

## 2022 ARCADIA □

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**Packet 13:** go to the haters list, do not pass go, do not collect \$200

Tossups

1. **This poet thinks, “my body is a pebble to them, they tend it as water” in a poem written while this author recovered from an appendectomy. In another poem, this author declares, “and now I / foam to wheat, a glitter of seas” and describes “dead hands, dead stringencies.” This poet claims, “I have nothing to do with explosions,” in a poem whose title objects “eat my oxygen.” The speaker compares herself to “the arrow, the (\*) dew that flies” and depicts the sun as “the red eye, the cauldron of morning” in a poem by this author set during a horseback ride. This author of “Tulips” warns “Herr Doktor and Herr Lucifer” to “beware, beware” and exclaims, “I rise with my red hair / and I eat men like air,” in a poem from the collection *Ariel*. For 10 points, name this author of “Lady Lazarus.”**

ANSWER: Sylvia Plath

<HG, American Literature>

2. **The “unitary” model for this input’s supply was introduced by Ashenfelter and Heckman. Frisch supply functions for this input hold the marginal utility of wealth constant. Thomas MaCurdy’s model of the effect of individual variations over a life cycle on the intertemporal supply of this input was criticized by David Card for minimizing wealth effects. Jacob Mincer is considered the “father” of a field of economics named for this input. The elasticity of this input’s supply is positive when the (\*) substitution effect dominates. Firms may experience perfectly inelastic supply for this input when its market has a monopsony structure. In the income effect, increases in wage can result in decreases in this input’s supply, which is usually measured in hours. For 10 points, name this factor of production often contrasted with leisure.**

ANSWER: labor [accept L; accept family labor supply; prompt on work]

<KJ, Social Science>

3. **Description acceptable. One usage of this technique is represented by the leftmost gift given to Jesus in the mosaic of the southwestern entrance of the Hagia Sophia. André Gide (“jeed”) coined a French term to describe this technique exemplified by a Giotto (“JO-toh”) altarpiece in which Cardinal Stefaneschi holds up an object. This technique is used in a painting of a man staring at a harbor called *Print Gallery*. Jan Musset’s design of a nurse on a cocoa box using this technique is the origin of the (\*) Droste effect. A lithograph of two hands drawn with this technique sometimes called *mises en abyme* is cited in a Douglas Hofstadter book that compares Kurt Gödel, J.S. Bach, and M.C. Escher. For 10 points, name this technique eventually limited by resolution in which an artwork refers back to itself.**

ANSWER: recursion [accept self-reference; accept strange loop; accept Droste effect until read; accept mises en abyme until read; accept descriptions of artwork containing itself or artwork creating itself; accept descriptions of artwork looping or nesting within itself; prompt on paradoxes; reject “fractals” or “infinite loops”]

<JF, Other Arts: Visual>

4. **A ruler of this dynasty sent his son Uicheon (“WEE-chun”) to become a monk, which resulted in this dynasty popularizing a derivative of the Tiāntāi school that holds the Lotus Sutra in high regard. The *Jikji*, a Buddhist text produced during this dynasty, is the oldest movable metal type printed book. In a practice**

**begun during this dynasty, enslaved women were trained as courtesans called *gisaeng* (“GHEE-seng”). Twenty-nine women from hojeok (“HO-juck”) families were married to this dynasty’s founder, (\*) Wang Geon (“gun”).** A later dynasty abolished the practice of administering *gwageo* (“GWAH-guh”) first instituted by this dynasty’s ruler Gwangjong. This dynasty unified Later Baekje (“BECK-jay”) and Silla (“SHEE-lah”), ending the Later Three Kingdoms period. For 10 points, name this Korean dynasty that existed later than the similarly-named Goguryeo dynasty.

ANSWER: **Goryeo** dynasty [or **Koryŏ** dynasty; reject “Goguryeo”]

<JF, World History>

**5. Description acceptable. Effects named for these places are exacerbated by habitat fragmentation and resultant reduced patch sizes and include brown-headed cowbirds’ practice of brood parasitism in these places. Aldo Leopold found that alpha diversity peaks in these places. Shelterbelts of wind-resistant plant species characterize versions of these areas associated with forests, which tend to be exposed to high windthrow. Buried pollen evidences North American forests’ instances of these places (\*) migrating by 100-500 meters per year since the last ice age. These areas are particularly evident on mountains due to the variety of climatic conditions experienced on their slopes. The Wallace Line demarcates one of these theoretical entities between Asian and Australian fauna. For 10 points, treelines are examples of what locations at the borders of distinct biogeographic regions?**

ANSWER: **boundaries** [accept word forms like **boundary**; accept habitat **boundaries** or ecosystem **boundaries** or biome **boundaries**; accept faunal **boundaries** or floral **boundaries**; accept **edge** effects or woodland **edges** or forest **edges**; accept **ecotones**; accept **ecoclines**; accept synonyms like **border**s until read]

<AS, Biology>

**6. After hearing of this event, Marvin Griffin tried to prevent Bobby Grier from playing in the Sugar Bowl. George Gilmore created the Club from Nowhere during this event, in which Lloyd’s of London insured “rolling churches.” After this event, E.D. Nixon fell out with the head of the Dexter Avenue Baptist Church who was elected president of the MIA. Jo Ann Robinson circulated flyers before this event mentioning Claudette (\*) Colvin, whose legal victory in *Browder v. Gayle* caused this event to end. Taxi drivers lowered prices to support this event, which began when a seamstress was asked to move for a White man. Rosa Parks’s refusal to give up a seat began, for 10 points, what campaign to desegregate transportation in an Alabama city?**

ANSWER: **Montgomery Bus Boycott** [prompt on partial answer]

<GE, American History>

**7. Glocalization and networked individualism are two of the three “personal” models of these constructs defined in a study co-authored by Barry Wellman. An Amitai Etzioni work proposes a political philosophy based on the restoration of these constructs, arguing for strengthening moral voices over managerial public policy. David Chavis and David McMillan proposed the factors (\*) membership, influence, integration, and fulfillment of needs in their theory of developing these constructs. Ferdinand Tönnies contrasted these constructs with *Gesellschaft*, characterizing these constructs as bound together by social control rather than written laws. For 10 points, socialization is the process of learning how to interact within what constructs of individuals with shared space and beliefs?**

ANSWER: **communities** [accept **community**; accept **Gemeinschaft**; prompt on **guilds**; prompt on **cultures**] ([The Wellman study is \*Connected Lives\*.](#))

<KJ, Social Science>

**8. The preface to this play describes its core as “music from the abyss of transition,” which this play’s author referred to as a Nietzschean “chthonic realm” in his essay “The Fourth Stage.” A man in this play apologizes to his servant for calling holy water “nonsense” in order to ask him the meaning of loud drumming in the**

distance. In this play, a Prince attends a masquerade where a student ridicules a woman for wearing an ancestral mask, and then accuses his father of being an (\*) “eater of leftovers.” This play begins with the protagonist selecting a new bride to have sex with after telling the story of the “Not-I bird” to a Praise-singer. The District Officer Simon Pilkings attempts to stop this play’s title action, which is done instead by Olunde. For 10 points, Elesin commits suicide in what play by Wole Soyinka?

ANSWER: *Death and the King’s Horseman*

<HG, World Literature>

9. A gray steel lattice sculpture in this city modeled after a giant baseball bat is Claes Oldenburg’s *Batcolumn*. An installation in this city consists of 106 headless and armless bodies and is Magdalena Abakanowicz’s (“ah-bah-kuh-NO-vich’s”) *Agora*. *Man Enters the Cosmos*, a sundial outside this city’s planetarium, was designed by Henry (\*) Moore. Either an Afghan Hound or Anubis inspired a sculpture in this city named for Picasso. This city, the location of the sculpture *Nuclear Energy*, is also home to a stabile (“stay-beel”) that coined the name for its sculptor’s eponymous shade of red. A stainless steel statue in this city was inspired by a droplet of mercury. For 10 points, name this city home to Alexander Calder’s *Flamingo* and Anish Kapoor’s *Cloud Gate*, nicknamed “The Bean.”

ANSWER: Chicago

<AS, Visual Arts>

10. It’s not a solvent effect, but this phenomenon explains the enhanced reactivity of DMF’s carbonyl (“carbon-eel”) group, allowing it to attack oxalyl (“ox-AL-ill”) chloride in DMF-catalyzed preparations of acid chlorides. A chimeric assistance facilitates substitution of homo·allylic positions because of this phenomenon of the homoallylic carbo·cat·ion, which relates it to an electron-deficient cyclobutane. Common patterns of this phenomenon include (\*) charges or lone pairs next to a pi system, such as in amides, whose planar structure is justified by this phenomenon. The idea that both bonds in ozone have a bond order of 1.5 can be explained by this phenomenon. For 10 points, a single double-headed arrow can be used to represent what phenomenon that describes delocalized electrons with structures that do not actually interconvert?

ANSWER: resonance [accept homoallylic resonance; accept delocalization until “delocalized” is read; prompt on electron pushing or conjugation or rearrangement] (The DMF-catalyzed acid chloride preparation is commonly used but does not have a name. It can be described as a Vilsmeier-like reaction.)

<JZ, Chemistry>

11. Characters blame workers from one of these locations when a trio of children plunder their onion fields and shops. Two of those thieving children are killed by soldiers shooting at brick-throwing rioters from one of these locations. A shopkeeper slips off of a roof before a mob of workers from one of these locations mutilate him for trading goods for sexual favors. The protagonist’s lover dies at one of these locations after the anarchist (\*) Souvarine, by sabotaging some tubing, causes a flood at one of these locations that also traps the brutish Chaval. After getting a job at one of these locations, Le Voreux (“vor-OOH”), a former railroad worker begins a relationship with the boyish Catherine. For 10 points, name these locations where a series of strikes is led by Étienne in Émile Zola’s novel *Germinal*.

ANSWER: coal mines [accept the pits; accept Le Voreux until read]

<PS, European Literature>

12. A bright, pyrite dusted tunnel found underneath one of these structures contained mysterious golden balls of clay that were coated with jarosite. The connection of one of these structures to the solar year is evidenced by its 365 niches. They aren’t platforms, but table-like panels surmounting steeply-sloped walls characterize an architectural style used on these structures. One of these structures at Tula named for the letter “B” features four massive warrior statues known as (\*) “Atlanteans”. The *talud-tablero* style was used on these

structures, including one whose exterior is decorated by alternating goggle-eyed Tlaloc faces and feathered serpent heads. El Castillo is one of these structures. Teotihuacan's Avenue of the Dead connects two of these structures named for the sun and moon. For 10 points, Mesoamerican temples often sat on what stepped structures?

ANSWER: pyramids [accept step pyramids; accept Pyramid of the Niches, Pyramid B, Pyramid of the Sun, Pyramid of the Moon; prompt on temples or Temple of the Feathered Serpent or Temple of Quetzalcoatl or Temple of the Morning Star until read by asking, "What structure do the temples sit on?"; reject "ziggurats"]

<KT, Other History: Ancient>

13. A whole-tone scale frames the start of a piece from this country, in which a motif that begins [read slowly] "long F-sharp, short G-sharp, long A, short G" mimics a toccata by its composer's colleague. A piece from this country was set to premiere with a tableaux vivant for one ruler until an assassination attempt forced its cancellation. One composer injured himself while practicing *Réminiscences de Don Juan* and a piece from this country. Ethnic melodies introduced by a clarinet and (\*) English horn interweave with a *pizzicato* "traveling" theme in a tone poem from this country. A Lezgin dance tune inspired an *ossia*-filled "oriental" piano fantasy by the leader of a group from this country. The title princess of a symphonic suite from this country is portrayed by a harp and a solo violin. For 10 points, *Scheherazade* is a piece from what home country of Nikolai Rimsky-Korsakov?

ANSWER: Russia [or Rossiva; or Russian Empire, or Rossivskaya Imperiva] (The melodies in the first clue are from the finale of *Scheherazade* and the beginning of *Islamey*.)

<AS, Auditory Arts>

14. A form of this process modeled using either a velocity-dependent friction or an energy depot drives self-propulsion, and is the non-equilibrium "active" form of this process. A first passage time problem computes when a particle undergoing this process will escape a potential well. The thermal noise term is assumed to be uncorrelated in time when modeling this process using the (\*) Langevin equation. In a Smoluchowski thought experiment repopularized by Feynman, this process drives the rotation in a thermal ratchet. This Wiener process is analogous to a continuous-time, continuous-space random walk. The mean-square displacement of a particle undergoing this process was derived in Einstein's second *annus mirabilis* paper. For 10 points, name this random movement of particles suspended in fluid.

ANSWER: Brownian motion [prompt on diffusion; prompt on random walk or Wiener process or stochastic process by asking, "What physical process is it modeling?"]

<VD, Physics>

15. Animals sacred to this figure appear on the back of the Oseberg wagon, leading some to suggest that the Oseberg queen was a priestess of this figure. Egil's daughter imitates her father by refusing to eat until she can dine with this figure. This figure threatens to burn a *völva* alive if she does not provide this figure's devotee with "memory-beer" so that he can remember his lineage. That devotee, Óttar, is disguised as the boar (\*) Hildisvini. The Aesir were taught *seiðr* ("SAY-dher") by this figure who weeps tears of red gold while waiting for her husband, Óðr ("OH-dher"), to return. A cloak of falcon feathers and a golden necklace known as Brisingamen are owned by this ruler of Folkvonger who rides a chariot pulled by cats. Thor disguises himself as this goddess while trying to retrieve his hammer. For 10 points, name this Norse love goddess, the sister of Freyr.

ANSWER: Freyja [or Freya; reject "Freyr" or "Frigga"]

<MB, Beliefs>

16. In Cubical Type Theory, proofs of this property are visualized as  $n$ -dimensional "cubes." A nontrivial proof of this property from the type of Booleans to itself flips true and false and can be visualized as a Möbius strip. This property is uncomputable on the reals, and is represented by paths in homotopy type theory. In Java, careless checks of this property may fail to be symmetric due to subclassing, which can be fixed by first checking this property for the classes themselves. In Haskell, this property between types is denoted by a (\*)

tilde. For sets, relations named for this property are reflexive, symmetric, and transitive. IEEE754 infamously makes NaN (“nan”) lack this property with itself. For 10 points, what property is checked in most programming languages by placing an operator consisting of two of a namesake symbol between two operands?

ANSWER: equality [accept identity; accept equivalence; accept isomorphic or word forms; prompt on the same or other descriptions]

<RA, Other Science: Computer Science>

17. In a Lovecraft-inspired short story by Neil Gaiman, this character pretends to be the theatrical promoter Henry Camberley in his search for the actor Sherry Vernet, who kills the Queen of Albion’s nephew. This author of the fictional book *Dynamics of an Asteroid* owns Jean-Baptiste Greuze’s painting *Girl With a Lamb*, according to a novel in which he murders an ex-member of the Vermissa Valley gang named Birdy Edwards. This character lures a man to a Swiss hotel with false rumors of a sick Englishwoman. This character’s accomplice (\*) throws boulders at the cliff-climbing protagonist after this man’s death, as revealed in “The Adventure of the Empty House.” This man does *not* survive a duel with his enemy at Reichenbach Falls in “The Final Problem.” For 10 points, name this villainous professor, the nemesis of Sherlock Holmes.

ANSWER: Professor James Moriarty [or Professor James Moriarty] (The Neil Gaiman short story is “A Study in Emerald.”)

<GE, British Literature>

18. Justus Hecker documented a mass hysteria in which French people with this profession began meowing uncontrollably. People in this profession escaped from Marienthron in barrels of pickled herrings. The mummified hand of a member of this profession who spread the idea of a seven-sided diamond as an “interior castle” was carried by Francisco Franco. A microhistory by Judith Brown details the life of this profession’s Benedetta Carlini, the so-called earliest European (\*) lesbian. A “simple” alternative to a “solemn” action taken by people in this profession was advocated for by Angela Merici. Martin Luther wed a former member of this profession, Katharina von Bora. For 10 points, Pope Boniface VIII formalized the cloistering of people in what profession into convents?

ANSWER: nuns [accept abbesses or prioresses; prompt on sisters]

<GE, European History>

19. In his book about these entities, John Robers argues for a measurability account of them. In *The Humean Tradition*, John Carroll argues for anti-reductionism about these entities, grounding them in causation. Bas van Fraassen imagined spheres made of gold and uranium in a book criticizing realist views of these entities. Humean Supervenience holds that possible worlds must differ with respect to the geometric arrangement of their parts or with respect to these entities. David Lewis’s (\*) “best systems” approach to these entities contrasts with Armstrong’s “universals” approach. A Ronald Dworkin work titled “the empire of” these entities bases them in integrity and criticizes an earlier work titled for “the concept of” these entities that was written by H.L.A. Hart. For 10 points, name these rules which govern science, one of which describing universal gravitation is named for Isaac Newton.

ANSWER: laws [accept laws of nature or natural laws; prompt on Scientific theories]

<JS, Philosophy>

20. In 2009, one of these features called West Mata was observed by the ROV *Jason* to study newly-formed boninites for the first time. In 2015, researchers discovered that Kavachi, one of these features, was infested with sharks. Likely the largest of these features by area is named for Texas A&M University, although the Ontong Java Plateau may contain an even larger one of these non-atoll features. One of these features formerly called (\*) Lō‘ihi is the newest in a group of these features whose northern portion is named for Japanese emperors. In 2022, the island of Hunga Ha‘apai in Tonga was partially destroyed by one of these features, which

was created in a manner similar to the island of Surtsey in Iceland. For 10 points, pumice rafts and pillow lava may form when what features erupt?

ANSWER: submarine **volcanoes** [accept equivalents like underwater **volcanoes**; accept **seamounts**; accept Kama‘ehuakanaloa **Seamount** or Emperor **Seamounts**; prompt on underwater mountains; prompt on massifs by asking, “What feature is the Tamu Massif?”] ([Lō‘ihi is now called Kama‘ehuakanaloa.](#))

<AS, Geography>



## Bonuses

1. In an attempt to enforce this legislation, Edward Gorsuch was killed by a militia of over 40 Black and White men assembled by William Parker in the Christiana Resistance. For 10 points each:

[10m] Name this legislation that amended an earlier 1793 bill curbed by *Prigg v. Pennsylvania*. It was derisively called the “Bloodhound Bill.”

ANSWER: **Fugitive Slave** Act of 1850 [accept the **Fugitive Slave** Acts; accept the **Fugitive Slave** Laws]

[10e] The Fugitive Slave Act of 1850 was part of this Kentucky Senator’s “Last Compromise.” He supported John Quincy Adams over Andrew Jackson in the “Corrupt Bargain” of 1828.

ANSWER: Henry **Clay**

[10h] Patty Cannon was charged for murder in this state after she ran the “Reverse Underground Railroad” kidnapping Black people. A French immigrant to this state founded the biggest gunpowder factory in the U.S.

ANSWER: **Delaware** [or **DE**] (The second clue is about the DuPont family.)

<KT, American History>

2. This author describes “an endless graveyard for a humanity struck by falling sickness” in a quote that he attributes to *The Garden of Cyrus* by Thomas Browne. For 10 points each:

[10h] Name this author who ruminates on a memorial at Waterloo, the iron bridge at Blyth, and Edward Fitzgerald’s childhood home while on an “English Pilgrimage” in one novel.

ANSWER: Winfried Georg **Sebald** [or Max **Sebald**]

[10e] Sebald included one of these artworks depicting the Waterloo memorial with multiple vanishing points in *The Rings of Saturn*. The title of Don DeLillo’s *Falling Man* references one of these visual artworks.

ANSWER: **photographs** [prompt on **pictures** or **images**]

[10m] While in Suffolk in *The Rings of Saturn*, Sebald connects with Michael Hamburger, a translator of this German author. The title Greecian hermit attempts to topple Turkish rule in this author’s epistolary novel *Hyperion*.

ANSWER: Friedrich **Hölderlin** [or Johann Christian Friedrich **Hölderlin**]

<HG, European Literature>

3. Norwegian professor Geir Evensen worked on sequential versions of this process through the development of the now-common extended and ensemble Kalman filters. For 10 points each:

[10h] Name this process that names techniques like 4D-VAR, which is a key part of the ECMWF model. This process improves the output of numerical models by updating model states based on observations.

ANSWER: data **assimilation** [accept three-dimensional variational **assimilation**; accept four-dimensional variational **assimilation**]

[10e] Data assimilation improves the accuracy of atmospheric simulations used for this task, like the ECMWF’s ensemble system. Data for this general task is collected by satellites and local stations, which measure variables like temperature and pressure.

ANSWER: **weather forecasting** [or numerical **weather prediction**; prompt on **forecasting** or **prediction**]

[10m] Atmospheric data for data assimilation is collected by these instrument packages carried by weather balloons. These instrument packages have “radio” and “rawin” types, the latter of which can also measure wind speeds.

ANSWER: **sondes** [accept radios**sondes**; accept rawin**sondes**]

<EK, Other Science: Earth Sciences>

4. This deity saved one city from Philip II’s army by appearing in the guise of the planet Venus and illuminating the sky. For 10 points each:

[10h] Name this daughter of Perses who was given partial dominion over the earth, sea, and sky. The goddess of ghosts, Melinoë (“**muh-LIN-oh-ee**”), was an aspect of this deity whose cult at Lagina was tended to by eunuchs.

ANSWER: **Hecate** [or **Hekate**; prompt on **Trivia**]

[10e] Hecate supposedly saved this city, whose founding occurred opposite to the “city of the blind.” Constantine XI lies petrified underneath this city’s Golden Gate.

ANSWER: **Byzantium** [or **Constantinople**; accept **Istanbul**]

[10m] It’s not Megara, but Hesychius of Miletus relates Byzantium’s founding by men from this city. A princess from this city was set adrift in a coffin after she was impregnated by a golden shower.

ANSWER: **Argos**

<KT, Beliefs>

5. Alice Hoschede destroyed mementos belonging to this model but failed to destroy paintings like *The Bench* and *River Scene at Bennecourt* in which she appears. For 10 points each:

[10h] Name this model who appears wearing a billowing dress in a field near Argenteuil with an artist’s son Jean in the painting *Woman with a Parasol*.

ANSWER: **Camille Monet** [or Camille **Doncieux**; accept La **Monette**; prompt on **Monet**; prompt on **Monet’s wife**]

[10e] After Camille’s death in 1879, Claude Monet fixated less on people and more on nature in his garden scenes, such as his eight murals at L’Orangerie that depict these aquatic flowers in the lake at Giverny.

ANSWER: **water lilies** [or **nymphéas**; prompt on **lilies**]

[10h] In an 1876 painting, Camille wears a red kimono and holds a fan colored like this object to her face. A man in a top hat with a shotgun approaches a woman in a ripped yellow dress raising this object in an 1830 painting.

ANSWER: **French Flag** [accept word forms such as the **Flag** of **France**; accept the **tricolour**; prompt on a flag with “Which one?”]

<GE, Visual Arts>

6. When plotting the adiabatic expansion of solar wind, the plots typically contain regions indicating firehose and mirror instabilities because solar wind is in this state of matter. For 10 points each:

[10e] Name this ionized fourth state of matter that makes up all stars.

ANSWER: **plasma**

[10h] This equation gives the ratio of atoms in two ionization states as a function of electron density and temperature, and is useful for matching the spectra of stars to their temperature.

ANSWER: **Saha** ionization equation

[10m] This quantity, the length over which mobile charge carriers screen out electric fields, can be hundreds of meters long in regions of space with low electron density.

ANSWER: **Debye** length [accept **Debye radius**]

<JF, Physics>

7. Brian Eno cites Paul McCartney chewing celery as an example of how this construct caused modern musicians to “operate under a different set of constraints” than classical composers. For 10 points each:

[10h] Name or describe this construct that Eno called a “compositional tool.” A group that pioneered using this place as an instrument used multitracking to emphasize the bass harmonies of a Bahamian folk song.

ANSWER: the recording **studio** [accept descriptions that indicate using the recording **studio** as an instrument; accept “playing the **studio**”] (*The folk song is “Sloop John B” from Pet Sounds.*)

[10e] Brian Wilson popularized “playing the studio” on this band’s album *Pet Sounds* and single “Good Vibrations.”

ANSWER: The **Beach Boys**

[10m] Studio techniques such as overdubbing were also used to create this sound collage from the *White Album*, which blends Karlheinz Stockhausen’s *musique concrète* with Yoko Ono’s avant-garde style.

ANSWER: **“Revolution 9”**

<AS, Auditory Arts>

8. Hanna Pitkin defined this concept as to “make present again” and outlined four views of it including a “descriptive” form in which politicians resemble the demographics of their constituencies. For 10 points each:



[10e] Name this concept that succeeds when elected politicians act in the best interest of citizens. Many parliamentary democracies use a type of electoral system named for a “proportional” type of this concept.

ANSWER: political **representation** [accept proportional **representation**; accept symbolic **representation**; accept descriptive **representation**; prompt on PR]

[10h] The last type of political representation outlined by Pitkin is described by this word and occurs when politicians act on the policy interests of their constituencies. Political theorists have historically debated the merits of this type of representation against descriptive representation.

ANSWER: **substantive** representation

[10m] Substantive representation is typically valued over descriptive representation in the creation of these constructs by political parties. In the practice of panachage, voters can rearrange these constructs.

ANSWER: party **lists**

<GP, Social Science>

9. This author responded “Not bad. Keep trying,” to a John Batchelor article that claimed this author was secretly J. D. Salinger. For 10 points each:

[10e] Name this author who mocked his own reclusion by playing himself with a paper bag over his head in a *Simpsons* episode. He also wrote *Gravity’s Rainbow*.

ANSWER: Thomas **Pynchon** [or Thomas Ruggles **Pynchon** Jr.]

[10m] Deane Rink claimed Pynchon turned down a Cornell professorship to sell these objects in Guadalajara. The protagonist of *Our Man in Havana* is a salesman of these objects, sketches of which he sends to MI6.

ANSWER: **vacuum** cleaners

[10h] Pynchon’s job at Boeing inspired his depiction of a fictional defense contractor that appears in both *V* and *The Crying of Lot 49*, and is partially named for this type of object. In Pynchon’s *V*, Benny Profane calls himself a human one of these objects.

ANSWER: **yo-yo** [accept **Yoyodyne**, Inc. or **human yo-yo**]

<CM, American Literature>

10. This island’s Carta de Logu, a 14th century law code, granted women in Arborea equal inheritance rights and the ability to refuse marriage. For 10 points each:

[10h] Name this island ruled by four independent judicates in the Medieval period.

ANSWER: **Sardinia** [or **Sardigna**]

[10e] The Carta de Logu was revised by a judge of this name. A Duchess of Aquitaine of this name served as queen of both France and England, as the wife of Louis VII and Henry II respectively.

ANSWER: **Eleanor** [accept **Eleanor** of Arborea or **Eleanor** of Aquitaine]

[10m] The Carta de Logu’s protection of equal inheritance ran in strong contrast to this Frankish law code that excluded women from inheriting land and influenced sexist European law for centuries.

ANSWER: **Salic** Law

<AS, European History>

11. In response to criticism over this event, this event’s host country instituted a minimum wage of 1,000 riyāls in 2020 that has been panned as too little, too late. For 10 points each:

[10e] Name this event. This sporting event has faced strong criticism for the mistreatment of migrant workers constructing the Al Janoub Stadium for this event.

ANSWER: 2022 FIFA **World Cup** [or **Qatar 2022**; or **Ka’su al-‘ālamī** 2022 or **Qatar 2022**; accept descriptions]

[10h] Migrant workers in the Persian Gulf are monitored by this system of sponsorship, which human rights groups have widely criticized for allowing worker exploitation and abuse.

ANSWER: **kafāla** system [or niẓām al-**kafāla**; prompt on **guest worker** program by asking, “What is the Arabic name for the specific system in place in the Gulf?”]

[10m] Workers of this ethnolinguistic group in Qatar, the largest single group of laborers in the country, were at one point dying at rates of one death a day, and were prevented from visiting loved ones after an April 2015 earthquake that caused 30,000 casualties.

ANSWER: **Nepalis** [or **Nepalese** people; accept **Chhetris** or **Bahun** or **Khas**; accept **Gorkhali**]

<AS, Current Events>

12. The Jod-Basedow effect refers to large doses of iodine precipitating toxicity of this organ in previously iodine-deficient individuals. For 10 points each:

[10e] Name this organ which synthesizes namesake hormones which are numbered based on how many iodine atoms they contain. Excess of that hormone produced by this organ can cause Graves disease.

ANSWER: **thyroid** [accept hyper**thyroidism**]

[10m] Graves disease, a form of hyperthyroidism, presents with bulging eyes and myx·edema due to the activation of these collagen-synthesizing cells. Those symptoms occur when these cells are activated and deposit GAGs.

ANSWER: **fibroblasts**

[10h] Thyroid storm, in which acute stress and untreated hyper·thyroidism cause delirium and ar·rhyth·mia, is treated with PTU, cortico·steroids, potassium iodide, and this other class of medications. These drugs oppose the adrenergic effects of thyroid hormones.

ANSWER: **beta-blockers** [or **beta receptor antagonists**; or **beta-adrenergic blocking agents**; or **beta-adrenergic antagonists**; or **beta-adrenoreceptor antagonists**]

<AY, Biology>

13. The Muisca tradition of offering this substance to the goddess Guatavita contributed to Spanish stories about a mythical chief covered in this material. For 10 points each:

[10e] Name this substance central to the legend of El Dorado and the Seven Cities of Cibola sought after by Francisco de Coronado.

ANSWER: **gold**

[10h] This Peruvian civilization pioneered techniques like gold gilding and sintering used across the Americas and was the first in the world to develop electroplating. This civilization built the massive Huaca del Sol near Trujillo.

ANSWER: **Moche** civilization

[10m] The Moche also produced ceramic vessels with spouts named for their resemblance to objects designed for use with this animal. The “cross-form” variety of those objects is erroneously named for people like Hernando de Soto, who intimidated Atahualpa with this animal.

ANSWER: **horse** (The Moche produced stirrup spout vessels and the cross-form stirrup is called the conquistador stirrup.)

<AS, World History>

14. The wife of this poem’s protagonist foreshadows its climax after calling her husband a “bletherin, blusterin, drunken blellum.” For 10 points each:

[10m] Name this poem about an alcoholic farmer who accidentally incites the ire of “warlocks and witches in a dance” while riding his horse home in a storm.

ANSWER: “**Tam o’ Shanter**”

[10e] “Tam o’ Shanter” was written in a combination of English and this other language by Robert Burns, who also employed this language in poems such as “Auld Lang Syne.”

ANSWER: **Scots** [reject “Scottish Gaelic”]

[10h] This poet led a renaissance of Scots poetry in the early 20th century with a dialect that he called “synthetic Scots,” which he used in the long metaphorical poem “A Drunk Man Looks at the Thistle.”

ANSWER: Hugh **MacDiarmid** [or Christopher Murray **Grieve**]

<HG, British Literature>

15. Aristotle's argument for the world's eternity troubled Late Antique Christian philosophers. For 10 points each:

[10m] *Against Aristotle* refutes Aristotle's argument for eternity because it would lead to an actual one of these things. Aristotle argued that these things can be potential, but not actual, in his refutations of Zeno's paradoxes.

ANSWER: infinities [accept word forms; accept infinite time; accept infinite distance]

[10h] *Against Aristotle* was written by John Philoponus, who rejected Aristotle's account of eternal celestial motions by arguing that stars move through having this concept implanted in them. This concept identifies an energy internal to objects that makes them continue to move until it is expended.

ANSWER: impetus

[10e] This philosopher and saint explored eternity in Book XI of his *Confessions* through considering God's timeless eternity.

ANSWER: Saint Augustine of Hippo [or Aurelius Augustinus Hipponensis]

<MB, Philosophy>

16. Taffy Bowen shared this technology with the United States during the Tizard Mission. For 10 points each:

[10m] Name this technology whose existence was shrouded by Baron Woolton and the Ministry of Food, who created the myth of carrots bettering eyesight to distract from its invention.

ANSWER: radar [or radio detection and ranging; accept cavity magnetron] (The carrot myth was first applied to RAF pilots to conceal their use of radar at nighttime.)

[10e] The combination of radar with the Dowding system, the world's first ground controlled interception system to be deployed over a large area, was key to the RAF's defensive success during this aerial World War II campaign.

ANSWER: Battle of Britain [accept the Blitz]

[10h] Winston Churchill's response of "Let 'em starve. They can rot at their leisure" may have been directed towards civilians of this political region targeted by the Granville Raid and occupied by the Nazis during the war.

ANSWER: Channel Islands [accept Jersey; accept Guernsey; accept Alderney; accept Sark; accept Herm]

<GE, Other History: British>

17. Substituent effects on benzoic acid ionization were used to develop this relationship. For 10 points each:

[10h] Name this linear free energy relationship that describes the effect of substituents in terms of a reaction constant rho and a substituent constant sigma.

ANSWER: Hammett equation [accept Hammett plot; reject "Hammett acidity function"]

[10m] The substituent parameter sigma is not measured for substituents on this position benzoic acid's benzene ring because this closest position to the carboxyl group would exhibit steric interactions.

ANSWER: ortho [accept 2-position]

[10e] A *meta* fluorine on benzoic acid has a sigma value of 0.34, meaning ionization is more likely. This is because fluorine's high value for this quantity stabilizes the conjugate base through inductive effects.

ANSWER: electronegativity

<JZ, Chemistry>

18. Pictographs from the Pomier Caves show indigenous people native to this body of water using Y-shaped tubes to snuff hallucinogenic powders. For 10 points each:

[10h] Name this body of water. The emaciated and wide-eyed looks that characterize the wooden *zemi* figurines of a people native to this body of water reference the side-effects of their *cohoba* ritual.

ANSWER: Caribbean Sea

[10e] During the *cohoba* ritual, fasting Taino shamans would place bony swallowing sticks down their throats in order to induce this purging method with the goal of facilitating better spirit communication.

ANSWER: vomiting [or emesis]

[10m] Diarrhea and ritual vomiting are used to cleanse the body following the ingestion of this South American psychoactive drink made from the stems of a tropical vine. DMT is the active ingredient in this drug.

ANSWER: ayahuasca [or caapi or yajé, or yagé]

<KT, Beliefs>

19. Willy Decker's sparse 2005 staging of this opera featured a massive clock to symbolize the ticking down of the title character's life, reminding her of her mortality as she dies of tuberculosis. For 10 points each:

[10e] Name this opera. Violetta sings of her need to live for pleasure in the aria "*Sempre libera*" to close the first act of this Verdi opera.

ANSWER: *La traviata* [or *The Fallen Woman*]

[10h] Gonzalve and Don Inigo hide in grandfather clocks that Ramiro carries up and down the stairs in this opera. This opera's title refers to the time period when Concepción has affairs while her husband is out repairing clocks.

ANSWER: *L'heure espagnole* [or *The Spanish Hour*] (by Maurice Ravel)

[10m] This character admits to getting up in the middle of the night to stop all the clocks because of her fear of aging. This character from *Der Rosenkavalier* steps away to allow the romance of young lovers Octavian and Sophie.

ANSWER: the Marschallin [or the Feldmarschallin, or Marie Therese, or Princess von Werdenberg, or Little Princess Resi]

<IZ, Other Arts: Auditory>

20. This poet is told, "No matter how good the fragrance of death, you cannot / kiss the lips of the white bones" in a poem about reading this author's "The Gardener." For 10 points each:

[10e] Name this Bengali poet who wrote "Thou hast made me endless" in his collection *Gitanjali*.

ANSWER: Rabindranath Tagore [or Robindronath Thakur; accept Gurudev or Kobiguru or Biswakobi]

[10h] The poet of "Upon Reading Tagore's 'The Gardener'" is from this country, which Tagore called a "lamp" waiting to be lit again. A poem from this country promises to "gather and scatter on your path" the title objects "When you go away / Sick of seeing me."

ANSWER: South Korea (The first poet is Han Yong-un. The poem is Kim Sowol's "Azaleas.")

[10m] A Kim Sowol poem titled for this trait describes how "the light of spring has come" to a meadow "deep in the mountains." The speaker pleads, "Take away my paddy" with this adjective "when you sail" in a Tagore poem titled for a boat with this trait.

ANSWER: golden [accept "The Golden Meadow" or "The Golden Boat"; accept geum or sonar or shonar]

<CM, World Literature>