Matt Bollinger, Philosophy>

17. The inscription on the Thoen Stone allegedly predates one of these events by 40 years. M. F. Stephenson made a public plea to continue one of these events adapted by Mark Twain into its more famous modern form. Christopher Bechtler is best-known for objects produced during one of these events, which predated the first similar objects made by the government by over a decade. A newspaper claimed that one group was “an abused people” as a result of one of these events called the (*) “Great Intrusion.” A federal institution built in response to one of these events operated between 1838-1861 in the town of Dahlonga (“duh-LON-eh-guh”). One of these events drew thousands of white settlers to Cherokee lands in 1829, prompting the Indian Removal Act. For 10 points, the town of Deadwood was founded by an influx of white settlers during what kind of event in the Black Hills?

ANSWER: gold rushes [accept Black Hills Gold Rush or Georgia Gold Rush] (The modern version of the M. F. Stephenson quote is, “There’s gold in them thar hills.”)

<Alex Fregeau, US History>

18. One class of methods synthesizes these systems by minimizing a linear fractional transformation in the H-infinity norm. The behavior at different gain parameters of a function that describes the effect of these systems can be visualized using a root-locus plot in one technique for analyzing these systems’ stability. Transfer functions of these mechanisms can be tuned by the use of three correcting terms known as the (*) proportional, integral, and derivative, or PID. Closed examples of these mechanisms use a set point to adjust a process variable, such as in a thermostat that attempts to reach a reference temperature. For 10 points, name these feedback or feedforward mechanisms that underlie dynamical control systems.

ANSWER: controllers [or control loops; prompt on control systems or control methods until “control” is read; accept closed or open or feedback or feedforward in front of either of these answers; prompt on control or governor or speed limiter; accept specific types of controller such as PID controller or programmable logic controller]

<Ankit Aggarwal, Other Science - Engineering and Applied>

19. In an opera with this title, one character introduces a friend in an aria named for “[that friend] svara sulla bocca viva,” after which that friend praises her as “la biondinetta.” A composer wrote, “Let him compose, I will compose. The audience will decide,” after being accused of stealing the libretto of an opera with this title. A deleted act in an opera with this title is referenced by a derogatory mention of a “moscardino di Viscontino,” and was cut to likely beat a rival to that opera’s completion. A tenor in an opera with this title often sings a unison, *perdendosi* high C to end a (*) duet whose female soloist is “bathed in moonlight.” Giuseppe Giacosa resigned three times as a librettist for an opera with this title based on an Henri Murger (“mur-ZHAY”) novel. That opera spurred Ruggero Leoncavallo to rewrite his own opera with this title to focus on Marcello and Musetta. For 10 points, name this opera in which “O soave fanciulla” (“o SWAH-vay fahn-CHOO-lah”) is sung by Rodolfo and Mimi.

ANSWER: *La bohème* [prompt on *Mimi Pinson* by asking “what was its original title?”]

<Ivone Zhou, Classical Music and Opera>

20. This author described their affair with the “Doctoresse” Sophie Ravoux and their friendships with Gide and Céline in their World War II diary, which uses the code-name “Kniébolo” (“k’nee-AY-boh-loh”) for Adolf Hitler. While visiting the apartment of an anorexic Guatemalan painter, this author discusses Dürer with Salvador Reyes in Roberto Bolaño’s *By Night in Chile*. After being caught visiting the house of a seventeen-year-old orphan girl he dubs “Jeanne d’Arc,” the narrator of a novel by this author is let go by the self-declared “King of Quéant” (“kay-AWN”). Despite their conservatism, this author of (*) *Strahlungen* depicted Hitler as the uncultured, autocratic Chief Ranger in the novella *On the Marble Cliffs*. This author, the youngest recipient of the *Pour le Mérite* (“poor luh may-REET”), continually revised a conspicuously non-pacifist account of their service in the 73rd Hanoverian Regiment during World War I. For 10 points, name this German author of *Storm of Steel*.

ANSWER: Ernst **Jünger**

<Arya Karthik, European Literature>

Bonuses

1. Sydney Moko Mead traced the style of bamboo stamps on these artworks back to Lapita pottery. For 10 points each:
[h] Name these artworks, one of which was 75 feet long and draped over Queen Sālote's coffin. Queen Elizabeth II's initials were painted on one of these artworks, which are created by using *ike* ("EE-kay") mallets to pound mulberry trees.

ANSWER: **tapa cloth** [or **kapa**; accept **ngato**, **ngatu**, **siapo**, **hiapo**, **uha**, **masi**, **ahu**, **aute**; prompt on **barkcloth** or **masi**]

[m] In Samoa, tapa can act as examples of these objects called *pupuni*. *The Heart of the Andes* was exhibited with green examples of these objects, a large one of which appears on the columns on the sides of *The Architect's Dream*.

ANSWER: **curtains** [accept **drapes** or **drapery**]

[e] Mead also connected Lapita motifs to patterns in *tā moko* face tattoos common among people of this ethnicity, whose jade carving tradition is called *pounamu*.

ANSWER: **Māori**

<Ganon Evans, Visual Fine Arts>

2. The Dorset Ooser ("OH-zer") was a giant wooden mask primarily used for this practice in the town of Melbury Osmond. For 10 points each:

[h] Name this practice of public censure, which could be accompanied by "rough music." John Williams, a leader in the 1631-1632 Western Rising, took an alias referencing this practice.

ANSWER: **charivari** [or **shivaree**, **chivaree**, **skimmington ride**, **skimmity ride**, **lewbelling**, **riding the stang**, **tin-panning**, **ran tanning**, **nominey**, **wooset**, **katzenmusik**, **haberfeldtreiben**, or **scampanate**; accept, but DO NOT REVEAL **hussitting**; prompt on public **humiliation**, **shaming**, or **vigilantism** or similar answers]

[e] A 1930 instance of charivari to punish a domestic abuser was given a local name based on this Czech theologian, who inspired a series of civil wars in Bohemia in the 1420s.

ANSWER: Jan **Hus** [or John **Hus** or Johannes **Hus**; accept **hussitting**]

[m] This French peasant was mocked with a charivari for being unable to conceive a son for eight years. The trial of Arnaud du Tilh ("ar-NOH doo teel"), who impersonated this person for several years, was the basis of a history by Natalie Zemon Davis.

ANSWER: Martin **Guerre** ("ghair") [accept *The Return of Martin **Guerre***]

<Matt Bollinger, European History>

3. *Note to moderator: Please read the answerline for the first part carefully.*

Right after this book's publication, its author fled to Rome with their daughters Marianne and Meta, and proceeded to perhaps fall in love with Charles Eliot Norton. For 10 points each:

[m] Name or describe this book, whose author blithely noted that they had "three people [whom they wanted] to libel" in it. This book blames Lydia Robinson for the death of its subject's brother Branwell.

ANSWER: *The **Life of Charlotte Brontë*** [accept Elizabeth **Gaskell**'s **biography** of **Charlotte Brontë** or equivalent descriptions; prompt on answers that describe a **biography** of **Charlotte Brontë** without naming its author by asking "By whom?"; prompt on answers that describe an Elizabeth **Gaskell** biography of a **Brontë** sister but that do not indicate which one by asking "which Brontë?"; prompt on answers that describe an Elizabeth **Gaskell** book on **Charlotte Brontë**, but that do not indicate what genre of book]

[h] While in Rome, Gaskell stayed at the house of this sculptor, the inspiration for Kenyon in Hawthorne's *The Marble Faun*. Henry James wrote a biography titled [this sculptor] *And His Friends*.

ANSWER: William Wetmore **Story** [accept *William Wetmore **Story** and His Friends*] (Story's sculpture *Cleopatra* is attributed to Kenyon in *The Marble Faun*.)

[e] Nell Stevens's fictionalization of Gaskell's time in Rome includes a chapter describing Harriet Hosmer's casting of the *Clasped Hands* of these two people. One of these two people was the addressee of the other's line, "Yes, call me by my pet-name!"

ANSWER: Robert **Browning** AND Elizabeth Barrett **Browning** [accept the **Brownings**; accept Elizabeth **Barrett** in place of "Elizabeth Barrett Browning"] (Nell Stevens wrote *Mrs. Gaskell and Me*.)

<Arya Karthik, British Literature>

4. Alfred Radcliffe-Brown provided a classic example of “joking relationships” with an article studying this social role, noting that it was permissible for subjects to steal and eat a sacrifice prepared by this type of person. For 10 points each:

[m] Name this social role. Claude Lévi-Strauss’s “alliance theory” improves on earlier theories of kinship by incorporating these people into the fundamental “atom of kinship” along with the nuclear family.

ANSWER: **uncle** [accept **avunculate**; or **mother’s brother** or **maternal uncle**; reject “father’s brother”]

[e] By studying cultures where the uncle, rather than the father, was in charge of disciplining children, this anthropologist’s *Sex and Repression in Savage Society* demonstrated that the Oedipus complex was not universal.

ANSWER: Bronisław **Malinowski** [or Bronisław Kasper **Malinowski**]

[h] A maternal uncle rubs his buttocks on the leg of a nephew who has carved his first canoe in this practice among the Iatmul people, which Gregory Bateson interpreted as a ritual to counteract schismogenesis.

ANSWER: **naven** ritual [accept **Naven**: *A Survey of the Problems Suggested by a Composite Picture of the Culture of a New Guinea Tribe*]

<Matt Bollinger, Social Science>

5. In a concerto for one of these musicians, orchestra members yawn, pop a soda can, and loudly exhale amidst onstage chatter between the second and third movements. For 10 points each:

[e] Name this type of musician. In Gabriel Prokofiev’s first concerto for this type of musician, the soloist samples the orchestra and showcases techniques such as scratching.

ANSWER: **DJ** [or **disc jockey** or **turntablist**] (Gabriel is Sergei Prokofiev’s grandson.)

[m] Prokofiev includes a DJ playing an electronics part in his “remix” of this symphony’s finale. The opening cello recitative (“ret-chi-tuh-TEEF”) in this symphony’s finale paraphrases a similar melody from its composer’s “Tempest” Sonata.

ANSWER: Ludwig van **Beethoven**’s Symphony No. **9** in D minor [or **Beethoven**’s **Ninth** Symphony or **Choral Symphony**; accept **Beethoven**’s **Opus 125** or **BEETHOVEN9 Symphonic Remix**]

[h] This composer-DJ features DJs and classical musicians performing together in his club concert Mercury Soul. He sampled a Fermilab collider in a piece that he wrote as composer-in-residence of the Chicago Symphony.

ANSWER: Mason **Bates** [or Mason Wesley **Bates**; accept DJ **Masonic**] (The unnamed piece is *Alternative Energy*.)

<Jacob Egol, Classical Music and Opera>

6. Severe alcohol withdrawal sometimes manifests as this condition accompanied by tremors and life-threatening seizures. For 10 points each:

[e] Name this state of acute confusion characterized by fluctuations in attention and cognition. This condition often flares in the evenings, which is known as “sundowning.”

ANSWER: **delirium** [accept **delirium tremens**]

[m] Patients with delirium in the ICU are often sedated with dex-med-etom·idine, which acts as an agonist to this specific receptor. Clonidine inhibits the release of catecholamines by binding to this receptor.

ANSWER: **alpha-2** adrenergic receptor [prompt on **alpha** adrenergic receptor]

[h] Physicians caring for older patients are advised to adhere to these guidelines, which encourage deprescribing medications that contribute to adverse events such as delirium or ground-level falls.

ANSWER: **Beers** Criteria [or **Beers** List; accept **Beers** Criteria for Potentially Inappropriate Medication Use in Older Adults]

<Itamar Naveh-Benjamin, Biology>

7. This thinker noted that African-Americans were better off than rural Sicilians “saturated with antiquity” while describing his visit to Europe in the book *The Man Farthest Down*. For 10 points each:

[e] Name this thinker whose model of industrial education was implemented in 20th-century African colonies. This thinker names an institute in Liberia established by several students from his Tuskegee Institute.

ANSWER: Booker T. **Washington** [or Booker Taliaferro **Washington**]

[h] Angela Zimmerman’s book *Alabama in Africa* notes how the Tuskegee Institute advised colonial cotton production in this country. Alois Musil and Emil Holub were proponents of an unrealized Czechoslovak colony in this country.

ANSWER: **Togo** [accept German **Togoland**]

[m] Like Washington, W.E.B. DuBois was aware of the global dimension of Jim Crow, using this two word phrase coined by Frederick Douglass to describe the “problem of the 20th century.”

ANSWER: “**color line**”

<Ethan Strombeck, Other History>

8. Aristotle claimed that when a snake bit this person, he bit the snake back and killed it. For 10 points each:

[e] Name this person whose improbable escapades include convincing a bull not to eat fava beans. This vegetarian philosopher came up with a tuning system by listening to the sounds of blacksmiths’ hammers.

ANSWER: **Pythagoras** of Samos

[h] Herodotus recounts stories of this charlatan, a slave of Pythagoras turned Thracian “god” whose cult was established amongst the Getae after he faked his resurrection using an underground chamber. Protochronists celebrate Mircea Eliade’s analysis of this god as a monotheistic figure.

ANSWER: **Zalmoxis** [or **Salmoxis**, **Zalmoxes**, **Zamolxis**, **Zamolxes**, **Zamolxe**, or **Samolxis**; accept **Gebeleizis**]

[m] Pythagoras convinced Abaris the Hyperborean that he was Apollo incarnate by showing off a golden one of these body parts. Pseudo-Apollodorus describes Typhon’s body as a writhing mass of vipers starting from this part down.

ANSWER: **thighs** [accept **groin**; accept **testicles** or common euphemisms; prompt on a **leg**]

<Henry Atkins, Beliefs>

9. Two proponents of this movement, Andrés Duany and Elizabeth Plater-Zyberk, used its principles to design the neighborhood of Kentlands in Gaithersburg, Maryland. For 10 points each:

[e] Identify this movement in city planning which emphasizes walkability and mixed-use zoning.

ANSWER: **New Urbanism**

[h] The first fully New Urbanist town was this planned community on the Florida panhandle near Destin. *The Truman Show* was shot on location in this town, whose laws require houses not to have the same design.

ANSWER: **Seaside**

[m] Scott Merrill designed an all-white minimalist building of this kind in Seaside. Skidmore, Owings and Merrill designed one of these buildings with a frame of one hundred tetrahedrons for the U.S. Air Force Academy.

ANSWER: **chapels** [prompt on **churches** or equivalents]

<Caleb Kendrick, Geography>

10. Jason Robards’s iconic turns in this role include in José Quintero’s Circle in the Square production, a success that helped create Eugene O’Neill’s modern reputation. For 10 points each:

[e] Name this charismatic salesman who tries to blow up the “pipe dreams” of drunks in *The Iceman Cometh*.

ANSWER: **Hickey** [or Theodore **Hickman** or **Theodore** Hickman; accept **Teddy**]

[h] This Broadway critical darling played Hickey in an acclaimed 2012 revival of *Iceman*. This star of *Gary: A Sequel to Titus Andronicus* won a Tony for playing Roy Cohn in a 2018 revival of *Angels in America*.

ANSWER: Nathan **Lane** [or Joseph **Lane**]

[m] Lane frequently collaborated with Terrence McNally and played the role of Buzz in the original run of this play. This play about eight gay friends vacationing upstate ends with a drag performance of *Swan Lake*.

ANSWER: **Love! Valour! Compassion!**

<Henry Atkins, American Literature>

11. This album's title track, which abruptly introduces a groove around Han Bennink's drums thirteen minutes in, first appeared on its artist's live album *Fuck de Boere* ("BOOR-uh"). For 10 points each:

[h] Name this 1968 free jazz album recorded by its artist's namesake Octet, which included bassist Buschi Niebergall and pianist Fred Van Hove. The bottom of this album's cover depicts the dictionary definition of its title phrase.

ANSWER: **Machine Gun** (by Peter Brötzmann)

[m] The artist of *Machine Gun*, Peter Brötzmann, was primarily inspired by Illinois Jacquet's ("jah-KETT's") tenor sax solo on this bandleader's version of "Flying Home." Before forming his own big band, this hit musician played vibraphone for the Benny Goodman Orchestra.

ANSWER: Lionel **Hampton** [or Lionel Leo **Hampton**]

[e] Another influence on *Machine Gun* was *Ascension*, which this saxophonist recorded after he departed from the modal jazz sound of his early '60s "classic" quartet.

ANSWER: John **Coltrane** [or John William **Coltrane**]

<Ani Perumalla, Other Fine Arts>

12. This language formed a Malay creole called "Papia Kristang," literally meaning "speak Christian." For 10 points each:

[e] Name this European language that served as an early modern lingua franca in the Indian Ocean due to trade in colonies like Goa and Malacca.

ANSWER: **Portuguese** [or **português** or língua **portuguesa**]

[h] One legacy of Portuguese trade in Asia is this word, first used to refer to local middlemen for companies in Chinese ports. In Marxist thought, this term has expanded to denote a rich but subordinate local bourgeoisie.

ANSWER: **comprador** [or **compradore**; accept **comprador** bourgeoisie]

[m] The Portuguese control over portions of this island led to the beginning of its Burgher ethnic group. Local troops who fought for the Portuguese on this island were called lascarins.

ANSWER: **Sri Lanka** [accept Portuguese **Ceylon** or **Ceilão** Portuguese]

<Henry Atkins, World History>

13. When Afrasiab executes this character in the land of Turan, this character's blood springs forth into a red flower upon touching the ground. For 10 points each:

[m] Name this character who rides through a mountain of fire to refute claims made by his step-mother Sudabeh that he seduced her.

ANSWER: **Siyâvash** [or **Siavash**]

[e] The stories of Siyâvash and Rostam form part of the Heroic Age in this epic by Ferdowsi.

ANSWER: **Shahnameh** [or *The Book of Kings*]

[h] Some of the most impressive illustrations of the *Shahnameh* appear in this 16th-century edition made in Tabriz and gifted to Selim II. Like the Demotte *Shahnameh*, this manuscript was broken up and sold by a 20th century collector.

ANSWER: **Houghton** *Shahnameh* [or *Shahnameh* of Shah **Tahmasp**]

<Ethan Strombeck, World Literature>

14. Richard von Mises attempted to solve this approach's reference class problem by developing a theory of "collectives," which are infinite sequences insensitive to place selections. For 10 points each:

[e] Name this interpretation of probability that defines the probability of *A* given reference class *B* as how often *A* actually occurs within *B*. It is usually contrasted with the Bayesian interpretation.

ANSWER: **frequentism** [or **frequentist** probability]

[m] This leader of the Berlin Circle, who co-founded the journal *Erkenntnis* with Rudolph Carnap, coined the name for the reference class problem in his widely-panned defense of frequentism titled *The Theory of Probability*.

ANSWER: Hans **Reichenbach**

[h] Alan Hájek ("HAH-yek") argued that "epistemic" reference class problems arise for those who accept this principle proposed by David Lewis, which asserts that credence in *A* conditional on the chance of *A* should equal the chance of *A*.

ANSWER: **Principal** Principle

<Caleb Kendrick, Philosophy>

15. Rina Foygel Barber et al. 2023 introduces methods for conformal prediction that do not rely on this assumption and defines the coverage gap to quantify loss in quality relative to when this assumption is met. For 10 points each:
[m] Name this property of a sequence of random variables whose joint distribution is invariant under their permutation. This property is notably possessed by Pólya urn models and sampling without replacement.

ANSWER: **exchangeability** [accept word forms; prompt on word forms interchangeable]

[e] *Two answers required.* Exchangeability is similar to, and implied by, these two commonly assumed properties of observations. You can give the three-letter acronym for these two properties that is often written above a tilde.

ANSWER: **independent** AND **identically distributed** [or **i-i-d**]

[h] Exchangeability is justified as an assumption for many statistical models by this statement. By this statement, random variables are exchangeable if and only if they are conditionally independent with respect to a latent variable.

ANSWER: **de Finetti's** representation **theorem** [prompt on representation theorem]

<David Bass, Other Science - Mathematics>

16. Atmospheric reactions recycling this species allow its concentration to remain steady despite the rise in global methane emissions. For 10 points each:

[m] Name this most important oxidant in Earth's atmosphere.

ANSWER: **hydroxyl** radical [or **•OH**; accept **hydridoxygen(•)** or **oxidanyl**]

[h] Photolysis of this compound is a key source of hydroxyl radicals, especially in polluted urban areas. The sources for this compound in the atmosphere are not currently understood, but potential sources include combustion of fossil fuels as well as heterogeneous reactions on surfaces and soot.

ANSWER: **HONO** [or **nitrous acid** or **HNO₂**]

[e] Hydroxyl radicals degrade this class of compounds that react with NO_x molecules to produce photochemical smog. This class of compounds are defined by, and named for, having a high vapor pressure at room temperature.

ANSWER: **VOCs** [or **volatile organic compounds**]

<Jonathen Settle, Earth Science>

17. The archaeologists Bernard Grenfell and Arthur Hunt transform into Apollo and Silenus in a Tony Harrison play titled for *The Trackers of* this city. For 10 points each:

[m] Name this Egyptian city where archaeologists discovered a trove of over five hundred thousand papyri, including texts of Sophocles' *Ichneutae* and many of the plays of Menander, in the early 20th century.

ANSWER: **Oxyrhynchus** [or **Oxyrhynchon polis**; accept *The Trackers of Oxyrhynchus*] (*The Trackers of Oxyrhynchus* incorporates parts of *Ichneutae*.)

[e] Sophocles's *Ichneutae* is one of these plays, the only fully-extant example of which is Euripides's *Cyclops*. Entries to the City Dionysia consisted of three tragedies and one of these tragi-comic plays.

ANSWER: **satyr** plays

[h] In 2019, this classicist was suspended from Oxford for stealing papyri from the Oxyrhynchus collection and selling them to Hobby Lobby. Questions have been raised about this classicist's 2014 "discovery" of two poems by Sappho, including the "Brothers" poem.

ANSWER: Dirk **Obbink**

<Matt Bollinger, European Literature>

18. Whenever Allah wants something done, he hits this figure's forehead with the "Preserved Tablet," communicating messages that this figure delivers. For 10 points each:

[m] Heaven's muezzin is what figure who stands closest to Allah? This figure's descent on Jerusalem will signal the Day of Judgement as he blows his trumpet.

ANSWER: **Israfil** [prompt on **Raphael**]

[e] Israfil sometimes shrinks to the size of a sparrow so that only Allah's glory will carry this object. The *hamlat al-arsh* support this object, which names a verse whose frequent recitation can guarantee paradise.

ANSWER: **Throne** of Allah [accept **Throne** Verse; or Ayat **al-Kursi**; accept **Throne** of God]

[h] Like Israfil, this pearly angel, whose feet and head respectively touch the Earth and Throne, is described as having wings that stretch from East to West. Muhammad meets this angel in the First Heaven prior to the Half-Fire, Half-Snow angel.

ANSWER: **Rooster** Angel [or **Cockerel**; accept **dik** ("deek")]

<Kevin Thomas, Beliefs>

19. A chairman of this polity, Thomas Dodge, unpopularity supported a program that killed over five hundred thousand sheep owned by its population. For 10 points each:

[m] Name this autonomous territory devastated by a Livestock Reduction program under John Collier. That program is sometimes referred to as this polity's "Second Long Walk."

ANSWER: **Navajo** Nation [or **Navajoland** or **Navajo** Reservation]

[e] Drinking water in the Navajo Nation continues to be affected by contamination from this radioactive ore, some of which was enriched and used for the nearby Manhattan Project's Trinity Test.

ANSWER: **uranium** [prompt on **U**]

[h] In 1975, AIM assisted in occupying one of these facilities in Shiprock, Navajo Nation over decreased wages. A 2023 Malcolm Harris book notes how workers for a plant of this type were required to be "small, foreign, and female" in a company co-founded by Robert Noyce.

ANSWER: semiconductor **fabrication** plants [accept **foundries**; prompt on **semiconductor** plants alone] (The 2023 book is *Palo Alto*.)

<Ethan Strombeck, US History>

20. Baade's ("BAA-duh's") window is a gap in the interstellar dust that mostly obscures this region in visible and UV wavelengths. For 10 points each:

[m] Name this region located visually close to the Butterfly Cluster and the star Shaula. A massive compact radio source is located in this region which has an unusually large population of Wolf-Rayet stars and supergiants.

ANSWER: **Galactic Center** [accept answers indicating the **center** of the **Milky Way**; prompt on, but DO NOT REVEAL **Sagittarius A** or **Sagittarius A*** or answers that indicate the **Milky Way**'s supermassive **black hole**; prompt on specific **centers** of **galaxies** by asking "which one?"]

[h] These gamma-emitting lobes extend 25 thousand light-years above and below the Galactic disc. Similarly-shaped, but larger, X-ray-emitting lobes were later discovered by the eROSITA observatory.

ANSWER: **Fermi bubbles** [prompt on **bubbles**]

[e] Computer simulations suggest that the Fermi and eRosita bubbles were produced by a single jet event from this supermassive black hole located at the center of the Galaxy.

ANSWER: **Sagittarius A*** ("A star") [accept **Sgr A***; prompt on **Sagittarius A** or **Sgr A**]

<Kevin Thomas, Other Science - Astronomy>