



**ACADEMIC
COMPETITION
FEDERATION**

ACF NATIONALS 2022

PACKET 3

Packet by

Claremont Colleges

**Authors
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TOSSUPS

1. This character, who is accused of “drowning the pillows in wicked sighs,” curses her father for giving her blood that “searches” and “beats against the walls.” All six British theatrical Best Actress awards were swept by Billie Piper for playing this character. In the first act of the play she appears in, this character sings a song in which she asks “When [...] are you going to come?” and receives the reply “When your flesh smells like jasmine.” This character and the two sisters-in-law who watch over her are gossiped about by six women doing laundry at a stream. The shepherd Victor shares a mutual attraction with this character, who solicits prayers from Dolores the Conjuror and strangles her husband Juan to death before exclaiming, “I’ve killed my child with my own hands!” For 10 points, name this title woman who longs to become a mother in a Federico García Lorca play.

ANSWER: Yerma

<European Literature>

2. This quantity is quickly decreased using copper sulfite in an assay to measure the volumetric mass transfer coefficient “ k -sub- L times a .” Leland Clark’s platinum–silver electrode to measure this quantity is often considered the first biosensor. This quantity is kept artificially high in the mixing lagoon during wastewater treatment. The drop in this quantity over five days is a proxy for organic pollution. This quantity is measured in a stoppered bottle by stepwise addition of manganese sulfate, then iodide or azide, then sodium thio-sulfate and starch until equivalence. Spargers (“SPAR-jerz”) and impellers are used in bioreactors to keep this quantity near the one-millimolar limit set by Henry’s law. This quantity is measured in the Winkler test. For 10 points, name this quantity that drops precipitously during eutrophication (“YOO-troh-fiction”) as phosphate-induced algal (“AL-gull”) blooms lead to hypoxia (“high-POX-ia”).

ANSWER: dissolved oxygen [or DO; or oxygen concentration; or oxygen saturation; or pO₂ (“P-O-2”); or oxygen partial pressure; or aeration; or oxygenation; prompt on partial answers like concentration, saturation, or partial pressure by asking “Of what species?”]

<Misc. Science>

3. The Papyrus Jumilhac states that a goddess took on a snake form associated with this other deity to kill the followers of Set at Gehesty, after which their blood became juniper berries. In *The Tale of the Doomed Prince*, aspects of this deity predict that either a dog, a snake, or a crocodile will cause the prince’s death, following the tradition that seven versions of this deity appeared at births to foretell a newborn’s fate. An object most closely associated with this deity consisted of a weight and an *aegis* plate linked by strings of beads. When Ra sulked in his tent because Babi mocked him, this “Lady of the Sycamore” cheered him up by exposing her genitals. This deity used gazelle’s milk to heal the eyes of Horus during his war with Set. The *menat* necklace and rattle-like *sistrum* were used in the worship of this deity, who had a temple at Dendera. For 10 points, name this cow-like Egyptian goddess of love and fertility.

ANSWER: Hathor [accept Isis-Hathor; prompt on Isis before “predict” is read by asking, “What other deity’s form did Isis take?”]

<Mythology/Legends>

4. The *Constitutiones Synodales* of 1530 record that the people who share their name with this region worshipped the underworld god Patollo and fertility god Potrimpus. Adalbert of Prague was martyred during his missions to those people of this region, who assembled in units called *lauks* and built the castle of Twangste (“t’VAHNG-sh’tuh”). A Jan Matejko (“mah-TAY-koh”) painting commemorates the homage paid by a 16th-century duke of this region named Albert to Sigismund the Old. The last-known West Baltic language to go extinct is named for this region, whose dukes built Albertina University. This region was historically bordered by Masovia to the south and Pomerania to the west, and lends its name to a European power which the Comte de Mirabeau (“mee-ruh-BOH”) derided as an “army with a state.” For 10 points, what region was ruled jointly with Brandenburg by the “Great Elector” Frederick William?

ANSWER: **Prussia** [or **Preussen**, or **Prusy**, or **Prūsa**, or **Prūsija**, or **Borussia**; accept **Prussians** or **Borussians**; accept East **Prussia**; accept **Albert** of Prussia; accept **Sambia** or **Samland** before “Sambians”; prompt on **Samland** after “Sambia”] (Twangste is the site of present-day Kaliningrad.)

<European History>

5. This woman wore a vermillion dress and waved a red chiffon scarf while descending the Louvre’s Daru Staircase in front of the Nike of Samothrace. A dress designed for this woman popularized a *décolleté* (“deco-lay-TAY”) named after the character she played while wearing it. That dress worn by this actress had a small bow on each shoulder and a boat neckline designed to hide her collarbone, about which she was self-conscious. For the same film, this woman wore a strapless white gown with black flowers across the skirt and bodice in a garden party scene in which she dances on a tennis court with Humphrey Bogart. In the opening scene of a 1961 film, this lifelong friend and collaborator of Hubert de Givenchy (“zhee-von-SHEE”) wore sunglasses and strings of pearls with an iconic little black dress while eating a pastry. For 10 points, name this star of *Funny Face*, *Sabrina*, and *Breakfast at Tiffany’s*.

ANSWER: **Audrey Hepburn** [or Audrey Kathleen **Ruston**; prompt on **Hepburn**; prompt on **Jo Stockton** by asking, “Who played that character?”]

<Other Fine Arts>

6. The release of these compounds is mediated by the SLCO2A1 (“S-L-C-O-two-A-one”) transporter. Agonists of these compounds’ EP2 (“E-P-2”) and EP4 (“E-P-four”) receptors are used to treat pulmonary hypertension. An enzyme that catalyzes the production of these compounds sometimes also produces 15-HETE (“H-E-T-E”), which rearranges to form lipoxins (“lih-POX-ins”). Analogues of their F2 alpha type are used to treat glaucoma. The E1 type of these compounds is used to keep the ductus arteriosus patent, and their I2 (“I-2”) type are used to treat Raynaud’s (“ray-NOH’s”) phenomenon. These compounds counter thromboxane (“throm-BOX-ane”) A2 to inhibit platelet aggregation. These eicosanoids (“eye-KOH-suh-noids”) are produced by the oxygenation of arachidonic (“AR-uh-kih-donic”) acid through the COX-1 enzyme. NSAIDs (“N-seds”) like ibuprofen inhibit their formation. For 10 points, name these lipids that serve as powerful vasodilators and mediate inflammation.

ANSWER: **prosta-glandins** [or **prostacyclins** or **prostanoids**, prompt on **eicosanoids** before mentioned]

<Biology>

7. This politician mimed a spinning Wheel of Fortune in a press conference, likening refusal of the COVID-19 vaccine to joining “the death lottery.” This politician offered \$300 million to settle loans from now-defunct Greensill Capital amid a financial dispute between Credit Suisse and Bluestone Resources. NASCAR entrepreneur Bray Cary was a senior advisor to this politician who, in a Twitter-incited feud, told singer Bette (“bet”) Midler to literally kiss the exposed “heinie” of his pet bulldog Babydog. This governor defeated Ben Salango to get reelected in 2020; before taking office in 2016, he was the only billionaire in his state. Last year, this most recent U.S. governor to switch parties unveiled a sign for the re-designated New River Gorge National Park and Preserve. For 10 points, name this now-Republican frenemy of Joe Manchin, the governor of West Virginia.

ANSWER: Jim **Justice** [or James Conley **Justice II**] (Bluestone Resources is a coal company that Justice owned, sold, and later repurchased.)

<Current Events>

8. In a novel by this author, a planned college performance of *Norman, Is That You?* is cancelled due to a political assassination. In another novel by this author, the ideas “It’s Best to be Prepared” and “Anything can Happen to Anyone” are called one character’s Two Thoughts, with capital T’s. This author wrote about marching through the forest at the invitation of a group of Maoist insurgents in “Walking with the Comrades” and criticized the Iraq War in “The Algebra of Infinite Justice.” She wrote a novel in which an Englishman’s abandoned home is called the History House. In that novel by this author of *The Ministry of Utmost Happiness*, Sophie’s drowning is blamed on a Communist Dalit who is beaten to death by the police, and the twins Estha and Rahel commit incest. For 10 points, name this Indian author of *The God of Small Things*.

ANSWER: (Suzanna) Arundhati **Roy**

<World Literature>

9. This person used the pseudonym “Phileunomos” to write a pamphlet that uses New Hampshire’s credit bills as an example of the “evils” of a “fluctuating medium of exchange.” This person countered James Wilson’s contention that “bad elections” result from “smallness of the districts” by espousing a “small-republic” view that “people are more happy in small than in large States.” This author of *A Caveat Against Injustice* was the only person to sign all four of the Continental Association, the Declaration of Independence, the Articles of Confederation, and the Constitution. While representing the same state as Oliver Ellsworth, this member of the Committee of Five drafted a plan that proposed a bicameral legislature to split the difference between the New Jersey and Virginia Plans. For 10 points, name this Founding Father who proposed the Connecticut Compromise.

ANSWER: Roger **Sherman**

<American History>

10. Cassiano dal Pozzo’s statement that a work from this artist’s workshop “does not inspire devotion” may explain why it was converted into a painting of Bacchus. This artist probably advised Giovanni Francesco Rustici (“ROOSS-tee-chee”) for a sculpture group that stood above Ghiberti’s doors for the Florence Baptistery. That group’s central figure makes a hand gesture similar to Saint Anne’s in this artist’s *Burlington House Cartoon*. This man reused the same gesture in a *chiaroscuro* painting possibly modeled on his student, Salaì (“sah-lah-EE”), which shows a long-and-curly-haired John the Baptist smiling and pointing to heaven. The Louvre and London’s National Gallery both house versions of a painting by this artist that exhibits his signature *sfumato* and shows John the Baptist as a child kneeling beside a blue-cloaked Mary in a grotto. For 10 points, name this artist of the *Virgin of the Rocks*.

ANSWER: **Leonardo** da Vinci [or **Leonardo** di ser Piero da Vinci; prompt on da Vinci]

<Painting/Sculpture>

11. This equation was derived in the presence of a quasi-classical external field in the first use of the Keldysh (“KELL-dish”) formalism for non-equilibrium Green’s functions. In the “method of moments,” this equation is integrated against powers of the wavenumber, yielding drift–diffusion and hydrodynamic models. Macroscopic properties are calculated by expanding solutions to this equation in powers of the Knudsen number in Chapman–Enskog theory. The Navier (“nahv-YAY”)–Stokes equations are discretized in a “lattice” method named for this equation that may treat relaxation with the BGK approximation. Derived from an assumption of “molecular chaos,” this equation describes the evolution of a distribution function under force, diffusion, and collision terms. For 10 points, name this “transport equation” of statistical mechanics whose formulator also names a constant used to calculate entropy.

ANSWER: **Boltzmann** transport equation [or **Boltzmann** equation; or **BTE**; accept lattice **Boltzmann** method]
<Physics>

12. When Jerrold Schechter interviewed a man about a phone call regarding this event, the interviewee said he made the call because he wanted cover for a “barrel of fun” with Le Duc Tho (“lay duck toe”). Live coverage of this event on Channel 13 in New York was commented on by sociology professor Shelby Lyman. A participant in this event was encouraged by a call saying “America wants you to go over there” by Henry Kissinger and a donation by James Slater that doubled its prize pool. An unofficial follow-up to this event was held in 1992 in Yugoslavia after one of its participants disappeared from the public eye for 17 years. This event, which took place in the Laugardalshöll (“LOY-gurr-tals-HALL”) in Reykjavik (“RAKE-yuh-vick”), resulted in a score of twelve-and-a-half to eight-and-a-half after a Russian forfeited its 21st game. For 10 points, identify this match that crowned the first American world titleholder in chess.

ANSWER: The **1972** World **Chess Championship** [accept answers which refer to both Bobby **Fischer** and Boris **Spassky**; accept answers which include **1972** and **Championship** after “chess”; accept answers which refer to Bobby **Fischer** and the World Chess **Championship**; accept **Match of the Century**; prompt on **Chess Championship**]
<Other History>

13. This thinker claimed that people strive for inner perfection in the hopes that it will allow them to control external reality in a so-called “bargain with fate.” In an essay, this thinker claimed that disillusionment and incest-prohibition are the two factors that cause people to seek love-objects outside of their partners, creating the “problem of the monogamous ideal.” According to this thinker, the “expansive solution” to stress in one disorder consists of narcissistic, perfectionistic, and arrogant-vindictive approaches to life. This founding editor of the *American Journal of Psychoanalysis* described the coping mechanisms of that disorder as “moving towards people,” “moving against people,” and “moving away from people” in her book *Neurosis and Human Growth*. For 10 points, name this author of *New Ways in Psychoanalysis* who created the concept of “womb envy.”

ANSWER: Karen **Horney** (“HOAR-nye”) [or Karen **Danielsen**]
<Social Science>

14. This music theorist described music that does not employ formulaic repetition or symmetry as “musical prose.” This theorist described the reduction of a complex musical idea to its bare essentials as a process of “liquidation.” The basis of William Caplin’s codification of the “sentence” theme type in *Classical Form* is this theorist’s analysis of the opening eight bars of Beethoven’s first piano sonata. This theorist’s late works were edited by his assistant Leonard Stein, who contributed to later editions of Dika Newlin’s anthology of this man’s essays, titled *Style and Idea*. This man, who coined the term “developing variation” in his essay “Brahms the Progressive,” devised a method that often involves applying inversion and retrograde transformations to a tone row. For 10 points, name this Austrian theorist and composer who invented the twelve-tone technique.

ANSWER: Arnold **Schoenberg**
<Classical Music>

15. A guest in this family's house remarks that their sitting room must be "most inconvenient" on summer evenings, as its windows are "full west." In a 2013 novel, a maid named Sarah who washes menstrual rags for this family meets the black ex-slave Ptolemy; in that novel by Jo Baker, titled for their hometown, the servant Mrs. Hill is a major character. The mother of this family makes a faux pas by saying it dines with "four and twenty" families. A "plain" girl in this family says that "The loss of virtue in a female is irretrievable," and earlier plays piano and sings so badly that her father urges her to give others a turn. Two sisters in this family often walk to Meryton to chat with Colonel Forster's militia. Their estate at Longbourn is entailed to the clergyman Mr. Collins, and is near Netherfield Park. For 10 points, Mary is the middle daughter of five in what main family of Jane Austen's *Pride and Prejudice*?

ANSWER: **Bennet** family

<British Literature>

16. This ruler surveyed approximately 17,000 people to assess public opinion of a new tax on farmers, as recorded in the fourth section of the *Veritable Records* of this ruler's dynasty. This ruler ordered the compilation of a 125-canto epic glorifying six ancestors titled *Song of the Dragons Flying to Heaven*. A leading figure in this ruler's court improved upon an iron printing press created 200 years earlier and invented a standardized bronze rain gauge. This ruler, who granted parental leave to a serf class called *nobi*, said a wise man could learn of his innovations in a morning, while a fool could learn it in a week. His assembly of scholars, the Hall of Worthies, helped create a system intended to be easier for commoners to use than *hanja*, or Chinese characters. The *hangul* alphabet was created under, for 10 points, what Joseon ("jo-sun") dynasty king known as "the Great?"

ANSWER: **Sejong** the Great [or **Sejong** Daewang, accept **Chungnyeong** or **Yi Do**]

<World History>

17. A book by this non-Greek thinker redefines dialectical thinking as "thought to the second power, a thought about thinking itself." Borrowing a term from IR, this thinker described how ideologies feign self-sufficiency by hiding their underlying narrative through "strategies of containment." An essay by this thinker claims that even though *Star Wars* isn't set in the historical past, its imitation of 1950s science fiction makes it a "nostalgia film." A book by him criticizes a building that tries to replace its own surroundings to create a "total space." That analysis of the Westin Bonaventure Hotel appears in a book by this author of *The Political Unconscious*, which defines the title movement as an "attempt to think the present historically" and claims that it has replaced parody with pastiche. For 10 points, name this American critical theorist who wrote *Postmodernism, or, The Cultural Logic of Late Capitalism*.

ANSWER: Fredric **Jameson** (The first book is *Marxism and Form*.)

<Philosophy>

18. A poem by this author describes "silence / closing around a blossom of fire" and states that "My bones turn to dark emeralds." Another poem by this author says a certain river has one shore "in hell" and the other "In Bridgeport, Ohio." This author and his son became the only parent-child pair to win a Pulitzer in the same category when his son won for the collection *Walking to Martha's Vineyard*. This author describes the flight of a chicken hawk at the beginning of a poem from his collection *The Branch Will Not Break* that abruptly ends, "I have wasted my life." This author describes two animals that "bow shyly as wet swans" in a poem inspired by a drive with Robert Bly, which mentions "two Indian ponies" whose eyes "Darken with kindness." For 10 points, name this poet of "Lying in a Hammock at William Duffy's Farm in Pine Island, Minnesota" and "A Blessing."

ANSWER: **James Wright** [prompt on **Wright**] (The first two poems are "The Jewel" and "In Response to a Rumor That the Oldest Whorehouse in Wheeling, West Virginia Has Been Condemned.")

<American Literature>

19. In a pinch, CoffeeMate creamer serves as a calibration standard for this quantity, replacing conventional references like goethite (“GUR-tyte”) or P-DADMAC (“P-dad-mack”). Folded capillary cells measure this quantity on Malvern’s popular line of DLS instruments, which are named for both size and it. A plot of this quantity against pH has a zero at the pzc (“P-Z-C”). This quantity is proportional to the Henry function of κa times the measured mobility over viscosity. Regular measurements of this quantity by a streaming current detector determine how much alum (“AL-um”) to add during water purification. This quantity is negative for lipid nanoparticles used in drug delivery. This quantity, which is measured at the slipping layer, determines the pH at which flocculation occurs. For 10 points, name this effective charge on the surface of a colloidal particle, but measured in volts and named for a Greek letter.

ANSWER: **zeta potential** [or **electrokinetic potential**; prompt on potential or voltage; prompt on zeta; prompt on surface charge or charge or electric charge until it is read by asking, “What is the corresponding measurable quantity?”]

<Chemistry>

20. One person with this first name gave away their last bag of flour to a beggar, inspiring a hadith stating that Allah will provide like he provides for the birds. According to al-Tabari, another person with this first name was exposed wearing underclothes when winds blew away a curtain made of hair. After the Battle of Khaybar, a Jewish person with this name prepared poison lamb meat to try to assassinate Muhammad. Yet another person with this name gave away her onyx necklace as a ransom for her husband Abu al-As, who was captured at the Battle of Badr. According to Sunnis, that woman of this name was the first daughter of Khadijah and Muhammad. This is the name of two of Muhammad’s wives, who had the patronymic names “bint Khuzayma” (“koo-ZYE-muh”) and “bint Jahsh.” For 10 points, give this Arabic female name whose Greek equivalent is Zenobia.

ANSWER: **Zaynab** [or **Zeynep**; prompt on Zenobia before “Zenobia”]

<Religion>

BONUSES

1. Some of this opera's recitatives employ awkward repeated notes and bizarre phrasing to depict the stuttering of the hunchback, Demo. For 10 points each:

[10h] Name this 1649 opera by Francesco Cavalli ("kah-VAH-lee"), which is often claimed to be the most popular opera of the 17th century. In it, the title character praises the pleasures of love to Ercole in the aria "Delizie ("day-LEETS-yay"), contenti."

ANSWER: Giasone ("jah-ZOH-nay") [or Jason]

[10e] The lead role in *Giasone* was for this kind of male singer, who had their testicles removed as youths to preserve their high voices.

ANSWER: castrato [or castrati]

[10m] Another opera by Cavalli uses a castrato to portray this real-life ruler. A different opera titled for this ruler begins with him admiring the shade of a plane tree in the aria "Ombra mai fu."

ANSWER: Xerxes ("ZERK-zees") I ("the-first") [or Xerxes the Great; accept *Il Xerse* or Xerxès or Serse] (The opera is Handel's *Serse*.)

<Other Fine Arts>

2. This community was built in just 110 days in 1942 and soon grew to become its state's second most populous city; about 6,000 of its 40,000 residents were Black. For 10 points each:

[10h] Name this public housing area in Oregon. As leaflets told residents to stay put, it was permanently destroyed by a May 1948 flood of the Columbia River that caused its dikes to burst.

ANSWER: Vanport City, Oregon [accept, but DO NOT REVEAL, Kaiserville]

[10m] Vanport was built after this Black union leader convinced President Roosevelt to desegregate the domestic munitions industry with Executive Order 8802. He also led a pressure campaign to desegregate the U.S. military.

ANSWER: A(sa) Philip Randolph

[10e] Vanport, Oregon housed workers in one of this magnate's shipyards. He founded, and partly names, a health care company that houses the Permanente Medical Group.

ANSWER: Henry (John) Kaiser [accept Kaiser Permanente]

<American History>

3. These are the smallest objects typically used by *matsuri-bayashi* ("mat-soo-ree-bah-yah-shee") at Japanese festivals. For 10 points each:

[10h] Name these objects. A group of Zen mendicant monks called *komusō* ("koh-moo-SOH") walk around with straw hats that cover their whole heads while using these objects to aid their meditation.

ANSWER: flutes [accept bamboo flutes or end-blown flutes or transverse flutes; accept fue or shakuhachi]

[10m] Flute music often accompanies these Shinto rituals, whose first example was a performance by the goddess Ame-no-Uzume ("AH-meh-noh-oo-ZOO-meh"). The name of these ubiquitous Shinto dances means "god-entertainment."

ANSWER: kagura

[10e] Shinto and Buddhist flute-playing styles blended to create the *shakuhachi* music of this genre's *gagaku*. Zeami incorporated principles of Zen Buddhism while developing this genre of austere Japanese theater.

ANSWER: noh [or nohgaku]

<Religion>

4. In one story by this author, the jazz saxophonist Johnny Carter is followed through Paris by his biographer Bruno. For 10 points each:

[10e] Name this Argentinian author of the story "The Pursuer" who included 99 expendable chapters in his novel *Hopscotch*.

ANSWER: Julio Florencio **Cortázar** ("kor-TAH-sar")

[10m] In this story by Cortázar, two nameless siblings are frightened by unexplained noises in their home, corner themselves off in a small section of the building, and eventually flee altogether.

ANSWER: "**House Taken Over**" [or "**Casa Tomada**"]

[10h] Cortázar wrote several stories about this type of naive and unconventional character, whom he once described as "greenish, frizzly, wet objects." These characters are the first title group in a collection that includes the stories "Unusual Occupations" and "Unusable Stuff."

ANSWER: **cronopio** ("kroh-NOPE-yoh") [accept *Historias de cronopios y de famas*]

<World Literature>

5. Morris Kharasch proved the "peroxide effect" when he showed that the addition of this molecule to an alkene is considerably slower under vacuum. For 10 points each:

[10m] Name this binary acid whose addition to alkenes is normally Markovnikov, but unusually becomes anti-Markovnikov when peroxides are present.

ANSWER: **hydrobromic** acid [or **HBr**; or **hydrogen bromide**]

[10h] Kharasch trapped the residual peroxides in the reaction mix with this pseudo-halide ion. This ambidentate ligand forms a blood-red coordination compound when it's used as an indicator for ferric iron.

ANSWER: **thio-cyanate** [or **SCN**; or **NCS**; reject "cyanate"; reject "isocyanate"; reject "isothiocyanate"]

[10e] Peroxides also catalyze anti-Markovnikov addition of this molecule to an alkene during hydro-boration-oxidation. Adding this common triatomic solvent across a double bond forms an alcohol.

ANSWER: **water** [or **H₂O**; or **dihydrogen monoxide**]

<Chemistry>

6. Successful defenses of non est factum can allow some defendants, such as illiterate ones, to void one of these agreements on the grounds that it was signed without proper understanding. For 10 points each:

[10e] Name these agreements that create legally enforceable obligations when there is capacity to act, a valid offer, mutual assent, and adequate consideration

ANSWER: **contracts** [accept **contract** law]

[10h] This legal rule, similar to the "Four Corners Rule," renders information outside of a written contract, such as a verbal agreement between two parties, inadmissible in a contract dispute.

ANSWER: **parol evidence** rule [prompt on **PER**]

[10m] This two-word French phrase refers to a provision that allows a contract to be voided if an unexpected or extraordinary event, such as a natural disaster or war, prevents a party from performing its duties.

ANSWER: **force majeure** [reject "Act(s) of God"]

<Social Science>

7. There are 97 known inscriptions in this civilization's language, which appears to have both Celtic and Paleo-Hispanic features. For 10 points each:

[10h] Identify this Iberian civilization, named for a semi-mythical port city. The Phoenicians built the colony of Gades ("GAH-dess") to trade with this civilization, which was succeeded by the Turdetanian ("TUR-duh-TAYN-ian") culture.

ANSWER: **Tartessos** [or **Tartessus**; accept **Tartessian** civilization/language/people; prompt on **Tarshish**]

[10m] Tartessos may be the same place as Tarshish, whose name appears in Phoenician script on the Nora Stone on this island. Ancient people on this island built stone fortresses called *nuraghi* ("noo-RAH-ghee").

ANSWER: **Sardinia** [or **Sardegna**] (The singular of *nuraghi* is *nuraghe*.)

[10e] Tarshish also crops up on the Esarhaddon ("eh-sar-HAH-don") Stele, which is named for a ruler of this empire.

This empire's ruler Ashurbanipal ("asher-BAH-nih-pal") built a great library in Nineveh ("NIN-eh-vuh").

ANSWER: **Assyrian** empire [or **Assyria** or **Ashur** or Neo-**Assyrian** empire]

<Ancient History>

8. Henry Sidgwick argued that one of these concepts arises from the modern, "imperative" conception of morality, while the other arises from the ancient, "attractive" conception. For 10 points each:

[10h] Name these two concepts. A 1930 book titled for them says that one of them depends on adherence to duty while the other divides into attributive and predicative senses.

ANSWER: **right** and **good** [accept in either order; accept **rightness** and **goodness**; reject any other synonyms]

[10e] W. D. Ross's *The Right and the Good* criticizes this English philosopher for conflating the right and the good in his *Principia Ethica*.

ANSWER: G. E. **Moore** [or George Edward **Moore**]

[10m] Sidgwick's two compatible "methods of ethics" are utilitarianism and this position on moral epistemology, also advocated by Ross. This position states that certain moral precepts can be self-evidently true without requiring logical deduction.

ANSWER: moral **intuitionism** [or ethical **intuitionism**]

<Philosophy>

9. In a prefatory note to a novel, this writer remarked that "the violet had to be cast into the crucible, the organic work of art to be remoulded in another tongue." For 10 points each:

[10h] Name this writer, best known for translating almost all of a certain German author's works into English. This writer chose the word "magic" for the title of one of those works, though its original author preferred "enchanted."

ANSWER: Helen Tracy **Lowe-Porter**

[10e] This is the aforementioned German author that Lowe-Porter translated. Her translation of this author's first novel, *Buddenbrooks*, was critical in introducing him to American and British audiences.

ANSWER: Thomas **Mann**

[10m] While translating Mann's novel about this character, Lowe-Porter wrote that she had to "emasculate" Mann's style. The last of the four parts of Mann's novel about this character is titled for him as "Provider."

ANSWER: **Joseph** [accept **Joseph** and *His Brothers* or **Joseph** und seine Brüder]

<European Literature>

10. A 2019 study at Auburn determined a link between obesity in elementary school children and the copy number of a gene coding for this enzyme. For 10 points each:

[10m] Name this enzyme whose activity is measured in the Falling number to assess sprout damage. Jöns Berzelius named a form of this enzyme “ptyalin” (“TYE-uh-lin”) which arose from a duplication of the gene for its pancreatic form.

ANSWER: alpha-**amylase** (“AM-ill-ase”)

[10e] Alpha-amylase in saliva breaks down this compound by hydrolyzing alpha-1,4 (“alpha-one-four”) glycosidic bonds. Staple foods such as wheat and potatoes contain large amounts of this carbohydrate, which is used by plants for energy storage.

ANSWER: **starch** [accept **amylum**]

[10h] When alpha-amylase breaks down starch, it produces maltose and these low-molecular-weight carbohydrates. These polymers have D-glucose bonded by alpha-1,4 or alpha-1,6 glycosidic linkages.

ANSWER: **dextrins** [accept more specific answers like cyclod**dextrins**]

<Biology>

11. One of the oldest Roman texts dedicated to this action begins with the chapter *Epimeles*, intended for the “careful housekeeper.” For 10 points each:

[10m] That text, named for the 1st century C.E. nobleman Apicius (“ah-PEE-kee-us”), primarily instructs in various methods for what task? A description is fine.

ANSWER: **cooking** [or making **recipes**; accept answers which refer to **cooking**, or **chefs**, or **cooking**, or **culinary** activity, or **food**, or **drinks**, or **meals**, or **dinners**; accept answers which mention **garum**; accept **gastronomy**; accept *De re **culinaria*** or *De re **coquinaria***]

[10e] Many recipes in the *Apicius* use *garum*, a fermented sauce made out of the intestines of this broad class of animals which was ubiquitous in Roman cooking.

ANSWER: **fish** [or **fishies** or **pisces**]

[10h] This Greek writer claimed that a cook named Apicius, who may or may not be the same person, found a new way of packing prawns. This writer’s best-known work, the *Deipnosophistae* (“DAPE-noh-SOH-fee-stye”), is framed as a conversation about dinner table conversations.

ANSWER: **Athenaeus** of Naucratis

<Other Academic>

12. This piece’s composer based its second movement on the *Larghetto* of Mozart’s Clarinet Quintet. For 10 points each:

[10m] Name this concerto, which was completed in 1931. It begins with a single sharp whipcrack, and some of its folk-inspired melodies may draw on its composer’s Basque heritage.

ANSWER: Maurice **Ravel**’s **Piano Concerto** in G major [prompt on “**Piano Concerto**” or “**Piano Concerto in G major**” by asking “which composer?”; reject *Piano Concerto for the Left Hand*]

[10e] Ravel used a whip-crack in his opera *L’heure espagnole* (“LURE ess-pan-YOL”), in which men hide in these objects. Haydn’s Symphony No. 101 is titled for one of these objects, and depicts its uniform rhythm in the second movement.

ANSWER: **clocks**

[10h] Ravel used a whipcrack in his orchestration of this movement from Mussorgsky’s *Pictures at an Exhibition*. His orchestration of this E-flat-minor movement also includes a celesta solo over eerie *sul tasto* glissandi in the strings.

ANSWER: “**Gnomus**” [or “The **Gnome**”]

<Classical Music>

13. The small city of Laguna was contested during this war, whose belligerents objected to high taxes on their domestic dried beef as foreign imports came in largely untaxed. For 10 points each:

[10h] Name this conflict that began in 1835. The short-lived Juliana (“zhoo-lee-AH-nah”) Republic supported the rebels in this conflict, who declared their own republic with capital at Piratini.

ANSWER: **Ragamuffin** War [or War of the **Tatters**; or **Farroupilha** Revolt; or Guerra dos **Farrapos**; or Revolução **Farroupilha**; prompt on **Riograndense** War or answers indicating a war or revolt in **Rio Grande do Sul**]

[10e] The Giuseppe Garibaldi-led Ragamuffins included many Brazilians of this status, which was abolished by emperor Pedro II’s (“the-second’s”) Golden Law six decades later.

ANSWER: **slaves** [or chattel **slaves**; or **slavery**; or **enslaved** people]

[10m] Earlier anti-slavery rebels in Brazil fought from these self-governing maroon communities, which were larger than village-sized *mocambos* (“moh-KAHM-boos”). A large one called Palmares was destroyed in 1694.

ANSWER: **quilombos** (“kee-LOHM-boos”)

<World History>

14. This poem begins by remarking, “How vainly men themselves amaze / To win the palm, the oak, or bays.” For 10 points each:

[10m] Name this 1681 poem that describes how the mind “Annihilates all that’s made / To a green thought in a green shade” in the title location.

ANSWER: “The **Garden**”

[10h] In “The Garden,” this entity is compared to a bird that “sits and sings, / Then whets, and combs its silver wings.” In another poem by the same author, this “willing” entity “transpires / At every pore with instant fires.”

ANSWER: the **soul**

[10e] This English metaphysical poet wrote “The Garden” and the second aforementioned poem, “To His Coy Mistress.”

ANSWER: Andrew **Marvell**

<British Literature>

15. Since this effect is inversely proportional to the third power of the focal length, it is more pronounced when the f-number is small. For 10 points each:

[10m] Name this effect in which incoming rays fail to focus on a single point due to the curvature of a lens or mirror. Aplanatic (“AY-pluh-NAT-ic”) lenses exhibit neither this effect nor a coma.

ANSWER: **spherical aberration** [prompt on **aberration**]

[10h] This thin a-spheric lens corrects the spherical aberration introduced by a primary mirror. This device brings all light paths to the same focal point but does not change the focal length of the system.

ANSWER: **Schmidt corrector plate** [or **Schmidt plate**; prompt on partial answer]

[10e] Combining a Schmidt plate with a Cassegrain (“kass-GRAN”) reflector provides a wide field of view for these instruments. Sedna and Eris were discovered using the Oschin Schmidt, one of these instruments at Palomar Observatory.

ANSWER: **telescopes** [accept Schmidt–Cassegrain **telescopes** or Samuel Oschin **telescope**; prompt on Schmidt **camera**]

<Physics>

16. Six of these places named for the region of Chiquitos (“chee-KEE-tohss”) comprise a UNESCO heritage site in the Gran Chaco region. For 10 points each:

[10m] Name these settlements which include La Santísima Trinidad de Paraná, one of the least-visited UNESCO sites in the world. Jesuits built these settlements to convert South American natives, such as the Guaraní (“gwa-rah-NEE”) people.

ANSWER: **reductions** [or **reducciones**]

[10e] Many Guaraní settled in reductions in this present-day South American country, where most of the population speaks some of the Guaraní language. The Gran Chaco comprises this South American country’s western half.

ANSWER: **Paraguay** [or República del **Paraguay** or Tetã **Paraguái**]

[10h] Outside of Paraguay, many reductions for Guaraní were built in this city, whose Jesuit Block and Estancias are also a UNESCO World Heritage site. The Primero River flows through this most populous city in the Pampas.

ANSWER: **Córdoba**, Argentina (It is named for the city in Spain.)

<Geography>

17. Preda Mihăilescu’s (“MEE-hye-LESS-koo’s”) 2002 proof of this statement uses the fact its two powers must form a pair of Wieferich (“VEE-fuh-rick”) primes. For 10 points each:

[10m] Name this now-proved conjecture which states that 8, which equals 2 cubed, and 9, which equals 3 squared, are the only consecutive natural numbers that are both perfect powers of natural numbers.

ANSWER: **Catalan’s** conjecture [accept **Catalan–Mihăilescu theorem**; prompt on partial answer]

[10e] Catalan’s conjecture concerns an example of these polynomial equations named for a Hellenistic mathematician. These equations only admit integers as solutions.

ANSWER: **Diophantine** equations

[10h] Victor-Amédée, a man with this surname, proved Catalan’s conjecture in the case of the smaller number being a square. An unrelated man with this surname names a quantity that is zero for any set of critical values subject to Sard’s theorem.

ANSWER: **Lebesgue** (“luh-BEG”) [accept Victor-Amédée **Lebesgue** or Henri **Lebesgue**]

<Misc. Science>

18. Thomas Heatherwick’s *Vessel* is a honeycomb-like structure in New York’s Hudson Yards Public Square with 154 of these architectural elements. For 10 points each:

[10e] Name these architectural elements. The “Penrose” type of these things is shown in a paradoxical lithograph by M. C. Escher in which identically dressed men walk in opposite directions on one of these things.

ANSWER: **stairs** [or **staircases**; prompt on **steps**]

[10m] This Icelandic-Danish artist’s *Umschreibung* (“um-sh’RYE-bung”) is a staircase in the form of a looping double helix. This artist of *The Weather Project* also placed waterfalls at four New York City locations, including under the Brooklyn Bridge.

ANSWER: **Ólafur Elíasson** [accept either name]

[10h] This artist’s plaster sculpture *Untitled (Stairs)* was created by casting the space above a stairwell. This artist’s Fourth plinth sculpture *Untitled Monument* was an inverted resin cast of the plinth itself.

ANSWER: Rachel **Whiteread**

<Painting/Sculpture>

19. Since this country's three state-run banks barely loaned any money, its citizens mostly deposited their money in shady informal lending companies like Vefa. For 10 points each:

[10m] Name this country whose economy was ruined in 1997 by the collapse of several giant Ponzi and pyramid schemes, including Sudja ("SOOD-yah") and Populli.

ANSWER: **Albania** [or **Shqipëri** or **Shqipëria**; accept Republika e **Shqipërisë**]

[10e] Critics of an economic "therapy" named for this noun cite Albania's Ponzi schemes as an example of its failures. This is the first title noun of Naomi Klein's book attacking "disaster capitalism."

ANSWER: **shock** [accept **shock** therapy or *The Shock Doctrine*]

[10h] The 1989 plan named for this economist and finance minister is considered a more successful "shock therapy," since it produced lasting structural reforms in Poland at the cost of a multi-year-long recession.

ANSWER: Leszek **Balcerowicz** ("BALT-ser-OH-vitch") [accept **Balcerowicz** Plan]

<European History>

20. A 2017 documentary about this author takes its title from her claim, "One cannot live with sighted eyes and feeling heart and not know or react to the miseries which afflict this world." For 10 points each:

[10m] Name this author who wrote a play in which the title denizen of Greenwich Village dislikes the politician Wally O'Hara, who is supported by the activist Alton Scales.

ANSWER: Lorraine **Hansberry** (That play is *The Sign in Sidney Brustein's Window*.)

[10e] Hansberry is best known for this play about the Younger family, which takes its title from a Langston Hughes poem.

ANSWER: *A Raisin in the Sun*

[10h] At the time of her death, Hansberry was working on an unfinished "Musical Drama in 7 Scenes" titled for this historical figure. In a short story by Ralph Ellison, the boy Buster tells Riley an embroidered history of this man's exploits before they both decide to steal some cherries.

ANSWER: François-Dominique **Toussaint L'Ouverture** ("too-SAN looh-ver-TURE") [accept either underlined name; **Toussaint**; accept "Mister **Toussan**"]

<American Literature>