Tossups

1. This concept's "error through misidentification" is explained via the sentence "John shouted that Johnson should be impeached" in an essay presenting a "quasi" form of this concept by Sydney Shoemaker. A theory of identity typically named for this concept is opposed by Joseph Butler's circularity objection and by Thomas Reid's example of a brave officer being flogged. This concept is represented by an inverted cone atop a plane in an Henri Bergson book whose title pairs it with "Matter." This concept typically names John Locke's theory of identity. Philosophers of mind often discuss cognitive "traces" of this concept called engrams. Maurice Halbwachs ("alb-vahks") theorized that a social group can have a shared "collective" form of this concept. For 10 points, name this store of past information.
ANSWER: **memory** [or **memories**; accept **remember**ing or **recollect**ion or word forms; accept collective **memory**; accept **memory** theory of identity; accept *Matter and **Memory***; accept quasi-**memory**] (The Sydney Shoemaker essay is "Persons and Their Pasts.")
<Philosophy>

2. A function named for this mathematician is the exponent in a product formula for cyclotomic polynomials whose terms are "*x*-to-the-*d* minus one." By a result of this mathematician, if *g* is the Dirichlet ("DEER-ih-klet") convolution of the constant one function with *f*, then *f* is the Dirichlet convolution of a function named for this mathematician with *g*. This mathematician names the conformal maps on the Riemann sphere, which are fractional linear transformations of the form "*az* plus *b*" over "*cz* plus *d*." A function denoted *mu* named for this mathematician gives nonzero values only for square-free inputs. An object named for this mathematician can be attached to a disk to form the real projective plane or glued to a copy of itself to form a Klein bottle. For 10 points, what mathematician names a non-orientable "strip"?
ANSWER: August Ferdinand **Möbius** [accept **Möbius** strip; accept **Möbius** function; accept **Möbius** inversion formula; accept **Möbius** transform or **Möbius** transformation]
<Other Science>

3. This leader propounded a doctrine of "external association," which was influenced by the Sugar Intervention and purportedly devised while he tied his shoelaces. This leader, who claimed to be more suited to be "a dyed-in-the-wool Tory or even a bishop" than to be in his highest position, ended a detrimental cattle surplus through the Coal-Cattle Pact. The perceived victory in an "economic war" waged by this European leader facilitated a policy of neutrality enforced during "the Emergency" that included banning the use of Treaty Ports. This leader's American citizenship allowed him to escape execution after the Easter Rising. Over opposition to the pro-treaty stance of Michael Collins, this politician left Sinn Féin to create the Fianna Fáil party. For 10 points, name this first and longest serving Taoiseach ("TEE-shuck") in Irish history.
ANSWER: Éamon **de Valera** ("EH-min deh vuh-LEH-ruh") [or Edward **de Valera**]
<Other History>

4. A collection of pieces by this composer transcribed "for Harriet Cohen" features prominently on an "Arrangements" album recorded as part of a decade-long cycle by Angela Hewitt. An *Aria variata* is the only full-length piece by this composer that is included on a 2018 album by Icelandic pianist Víkingur Ólafsson. A collection by this composer was recorded twice by both Nathan Milstein and Henryk Szeryng ("SHARE-ing"), who employ a "Romantic" style instead of the minimal vibrato favored today. A cycle of six suites by this composer was effectively rediscovered and first recorded by Pablo Casals. A pianist used markedly different tempi in 1955 and 1981 recordings of a piece by this composer that opens with a G major aria. For 10 points, Canadian pianist Glenn Gould twice recorded what Baroque composer's *Goldberg Variations*?
ANSWER: J. S. **Bach** [or Johann Sebastian **Bach**] (Milstein and Szeryng recorded Bach's Sonatas and Partitas. Casals recorded his six Cello Suites.)
<Classical Music>

5. The speaker of a poem by this author states "I am bombarded yet I stand" while facing "skies full of… a woman in the shape of a monster." This poet reflected on the "earth-deposits of our history" in a poem that suggests Marie Curie died "denying her wounds came from the same source as her power." This poet, who dedicated the poem "Planetarium" to Caroline Herschel, created a speaker who carries a "book of myths / in which / our names do not appear." This poet's collection *Twenty-One Love Poems* is addressed to Michelle Cliff. One of this poet's speakers contrasts herself with Jacques Cousteau's "assiduous team" as she "[puts] on / the body-armor of black rubber [and] the absurd flippers." For 10 points, name this American lesbian poet of "Diving into the Wreck."
ANSWER: Adrienne **Rich** [or Adrienne Cecile **Rich**] (The poem in the second line is "Power.")
<American Literature>

6. *Note to moderator: Read the answerline carefully.*
In the 18th century, states along this body of water's "small route" were centralized by the Nkomi and Orungu. Freedmen called forros ("FOH-ohs") inhabited one of the three islands in this body of water settled by degredados ("deg-ray-DAH-dooz"), whose plantations dominated 16th-century sugar and 19th-century cocoa production. Kingdoms along this body of water, like Niumi and Allada, rented to lançados ("lon-SAH-dooz") who bought cloth and Sapi salt-cellars. This body of water, the largest reached by the Fang migrations into Río Muni, titles a transnational analysis of Black intellectuals by Paul Gilroy. Mansa Musa's predecessor sent two doomed voyages into this body of water, whose ports of Ouidah, Cotonou, and Porto-Novo were controlled by Dahomey. For 10 points, cassava and maize crossed what body of water into Africa in the Columbian exchange?
ANSWER: **Atlantic** Ocean [accept Gulf of **Guinea**; accept Bight of **Biafra** or Bight of **Bonny**; accept Bight of **Benin**; accept **Gambia** River; accept North **Atlantic** Ocean or South **Atlantic** Ocean; accept *The Black **Atlantic**: Modernity and Double Consciousness*; accept **Ogooué** River; accept **Gabon** Estuary; accept **Ouémé** River; accept **Cacheu** River; accept **Fernan Vaz** Lagoon; prompt on the ocean or sea]
<World History>

7. In a play, this character whips the director of Conti-Bank after being seduced by the wealthy Konsul Weygang. This character's nursemaid Anne-Marie and daughter Emma are depicted in a 2017 play by Lucas Hnath ("nayth"). This character declares that "before all else I am a human being, just as much as you are," which was closely echoed in a different author's sequel subtitled *The Pillars of Societies*. This character does not respond when a man declares "the miracle of miracles," which inspired a sequel by Elfriede Jelinek ("el-FREE-duh YELL-in-ek"). This character, who is first seen carrying Christmas presents, is called a "little squirrel" by her husband and later blackmailed by Krogstad. For 10 points, what character slams a door and leaves her husband Torvald in Henrik Ibsen's play *A Doll's House*?
ANSWER: **Nora** Helmer [prompt on Helmer]
<European Literature>

8. In legends from [emphasize] *other countries*, a king of this modern-day country fathers a golden mermaid who falls in love with a foe. An 1861 adaption is titled for the "slaying" of the prince of this country, whose arrows kill millions before his army is attacked by bears. A 5th-century king from this country was legendarily immured by his son, who built a fresco-covered rock fortress shaped like a lion. A kingdom conventionally located in this country is ruled by the pot-bellied world guardian of the north until he is usurped by his ten-headed half-brother. This is the smaller of two countries linked by Adam's Bridge, which is said to represent a floating causeway created by monkeys to reach a fortress ruled by a king of the rākshasas. For 10 points, what island country contains a kingdom ruled by Rāvaṇa in the *Rāmāyaṇa*?

ANSWER: Sri **Lanka** [or Democratic Socialist Republic of Sri **Lanka** or **Ilaṅkai** Jaṉanāyaka Sōsalisak Kuṭiyarasu or Śrī **Laṅkā** Prajātāntrika Samājavādī Janarajaya; accept **Anurādhapura** Kingdom or **Anurādhapura** Rājadhāniya; prompt on Ceylon] (The first line refers to Suvaṇṇamacchā. The second line refers to Indrajit and Michael Madhusudan Dutt's *Meghnad Badh Kavya*. The third line is about Sigiriya. The fourth line refers to Kuberā.)
<Mythology>

9. Microcrystals of salts of this metal combine with photoelectrons from glass exposed to UV light to produce its elemental form in a technology used for photochromic lenses. Dendrites and nanoparticles of this metal are produced by reducing metallic copper with this metal's nitrate. Titrating with a salt of this metal in Mohr's method can be used to measure the concentration of chloride ions in solution, as this metal's chloride is highly insoluble in water. Salts of this metal are held in a clear gelatin matrix, allowing light-excited electrons to form sensitivity specs of this metal by reducing one of its halide salts in a common black-and-white printmaking method. For 10 points, name this reflective metal found above gold in the periodic table.

ANSWER: **silver** [or **Ag**; accept **silver** chloride or **Ag**Cl; accept **silver** bromide or **Ag**Br; accept **silver** nitrate or **Ag**NO$_3$]
<Chemistry>

10. In October 2022, Susanne Meyer-Büser found that a painting featuring tape of these colors was displayed upside down for 77 years. At the *5×5=25* exhibition, Alexander Rodchenko exhibited a set of "pure" canvases in these colors and proclaimed the "death of painting." A proponent of Elementarism evoked the *Rhythm of a Russian Dance* with lines of these colors, which were painted over black for a chair designed by Gerrit Rietveld. A 1926 essay states that "the plastic means must be the rectangular plane or prism in" these colors as the first principle of Neo-Plasticism. Squares of white and these three colors stand in for the avenues of New York City in a painting inspired by the syncopation of boogie-woogie. For 10 points, black, white, and what three colors were used by De Stijl ("duh STAIL") artists like Piet Mondrian?

ANSWER: **red** AND **blue** AND **yellow** [accept answers in any order; accept the **primary** colors; prompt on answers with two of the colors, such as red AND blue, by asking "what other color was used in the work?"; reject answers that mention additional colors]
<Painting/Sculpture>

11. The origins of this organization were traced by Anton Blok using the pseudonymous estate complex of "Baronessa" as a case study of the "'liberalization' of land ownership" during a set of lesser-known Bourbon reforms. Members of this organization were called "creatures of the landlords" in a preface to that book by Charles Tilly. A politician known as the "Iron Prefect" suppressed this organization by occupying the town of Gangi. This organization's collusive "cupola" was temporarily disbanded after the Ciaculli ("chah-KOO-lee") Massacre, in which seven civilians were killed by a car bomb intended for "Ciaschiteddu" ("shash-kee-TED-doo") Greco. Members of this organization, who were jailed after the Maxi Trial, adhere to the omertà ("oh-mair-TAH") code of silence. For 10 points, name this criminal organization that operates in Sicily.
ANSWER: Sicilian **Mafia** [accept La **Cosa Nostra**; accept The **_Mafia_** of a Sicilian Village; prompt on mob or organized crime or syndicate] (Cesare Mori was the "Iron Prefect.")
<European History>

12. A negative effective mass can result when this quantity for a metallic particle approaches its value for plasmonic excitations of a free electron gas from above. For warm electrons, this quantity is modified by adding three times k-squared times the thermal speed to the square of this quantity for cold electrons, according to a relation named for Bohm and Gross. The critical density is defined by the electron density when this quantity for an electromagnetic wave is equal to the plasma value of this quantity, giving a zero index of refraction. This value for an ideal Langmuir ("LANG-myoor") wave is independent of wavevector, resulting in constant phase velocity and a linear dispersion relation. For waves with constant speed, this quantity equals v over lambda. For 10 points, name this quantity that describes how quickly a wave oscillates.
ANSWER: **frequency** [or f; accept angular **frequency** or **omega**; accept plasma **frequency**]
<Physics>

13. In this state, an artist created "15 untitled works in concrete" and "100 untitled works in mill aluminum" that produce multifaceted reflections. It's not California, but the skyspace "Twilight Epiphany" was created at a university in this state by James Turrell. Michelangelo's first painting is housed in an art museum in this state that consists of 16 parallel barrel vaults and was designed by Louis Kahn. Donald Judd converted a fort in this state into the Chinati Foundation. A building in this state stands next to a reflecting pool by Philip Johnson containing Barnett Newman's _Broken Obelisk_. Art collections in this state include the Kimbell Art Museum and an octagonal building with 14 dark color-field paintings. For 10 points, what state contains the Menil Collection and the Rothko Chapel in Houston?
ANSWER: **Texas** [or **TX**] ("Twilight Epiphany" is at Rice University.)
<Other Fine Arts>

14. A neighborhood of this country was analyzed by Barry Wellman to evaluate whether its community was "lost, saved, or liberated." A thinker from this country analyzed historical empires based on whether they relied on "time-biased" or "space-biased" technologies to encode information. Another thinker from this country contrasted four types of criticism, including an "archetypal" one heavily based on Aristotelian theories, in a book that developed the ideas from his earlier _Fearful Symmetry_. At a university in this country, Harold Innis's "staples thesis" partially inspired a "school of communication theory." A thinker from this country coined the term "global village" in his book _The Gutenberg Galaxy_. For 10 points, "the medium is the message" is the most enduring quote by a scholar from what country named Marshall McLuhan?
ANSWER: **Canada** (Northrop Frye wrote _Fearful Symmetry_. The university is the University of Toronto.)
<Social Science>

15. In a novel by this author, every television screen in a country splits into seven pieces after a club is thrown at a cameraman. In another novel by this author, a plane crash in a village miraculously only kills a donkey before one of the protagonists is arrested by Inspector Godfrey. A novel by this author depicts a pregnant Ruler who gives birth to Baby Democracy in the Free Republic of Aburĩria. In another novel by this author, Abdulla's bar commercializes a new drink made from the theng'eta plant and Wanja's brothel in New Ilmorog is burned down by Munira. This author self-translated his novel *Wizard of the Crow* into English from Gikuyu. For 10 points, the Mau Mau Rising is depicted in *Petals of Blood* by what Kenyan author?
ANSWER: **Ngũgĩ** wa Thiong'o ("GOO-ghee wah tee-ON-go") [or James **Ngugi**]
<World Literature>

16. In this city, Forrest Shreve studied Madrean ("mah-DRAY-in") Sky Islands at a biological laboratory on Tumamoc Hill. A. E. Douglass founded this city's Laboratory of Tree-Ring Research. Roy Place designed the Spanish Revival Pioneer Hotel in this city, where William Rathje ("RATH-jee") led the Garbage Project. UNESCO recognized it as the US's first "City of Gastronomy" for foods like Mission Garden's tepary beans, bacon-wrapped hot dogs on bolillo buns, and perhaps the original chimichanga. Southeast of this city, elegant trogons and the jaguar El Jefe have frequented the Santa Rita Mountains. This city is named for an O'odham ("AW-tum") term for Sentinel Peak. This city, whose west contains an outdoor museum about the Sonoran Desert, is flanked by Saguaro National Park. For 10 points, what Pima County seat contains the University of Arizona?
ANSWER: **Tucson** [accept **Tucson** Garbage Project] (The first line is about the Desert Laboratory. The hot dogs are Sonoran hot dogs. The outdoor museum is the Arizona-Sonora Desert Museum.)
<Geography>

17. This novel asks whether "the general election or the end of the world was coming on" before describing two politically opposed newspapers, the *Trumpet* and the *Pioneer*. In this novel, a politician's nervous speech is derailed when his effigy is raised in the crowd and pelted with eggs. A group of laborers attack agents planning to build a railway through their parish in this novel, which is set in the leadup to the Great Reform Act. A young doctor in this novel attracts controversy with his push for science-based medicine but is disgraced by the death of John Raffles and goes into debt after marrying Rosamond Vincy. This novel's protagonist marries the reformist Will Ladislaw after the death of Edward Casaubon. For 10 points, name this novel about Dorothea Brooke by George Eliot.
ANSWER: ***Middlemarch*** [or ***Middlemarch***: *A Study of Provincial Life*]
<British Literature>

18. *Note to moderator: Read the answerline carefully.*
In eleutherodontids ("ih-Luther-oh-DON-tids") like *Vilevolodon*, this behavior relied on pro-, plagio-, and uro-structures and shoulder girdles that resembled furculae. A "polar" typically models this behavior's performance curve with linear span reduction from the stalling speed. The closest relatives of primates are tree shrews and Southeast Asian mammals that perform this behavior with a patagium, the colugos. In contrast to "tumbling," this behavior names "twitching" and other types of flagella-free microbial motility. *Draco* lizards evade predators with this behavior, which names nectar-eating Australian possums often kept as exotic pets. This behavior lacks internal work but entails slowing or sinking, in contrast to the energy gain from thermals that defines soaring. For 10 points, name this aerial locomotion of flying squirrels.
ANSWER: **gliding** [or word forms like **glide**; or **gliding** flight or **volplaning**; accept sugar **glider**s; accept **gliding** motility; accept **glide** polar; prompt on passive **flight**, being **volant**, **fly**ing squirrels, **fly**ing lizards, or **fly**ing lemurs until "flying" is read; prompt on aerial loco**motion** or **movement** or equivalents until "locomotion" is read; prompt on **motility** until read; prompt on **escape** or **evasion** or equivalents until "evade" is read] (The furcula is the wishbone.)
<Biology>

19. The social impacts of one of these projects in St. Paul informed Evelyn Fairbanks's book *The Days of Rondo*. John Anthony Volpe's decision to cancel one of these projects named for the Vieux Carré ("view car-RAY") enabled the eventual opening of their national trust fund. Norman Bel Geddes's *Futurama* exhibit at the 1939 World's Fair advocated the use of these projects as "feeders." Plans for these projects were compiled in the "Yellow Book," which influenced Lucius Clay's report on their funding. Carl G. Fisher conceived one of these projects named for Lincoln, on which a 1919 trip inspired a future president to support the 1956 Federal-Aid Act. For 10 points, name these projects expanded by the Eisenhower administration with the national interstate system.
ANSWER: **highway**s [accept **freeway**s, **motorway**s, **expressway**s, or **speedway**s; accept **interstate** highways until read; prompt on <u>road</u>s or <u>route</u>s; prompt on <u>bridge</u>s; prompt on <u>tunnel</u>s; reject "streets"]
<American History>

20. This city's king was not humiliated to signify "dying-rising" according to Jonathan Z. Smith's *Imagining Religion*, which is subtitled "from [this city] to Jonestown." Friedrich Delitzsch's lectures titled for this city and the Bible led the "history of religions" scholar Hermann Gunkel to link its culture to Israelite religion. This city names the region where Geonim ("gay-oh-NEEM") led the Sura Academy and Amoraim ("ah-mor-ah-EEM") codified the counterpart of the Jerusalem Talmud. Jehovah's Witnesses and Rastafaris use this city as a metonym for the fallen West, referencing a woman on a scarlet beast in the Book of Revelation. Jeremiah castigates Jews in this city after the sack of Jerusalem's First Temple by Nebuchadnezzar II. For 10 points, Nehemiah and Ezra record the "return to Zion" after an empire based in what city held the Jews in captivity?
ANSWER: **Babylon** [or **Babel** or **Bavel** or **Bāb-ilim**; accept **Babylonia**; accept Neo-**Babylonian** Empire or māt **Bābil**; accept **Babylonian** captivity or **Babylonian** exile; accept Whore of **Babylon**; accept **Babylonian** Talmud or Talmud **Bavli**; accept "**Babel** und Bibel" or "**Babel** and Bible" or Pan**babylon**ism]
<Religion>

21. In a one-act opera, this character is given a front row seat to watch "The Tale of Melisendra," a fictional daughter of Charlemagne who is captured by Moors. In that opera commissioned by the Princess de Polignac, this character complains about the boy Trujamán ("troo-hah-MAHN"). While reviving a ballet titled for this character, Alexander Gorsky added three variations for a dream scene in which this character kills a giant spider and meets the Queen of the Dryads. This character inspired a "puppet-opera" by Manuel de Falla that features Master Peter, as well as a ballet that was the first collaboration between Ludwig Minkus and Marius Petipa. In a musical, this character sings about "the unreachable star" in the song "The Impossible Dream." For 10 points, name this literary character who inspired the Broadway musical *Man of La Mancha*.
ANSWER: Don **Quixote** [accept *El ingenioso hidalgo don **Quixote** de la Mancha*; prompt on *Man of La Mancha* until read] (The "puppet-opera" is *El retablo de maese Pedro*.)
<Other Fine Arts>

Bonuses

1. Catherine Bell's book on the "theory" and "practice" of these events notes their consistent features of "enthusiasm" and "sociocultural integration" and dissents from their portrayal as "thoughtless." For 10 points each:
[10h] Identify these events that "dramatize interpretations" according to Wayne Proudfoot. Cambridge scholars like Gilbert Murray and Jane Ellen Harrison linked these events to myths.
ANSWER: **ritual**s [accept **rite**s; accept Cambridge **Ritual**ists; accept ***Ritual*** *theory, Ritual practice*; prompt on ceremony or ceremonies; prompt on religious experiences; prompt on collective actions or group activities]
[10m] Ilkka Pyysiäinen ("EEL-kah PYOO-see-eye-nen") seeks to explain "why indeed" rituals are so common with tools from this interdisciplinary field about the mind. Linguistics and artificial intelligence inform this field with a two-word name, which grew out of cybernetics.
ANSWER: **cognitive science** [accept **cog sci**; accept **cognitive science** of religion; prompt on cognitivists]
[10e] *What Is Religion?* notes that cognitive science robustly detects human belief in this type of "agent." Unlike "paranormal," this adjective describes unexplainable, miraculous phenomena like spirits that transcend physical laws.
ANSWER: **supernatural** [accept **supernatural** agents; accept **preternatural**] (Russell T. McCutcheon and Aaron W. Hughes edited *What is Religion?*)
<Religion>

2. The behavioral manipulation of organisms in this role is common in trophic transmission, one of six common strategies for exploiting them. For 10 points each:
[10e] Give this generic term for organisms that harbor and coevolve with smaller pathogens, microbiota, and parasites.
ANSWER: **host**s [accept **host**–parasite interactions or **host**–microbe interactions or **host**–pathogen interactions; prompt on vectors]
[10h] While some ordinary parasites castrate their hosts, only these organisms actually kill their hosts. The canonical examples of this type of parasitism are ichneumons ("ick-NEW-muns") and the chalcid ("KAL-sid") wasps related to fig wasps.
ANSWER: **parasitoid**s [accept **parasitoid** wasps]
[10m] Marlene Zuk wrote a review on parasitoids exploiting these things, which are often conspicuous and may be multimodal. By the handicap principle, costly examples of these intangible things reliably indicate fitness to receivers.
ANSWER: **signal**s [or word forms like **signal**ing; accept sexual **signal**s, mating **signal**s, costly **signal**s, honest **signal**s, conspicuous **signal**s, or multimodal **signal**s; prompt on animal communication; prompt on traits]
<Biology>

3. Answer the following about Arthur Quiller-Couch ("quiller cooch"), a Cornish writer known to many simply as "Q," for 10 points each.
[10e] Quiller-Couch is best known for his taste-shaping anthology of British poetry titled this place's "Book of English Verse." A sprawling English dictionary named for this place was begun in 1857.
ANSWER: **Oxford** University [accept ***Oxford** English Dictionary*; accept **Oxford** University Press; accept *The **Oxford** Book of English Verse*; prompt on *OED* by asking "what does that stand for?"]
[10m] This friend of Quiller-Couch finished his novel *Castle Dor*, which adapts the Tristan and Isolde myth to 19th-century Cornwall. Mrs. Danvers burns down an estate in Cornwall at the end of a novel by this author.
ANSWER: Daphne **du Maurier** [or Daphne **du Maurier**, Lady Browning; prompt on Lady Browning] (The second novel is *Rebecca*.)
[10h] In *On the Art of Writing*, Quiller-Couch coined this three-word maxim, often misattributed to William Faulkner. This violent-sounding adage advises the removal of unnecessary elements from one's writing.
ANSWER: "**kill your darlings**" [or "**murder your darlings**"]
<British Literature>

4. An 1857 print copied by Vincent van Gogh shows a deep red sky obscured by one of these plants nicknamed the "Sleeping Dragon" at an estate in Kameido. For 10 points each:
[10h] A pair of *byōbu* folding screens painted by Ogata Kōrin depict a swirling river bordered by the red and white blossoms of what plants?
ANSWER: **plum** trees [or **ume**; accept *Red and White **Plum** Blossoms*; prompt on trees]
[10m] Hiroshige painted plum orchards at Kameido and Kamada in two of his "One Hundred Famous Views" of this city, where the Rinpa school flourished.
ANSWER: **Edo** [accept *One Hundred Famous Views of **Edo***; prompt on Tōkyō]
[10e] Kōrin held two brushes in one hand to outline a Rinpa-style screen of these things, which surround Matsushima in a screen by Tawaraya Sōtatsu. The first of Hokusai's "Thirty-six Views" depicts a "Great" one of these things in Prussian blue.
ANSWER: **wave**s [accept *The Great **Wave** Off Kanagawa*, *Kanagawa-oki **Nami** Ura*, *Rough **Wave**s*, or ***Wave**s at Matsushima*]
<Painting/Sculpture>

5. This ruler won a battle so violent that it became known as the "damming of the waters" due to the corpses blocking the flow of the ʻĪao ("EE-ow"). For 10 points each:
[10m] Name this ruler who won a decisive victory at Kepaniwai with the help of Welsh cannoneer Isaac Davis. This ruler hired the Australian convicts Mela and Black Jack to design the Brick Palace for his favorite queen, Kaʻahumanu ("kuh-AH-hoo-MAH-noo").
ANSWER: **Kamehameha** the **Great** [or **Kamehameha I**; or **Paiʻea**; prompt on Kamehameha]
[10h] Control of Maui after the victory at Kepaniwai gave Kamehameha I access to the prized Haleakala type of this commodity, known locally as ʻIliahi ("ee-lee-ah-hee"). Kamehameha's successor taxed this commodity at 133 pounds per person annually for its mass export to Macau.
ANSWER: **sandalwood** [or ***Santalum** haleakalae*; accept **sandalwood** oil; prompt on wood; prompt on incense, aromatic materials, fragrant materials, perfumes, or scents by asking "from what specific material?"; prompt on oil]
[10e] The rapid depletion of sandalwood on Maui in part prompted Kamehameha III to move his capital from Lahaina to this city on Oʻahu. This modern capital of Hawaiʻi preserves the ʻIolani ("EE-oh-LAH-nee") Palace.
ANSWER: **Honolulu** [or **Kou**]
<American History>

6. This rule gives the opposite result of Hofmann's rule, which is valid for sterically hindered molecules, in contrast to this rule. For 10 points each:
[10m] Name this rule that determines the major product in an elimination reaction based on the degree of substitution.
ANSWER: **Zaitsev**'s rule [accept **Zaitsev** alkenes or **Zaitsev** products; accept **Saytzeff** or **Saytzev** in place of "Zaitsev"]
[10e] Zaitsev's rule is explained by the relative stability of alkenes, with more-substituted alkenes being more stable because electron density is donated from these bonds. They are formed from the overlap of s orbitals.
ANSWER: **sigma** bonds
[10h] A good leaving group in elimination reactions, such as this aromatic sulfonyl-containing group, is a weak base, allowing it to leave the substrate with a lone pair of electrons.
ANSWER: **tosyl** group [or **toluenesulfonyl** group; or **Ts** or **Tos**; accept **tosylate**s]
<Chemistry>

7. In this novel, Mauro Carías attempts to poison the Indigenous people of the Amazon with measles injections disguised as vaccines. For 10 points each:
[10h] Name this novel in which Alexander Cold travels to the rainforest with his grandmother Kate. Alexander transforms into a jaguar after meeting the People of the Mist, who worship this novel's title creatures.
ANSWER: *City of the Beasts* [or *La ciudad de las bestias*]
[10e] This author of *City of the Beasts* wrote about Tao Chi'en, who determines that poison killed a "singsong girl," in *Daughter of Fortune*. This Chilean author wrote *The House of the Spirits*.
ANSWER: Isabel **Allende** [or Isabel Angélica **Allende** Llona; prompt on Llona]
[10m] In *The House of the Spirits*, an attempt to poison the politician Severo instead kills this character, whose autopsy renders her clairvoyant sister mute. This green-haired character is often referred to as "the Beautiful."
ANSWER: **Rosa** del Valle [or **Rosa** the Beautiful; prompt on del Valle]
<World Literature>

8. A city in this country names the "protocol" that expanded the Commonwealth of Independent States after its 1991 creation in Belarus's Belavezha Accords. For 10 points each:
[10m] Name this country where the Eurasian Economic Union was established. This country approved a constitutional referendum months before the snap reelection of its president Kassym-Jomart Tokayev ("kah-SEEM joh-MART toh-KAH-yeff"), who may weaken its ties to Russia.
ANSWER: **Kazakhstan** [or Republic of **Kazakhstan** or **Qazaqstan** Respublikasy or Respublika **Kazakhstan**; reject "Soviet Union" or "USSR" or "CCCP"] (The first line refers to the Alma-Ata Protocol.)
[10h] During Kazakhstan's "Bloody January" protests, Tokayev requested an intervention by this military alliance. In 2022, protesters in Yerevan denounced this post-Soviet alliance for its failure to defend Armenia against Azerbaijan.
ANSWER: **CSTO** [or **Collective Security Treaty Organization** or **Organizatsiya Dogovora o kollektivnoy bezopasnosti** or **Arhanizacyja Damovy ab kaliektyŭnaj biaśpiecy** or **Havak'akan anvtangut'yan paymanagri kazmakerput'yun** or **Ūjymdyq Qauıpsızdık Turaly Şart Ūiymy** or **Jamaattık koopsuzduk jönündö kelişim uyumu** or **Sozmoni Ahdnomai amnijati dastaçam'ī**]
[10e] The CSTO's weakness may lead it to be eclipsed by a "Cooperation Organization" named for this coastal city. Protesters on Ürümqi ("uh-RUM-chee") Road denounced "zero-COVID" lockdowns in this most populous urban area in China.
ANSWER: **Shanghai** [or **Shànghǎi**; accept **Shànghǎi** Cooperation Organization, **Shankhay**skaya Organizatsiya Sotrudnichestva, **Shànghǎi** Hézuò Zǔzhī, or **Shànghǎi** Five; prompt on SCO by asking "what does that stand for?"]
<Current Events>

9. Herbert Howells's "Collegium Regale" setting of this text opens with a tenor solo, in contrast to its companion piece's soft treble opening. For 10 points each:
[10h] Name this text that is paired with a *Magnificat* in settings of the canticles for choral evensong. Its opening words implore "Lord now lettest Thou Thy servant depart in peace."
ANSWER: ***Nunc dimittis*** [accept **Song** of **Simeon**; accept **Canticle** of **Simeon**; accept **Simeon**'s **Song** of Praise]
[10m] An eight-part choir enters on successive beats in this composer's *Nunc dimittis*, which was posthumously revised by his daughter Imogen ("IM-oh-jen"). This composer and Harold Darke wrote the best-known settings of the Christmas carol *In the Bleak Midwinter*.
ANSWER: Gustav **Holst** [or Gustavus Theodore von **Holst**]
[10e] This composer has the basses sing a B-flat three octaves below middle C in the setting of the *Nunc dimittis* from his *All-Night Vigil*. This Russian composer also wrote *Rhapsody on a Theme of Paganini*.
ANSWER: Sergei **Rachmaninoff** [or Sergei Vasilyevich **Rachmaninoff**]
<Classical Music>

10. In the 1920s, Percy Newberry dismissed the importance of this symbol, considering it to be a tool used to collect labdanum resin, not a representation of a ruler's ability to provide for their people. For 10 points each:
[10h] Name this royal insignia that displayed Egyptian pharaohs' right to rule when paired with another symbol that represented power and kingship.
ANSWER: **flail** [or **nekhakha**; accept **scourge**; prompt on crook and flail by asking "which one?"]
[10e] The only surviving physical examples of the crook and flail were excavated in 1922 by Howard Carter from this tomb in the Valley of the Kings.
ANSWER: tomb of **Tutankhamun** [or tomb of **Tutankhaten** or tomb of King **Tut** or **Tutankhamun**'s tomb or equivalents; or KV**62**]
[10m] On a namesake macehead found in Nekhen, this pharaoh holds a flail and is presented with captives and loot. This pharaoh holds a mace and flail and wears a red crown on the verso, but wears a white crown on the recto, of a namesake palette.
ANSWER: **Narmer** [accept **Mênês**; accept **Narmer** Palette; accept **Narmer** Macehead]
<Other History>

11. Steven Nadler's *A Book Forged in Hell*, which examines the "Birth of the Secular Age," takes its title from a scathing contemporary review of this text. For 10 points each:
[10m] Name this text by Baruch Spinoza that opposes organized religion by arguing that miracles and prophecies have natural explanations. This text controversially claims that Moses did not write the Torah.
ANSWER: ***Tractatus Theologico-Politicus*** [or ***Theologico-Political Treatise***; prompt on *TTP*; prompt on Spinoza's *Tractatus*]
[10e] In both his *Tractatus* and *Ethics*, Baruch Spinoza gained a reputation as a pantheist based largely on his belief in this philosophical position, which holds that the universe consists of one substance.
ANSWER: **monism** [accept substance **monism**]
[10h] The German "pantheism controversy" of the 1780s began as a dispute between these two philosophers over Gotthold Lessing's Spinozist views. One of these philosophers legendarily died of a cold contracted while carrying a text critical of the other to the publisher. Name either.
ANSWER: Moses **Mendelssohn** OR Friedrich Heinrich **Jacobi**
<Philosophy>

12. The depth hoar type of this substance is formed due to a large temperature gradient between the ground and its surface. For 10 points each:
[10e] Surface hoar, or frozen dew, forms from rapidly cooling water vapor on the surface of what substance? It is formed by the precipitation of individual ice crystals.
ANSWER: **snow** [accept **snow**pack; accept **frost**; accept sugar **snow** or temperature gradient **snow**; prompt on ice]
[10m] Soft rime ice, which looks similar to hoar frost, forms after water undergoes this process, which happens if liquid water cools in the absence of a seed nucleus.
ANSWER: **supercool**ing
[10h] This type of precipitation is formed by the accretion of supercooled water droplets on snow crystals in the air. It is distinct from hail due to its opaque appearance, oblong shape, and soft texture.
ANSWER: **graupel** [accept **soft hail**; accept **hominy snow**; accept **snow pellets**; reject "hail" or "ice pellets"]
<Other Science>

13. One of these events titles a "return song" about Smailagić Meho ("sma-EE-lah-gitch MAY-ho"), one of the oral epics dictated by the Montenegrin-Albanian guslar Avdo Međedović ("meh-JED-oh-vitch"). For 10 points each:
[10m] Name these events that are subverted by thefts in Cypriot and South Slavic songs that may reflect Akritic motifs. The immortal horses Balius and Xanthus are brought to one of these events prior to the Trojan War.
ANSWER: **wedding**s [or **marriage**s, **nuptial**s, **matrimony**, or equivalents; accept **bride** theft or **bride** abduction; accept bride**groom**s; accept the **wedding** of Peleus and Thetis; accept The **Wedding** of Smailagić Meho; prompt on banquets, feasts, meals, or dinners by asking "held at what type of event?"]
[10h] This classicist studied Serbo-Croatian wedding songs to substantiate the oral transmission of Homeric epics. This scholar's student Albert B. Lord presented his theories of oral-formulaic composition in The Singer of Tales.
ANSWER: Milman **Parry** [accept **Parry**–Lord thesis]
[10e] Parry argued that Homeric epithets like this realm's description as "wine-dark" reflected metrical constraints. Saint Nicholas took over temples of this realm's Greek god, the earthshaking husband of Amphitrite.
ANSWER: the **sea** [or **ocean**; accept **Mediterranean** or **Aegean** or other specific seas; accept wine-dark **sea** or oînops **póntos**; prompt on bodies of water or salt water or H_2O or equivalents] (The god is Poseidon.)
<Mythology>

14. This measure is the basis for Kaldor–Hicks efficiency, which, unlike Pareto efficiency, admits the possibility of ex-post redistribution from the "winners" of a policy to the "losers." For 10 points each:
[10h] Name this measure that addresses the counterfactual question of how much additional money an agent would need to maintain their initial utility level in the face of changing prices.
ANSWER: **compensating variation** [or **CV**]
[10m] If the income elasticity of demand for a good is unity, then the compensating variation equals the change in this quantity. This quantity can be represented as the area under the demand curve and above the equilibrium price.
ANSWER: **consumer surplus** [or **CS**; prompt on surplus]
[10e] Compensating variation and the change in consumer surplus are measures of this concept, which represents the overall good of society. In politics, the "state" named for this concept administers programs like pensions.
ANSWER: **welfare** [accept **welfare** state; accept **welfare** economics]
<Social Science>

15. The Saltykov brothers were disgraced by the founder of this house after they poisoned his betrothed, Maria Khlopova, then used the ill effects as evidence of her infertility. For 10 points each:
[10e] Name this Russian house founded by Michael I, whose 1613 accession marked the end of the Time of Troubles.
ANSWER: House of **Romanov** [or **Romanoff** or **Románovy**; accept Michael I **Romanov** or Mikhail **Romanov**]
[10m] The anti-Romanov schemings of the Saltykov brothers paled in comparison to a kinswoman known as Saltychikha ("salt-ih-CHEE-khuh"), whose torture of serfs drew comparisons to a "blood countess" from this family. Stephen, a member of this family, fought the Livonian War against Ivan the Terrible.
ANSWER: **Báthory** [or **Báthori**; accept Stephen **Báthory** or **Báthori** István; accept Elizabeth **Báthory** or Erzsébet **Báthori**]
[10h] During the Time of Troubles, Michael Romanov's Saltykov mother was forced to become a nun and adopt this name. A 15th-century "mayoress" with this name resisted Ivan III's siege of Novgorod.
ANSWER: **Martha** [or **Marfa**; accept **Martha** the Nun; accept **Marfa** Boretskaia]
<European History>

16. A literary genre named for this substance reflects a "poet-engineer mindset" and W. Bruce Arthur's view of "technology as language." For 10 points each:
[10h] What substance names an alternative to steampunk inspired by East Asian antiquity? That genre was coined to label a series of novels about the bandit Kuni Garu's rise in the kingdom of Dara, titled *Dandelion Dynasty*.
ANSWER: **silk** [accept **silk**punk]
[10m] "Silkpunk" was coined by a Chinese-American author with this surname and the first name Ken. He has translated two books from the *Remembrance of Earth's Past* trilogy written by another author with this surname.
ANSWER: **Liu** [accept **Liú** Cíxīn; accept Ken **Liu**]
[10e] Liu applied the silkpunk label to Richard Garfinkle's novel *Celestial Matters*, which is set in a world governed by Taoist alchemy and the physics of this thinker. This author, who appears with Mòzǐ ("MO-tzuh") in *The Three-Body Problem*, wrote the *Poetics*.
ANSWER: **Aristotle** [or **Aristotélēs**] (Liú Cíxīn wrote *The Three-Body Problem*.)
<American Literature>

17. Applying a Legendre transform to the Lagrangian yields this function. For 10 points each:
[10e] Name this function from classical mechanics named for an Irish physicist. This function is expressed in terms of generalized coordinates and conjugate momenta, which are conserved under the dynamics of the system.
ANSWER: **Hamiltonian**
[10m] The time derivative of a quantity in classical mechanics can be found by taking this binary function, named for a French mathematician, of the quantity with the Hamiltonian. Conserved quantities have a value of zero for this "bracket" with the Hamiltonian.
ANSWER: **Poisson** bracket
[10h] This alternate formulation of classical mechanics is particularly useful for identifying conserved quantities. This formulation centers on a first-order PDE for the principal function, which is obtained from the action at fixed initial time and endpoint.
ANSWER: **Hamilton–Jacobi** equation
<Physics>

18. The French fashion house Hermès ("air-MEZ") was inspired by actress Jane Birkin to create a luxury leather brand of these items. For 10 points each:
[10e] Name these fashion accessories used to carry personal items, which are larger than purses. Louis Vuitton is known for creating these accessories with its Monogram Canvas.
ANSWER: **handbag**s [or **shoulder bag**s; accept **tote** bags; prompt on Birkin **bag**s; prompt on **pocketbook**s]
[10m] This designer's namesake "New York" company created the "Sam" and "Frances Valentine" handbags. After her 2018 suicide, this designer's brand announced a one-million-dollar donation towards mental health awareness.
ANSWER: Kate **Spade** [or Katherine Noel Valentine Brosnahan **Spade** or Katherine Noel **Brosnahan**; accept Kate **Spade** New York]
[10h] Kate Spade started her career as a fashion editor for this now-defunct magazine, which targeted "the smart young woman." Barbara Kruger worked as an art director for this magazine, which also published short stories.
ANSWER: *__Mademoiselle__*
<Other Fine Arts>

19. This poet's collections *Mileposts* and *The Girlfriend* respectively describe her affairs with the fellow authors Osip Mandelstam and Sophia Parnok. For 10 points each:
[10h] Name this Russian poet who praised the White Army in her verse cycle *The Swans' Encampment*.
ANSWER: Marina **Tsvetaeva** ("ts'veh-TAI-eh-vuh") [or Marina Ivanovna **Tsvetaeva**]
[10e] In the 1920s, Tsvetaeva engaged in a detailed correspondence with Rainer Maria Rilke and this Russian author of *Doctor Zhivago*.
ANSWER: Boris **Pasternak** [or Boris Leonidovich **Pasternak**]
[10m] One of Tsvetaeva's poetic cycles was dedicated to Anna Akhmatova ("akh-MAH-tuh-vuh"), who wrote this elegy about the Great Terror. Like *Poem Without a Hero*, Akhmatova spent decades writing this poem.
ANSWER: *__Requiem__*
<European Literature>

20. Members of this group supported Şahkulu ("SHAH-koo-loo") during his uprising against Sultan Bayezid II amidst Ottoman persecutions of the Alevis. For 10 points each:
[10h] Name this group of murīd warriors drawn largely from the Rūmlu clan. This group's founder Sheikh Haydar was killed fighting the White Sheep Turkomans, after which his mausoleum in Ardabīl became a pilgrimage site.
ANSWER: **Qizilbash** [prompt on Red Heads; prompt on Safavids]
[10m] This 1514 battle was the climax of Selim I's retaliatory campaign against Safavid support for Şahkulu's rebellion. The Qizilbash confederation began to splinter after Selim won this battle and pillaged Tabriz.
ANSWER: Battle of **Chaldiran** [or **Çaldıran** Savaşı]
[10e] Selim's victory at Chaldiran assuaged his fear of this branch of Islam, the official religion of the Safavids under Ismail I. Qizilbash warriors wore twelve-gored red headgear to symbolize this branch's Twelve Imams.
ANSWER: **Shī'a** Islam [or **Shī'ī**te Islam; or **Shī'ī**sm; accept Twelver **Shi'a** or **Imāmīyyah**; prompt on Twelvers]
<World History>

21. Lee and Richards defined the "accessible" form of this quantity, which depends on the size of solvent molecules. For 10 points each:

[10m] Name this quantity that increases the rate of solid-state reactions. Zeolites are used because of their high porosity and high value of this quantity.

ANSWER: **surface area** [prompt on area]

[10e] The high surface area of zeolites makes them useful for applications involving gas adsorption, including scrubbers that remove this gas from air to permit continual breathing in enclosed spaces like spacecraft.

ANSWER: **carbon dioxide** [or **CO_2**]

[10h] High surface area is also an important characteristic of materials playing this role in catalyzed reactions. Silica is commonly used in this role, which is played by magnesium chloride for the Ziegler–Natta reaction.

ANSWER: catalyst **support**

<Chemistry>