

TOSSUPS

1. This kingdom ransomed the noblewoman Tamta, one of its [emphasize] *vassal* Zak'arids, who often served as commanders called *amirspasalars*. 100,000 martyrs supposedly fell to Jalāl al-Dīn Mingburnū's invasion of this kingdom, whose "incredible victory" in 1121 let it reconquer an emirate in the capital of its reunified *eristavi* realms. This kingdom served as grazing land during its "Great Turkish Troubles" until its king repulsed the Eldiguzids and Seljuks with resettled Kipchaks. In the 1230s, Gregory IX refused to fight Chormaqan's Mongol invasion of this kingdom when it was ruled by Rusudan, a daughter of David Soslan and a queen who helped Alexios I capture Trebizond. David Narin ruled this kingdom's breakaway realm of Imereti from Kutaisi. For 10 points, what Eastern Orthodox kingdom's "golden age" spanned the Bagrationi ("ba-gra-tee-OWN-ee") rule of David the Builder and Tamar the Great?

ANSWER: **Georgia** [or **Saqartvelo** or **Kartvelia**; or Kingdom of **Georgia** or **Georgian** Empire or **Saqartvelos** samepo; accept **Georgian** Golden Age] (The Zak'arids, also known as the Mqargrdzeli or Zakarian family, were Armenian vassals of Georgia. The "incredible victory" was the Battle of Didgori.)

<European History>

2. This composer's Opus 1 is a collection whose last piece includes two *Grave* ("GRAH-vay") movements surrounding a *Largo e puntato* movement built on a seven-note descending bass part. A piece by this composer begins with seven bars of a 3/4-time *Vivace* ("vee-VAH-chay"), which then switches to a 4/2-time *Grave* played "without ornaments." That piece by this composer begins its *Allegro* second movement with two solo violins playing a contrapuntal passage that begins "G, G, A, F-sharp." This composer was so offended by a high-pitched violin part that he refused to play a Handel piece. This composer's Opus 5 is a set of 12 violin sonatas, the last of which is a set of variations on La Folia. Handel's Opus 6 concerti grossi are modeled after this composer, whose own Opus 6, No. 8 ends with a Pastorale *ad libitum*. For 10 points, name this Baroque composer of the *Christmas Concerto*.

ANSWER: Arcangelo **Corelli**

<Classical Music>

3. This system contains two symmetric regions with unusually low temperatures called "cold collars." Ferric chloride is a candidate for this system's so-called "unknown UV absorber." Thermal tides excited in this system contribute to its superrotation. Estimates of the particle size distribution in this system can be derived from the glory phenomenon observed in images taken by *Akatsuki*. The disputed detection of phosphine in this system might be evidence that it harbors life. Permanent polar vortices are found in this system, which directly interacts with the solar wind due to a lack of a magnetic field. Carbon dioxide makes up nearly 97 percent of this system due to a runaway greenhouse effect. For 10 points, what system contains a layer of sulfuric acid clouds that completely encircle a terrestrial planet?

ANSWER: **atmosphere** of **Venus** [or **Venusian atmosphere** or **Venerian atmosphere** or **Venerial atmosphere**; accept **troposphere**, **mesosphere**, **stratosphere**, **ionosphere**, or **thermosphere** in place of "atmosphere"; prompt on **Venus** or **Venerian** by asking "what region of Venus?"; prompt on **atmosphere** or specific atmospheric layers by asking "of what astronomical body?"]

<Other Science>

4. This figure “takes LSD” in the title of Dean and Zamora’s book about Michel Foucault (“foo-KOH”) and neoliberalism. This “blinking” figure asks, “What is longing? What is a star?” and hops upon the earth like a flea in a world where “whoever feels different goes voluntarily into a madhouse.” In a later book, this title figure is read as a depiction of the banishment of *megalothymia* (“mega-lo-THIGH-mee-uh”) from public life. A crowd begs to be turned into this figure in the prologue of *Thus Spoke Zarathustra*. Nietzsche’s portrayal of this self-satisfied, comfortable antithesis of the *Übermensch* is taken as a critique of life under an egalitarian social order in a book partly titled for this figure, which builds on Alexandre Kojève (“ko-ZHEV”) to theorize the “victory” of liberal democracy. For 10 points, name this figure who titles a Francis Fukuyama book along with the “end of history.”
ANSWER: **last man** [or **last human** being; or **letzter Mensch**; or the **ultimate** man or the **final** man; accept *The End of History and the Last Man* or *The Last Man Takes LSD*; prompt on **man** or **human** or **Mensch**]
<Philosophy>

5. A “poet king” with this name compiled a *sepha* story known as the *KCKP* and adapted a Panji tale into the play *Inao*. A series of “Lords of Light” with this name are revered by a woman whose son marries the Frenchwoman Lucille in *Four Reigns*. A king with this name patronized a master of *nirat* poems who wrote a romance about a flute-playing prince who seduces an ogress and a mermaid. In a *khon* dance-drama, a prince with this name obtains a heart casket to defeat Totsagan. A prince with this name or his father titles a Jātaka tale adapted into *kakawin*, *hikayat*, and *zardaw* poems, as well as an epic titled for his “glory,” or *-kien* (“KEE-un”). Sunthorn Phu (“soon-tone poo”) served a king who took this regnal name from a son of Dasharatha who spent 14 years in forest exile with Lakshmana. For 10 points, a hero with what name titles a Thai national epic based on a poem by Vālmīki?
ANSWER: **Rāma** [accept **Rāmāyana**, **Rāmāyaṇam**, Phra **Ram**, **Ramakien**, **Yama Zardaw**, or **Rāma Jātaka**; accept **Rama IV** or **Mongkut**; accept **Rama II** or Phra Phuttalerdla **Naphalai** or **Chim**; accept **Rama III** or **Nangklao** or **Thap**; prompt on Phra **Narai** by asking “what character is he reborn as?”] (KCKP stands for *Khun Chang, Khun Phaen*. The romance is *Phra Aphai Mani*.)
<World Literature>

6. The isomers eoxin (“ee-OX-in”) A4 and leukotriene (“leuko-TRY-eeen”) A4 bear this group before it is removed by coupling to glutathione (“gluta-THIGH-own”). Rifampin indirectly increases carbamazepine (“car-buh-MAY-zuh-peen”) activity by promoting the addition of this group, while grapefruit has the opposite effect. Post-translational modification by gamma-glutamyl carboxylase (“carboxy-lase”) adds this group to its cofactor, which must be removed by the VKOR (“V-kor”) complex. The addition of this group to aflatoxin (“afla-toxin”) enables it to cause liver damage. The ability of PAHs (“P-A-H’s”) to cause transitions and transversions is attributed to the addition of this functional group by cytochrome P450s, which may be followed by hydrolysis to form a vicinal diol (“VISS-ih-null DYE-ol”). The C-3 hydroxyl of sterols derives from one of these functional groups added to a double bond by squalene monooxygenase (“mono-oxygen-ace”). For 10 points, name this reactive group consisting of a three-membered ether ring.
ANSWER: **epoxides** (“ee-POCK-sydes”) [or **epoxy**; or **oxiranes**; prompt on cyclic **ethers** until “ether” is read]
<Biology>

7. A bank called BADEA (“bah-day-uh”) loaned members of this organization six billion dollars before it embraced self-sufficiency in a 1980 “plan of action.” In order to condemn the killing of a leader who lost support from CUT’s militant Juvento youth wing, this organization affirmed non-interference and territorial integrity in Article III of its charter. This organization, whose “Liberation Committee” sent arms to insurgents in the “frontline states,” enforced a 1987 ceasefire between the author of its transitional Sirte (“surt”) Declaration and Hissène Habré (“ee-SEN ah-BRAY”). The Arab League mediated the Sand War with this organization, which formed after the FLN’s Évian Accords eased tensions between Mohammed V’s integrationist Casablanca group and the less radical Monrovia bloc. For 10 points, Muammar Gaddafi transformed what organization into a current supranational body of 55 states based in Addis Ababa?

ANSWER: **OAU** [or Organization of **African Unity**, Organization for **African Unity**, Organisation de l’**unité africaine**, or **OUA**; accept **African Union** or **AU**; accept Charter of **African Unity**] (Clues include the Lagos Plan of Action, the assassination of Sylvanus Olympio in the 1963 Togolese coup, and the Toyota War ceasefire.)

<World History>

8. A poem commissioned by the Folger Shakespeare Library states that reading this poet makes the skies “rise higher and hang younger stars.” That poem by Eavan Boland quotes this poet’s lines about finding “nought save homespun cloth” in the house. The 57th and final stanza of a poem [emphasize] *about* this poet states that “Love has no body and presides the sun” and calls this poet a “sourcing whom my lost candle like the firefly loves.” The prologue to a collection by this poet describes reading Du Bartas and opens, “To sing of Wars, of Captaines, and of Kings.” This subject of an “Homage” by John Berryman wrote that that collection was published prematurely “by friends, less wise than true” in a poem that addresses it as “rambling brat” and the “ill-form’d offspring of my feeble brain.” For 10 points, name this poet of *The Tenth Muse Lately Sprung Up in America*.

ANSWER: Anne **Bradstreet** [or Anne **Dudley**] (The poem in the penultimate line is “The Author to Her Book.”)

<American Literature>

9. Filippo Bonanni’s 1720 study of this technique examined pieces nicknamed for the Martin family. This technique’s incised *yun* (“yoon”) style arose in Pagan (“puh-GAHN”) after Bayinnaung (“buh-yin-nong”) took its artisans from Chiang Mai. Charcoal burnish is used in a form of this technique compared to pear skin called *nashiji*. The Unryuan (“oon-ryoo-ahn”) studio has helped revive the use of this technique to create *inrō* boxes. Unlike monochrome products of this technique, “Coromandel” ones made with *gesso* (“JESS-oh”) and mother-of-pearl inlay resemble gold-sprinkled *maki-e* (“MAH-kee-EH”). Shibata Zeshin treated ink with this material for *urushi-e* paintings. Sword-pommel patterns are carved into this material in *diāoqī* (“dec-ow-chee”). The varnishes of Queen-Anne-style furniture imitated this material’s use of *Toxicodendron* sap. For 10 points, cinnabar gives a vermilion color to what polished, protective coating on East Asian “ware”?

ANSWER: **lacquering** (“lacker-ing”) [or **lacquerwork**; accept **lacquerware**; accept **lac** or **shellac**; accept **lacq** ancien or vernis de **lacque** or **vernis de la Chine**; accept **urushi-e** or **urushi** tree or **urushiol** until “*urushi-e*” is read; accept monochrome **lacquers** or coromandel **lacquers**; prompt on **varnishing** or **coating** until each is read; prompt on **polishing** or **rubbing** until “polished” is read; prompt on **resin** or **vernis Martin**]

<Painting & Sculpture>

10. The “Wobbly Economist” Frederic S. Lee argued that these quantities are determined by political interests of “going-concerns.” The 1939 Hall and Hitch report found that, contrary to classical predictions, these quantities derive from British firms’ lack of information and their sense of fairness. The Areeda–Turner test for the legality of these quantities uses AVC as a rule of thumb. The “limit” type of these quantities creates barriers to entry. Manipulating one of these quantities boosts profits on a complementary good in a “razor and blades” strategy. It’s not supply, but orthodox theories assume that these quantities are [emphasize] *not* set in a “cost-plus” fashion but via “marginal cost” approaches resulting in “stickiness.” For 10 points, firms with market power are “setters” and not “takers” of what quantities?

ANSWER: **prices** [accept **price** takers, **price** setters, **price** stickiness, cost-plus **pricing**, **pricing** strategies, or predatory **pricing**; prompt on **wages** by asking “wages are what quantity with respect to labor supply?”; prompt on business **model** or business **strategy** by asking “what kind of model or strategy?”] (“AVC” stands for “average variable cost,” which determines prices in “average cost” cost-plus pricing.)

<Social Science>

11. After a leader of these people named Najda ibn ‘Āmir repented under penalty of death, his accusers recanted and threatened to kill him if he did not “repent his repentance.” The Murji’a theology opposed these people by advocating “postponing judgment,” leading to the Mu’tazila’s compromise position. A group of these people distinguish four types of leaders, like “exchange” and “glory,” and follow Jābir ibn Zayd and the *Tartīb* (“tar-TEEB”) *al-Musnad*. These people chanted “judgment belongs to Allah alone” to oppose “arbitration” after the Battle of Siffin, since they believed that sin rendered a Muslim a *kāfir* and that merit alone determined the imamate. On that theory, these people assassinated Ali. These people “exited” the *ummah* over the “unjust” leadership of the Umayyads. For 10 points, a modern school of what sect is the majority in Oman?

ANSWER: **Khārijites** [or **Khawārij**; accept **Ibadi** Muslims or **Ibadism** or al-’**Ibādiyya**; accept **Ourra** or **Haruri** or **Muhakkima**; prompt on **Omani** Muslims until read] (Ibadis dislike being called Khariji even though the intellectual lineage is clear.)

<Religion>

12. The protagonist of this novel tells a man to not fear her elder brother’s “cold, insulting violence” after he is ignored by her family at an expensive dinner that he pays for. During this novel’s many switches to the third person, the narrator calls herself “the white girl” and describes wearing a fedora and gold lamé (“lah-MAY”) heels. The protagonist of this novel, who is haunted by her younger brother’s death from pneumonia during the Japanese occupation, sees her friend Héléne Lagonelle (“ay-LEN lah-go-nell”) as “being of one flesh” with the title character. Near the end of this novella, the narrator sees a man watching her in his limousine as she leaves on a boat, which parallels their first meeting on a ferry when she was 15. For 10 points, name this autobiographical novella about a French teenager’s romance with an older Chinese man in Vietnam, written by Marguerite Duras (“dew-RASS”).

ANSWER: *The **Lover*** [or *L’**Amant***]

<European Literature>

13. This culture's funerary "grove temples" for a triad of deities may have held sacrificial *šip* ("ship") feasts that continued under the [emphasize] *later* Teispids ("TACE-pids"), who wore its fringed royal robes. "Brother kings" used the honoric "my father" for this culture's "grand regent," or *sukkalmaḥ*, to secure tin possibly sourced from the BMAC ("BEE-mack"). François Desset claimed to decipher this culture's "linear" script, which is distinct from its namesake "proto" numerals that antedate cuneiform. This culture's king Shutruk-Nakhunte plundered Sippar's Louvre stele from the Kassites. This culture's Middle Bronze Age Shimashki dynasty inspired Isin-Larsa period "city laments" about its conquest of Ur III ("three") before its rule over Eshnunna was halted by Hammurabi. This culture's language lost primacy in Anshan under the Achaemenids. For 10 points, what civilization built Susa in Iran?

ANSWER: **Elam** [or **Elamites**, **elamtu**, **Elymais**, **Haltamtip**, **Hatamti**, **halatamti**, **NIM**, or **hūja**; accept **Awan**, **a-wa-an**, **Šimaški**, Proto-**Elamite**, Linear **Elamite**, or **Elamite** cuneiform; accept **Susa**, **Susiana**, **Shusha**, **Šūšān**, **Čūšā**, or **Sousiāné** until "Susa" is read; accept **Anshan** or **Anzan** until "Anshan" is read] (The BMAC was the Bactria-Margiana archaeological complex. Proto-Elamite may not actually be related to Linear Elamite.)

<Other History>

14. N3 and its diprotonated counterpart N179 perform this process as a means of "injection" in the presence of triiodide ("tri-iodide"). The Grätzel ("GRET-sell") group demonstrated that the ability of bipy ("bippy") dyes to undergo this process makes them excellent panchromatic photosensitizers for solar cells. The bands produced by this process are broadened by solvatochromism. Impurities capable of this process produce the blue color of lapis lazuli and sapphires. This process routinely produces extinction coefficients exceeding 10,000 units, and is responsible for the intense colors of tetra-oxo complexes like the permanganate ion. This class of Laporte-allowed absorptions comprises the entire spectrum of d0 ("D-zero") and d10 ("D-ten") metal centers, which are incapable of d-d transitions. For 10 points, name these strong transitions that include metal-to-ligand and ligand-to-metal varieties.

ANSWER: **charge transfer** [or **charge-transfer** bands; or **CT**; accept metal-to-ligand **charge transfer**, ligand-to-metal **charge transfer**, intervalence **charge transfer**, **intervalence transfer**, **MLCT**, **LMCT**, **IVCT**, or **IT**; accept **charge-transfer** complexes; prompt on photoinduced **charge separation** or inner sphere **electron transfer**; prompt on electronic **transitions** or **absorptions** until each is read]

<Chemistry>

15. In Book 7 of the *Iliad*, this character's description of killing Ereuthalion prompts nine Achaeans ("uh-KEE-uns") to jump up and draw lots. Pausanias's account of this character's cattle-in-a-cave is probably the outcome of his cattle raid of the Epeians ("eh-PEE-uns") in Elis. Book 11 of the *Iliad* states that this character has a cup adorned with golden doves, which no one else can lift. In Book 2 of the *Iliad*, this character's likeness appears in Agamemnon's dream to persuade him to return home. This character grows up in Gerenia with three generations' worth of life as compensation for the murder of his father and brothers by Heracles. This son of Neleus gets home safe from Troy since he didn't commit war crimes, as per the advice that he gives Telemachus in Book 3 of the *Odyssey*. For 10 points, name this old king of Pylos.

ANSWER: **Nestor** [or **Nestōr**; prompt on **Gerēnios** or the **Gerenian** until "Gerenia" is read]

<Mythology>

16. This instrument doubles a vibraphone at the start of “Sorta Blue,” a track on *The Music From Peter Gunn*. An unaccompanied solo on this instrument opens the 1962 film *Days of Wine and Roses*. A cello doubles this instrument in “Shades of Gray” by the Monkees, on which it is played by session musician Vince DeRosa. Four of these instruments play on the title track of *Sgt. Pepper’s Lonely Hearts Club Band*. Bassist John Entwistle also plays this instrument on the Who’s *Tommy*. Alan Civil’s solos on this instrument punctuate the Beatles song “For No One.” This instrument repeats a soaring motif throughout “God Only Knows” by the Beach Boys. In popular music, this instrument’s “section” is used as a blanket term for all wind instruments. For 10 points, name this brass instrument played with one hand inside the bell.

ANSWER: French **horn** [accept **horn** section]

<Other Fine Arts>

17. This [emphasize] *dimensionless* quantity is one of the two main quantities measured by the SMARTS (“smarts”) neutron diffractometer. By using a camera to track specific points of a sample, this dimensionless quantity can be measured over a large area using digital image correlation. A device that measures this dimensionless quantity, whose namesake factor depends on the resistivity of alloys like constantan (“constant-tan”), can be used in theories named for this quantity being “finite” or “infinitesimal.” Increasing this dimensionless quantity leads to an increase in a Wheatstone bridge’s resistance in a common design for their namesake gauges. The negative ratio of two values of this quantity, respectively measured transversely and axially, is denoted ν and is named for

Poisson (“pwah-SAWN”). For 10 points, what ratio of extension to original length is often plotted alongside stress?

ANSWER: **strain** [accept engineering **strain** or axial **strain** or transverse **strain**; accept **strain** gauges; accept finite **strain** theory or infinitesimal **strain** theory; prompt on **epsilon**]

<Physics>

18. This justice dissented that it would only be due process to indefinitely confine an immigrant on Ellis Island if “he were an amphibian” in a case that strengthened Congress’s “plenary power” of exclusion. This dissenter in *Mezei* (“meh-ZAY”) theorized a “zone of twilight” in which the president and Congress “may have concurrent authority” as part of a three-pronged test of executive power in an influential concurrence in *Youngstown Sheet & Tube Company*. This justice promised “undeniable proofs of incredible events” in an opening statement of a trial convened in accordance with the London Charter. This justice wrote that racism “lies about like a loaded weapon” in his dissent against upholding Executive Order 9066. For 10 points, name this Supreme Court justice who authored the dissent in *Korematsu* and led the American prosecution at the Nuremberg trials.

ANSWER: Robert H. **Jackson** [or Robert Houghwout **Jackson**]

<American History>

19. Linnaeus’s weak grasp of mythology led him to give one of these birds the species name *Antigone*. Invasive *Mimosa* plants threaten the wattled species of these birds, which flies from the Kafue (“kuh-FOO-eh”) Flats to the Bale (“bah-lay”) Mountains. Patuxent (“puh-TUCK-sint”) Wildlife Center led the first ever artificial insemination program for an endangered species in these birds, whose 15 species at their International Foundation in Baraboo include a blue totem of Xhosa (“KOH-suh”) warriors. Marie Antoinette named the demoiselle (“duh-mwah-ZELL”) species of these birds, whose *mort d’amour* (“mor dah-MOOR”) led Vālmīki to invent *shloka* verse. The Siberian species of these birds winters at the shrinking Póyáng Lake. Korea’s DMZ protects one of these birds that represents Japan Air. Uganda’s flag features their grey crowned species. For 10 points, Nebraska hosts the sandhill and whooping species of what birds that symbolize longevity in origami?

ANSWER: **cranes** [or **Gruidae**; accept **Grus** or **Balearica**; accept whooping **cranes**, sandhill **cranes**, grey crowned **cranes**, red-crowned **cranes**, **sarus** cranes, or other specific species; accept dāndǐng **hè**, **tanchōzuru**, **zuru**, or **durumi**; accept International **Crane** Foundation; prompt on **Gruiformes** or **Grues**]

<Geography>

20. This novel's protagonist is unable to finish reading the poem "The Jackdaw of Rheims ("reems")" because its description of water worsens his thirst. Three colossi in this novel, one depicting a crescent-headed goddess, are called the "Silent Ones" by the locals. A map drawn by José da Silvestra in his own blood leads this novel's main characters to twin mountains called Sheba's Breasts. In this novel, the last stand of the Greys helps their rightful king Ignosi defeat the usurper Twala. Captain John Good and Sir Henry Curtis go with this novel's protagonist to Kukuanaaland, where the witch Gagool traps them in a diamond-filled treasure chamber. In a crossover work, this novel's protagonist meets Ayesha, the titular queen of its author's novel *She*. For 10 points, what adventure novel introduced H. Rider Haggard's big-game hunter Allan Quatermain?

ANSWER: *King Solomon's Mines*

<British Literature>

BONUSES

1. Mabel Dove serialized a Shaw parody in this present-day country, whose people are likened to the Greeks in J. E. Casely Hayford's speculative novel *Ethiopia Unbound*. For 10 points each:

[10m] What country's *Western Echo* published A. Native's pseudonymous novel *Marita*? Kobina Sekyi's 1915 play *The Blinkards* satirized its "Euro-Africans," as did the later novels *Changes: A Love Story* and *Our Sister Killjoy*.

ANSWER: **Ghana** [or Republic of **Ghana**; accept **Gold Coast** or **Cape Coast**; reject "Cape Colony"] (Mabel Dove Danquah wrote *The Adventures of the Black Girl in Her Search for Mr Shaw*. The later author is Ama Ata Aidoo.)

[10e] This author, who moved to Ghana to create an *Encyclopedia Africana*, theorized the "problem of the color line" and "double consciousness."

ANSWER: W. E. B. **Du Bois** [or William Edward Burghardt **Du Bois**]

[10h] One of these people titles a Du Bois novel in which Matthew and Kautilya conceive a "messiah." "African" examples of these people title Fatima Massaquoi's autobiography and Joseph J. Walters's 1891 novel *Guanya Pau*.

ANSWER: **princesses** [accept *Dark Princess*; accept *Guanya Pau: A Story of an African Princess*; accept *The Autobiography of an African Princess*]

<World Literature>

2. The value of this theory's Immirzi parameter has been deduced by comparison with the entropy of black holes. For 10 points each:

[10m] Identify this competitor of string theory named for closed structures that can form a spin network.

ANSWER: **loop quantum gravity** [or **LOG**; prompt on **quantum gravity** or **QG**]

[10e] Some proposals for testing loop quantum gravity involve this type of radiation emitted by evaporating black holes.

ANSWER: **Hawking** radiation

[10h] A 2020 paper by Gambini et al. suggested using real examples of these variables to model rotating black holes in loop quantum gravity. These variables were introduced in 1986 to rewrite the Hamiltonian constraint in terms of triads.

ANSWER: **Ashtekar** ("ush-TAY-ker") variables [accept real **Ashtekar** variables or complex **Ashtekar** variables or **Ashtekar**-Barbero variables]

<Physics>

3. An occult encyclopedia from Peterborough lists 145 types of these objects, including many alleged galactagogues. For 10 points each:

[10h] What objects inspired a therapeutic speculum by Camillo Leonardi? In medieval cosmologies, these objects indicate proximity to the earthly paradise, whose rivers disseminate them.

ANSWER: **gemstones** [or **jewels** or **precious stones**; accept specific gems, such as **diamonds** or **emeralds** or **agate**; accept **crystals**, **gemology**, **lapidary**, **lapidaries**, **lapidaria**, **lithotherapy**, or *Speculum Lapidum*; prompt on **rocks**, **stones**, **minerals**, **crystals**]

[10e] Professional lapidaries alter this property of a gemstone with trilliants ("TRILL-ee-unts") and facets as an alternative to cabochon ("CAB-uh-shon"). The "four Cs" are this property, color, clarity, and carat.

ANSWER: **cut** [or word forms of **cutting**; accept gem**cutters**]

[10m] Robert N. Proctor punningly used this term for the ignorance created by lapidaries neglecting a variety of chalcedony ("cal-SED-uh-nee") in favor of diamond. Iain Boal used Greek roots to coin this term for the study of ignorance and doubt.

ANSWER: **agnotology** [or word forms of **agnotologists**; accept **Agnotology: The Making and Unmaking of Ignorance**] (The variety of chalcedony is agate.)

<Other Academic>

4. As *adelantado* of Paraguay, this man reported a poisoning by the Cario woman Juliana and was convinced by Guaraní (“gwah-ruh-NEE”) diplomats to fight Payaguá (“pah-yuh-GWAH”) “river pirates.” For 10 points each: [10m] Name this author who chronicled the Moroccan-born explorer Estevanico’s (“eh-stay-vuh-NEE-koh’s”) diplomacy on the Gulf Coast during the Narváez (“nar-VAH-ess”) expedition.

ANSWER: **Cabeza de Vaca** [or Álvar Núñez **Cabeza de Vaca**; prompt on **Álvar**, **Núñez**, **Cabeza**, or de **Vaca**]

[10e] Cabeza de Vaca fought the Payaguá for killing a Spaniard with this first name, which was adopted by African conquistadors surnamed Valiente and Garrido. A sailor of this name explored the strait south of Vancouver Island.

ANSWER: **Juan** [or **John** or **Johannes**; accept **Juan** de Fuca, **Ioánnis** Fokás, **Johannes** Phocas, **Juan** de Fuca Strait, or **Juan** de Fuca Strait; accept **Juan** Garrido; accept **Juan** Valiente; accept **Juan** de Ayolas]

[10h] Juan de Grijalva (“gree-HAL-vuh”) reported a voyage to enslave these natives of the Bahamas, whose crew was massacred in Matanzas by the related Ciboney (“see-bo-NAY”). In 1527, an early slave ship from Cape Verde replaced these people’s Cubaguan (“koo-BAH-gwan”) pearl divers.

ANSWER: **Lucayan** (“loo-KAH-yun”) people [or **Lucayos**; or **Lukku**-Cairi; prompt on **Táinos**] (Bernal Diaz del Castillo’s *True History of the Conquest of New Spain* reports the shipwreck of ca. 1510 in Matanzas, which means “massacre.”)

<Other History>

5. This scientist and René Suttel mapped the Paris catacombs for the French Resistance. For 10 points each:

[10h] Name this neurosurgeon who worked with Pierre Tournoux to create an “Atlas” of the human brain based on that of a 60-year-old woman. His namesake coordinate system competes with MNI coordinates.

ANSWER: Jean **Talairach** (“zhahn tal-ay-RACK”) [accept **Talairach** Atlas or **Talairach** coordinates]

[10e] Talairach (“tal-ay-RACK”) coordinates can report outcomes in neuropsychology experiments that use the “functional” type of this radio imaging procedure to track blood flow in the brain. It produced false positives in the “dead salmon” study.

ANSWER: **fMRI** [or functional **MRI** or functional **magnetic resonance imaging**]

[10m] Talairach coordinates are more precise than these 52 divisions of the cerebral cortex. For example, parts of the anterior cingulate cortex that activate in conflict monitoring tasks overlap the 32nd and 33rd of these “areas.”

ANSWER: **Brodman** areas

<Social Science>

6. In the early 1980s, authorities in this city attempted to control a heroin epidemic by designating a supervised “needle park” behind its central train station. For 10 points each:

[10h] Name this largest city in a country that developed a “four-pillar” policy to mitigate drug abuse.

ANSWER: **Zürich**

[10e] One of the four pillars is this two-word approach exemplified by the “needle park” in Zürich. This approach is characterized by preventing negative effects from drug use in lieu of preaching abstinence.

ANSWER: **harm reduction** [or **harm minimization**; prompt on **safe injection**]

[10m] Seminal cohort studies gauged harm reduction’s success in this European city beginning in 1984. The Provo movement supported several “white plans” in this city, where squatters opposed the coronation of a new queen in 1980.

ANSWER: **Amsterdam** [accept **Amsterdam** Cohort Study] (The queen was Beatrix.)

<European History>

7. The Little Theatre movement reacted against this pervasive quality in Victorian theater, as typified by Augustin Daly's *Under the Gaslight* and Dion Boucicault's ("DYE-ahn BOO-sih-koh's") *The Octoroon*. For 10 points each:
[10e] Give this generic term for sensational plays. It originates from plays that used music to heighten exaggerated plots about stock heroes and villains.

ANSWER: **melodramas** [or **melodramatic** plays]

[10h] A Gilded Age champion of "real melodrama" with this first name wrote realistic comedies like *The Truth*. A villain with this name torments ex-prisoners at a purgatorial truck stop kitchen in a recent play by Lynn Nottage.

ANSWER: **Clyde** [accept **Clyde**'s; accept **Clyde** Fitch or William **Clyde** Fitch; prompt on **William** by asking "he typically went by what first name?"; prompt on **Floyd**'s by asking "the play was retitled for what name?"]

[10m] Richard Mansfield starred in Clyde Fitch's 1890 play about this paradigmatic English dandy, who is called an "emperor among... insects" in William Hazlitt's essay about his vacuous wit.

ANSWER: Beau **Brummell** [or George Bryan **Brummell**; accept "**Brummelliana**"]

<American Literature>

8. This orchestral movement includes a six-bar passage in which a celesta solo is accompanied by the second harp and one desk each of first violins, second violins, and violas. For 10 points each:

[10h] Name this orchestral third movement, a 6/8-time *Vivace* with passages in dual 2/4 time. In this movement, the strings are scored in A, B-flat, and C.

ANSWER: "**Mercury**, the Winged Messenger" [accept "the **Winged Messenger**"; prompt on *The Planets*; reject "Hermes"]

[10e] After solo passages in "Mercury," the score uses this Italian musical term, which instructs the orchestra to play together again.

ANSWER: **tutti** ("TOOT-tee") [reject word forms such as "tutte"]

[10m] "Mercury" ends with violins using this technique to play a very high E, held for 13 bars. This technique is indicated either by a circle over a note or a diamond notehead.

ANSWER: **harmonics** [accept natural **harmonics** or artificial **harmonics**; reject "harmony" or word forms]

<Classical Music>

9. Studies near Lituya Bay showed that plants in this genus promote podzolization, fueling autogenic succession towards an acidic community where they dominate. For 10 points each:

[10h] Name this genus of ecosystem engineers that force reliance on rainwater by raising the acrotelm into a mound. Most of the volume of plants in this genus comprises water-retaining hyaline cells.

ANSWER: **Sphagnum** moss [prompt on **moss**]

[10m] This quantity for a hummock of sphagnum is only about a meter a day in the vertical. The presence of tracheids in vascular plants increases this quantity, symbolized K, which is higher for gravelly soils than sandy ones.

ANSWER: hydraulic **conductivity** [accept soil **permeability**; prompt on **porosity**]

[10e] The water that seeps out of sphagnum bogs is colored by these polyphenolic compounds, whose astringent taste discourages herbivory, but pleases some winetasters.

ANSWER: **tannins** [accept **tannoids**]

<Biology>

10. Governor Joseph Wanton opposed creating an army of observation in this colony, which would have included the future “Black Regiment” instrumental in the defense of Fort Mercer. For 10 points each:

[10m] Name this colony whose 1st Regiment was the first to directly enlist enslaved people with a promise of freedom. Christopher and Nathanael Greene were Continental Army commanders from this colony.

ANSWER: **Rhode Island** [or Colony of **Rhode Island** and Providence Plantations]

[10e] This Governor of Virginia issued a proclamation promising to liberate slaves who fought for the British. This “Lord” supported campaigns against the Shawnee in Ohio as part of his namesake war.

ANSWER: Lord **Dunmore** [or John **Murray**, 4th Earl of Dunmore; accept Lord **Dunmore**’s War; accept **Dunmore**’s Proclamation]

[10h] Many of the enslaved British fighters were listed in the *Book of Negroes* at the behest of this British commander. He ensured several thousand soldiers were evacuated to Nova Scotia and freed.

ANSWER: Guy **Carleton** [or Lord **Dorchester**; or Guy Carleton, 1st Baron **Dorchester**]

<American History>

11. Gilbert Stork devoted a controversial footnote of their pioneering quinine synthesis to dismissing quinine’s first formal synthesis, which was conducted by this scientist and Robert Woodward. For 10 points each:

[10h] Name this chemist who determined the mechanism of the Baeyer–Villiger oxidation with Edwin Dorfman. This scientist worked with Wolfgang Roth to identify a reaction’s chair transition state.

ANSWER: William **Doering** [or William von Eggers **Doering**; accept **Doering**–Dorfman experiment or **Doering**–Roth experiment]

[10m] Doering and Roth predicted that bullvalene (“BULL-vuh-leen”) would only have one proton NMR peak because of how rapidly it undergoes this sigmatropic reaction.

ANSWER: **Cope rearrangement** [prompt on **Cope** reaction; prompt on **rearrangement**; reject “Cope elimination”]

[10e] Bullvalene can undergo this many possible rearrangements at any given moment, as each swaps the bridgehead carbon with a cyclopropyl (“cyclo-PRO-pill”) carbon. There are this many carbons in propane.

ANSWER: **three** [or **3**]

<Chemistry>

12. During an annual ceremony, residents of this building’s town compete to spread it with *banco*, a mixture that includes shea butter, baobab tree powder, and rice husks. For 10 points each:

[10m] Name this building made of *ferey* bricks, the largest mud-brick building in the world. The façade of this building is studded with *toron*, bundles of palm fronds that jut out and serve as scaffolding.

ANSWER: Great **Mosque** of **Djenné** [or **mosque** at **Djenné**; or Grande **Mosquée** de **Djenné**; accept **masjid** or **jāmi** in place of “mosque”]

[10e] The Great Mosque of Djenné is located in this modern-day country, which also contains the Tomb of Askia Muhammad.

ANSWER: **Mali** [or Republic of **Mali** or Republik bu **Maali** or Jumhūriyyet **Mali**]

[10h] The square minarets of Djenné’s Great Mosque and Mauritania’s Chinguetti Mosque are topped with these objects, which symbolize fertility. According to legend, three of these objects hung in Istanbul’s Blue Mosque to ward off spiders.

ANSWER: **ostrich eggs** [prompt on **eggs**]

<Other Fine Arts>

13. This poem borrows the phrase “And after this our exile” from the Salve Regina (“SAL-vay ray-JEE-nuh”), and quotes the Hail Mary by asking, “Pray for us sinners now and at the hour of our death.” For 10 points each:
[10m] Name this poem that describes a “veiled sister” who wears Mary’s colors of white and blue. This poem opens by adapting a line by Guido Cavalcanti that states, “Because I think not ever to return.”

ANSWER: “**Ash Wednesday**”

[10e] Mary is addressed as “Lady, whose shrine stands on the promontory” in “The Dry Salvages” (“SAL-vay-jizz”), the third work in this set of long poems by T. S. Eliot.

ANSWER: **Four Quartets**

[10h] Mary is told, “And a sword shall pierce thy heart,” in “A Song for Simeon (“simian”),” one of six poems that Eliot wrote for this illustrated series published by Faber & Gwyer. It also included “Journey of the Magi.”

ANSWER: **Ariel** Poems [accept **Ariel** series]

<British Literature>

14. The contemplative practice of Centering Prayer draws on both Buddhist meditation and mystical texts from this theological tradition, like *The Cloud of Unknowing*. For 10 points each:

[10m] Douglas John Hall wrote that modern Christianity is “not the church” in an “exercise” in what patristic tradition that embraces God’s ineffability?

ANSWER: **negative** theology [or via **negativa** or **negation**; accept **apophatic** theology or **apophasis** or **apophaticism**]

[10h] *Specific term required.* David Newheiser’s (“NEW-hyzer’s”) book *Hope in a Secular Age* calls negative theology this process’s “first serious rival.” Evangelicals increasingly use it as a framework to question key tenets of their faith.

ANSWER: **deconstruction** [or word forms of **deconstructing** or **deconstructionist**; accept faith **deconstruction**]

[10e] Jean-Luc Marion termed this experience a “saturated phenomenon” in a debate with Jacques Derrida over negative theology and deconstruction. It titles a biblical book that many evangelicals believe describes the rapture.

ANSWER: **revelation** [or divine **revelation**; accept Book of **Revelation** or **apocalypse** or **apokálupsis**; accept **revealed** religion]

<Religion>

15. A book on “two patron saints of classical philosophy” compares Socrates to a sage of this ethnicity. For 10 points each:

[10h] Name this ethnicity whose epistemology separates “direct” and “second-hand” knowledge, according to Hallen and Sodipo. A 256-part “corpus” in their language uses a word meaning “head” to denote a force that directs one’s fate.

ANSWER: **Yoruba** [or Ìran **Yorùbá**; or **Omo Oòduà**] (The two levels of knowledge are imo and igbagbo. The word “ori” means “head.”)

[10e] Sophie Olúwolé’s *Socrates and Òrúnmilà* argues that the Ifá corpus’s form of this position is “complementary.” Descartes argued for the “substance” type of this view.

ANSWER: **dualism** [accept Cartesian **dualism** or substance **dualism** or complementary **dualism**; accept **dualist** in place of “dualism”]

[10m] The Yorùbá concept of *anafemale* theorized in Oyèrónké Oyèwùmí’s *The Invention of Women* is cited in a María Lugones paper linking this phenomenon and gender. An essay by Aimé Césaire equates this phenomenon with “thingification.”

ANSWER: **colonialism** [or **colonization** or **coloniality** or word forms; accept *Discourse on Colonialism* or *Discours sur le colonialisme*; accept **coloniality** of gender; reject “imperialism” or other related terms]

<Philosophy>

16. Aluísio Azevedo's novel *O Mulato* brought this movement to Brazil, where Machado de Assis denounced its lurid influence on Eça de Queirós ("AY-suh dee kay-ROSH"). For 10 points each:

[10e] Name this literary movement whose determinism was criticized by the realists Leopoldo Alas and Juan Valera. Claude Bernard's physiology influenced its elaboration by Émile Zola.

ANSWER: **naturalism** [or **naturalist** literature; or **naturalisme** or **naturalismo** or **naturalistes**]

[10h] In *The Pressing Question*, this Spanish countess advocated a uniquely hispanophone naturalism. She adopted naturalism's poor protagonists in *The Tribune* and its frank sexuality in *The House of Ulloa* ("oo-YO-ah").

ANSWER: Emilia **Pardo** Bazán [or Emilia **Pardo** Bazán y de la Rúa-Figueroa; prompt on **Bazán**]

[10m] Zola's *Rougon-Macquart* ("roo-GON ma-CAR") influenced Benito Pérez Galdós's 46 National Episodes, whose first novel is mostly set in these places. Gilliatt ("gill-YAHT") seeks an engine in one of these places in a novel written during Victor Hugo's exile.

ANSWER: **ships** [or **boats**; accept **shipwrecks**; accept **fleets** or **armadas** or **navy** or word forms; accept **decks** or **sterns** or other parts of ships; accept **galleys**, **galleons**, **steamships**, or other specific ships; accept high **seas** or open **ocean**; prompt on **vessels**] (The unnamed novels are *Trafalgar* and *Toilers of the Sea*. Hugo was exiled to Guernsey.)
<European Literature>

17. Steven Krantz remarked that it was once said that "anyone who could survive a year of" a topology-infused book by this author "was a real mathematician." For 10 points each:

[10h] What mathematician's notoriously concise textbook *Principles of Mathematical Analysis* is sometimes nicknamed for him and the word "baby"?

ANSWER: Walter **Rudin** [accept "Baby **Rudin**"]

[10e] In the textbook's proofs, Rudin sometimes neglects the case of the metric space over this set. Only one possible topology can be defined on this set, which is denoted by an "O" with a slash through it.

ANSWER: **empty** set [accept **empty** space; accept **null** set]

[10m] Walter Rudin's wife Mary Ellen Rudin gave a short proof that all metric spaces have the "para-" variant of this property. Procedures named for imparting this property include ones called "Stone-Čech" ("stone-check") and "one-point."

ANSWER: **compact** space [or **compactness**; accept **compactification** or Stone-Čech **compactification** or one-point **compactification**; accept **paracompact** space or **paracompactness**]

<Other Science>

18. To adopt this thing in Argentina, Javier Milei has proposed both a "purist" plan inspired by Henry C. Simons and a transitional period emulating its introduction in El Salvador and Ecuador in the early 2000s. For 10 points each:

[10m] What unit of account is used within the Compact of Free Association?

ANSWER: U.S. **dollar** [or **USD**, United States **dollar**, American **dollar**, or slang terms like **bucks** or **greenbacks**; accept **dollarization** or **dollarize**; prompt on **money**, **currency**, legal **tender**, **cash**, or equivalents; reject "coins"]

(The freely associated states are Palau, the Federated States of Micronesia, and the Marshall Islands.)

[10h] The dollar is one of five currencies that determine the value of this accounting unit allocated by the IMF to provide liquidity. Brazil and Argentina's proposed currency union would mimic this reserve asset.

ANSWER: **special drawing rights** [or **SDRs**; or **XDR**; prompt on **drawing rights**] (The other four currencies are the yen, rénminbì, euro, and pound.)

[10e] This bloc's de-dollarization proposals include a common basket currency similar to SDRs. Milei canceled plans to join this association, whose name is an acronym for five emerging economies, after its 2023 summit in Johannesburg.

ANSWER: **BRICS** ("bricks") [accept **BRICS** Plus; reject "BRIC"] (Egypt, Ethiopia, Iran, and the UAE joined the group, which originally included Brazil, Russia, India, China, and South Africa.)

<Current Events>

19. *Description acceptable.* A *cartellino* reading “36” appears in a proto-conceptual painting of one of these things by Cornelius Gijssbrechts (“GAYS-brechts”) from 1670. For 10 points each:

[10h] Describe these things that were copied by Vik Muniz for an unusual 2024 Prado exhibit. Leonardo painted a laurel, palm, and juniper around the motto “Virtutem Forma Decorat” on one of these things.

ANSWER: **reverse** side of paintings [or **back** side of paintings or **obverse** of paintings or equivalents; accept **versos**; accept *The Reverse of a Framed Painting* or *Bagsiden af et indrammet maleri*; prompt on **paintings** or equivalents] (The Leonardo painting is done on the *verso* of his portrait of Ginevra de’ Benci.)

[10m] The *verso* of a Martin van Meytens painting shows the bare butt of a person with this vocation. A yellow window illuminates a sculpture of a person of this vocation flanked by theater-box portraits of its chapel’s eponymous family.

ANSWER: **nuns** [or **sisters**; or **abbesses**; accept *Kneeling Nun*; prompt on religious **orders**; prompt on **saints** or the *Ecstasy of Saint Theresa* or *l’Estasi di santa Teresa d’Avila* by asking “what was her earthly vocation?”] (The chapel is named for the Cornaro family.)

[10e] Muniz copied the back of this painting, which reflexively depicts its own *verso*. Foucault’s *The Order of Things* details a new *episteme* using this group portrait of the Infanta Margaret Theresa.

ANSWER: **Las Meninas** [or *The Royal Family*; or *The Maids of Honor*] (by Diego Velázquez)
<Painting & Sculpture>

20. The *Nihon Shoki* credits this kingdom’s monks with introducing Buddhism to Yamato and states that it sent herbalists to Emperor Kinmei in a request for military aid. For 10 points each:

[10m] Name this kingdom whose craftsmen built the Asuka-dera. Táng China allied with Silla (“SHILL-uh”) and invaded this southwestern Korean kingdom in 660.

ANSWER: **Baekje** (“BECK-jeh”) [or **Paekche**; or **Kudara**]

[10h] Baekje’s (“BECK-jeh’s”) Buddhists backed the Soga clan against the Nakatomi and this other pro-Shintō clan that favored Silla. This traditionalist clan’s influence at court waned after the conversions of Yōmei and Empress Suiko.

ANSWER: **Mononobe** clan [accept Soga–**Mononobe** feud or equivalents]

[10e] Baekje artisans crafted the Kudara Kannon at one of this city’s Seven Great Temples. The Fujiwaras’ Kasuga Shrine protected deer in this city after Empress Genmei modeled it on Cháng’ān as the pre-Heian capital.

ANSWER: **Nara** [accept **Nara** period or **Nara** jidai; accept **Heijō**-kyō or **Heizei**-kyō] (The statue is at the Hōryū-ji.)
<World History>