

2021 ARCADIA 🐼

Edited by Vincent Du, Jacob Egol, Henry Goff, Hasna Karim, Grant Peet, Ryan Rosenberg (head), Payton Schubel, Kevin Thomas, and Annabelle Yang

Written by Michael Bucknall, Daniel Cronin, Jim Fan, Eric Gunter, Kevin Jiang, Caroline Mao, Erik Novak, Jonathan Shauf, Ashish Subramanian, Raymond Wang, Brandon Weiss, Justin Zhang, and the editors

Packet 3: WHY WOULD I WANT TO READ SOMETHING THAT'S BORING.

Tossups

1. **The engineer Sonam Wangchuk has invented artificial forms of these objects to aid Ladakhi farmers in the summer. Packing pieces of these objects in coal and barley hay is the first step in a traditional ritual for growing these objects, a process also known as “grafting” these objects. The EPICA project is one of several that analyzes clathrates in samples of these objects that contain trapped (*) air bubbles.** Continuous calculation of the mass balance of these objects, defined as the difference between accumulation and ablation, has allowed researchers to study the effects of climate change on these objects’ advance and retreat, which creates depositional landforms like eskers and moraines. For 10 points, calving leads to the formation of icebergs from what massive moving ice sheets?

ANSWER: **glaciers** [accept **ice sheets** until read; prompt on **ice cores**]

<AS, Other Science: Earth Science>

2. **A professor in this story compares a girl to a woman perfumed with “Persian Roses” in the court of Alexander the Great. This story’s protagonist mocks his love for crossing herself, saying that she is “scattering curses...in the likeness of holy symbols!” Gold persuades Lisabetta to help this story’s protagonist sneak into his neighbor’s place. A lady in this story shouts not to touch a “magnificent shrub” with (*) purple flowers that she later calls her sister. Professor Baglioni gives this story’s protagonist a silver vase with the cure to the most “virulent poison,” but the title character dies after drinking it. A Paduan man experiments on his child in this story by exposing her to his deadly garden.** For 10 points, name this short story about Giovanni’s love for the poisonous Beatrice, by Nathaniel Hawthorne.

ANSWER: **“Rappaccini’s Daughter”**

<DC, American Literature>

3. **Robert Levin polished a piece by this composer that was abandoned after its exposition and preceded his extant A-major work in the same genre. This composer included an out-of-place whole tone scale in a piece for two horns and string quartet that parodies amateur composers. Another piece by this composer once contained a second minuet between its C-major *Romanze* and its G-major *Allegro* first movement. Anton Stadler played the (*) basset horn on the premiere of this composer’s clarinet quintet and was also the dedicatee of several of his divertimenti, which include *A Musical Joke*. A Mannheim rocket follows unison strings playing a *forte* “long G, short low D, long G” in a serenade by this composer meant to be performed in a park at the title time.** For 10 points, name this Austrian composer of *Eine Kleine Nachtmusik*.

ANSWER: Wolfgang Amadeus **Mozart** [or Johannes Chrysostomus Wolfgangus Theophilus **Mozart**] (The unnamed piece in the lead-in would have been Mozart’s first clarinet quintet in B-flat major, but only the A-major clarinet quintet exists today.)

<JE, Auditory Arts>

4. **Wooden examples of these objects known as LMLK (“lam-el-ekh”) were used on jars manufactured on the orders of King Hezekiah in preparation for Sennacherib’s invasion. It’s not a palace relief, but a lion-hunt scene on one of these objects shows Ahura Mazda flying above King Darius as he fires arrows from his chariot. A tricephalic horned figure is surrounded by an elephant, buffalo, rhino, and tiger on one of these objects named for (*) Pashupati.** These objects were carved in *intaglio* and shaped like a cylinder in the Near East.

Animal motifs adorn thousands of these objects made of steatite that were likely used to mark trade goods by the Indus Valley civilization. For 10 points, name these objects that, in Mesopotamia, were used during business transactions to impart a unique signature when pressed onto clay.

ANSWER: seals [accept impression seals or stamp seals or cylinder seals; prompt on stamps; prompt on relief until mentioned]

<KT, Ancient History / Archaeology>

5. **A growing body of evidence shows this quantity to have time-varying risk premiums, contrary to the unbiasedness hypothesis. A ratio of two of these quantities appears in the uncovered interest rate parity condition. This quantity cannot be constant in an economy with free capital movement and independent monetary policy according to the Mundell-Fleming model. Assuming sticky prices, Rudi (*) Dornbusch showed that monetary policy causes changes in this quantity that “overshoot” its long-run equilibrium value. This quantity’s “spot” value determines the price of a transaction in the Forex market. After Bretton Woods, European countries managed this quantity in a “fixed” rather than “floating” regime with respect to the US Dollar. For 10 points, name these quantities that give the relative value of currencies.**

ANSWER: foreign exchange rate [accept currency exchange rate; prompt on currency strength]

<VD, Social Science: Economics>

6. **A character in this play insists that she’d rather carry sacks to the mill than sit in a “white inner room.” Servants lock up an escaped woman in this play, who insists she wants to be married by the seashore. After hearing thumps on the wall, a character in this play orders that her stallion be released from the stables. While demanding silence, a woman in this play proclaims her daughter died a (*) virgin. After hiding a picture of her sister’s fiancé between her bedsheets in this play, Martirio is confronted by the maid Poncia. A mother shoots at an offstage character in this play after discovering the affair between Adela and Pepe el Romano. For 10 points, name this play titled for the residence of a controlling matriarch, written by Federico Garcia Lorca.**

ANSWER: *The House of Bernarda Alba* [or *La casa de Bernarda Alba*]

<CM, European Literature>

7. **In a Christmas tradition, a giant straw example of these animals is constructed by the Swedish city of Gävle. One of these animals lies “half-dead on the ground” after its master defeats a many-headed army. Along with Eikthyrnir (“EYK-thur-nur”), one of these animals feeds on Laeradr. One of these animals is accidentally harmed by a figure who later races against Thought itself. In the *Lay of Hyndla*, Freya is called (*) “Heidrun” to derisively compare her to these animals. Loki makes Skadi laugh after he ties his testicles to one of these creatures. Roskva and Thialfi enter a god’s service after the latter consumes the marrow of one of these animals, which pull the chariot of Thor. For 10 points, name these animals that outsmart a troll in the Norwegian fairy tale “The Three Billy [these animals] Gruff.”**

ANSWER: goats (The second and third clues refer to the *Lay of Hymir*.)

<KT, Beliefs>

8. **The never-implemented Allon Plan originally advocated this cause before abandoning it partly due to Ahmad Shuqayri’s lack of legitimacy. Patrick Argüello (“ahr-GWAY-yoh”) and Leila Khaled received support for a group named for this cause during the Dawson’s Field hijackings. Signatories of a 1967 agreement adhered to the “three no’s” until the recognition of this cause. On the *Achille Lauro*, an organization named for this cause murdered wheelchair-using American tourist Leon (*) Klinghoffer. During the War of Attrition, an organization named for this cause allied with King Hussein before infighting during Black September prompted its exile to Lebanon. Supporters of this cause agreed to the creation of a “National Authority” by the Oslo Accords. For 10 points, name this cause sought by Yasser Arafat and advocates of the two-state solution with Israel.**

ANSWER: independence of Palestine [accept word forms; accept liberation, creation, or recognition in place of

“independence;” accept creation of a **Palestinian state**; accept **two-state solution** until read; accept **creation** of the **Palestinian** (National) **Authority**; accept Popular Front for the **Liberation** of **Palestine**, **Palestinian Liberation** Front, or **Palestine Liberation** Organization; prompt on **PFLP**, **PLF**, or **PLO**
<GP, World History>

9. **William Golden designed a black and white logo featuring one of these objects inspired by hex symbols on Shaker barns. The kidnapping of Dionysus appears on the inside of a *kylix* whose exterior was decorated with these objects by Exekias (“ih-ZEE-kee-us”). Filip Pagowski added these objects to the heart in the Commes des Garçons logo. A cog resembling one of these objects appears against a red and yellow background in David Pelham’s cover for (*) *A Clockwork Orange*. A black circle within a light blue and then a white circle painted on a dark blue bead protects wearers from these objects. Two of these objects appear in a dark blue sky above New York in Francis Cugat’s cover of *The Great Gatsby*. For 10 points, in a pictorial proverb, monkeys cover their ears, mouths, and what facial features to indicate that they “see no evil?”**

ANSWER: **eyes** [accept the CBS **eye**; accept **eye**-cups; accept the Evil **Eye**; accept the **eyes** of Doctor T.J. Eckleburg]
<CM, Other Arts: Fashion/Decorative/Misc.>

10. **These ecosystems make up “complex early” seral communities that arise after stand replacement disturbances. In freshwater, types of these ecosystems called snags that contain many cavities are vital to fish spawning, amphibian cover, and biofilm growth. Bridges between these ecosystems can be formed by lianas, which also sap resources from them. These ecosystems support the growth of (*) bromeliads and other epiphytes like orchids. Since these ecosystems prevent surface runoff and act as windbreaks, they are an important barrier against erosion. These ecosystems are responsible for the majority of respiration in the carbon cycle. Rainforest canopies consist of the uppermost branches of, for 10 points, what habitats that are home to animals like woodpeckers and termites?**

ANSWER: **trees** [accept **tree** trunks or **tree** stumps or **tree** branches; accept **snags** until mentioned; accept **coarse woody debris**; anti-prompt (ask, “Can you be less specific?”) on **logs**; prompt on **forests** or **rainforests** by asking, “What structures make up (rain)forests?;” prompt on **shrubs**]
<RR, Biology>

11. **Fayette McKenzie resigned as head of one of these institutions following protests supported by the *Nashville Globe* against his oppressive “southernization” program. Rufus Early Clement, the president of one of these institutions, was the father-in-law of the California physician Robert Pershing Foster, as detailed in *The Warmth of Other Suns*. A fundraising campaign for one of these institutions featured its Jubilee Singers barnstorming (*) spirituals like “Swing Low, Sweet Chariot.” The Second Morrill Act mandated the establishment of these places. Researchers conducting a study at one of these places refused to treat syphilis patients; that one of these institutions was founded by Booker T. Washington. For 10 points, name these institutions of higher learning, such as Howard, which were first established to educate freed slaves.**

ANSWER: **historically black colleges** and universities [or **HBCUs**; accept **universities** in place of “colleges;” prompt on black **colleges** or **universities** or **schools**; prompt on **land-grant colleges** or **land-grant universities**]
<GP, American History>

12. **This politician forced the resignation of Thomas Kemmerich over an “unforgivable” election aided by this politician’s party cooperating with the far right. That event caused this politician’s hand-picked successor as party head to resign in favor of a politician who torpedoed electoral chances by laughing during a speech about catastrophic flooding. An emoticon of two angled brackets facing towards each other immortalizes this politician’s (*) “rhombus” hand gesture, controversially adopted by an opposition party candidate on the 2021 campaign trail. September 2021 electoral results suggest that Olaf Scholz will attempt to form a government without the CDU, which this politician led until Annegret Kramp-Karrenbauer succeeded her in 2018. For 10 points, name**

this longtime German chancellor set to retire in fall 2021.

ANSWER: Angela Merkel [or Angela Dorothea Merkel; accept Angela Dorothea Kasner]

<GP, Current Events>

13. In one novel, a member of this family sees a woman flying her kestrel, then shares a kiss with her in a barn full of apples. A member of this family dies after contracting a fever from his sister in that “novel of the plague” by Maggie O’Farrell. A fictional member of this family is buried outside the Elephant and Castle after her pregnancy by (*) Nick Greene prompts her to commit suicide. That woman from this family is not allowed to study Horace or Virgil, despite being “extraordinarily gifted.” This family included a pair of fraternal twins: one died at age 11 and was named Hamnet, and the other, Judith, shares her name with a member of this family imagined in Virginia Woolf’s essay *A Room of One’s Own*. For 10 points, name this family who resided in Stratford-upon-Avon.

ANSWER: Shakespeare family [accept descriptions of the family of William Shakespeare] (The O’Farrell novel is *Hamnet*.)

<HG, British Literature>

14. Striking gold and blue scenes appear in “black” examples of these works. Literal interpretations such as a man touching his lips and holding a cup and the *beatus vir* planted “like a tree” appear in another of these works. An otter with a fish and overlapping snakes, lions, and peacocks adorn another of these works, which features a dense space-filling design named for (*) carpets. Lunettes in one of these works contain the zodiac signs against blue backgrounds. A procession of riders in May appears in that example of these works. Elaborate Chi-Rho monograms appear in Hiberno-Saxon-style examples of these works. The Limbourg brothers created a “Very Rich” example of these works for the Duke of Berry. For 10 points, miniatures fill the pages of what illuminated artworks?

ANSWER: books [accept illuminated manuscripts or psalters; accept Book of Hours; accept Book of Gospels; accept *Utrecht Psalter*; accept Book of Kells; accept *Lindisfarne Gospels*; accept *Very Rich Hours of the Duke of Berry* or *Très Riches Heures du Duc de Berry*] (The third clue refers to animals from the Chi-Rho monogram page in the *Book of Kells*.)

<DC, Visual Arts>

15. One of these reactions uses *N*-chloro-suc·cin·imide in dimethyl sulfide, and is often modified to be odorless. This reaction can be achieved for *in situ* enolates using Davis’s oxa·ziri·dine, producing an alpha·hydroxy·ketone. Environmentally friendly versions of these reactions use Dess·Martin per·iodin·ane or oxa·lyl chloride in DMSO. Phenols readily undergo these reactions to produce quinones. Treating alcohols with (*) PCC results in one of these reactions occurring partially, while potassium permanganate and the Jones reagent take it to completion. Starting from alkanes, these reactions successively form alcohols, then aldehydes, then carboxylic acids. These reactions occur at the anode of galvanic cells. For 10 points, identify these reactions that result in a species losing electrons, unlike reductions.

ANSWER: oxidations

<JZ, Chemistry>

16. *Description acceptable.* Coldea et al. showed that the E8 group describes the excitations of a chain undergoing a quantum version of this phase transition. The order parameter of this phase transition is a hyperbolic tangent function in the mean-field solution of one model. The paper that proved the Mermin-Wagner theorem showed that this phase transition is impossible in a 1D or 2D isotropic Heisenberg model. This phase transition occurs when the coupling is *positive* and temperature is low in the Ising model, resulting in all lattice sites becoming plus (*) 1. This phase transition occurs below the Curie temperature as spins become aligned and overall magnetization becomes nonzero. For 10 points, name or describe this phase transition that turns nickel, cobalt, and iron into permanently magnetic materials.

ANSWER: paramagnetic-to-**ferromagnetic** phase transition [accept word forms; accept answers indicating that the material is becoming **ferromagnetic** or **magnetically ordered**; prompt on Curie transition by asking, “What property does the material acquire below the Curie point?”]
<VD, Physics>

17. **In occupied areas, this polity influenced the division of most armies into five parts, including Sentry, Left Hand, and Right Hand regiments, instead of the traditional three-pronged European convention. The development of *poroks* and *tyufyaks* aided against a siege by forces of this polity, during which the one-eyed Prince of Suzdal tricked defenders into opening city gates. The *Zadonshchina* (“zuh-DOAN-shih-nuh”) recounts a defeat of this polity, earlier centralized by a unification of (*) “Blue” and “White” branches by Tokhtamysh. A defeat at the Battle of Kulikovo began to diminish the hegemony of this polity, finally defeated during the Great Stand on the Ugra River by Ivan III. For 10 points, name this Mongol successor state founded by Batu Khan and supposedly named for its colorful tents.**

ANSWER: **Golden Horde** [or Ulug Ulus or Kipchak Khanate or Ulus of Jochi; prompt on Blue Horde or White Horde until read; prompt on Mongols or Mongolian Empire]
<GP, European History>

18. **Karl Popper grounds this position in his Three Worlds theory in a book co-written with John Eccles. Robert Kirk coined the term for constructs used in the “conceivability argument” for this position. One objection holds that this philosophical position violates the conservation of energy. David Chalmers frames panpsychism as an intermediate position between materialism and this position. Holders of this position have made a (*) “category mistake” according to a Gilbert Ryle book that coined the phrase “ghost in the machine.” Princess Elisabeth articulated this position’s problem of interaction in letters to its formulator, who distinguished between *res extensa* and *res cogitans* in his *Meditations on First Philosophy*. For 10 points, Descartes held what position that says that mind and body are separate substances?**

ANSWER: mind-body **dualism** [or Cartesian **dualism** or substance **dualism** or property **dualism**; prompt on non-physicalism; anti-prompt (ask, “Can you be less specific?”) on epiphenomenalism or interactionism]
<MB, Philosophy>

19. **One author described this place’s “unremembered...bats / circling through the night” in a poem that compares this place to “a book one thumbs / listlessly, ‘til slumber comes.” This place titles a poem that describes the cries of a “white dust of ibises” from a “beast-teeming plain.” Descriptions like “spicy grove, cinnamon tree” and “copper sun or scarlet sea” partially answer the question “What is [this place] to me?” in a (*) Countee Cullen poem. This place titles a poem that imagines a wind ruffling this place’s “tawny pelt.” That poem raises the question “how can I turn from [this place] and live?” after wondering how to choose between this place and “the English tongue I love.” For 10 points, a Derek Walcott poem is titled for “A Far Cry From” what continent?**

ANSWER: **Africa** [accept “A Far Cry from **Africa**”]
<HG, World Literature>

20. **Carolyn McCaskill’s book titled for “The Hidden Treasure of” one of these things developed by black Americans discusses its increased use of constructed action. The siblings Ann and Richard Senghas study one of these systems. A notational method for one of these systems includes *tab*, *dez*, and *sig* symbols and was developed by William (*) Stokoe (“STOH-kee”). One of these systems became the focus of language development studies after its creation by Nicaraguan schoolchildren. Thomas Gallaudet advocated for instruction using these systems instead of oral methods like lip reading. For 10 points, name these systems used for communication by deaf communities.**

ANSWER: **sign languages** [accept American **Sign Language** or **ASL**; accept Black American **Sign Language** or **BASL**; prompt on languages until read; prompt on signs] (The first book is *The Hidden Treasure of Black American Sign Language*.)

<EG, Social Science: Linguistics>

Bonuses

1. Sotah 42 of the Babylonian Talmud identifies this woman with Harafa, who gave birth to Goliath and three other Philistine giants who fought against the Israelites. For 10 points each:

[10h] Name this woman who, in one account, is killed by Abishai, son of Zeruah, after he throws her spindle at her head. This woman abandons her mother-in-law Naomi and returns to her people following the death of her husband.

ANSWER: **Orpah**

[10e] Orpah was the sister-in-law of this woman who, unlike Orpah, decided to stay with Naomi. This Moabite woman, who names a book that follows Judges, marries Boaz.

ANSWER: **Ruth** [accept Book of **Ruth**]

[10m] Orpah's killer, Abishai, was the nephew of this great-grandson of Ruth. This man's other nephews include his military commander Joab, who sent Uriah the Hittite to the front lines to die thanks to this man's orders.

ANSWER: **David**

<JS, Beliefs>

2. The Labor Party in this country outlined its objectives in the "Light on the Hill" speech. For 10 points each:

[10m] Name this country, for which engineer William Hudson designed the Snowy Mountains Scheme as part of a renewed focus on infrastructure investment following World War II.

ANSWER: **Australia** [or Commonwealth of **Australia**]

[10h] This Labor prime minister hired Hudson to draw initial plans for the Snowy Mountains Scheme and gave the "Light on the Hill" speech before losing power to Robert Menzies's Liberal-National coalition in 1949.

ANSWER: Ben **Chifley** [or Joseph Benedict **Chifley**]

[10e] Chifley's electoral defeat resulted from the use of the military in breaking a 1949 strike of people in this profession. "Diggers" settled in New South Wales to join this profession in 1851, inspired by the success of Californian prospectors at Sutter's Mill.

ANSWER: **mining** [accept coal **mining**; accept gold **mining**; accept **miners** in place of "mining"]

<GP, British/Commonwealth History>

3. Breaking adherence to this practice, along with stealing, killing, and lying, is one of four pārajikas enumerated in the Pāṭimokkha. For 10 points each:

[10e] Name this practice denoted by the term *brahmacharya*. Monks follow this practice in avoidance of sensual desires.

ANSWER: **celibacy** [or answers like **abstinence** or **not having sex**]

[10m] Despite conventions of monastic celibacy, monks from a school of this Buddhist sect often marry, citing the example of Shinran. Members of this sect chant the nembutsu to take refuge in one Buddha and be reborn in its title place.

ANSWER: **Pure Land** Buddhism [or True **Pure Land** Buddhism or **Jōdo Shinshū** or **Shin** Buddhism or **Amidism**]

[10h] In lieu of blood lineages, Zen Buddhists trace this practice. At the Flower Sermon, Mahākāshyapa became the first of 28 canonical patriarchs by receiving this practice, evidenced by the biographies in the *Jingde Record*.

ANSWER: dharma **transmission** [accept *The Jingde Record of the Transmission of the Lamp*; prompt on **dharma** or **dhamma**; prompt on **holding up a flower** by asking, "What more general practice is this an example of?"; prompt on **designating an heir**]

<AY, Beliefs>

4. A "fuming" method uses one of these polymers to preserve fingerprints in forensic analysis. For 10 points each:

[10h] Identify these polymers that are the main component of superglues. Their monomers contain esters and carbon-nitrogen triple bonds, and are reactive enough that they polymerize in the presence of water.

ANSWER: **cyanoacrylates** [or ethyl-2-**cyanoacrylate** or methyl-2-**cyanoacrylate**]

[10m] The polymerization of superglue occurs via this reaction between monomers. This reaction is a conjugate addition of an enolate to a carbonyl, and it occurs in tandem with the aldol reaction in a Robinson annulation.

ANSWER: **Michael** addition [or **Michael** reaction]

[10e] Superglue is thus an addition polymer, which is contrasted with *this* kind of polymer whose formation produces small-molecule byproducts, typically water. This term also refers to the phase change from gas to liquid.

ANSWER: **condensation** polymers

<JZ, Chemistry>

5. H.D. contributed to a list of three rules of this movement, which advocates for “no superfluous words” and the “direct treatment of the thing.” For 10 points each:

[10m] Name this movement exemplified by poems like “In a Station of the Metro.”

ANSWER: **Imagism** [or **Imagists**]

[10e] This friend of H.D. composed the short poem “In a Station of the Metro” and published the three rules of Imagism in the essay “A Retrospect.” This poet failed to complete the epic poem *The Cantos*.

ANSWER: Ezra **Pound** [or Ezra Weston Loomis **Pound**]

[10h] H.D. implores this entity to “hurl your green over us, / cover us with your pools of fir” in the poem “Oread” (“oh-REE-add”). H.D. included five flower poems in a collection titled for a garden of this entity.

ANSWER: **sea** [accept **Sea Garden**; prompt on **ocean**]

<GP, American Literature>

6. This film begins with an eight-minute shot of a pasture of cows before panning past many dilapidated houses. For 10 points each:

[10m] Name this seven-hour black-and-white film by Béla Tarr, which makes frequent use of unbroken long takes to portray the central desolate Hungarian village.

ANSWER: **Sátántangó**

[10e] Tarr’s use of long takes has often earned him comparisons to Andrei Tarkovsky, a director from this country. A shot of a baby carriage falling down a flight of stairs appears in another film from this country, *Battleship Potemkin*.

ANSWER: **Soviet Union** [or **USSR** or **Union of Soviet Socialist Republics**; prompt on **Russia**]

[10h] This director opened his *Earrings of Madame De...* with the title character selecting her accessories in one of his famed long tracking shots. This director depicted ten interconnected romantic encounters in his film *La Ronde*.

ANSWER: Max **Ophüls** [or Maximilian **Oppenheimer**]

<HG, Other Arts: Film>

7. Karl Sundman demonstrated an analytic solution to this problem in terms of powers of t to the one-third, but it converges so slowly that it’s mostly useless. For 10 points each:

[10e] Name this problem in celestial mechanics that spurred the development of much of the modern theory of dynamical systems. A restricted example of this chaotic system is given by the Earth, Moon, and Sun.

ANSWER: **three-body** problem

[10m] To avoid the trivial case of a triple collision, Sundman’s solution only converges when this quantity is not zero. When the Lagrangian does not depend on ϕ , this quantity is a constant of the motion.

ANSWER: **angular momentum** [prompt on **generalized momentum**]

[10h] The procedure in n -body simulations where singularities from collisions between point masses are eliminated has *this* name. In QFT, this non-renormalization procedure introduces an extra parameter such that the original divergent theory is recovered in the limit.

ANSWER: **regularization**

<EG, Physics>

8. This philosopher described a puzzle where identity statements like “ a equals b ” seem more cognitively significant than ones like “ a equals a .” For 10 points each:

[10m] Name this philosopher. In his major essay on language, he resolved the puzzle by showing that two expressions with the same *reference*, such as “morning star” and “evening star,” can differ in their *sense*.

ANSWER: Gottlob **Frege** (“FRAY-guh”) [or Friedrich Ludwig Gottlob **Frege**]

[10e] In *Naming and Necessity*, Saul Kripke rejects the “descriptivist theory of names” put forth by Frege and developed by *this* philosopher in “On Denoting.” With Alfred North Whitehead, this thinker co-wrote *Principia Mathematica*.

ANSWER: Bertrand **Russell** [or Bertrand Arthur William **Russell**]

[10h] This philosopher proposed that proper names lack descriptive content and are rather “tags” whose meaning is their referent. She introduced a namesake formula in her formalization of quantified modal logic.

ANSWER: Ruth Barcan **Marcus** [or Ruth Charlotte **Barcan**]

<HG, Philosophy>

9. While reading this novel in a London taxicab, Clare Savage remembers that her father compared her to Medusa when she refused to use his hair product on her curls. For 10 points each:

[10m] Name this novel, which *inspired* a prequel about a woman who lives on a Jamaican sugar plantation with her nurse Christophine and mother Annette.

ANSWER: ***Jane Eyre***

[10e] *Jane Eyre*’s depiction of Bertha Mason was called “Charlotte Brontë’s imperial portrait” in the essay “Caliban’s Daughter,” whose title refers to a character from *this* Shakespeare play who rebels against his master Prospero.

ANSWER: *The* **Tempest**

[10h] This author praised *Wide Sargasso Sea*’s renaming of Bertha to Antoinette in “Caliban’s Daughter.” Clare Savage calls herself “Caliban. Carib. Cannibal. Cimarron. All Bertha.” in this author’s *No Telephone to Heaven*.

ANSWER: Michelle **Cliff** [or Michelle Carla **Cliff**]

<CM, World Literature>

10. The regency of Maria of Antioch favored these people, the subjects of a namesake 1182 massacre coinciding with the coup of Andronikos I Komnenos. For 10 points each:

[10m] Give this term, a catch-all used to describe representatives of Italian merchant republics in the Byzantine Empire. Michael VIII Palaiologos restored the Empire after usurping Baldwin II, a ruler of a state named for these people.

ANSWER: **Latins** [accept **Latin** Empire; accept Massacre of the **Latins**]

[10e] Lingering tensions over the Massacre of the Latins incited the sacking of this city during the Fourth Crusade by Enrico Dandolo. After that sack of this city, Baldwin of Flanders founded the Latin Empire.

ANSWER: **Constantinople**

[10h] Venice remained a political player after the fall of the Latin Empire, purchasing the Byzantine Crown Jewels from Anna of Savoy during a civil war over the regency of a Palaiologos monarch with this name. A patriarch of the Kantakouzenos family with this name won that civil war and reigned from 1347 to 1354.

ANSWER: **John** [accept **John** V Palaiologos or **John** V Palaeologus; accept **John** VI Kantakouzenos or **John** VI Cantacuzenus]

<GP, European History>

11. In a novel, Michael Gilhaney is described as an example of the “Atomic Theory” of people who are half-[these objects]. For 10 points each:

[10h] Name these objects, the obsession of Sergeant Pluck and Officer MacCruiskeen (“mac-CROOSH-keen”), who repeatedly ask the question, “Is it about [one of these objects]?”

ANSWER: **bicycles**

[10m] This Irish author wrote about Sergeant Pluck’s “Mollycule Theory” of men who turn into bicycles in his novels *The Third Policeman* and *The Dalkey Archive*.

ANSWER: Flann **O'Brien** [accept Brian **O'Nolan**]

[10e] In *The Dalkey Archive*, the scientist de Selby uses this technique to acquire prematurely aged whiskey. The protagonist of an H.G. Wells novel meets the Eloi and the Morlocks after doing this action.

ANSWER: **time travel** [accept descriptive answers like using a **time machine** or **going back in time**]
<HG, British Literature>

12. The 1928 Meriam Report criticized the racist and “grossly inadequate” systems set up by Estelle Reel in these institutions. For 10 points each:

[10e] Name these institutions. General Richard Henry Pratt founded one of these institutions in Carlisle, Pennsylvania that infamously sought to “kill the Indian and save the man.”

ANSWER: boarding **schools** [or residential **schools**; accept Carlisle Indian Industrial **School**]

[10m] The Meriam Report criticized this practice in residential schools, noting its illegality in most states. The federal government was barred from regulating this practice in the case *Hammer v. Dagenhart*.

ANSWER: **child labor** [accept answers indicating that **children** are **working**]

[10h] This Yankton Dakota activist was instrumental in pressing for the Meriam Report. This woman wrote about her time at residential schools in “The School Days of an Indian Girl” and wrote the libretto for the first Native American opera.

ANSWER: **Zitkála-Šá** [accept Gertrude Simmons **Bonnin**]

<AS, American History>

13. Geographer Doreen Massey challenges a rethink of this concept “when things are speeding up and spreading out” in an era of “time-space compression” in a 1991 article titled “A Global Sense of” this concept. For 10 points each:

[10m] Name this concept, whose “central” variety was theorized by Walter Christaller to explain how urban areas are spaced to provide goods and services to their surroundings.

ANSWER: **place** [accept “A Global Sense of **Place**”; accept central **place** theory]

[10h] Massey introduces the idea of “spatial imprisonment” to explain a process of “time-space compression” responsible for how inhabitants of favelas can leave Brazil through participation in this activity, without ever setting foot in downtown Rio de Janeiro. Franklin Foer detailed how this activity “explains the world” in a 2004 book.

ANSWER: **soccer** [or **football**; accept *How Soccer Explains the World*; prompt on **sports**]

[10e] Massey argues the importance of the “uniqueness of place,” a concept that Marc Augé, a thinker from this country, applied to create a division between “places” and “nonplaces.” Augé cited Charles de Gaulle Airport in this country as an example of a “nonplace.”

ANSWER: **France**

<GP, Geography>

14. Due to its low viscosity, water and volatile compounds can easily escape this type of lava, making eruptions consisting of it less explosive than its counterpart. For 10 points each:

[10m] Name this type of lava. This type of lava is characterized by its high magnesium and iron content, and it can cool to form the intrusive igneous rock gabbro.

ANSWER: **mafic** lava

[10e] Rapid cooling of mafic lava forms this mineral, which makes up columnar structures like the Giant’s Causeway. This igneous rock, along with gabbro, makes up the oceanic crust.

ANSWER: **basalt**

[10h] The two main types of basaltic lava are ‘a‘ā (“uh-AH”) and pāhoehoe (“pah-HOH-ay-HOH-ay”). Describe the distinction between the two types.

ANSWER: **pāhoehoe is smoother** [accept any answer indicating that **pahoehoe is ropy** or **‘a‘ā is rougher** or **‘a‘ā is chunkier**; prompt on answers indicating that **one is smoother** or **one is rougher** without indicating which is which, by asking, “Which one is [rougher/smoothier]?”]

<EG, Other Science: Earth Science>

15. One of these works opens with shimmering runs and octaves marked “*a capriccio*” before introducing the andante theme from *Rigoletto*’s “Bella figlia dell’amore.” For 10 points each:

[10h] *Composer and type of piece required.* Name these works inspired by other composers. They include solo arrangements of Beethoven’s symphonies, as well as a work that contrapuntally juxtaposes a “statue” theme with the Champagne Aria.

ANSWER: piano **transcriptions** by Franz **Liszt** [accept concert **paraphrases**, **arrangements**, **partitions**, or **reminiscences** by Franz **Liszt**] (The latter work clued is *Reminiscences de Don Juan*.)

[10e] Liszt’s transcriptions of works in this genre often incorporate broken chords around the vocal line, as in his version of Schumann’s *Widmung*. Liszt also transcribed *Der Erlkönig* and many other Schubert examples of *these* songs that set poetry to music.

ANSWER: **lieder** [prompt on art **songs**]

[10m] This notoriously hard Liszt etude incorporates a transcription of another composer’s *Ronde à la clochette*. In this G-sharp minor piece, the right hand leaps between the melody, played with thumb, and a high D-sharp to depict the title ringing object.

ANSWER: *La Campanella* [or **Étude** No. **3** in G-sharp minor from Liszt’s *Grandes études de Paganini*]

<AY, Auditory Arts>

16. Stephanie Black’s documentary *Life and Debt* criticizes the proliferation of Free Zones in this country, tax- and duty-free areas that must export 85% of products to areas outside the Caribbean. For 10 points each:

[10e] Name this island nation whose Free Zones at Montego Bay and Kingston primarily employ female workers at cut-rate wages without prospects for unionization.

ANSWER: **Jamaica**

[10h] This socialist Jamaican prime minister established the Kingston Free Zone in 1976. This politician lost power to Edward Seaga following a 1980 election marred by violence stemming from long-term economic decline.

ANSWER: **Michael Manley** [or **Michael Norman Manley**; prompt on **Manley**; do not accept or prompt on “Norman Manley”]

[10m] Manley had earlier joined hands with Seaga during an instance of these events, which intended to quell violence between partisan gangs led by Claude Massop and Buckie Marshall. A Marlon James novel details violence preceding one of these events called “Smile Jamaica.”

ANSWER: **concerts** [accept One Love Peace **Concert** or Smile Jamaica **Concert**]

<GP, World History>

17. Robinson and Berridge’s theory that this kind of stimulus can be split into “liking” and “wanting” was supported by an experiment in which electrical stimulation in rat hypothalamuses increased sucrose intake without lip-licking. For 10 points each:

[10h] *Specific term required.* Name this kind of stimulus, which drives addiction. Milner and Olds used brain stimulation as this kind of stimulus, which serves as an operant reinforcer.

ANSWER: **reward** [accept word forms; accept brain stimulus **reward**; prompt on answers like **pleasurable**, **pleasant**, or **positive**]

[10m] Rogers and Smit argued that “food addiction” is an example of this process, which can explain lack of control. Lee Ross studied biases in this process, which Jones and Harris investigated with essays about Fidel Castro.

ANSWER: **attribution** [accept fundamental **attribution** error]

[10e] Food reward can drive eating during stress and negative examples of these states, which arise from cognitive labeling of physiological responses according to Schachter and Singer. These states include anger and sadness.

ANSWER: **emotions** [or **emotional** states or **feelings** or **moods**]

<AY, Social Science: Psychology>

18. Rachel Ruysch specialized in detailed still-lives of these objects, incorporating her upbringing as a scientist's daughter. For 10 points each:

[10e] Name these objects. Georgia O'Keeffe painted many cow skulls and, inspired by Paul Strand's close-cropping techniques, these objects, which Alfred Stieglitz claimed resembled vaginas despite O'Keeffe's vehement objections.

ANSWER: **flowers** [accept specific types, like calla **lilies**]

[10m] Imogen Cunningham, a member of this group, took close-up photographs of magnolias. Another member of this group photographed a rose on driftwood and collaborated with Fred Archer to codify levels of brightness.

ANSWER: **f/64** ("f-stop 64") (The unnamed photographer is Ansel Adams, who developed the Zone System with Fred Archer.)

[10h] Anna Atkins published a botanical guide to algae featuring these "cameraless" images. Lucia Moholy ("MO-hoy") and László Moholy-Nagy ("MO-hoy-NAHJ") created these images by placing objects on photosensitive paper and treating them with light.

ANSWER: **photograms** [accept **cyanotypes**; anti-prompt (ask, "Can you be less specific?") on **rayographs**]
<AY, Visual Arts>

19. Answer the following about interesting uses of vowels in literature, for 10 points each.

[10e] This Symbolist poet assigned a different color to A, E, I, O, and U in his sonnet "Voyelles." This lover of Paul Verlaine claimed that he "invented colors for the vowels" in his long poem *A Season In Hell*.

ANSWER: Arthur **Rimbaud** [or Jean Nicolas Arthur **Rimbaud**]

[10h] In this novel, Anton Vowl's friends struggle to identify the missing piece in their lives. That missing piece in this novel turns out to be the letter "e."

ANSWER: *A Void* [or *La Disparition*]

[10m] Perec, author of *A Void*, was part of this French literary group led by Raymond Queneau. This group wrote novels and poetry with severe syntax constraints, including the omission of certain vowels.

ANSWER: **Oulipo** [or **Ouvroir de littérature potentielle** or **Workshop of potential literature**]

<HG, European Literature>

20. Richard Doll and Austin Bradford Hill's British Doctors study tracked the effects of this activity. For 10 points each:

[10e] Name this activity that Doll and Hill's study first conclusively linked to cause-specific mortality. This activity can cause myocardial infarction or lung cancer.

ANSWER: **smoking** tobacco [accept answers like **smoking** cigarettes; do not accept answers which imply that the substance being smoked is not tobacco]

[10m] This British evolutionary biologist and heavy smoker argued, "correlation does not imply causation," to ridicule Doll and Hill's inference of a causal link between smoking and lung cancer. He also developed ANOVA.

ANSWER: Ronald **Fisher** [or Ronald Aylmer **Fisher**]

[10h] Bradford Hill later introduced nine "criteria" for assessing causality, the fifth of which requires this kind of relationship between variables. The Hill equation can be used to fit logarithmic curves named for this kind of relationship.

ANSWER: **dose-response** relationship [or **dose-response** curve; accept **exposure-response** relationship or **exposure-response** curve; prompt on **biological gradient**; prompt on **stimulus-response** relationship]

<HK, Biology>