

## 2022 ARCADIA □

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**Packet 8:** Just because we haven't seen Kevin turn into a horseshoe crab with Fanta doesn't mean he can't

Tossups

1. A polymer of this compound can induce accelerated blood clearance, or the ABC phenomenon, when targeted by an IgM. The bacterium *I. sakaiensis* has two hydrolytic enzymes for digesting a copolymer into this compound and a benzene di-carboxylic acid. Nanoparticles for drug delivery are coated with a polymer of this compound to “mask” them from macrophages. This compound can protect carbonyls by reacting with them to form a 1,3-dioxolane (“1-3-dye-OX-oh-lane”) group, which is a cyclic acetal. This compound and (\*) terephthalic acid are the repeating units in the synthetic plastic PET (“P-E-T”). A 50-50 mixture of this compound and water freezes at negative 37 degrees Celsius, so it is used as engine coolant. For 10 points, name this diol, the main component of antifreeze.

ANSWER: ethylene glycol [accept polyethylene glycol; prompt on glycol or 1,2-diol; reject “ethylene”]  
<VD, Chemistry>

2. This architect drew inspiration from traditional Kanak Great Houses for the ten-pavilion Jean-Marie Tjibaou (“chee-BOW”) Cultural Centre in Nouméa. This architect called for Gozitan (“GO-zit-un”) limestone slabs to be carved to appear eroded for the controversial zero-emission Parliament House of Malta. This architect replaced a Marcel Breuer-designed building in a Meatpacking District with a new terraced structure that opens to the High Line at the (\*) Whitney Museum. A mile-long departure lounge is part of the world's longest airport terminal, which this architect designed on the artificial island of Kankūjima. A glass-clad pyramidal skyscraper designed by this architect is the tallest building in the United Kingdom. For 10 points, name this Italian architect of Ōsaka's Kansai International Airport and The Shard.

ANSWER: Renzo Piano  
<AS, Other Arts: Architecture>

3. In 1870, the richest Black person in America, Thomy Lafon, patronized this city's Catholic Institute. The vaudeville troop “The Tramps” performed at this city's Pythian Temple, which evolved into the Zulu Social Aid and Pleasure Club. An Ida B. Wells book describes the “Mob Rule” during riots in this city that began when Robert Charles killed two police officers. Marcus Garvey was deported from this city. In 2017, this city removed the (\*) Liberty Place monument that memorialized the White League's rebellion. This city's Citizens Committee originated to challenge the Separate Car Act, which led to the case of *Plessy v. Ferguson*. After securing the Anaconda Plan, this city was the first target of David Farragut's up-river campaign. For 10 points, name this largest city in the Confederacy, a port at the mouth of the Mississippi.

ANSWER: New Orleans  
<GE, American History>

4. Réunion's (“reunion's”) volcano is home to a “witch-like” form of this deity who feeds on naughty children, as told in a William Dalrymple book titled for this deity. That non-Vishnu deity is associated with the cult of St. Expedite. This deity's image is drawn with colored powders during the Keralan Mudi yettu dance, which dramatizes the slaying of Darika by this deity's Bhadra form. Garlands of red hibiscus flowers are often offered to this deity, who gained the epithet Chamunda after slaying two *asuras*. This deity overcame the (\*)

cloning abilities of Raktabīja by lapping up his blood. This deity is depicted sticking her tongue out in embarrassment as she places a foot on her consort Shiva while wearing a garland of human heads. For 10 points, Durga's forehead birthed what bloodthirsty destruction goddess?

ANSWER: Kālī [accept Mahākālī or Bhadrakālī or Kālīkā; accept Dakṣiṇākālī; accept *The Age of Kālī: Indian Travels and Encounters*; accept Kale; prompt on Pārvatī; prompt on Mahādevī or Ādi Shakti; prompt on Durgā before read] ([The iconography of Kālī's tongue sticking out is the inspiration for the logo of The Rolling Stones.](#))  
<AS, Beliefs>

5. This author opens one poem by contemplating a painter who wants to affix a human head onto a horse's neck. That poem by this author refers to a descriptions of the Rhine as "purple patch-work." This author referred to a woman who died by snakebite as "unblench'd, and fearless to the end." An "Epistle to the Pisos" by this author praises the *Iliad* for not starting the Trojan war with Leda's eggs but beginning (\*) "in the middle of the action." This author opens a poem about Cleopatra, "Now is the time to drink!" This author wrote that he had "crafted a monument more lasting than bronze" by writing. Wilfred Owen rejected this poet's claim that "it is sweet and fitting to die for one's country." For 10 points, name this Roman poet of "Ars Poetica" and the *Odes*, who coined the phrase "carpe diem."

ANSWER: Horace [or Quintus Horatius Flaccus]  
<HG, European Literature>

6. This process can surprisingly still be evoked in decerebrated cats by stimulating the MLR in the midbrain. In the Trendelenburg form of this process, patients lean contralateral to the side with nerve damage. Combined subacute degeneration in vitamin B12 deficiency classically causes paresthesia that results in an odd form of this process. "Scissor" and "semi-circular" forms of this process are observed in cerebral (\*) palsy. This process can be classified as asymmetrical or symmetrical depending on whether it is alternating or simultaneous. In humans, this process has a stance phase and a swing phase. Patients with Parkinson's disease often display characteristic small, shuffling movements as they perform this process. For 10 points, atypical forms of what process include limping?

ANSWER: gait [or walking; accept limping; prompt on locomotion or movement; prompt on ataxia or dyskinesia by asking, "What motor process is being affected?"]  
<AY, Biology>

7. The identification by rational agents that certain central bank announcements are not credible results in a higher level of this quantity, according to the "time inconsistency" problem developed by Kydland and Prescott. This quantity names a type of "bias" that occurs due to governmental propensity to maintain a low unemployment rate. Revenue obtained through seigniorage ("SAIN-yur-idge") may be termed a (\*) "tax" of this quantity on nominal assets. Either profits or this quantity are denoted by the  $\pi$  ("pie") symbol in economics, like when this quantity impacts the real interest rate in the Fisher equation. In the long term, repeated increases in this quantity are caused by increases in the money supply. For 10 points, name this quantity that is related to unemployment by the Phillips curve and can indicate long-term increases in cost of living.

ANSWER: inflation rate [accept inflation tax]  
<GP, Social Science>

8. In *Unbecoming Citizens*, Michael Hutt analyzes how one ethnic group fled this country due to racist reports in the national newspaper *Kuensel*. Tek Nāth Rizāl was arrested in 1989 for criticizing this country's cultural integration policy of *driglam namzha*, which mandated a public dress code. In the 1990s, this country expelled over 100,000 Lhotshampa people. Suriname, Panama, and this United Nations-recognized country are the only ones to have a negative carbon footprint. Home to *dzong* architecture, this country is ruled by the (\*) Wangchuck house that promotes the measure of Gross National Happiness. During the Doklam Dispute, India

supported this country against Chinese territorial encroachment from Tibet. For 10 points, name this Himalayan kingdom ruled from Thimphu.

ANSWER: Bhutan [or Kingdom of Bhutan; accept Druk Yul or Druk Gyal Khap]

<AS, World History>

9. A character created by this author thinks of “the first animal that dreamed of another animal” in a novel that ends with that man and Celestina having sex in the ruins of a dystopic Paris. This author lauded Cervantes in his essay “The Critique of Reading,” and later created a character who carries a copy of *Don Quixote*. Sections titled “The Old World,” “The New World,” and “The Next World” divide a novel by this author that follows the construction of El Escorial under (\*) Philip II. The title character of a novel by this author is shot in the back as revenge for burning a document granting the Miranda hacienda to General Tomás Arroyo, who had an affair with his nurse, Harriet Winslow. For 10 points, name this author of *Terra Nostra*, who fictionalized Ambrose Bierce’s foray into the Mexican Revolution in his novel *The Old Gringo*.

ANSWER: Carlos Fuentes [or Carlos Fuentes Macías]

<HG, World Literature>

10. The Shiraz Festival commissioned a piece in this medium whose premiere used ninety-two spotlights and two lasers to project the Zoroastrian symbol for light. One piece that uses this medium is based on a speech given by a Pentecostal preacher in San Francisco. Resonant frequencies end a piece in which the composer describes using this medium to make its text unintelligible in the title location. On a set of albums dedicated to 9/11 victims, William (\*) Basinski “disintegrated” this medium. A piece that features this medium uses speech-melody to tell that its composer could have been traveling to concentration camps in the title vehicles. In *It’s Gonna Rain* and *Different Trains*, Steve Reich created phasing by playing loops of this medium at different speeds. For 10 points, name this medium used to record audio in cassettes.

ANSWER: magnetic tape [accept tape loops or cassette tapes; prompt on recordings or samples by asking, “What physical medium contained them?” until “record” is read] (The piece in the first clue is Iannis Xenakis’s *Persepolis*. The piece in the third clue is Alvin Lucier’s *I Am Sitting in a Room*.)

<IH, Auditory Arts>

11. Given a set of nodes named for this person, a node is conditionally independent from the rest of a Bayesian network. The Baum-Welch algorithm is used to train a type of model named for this person that is used for multiple sequence alignment. The initial “burn-in” states of a process named for this person are discarded in methods like Gibbs sampling. The Metropolis-Hastings algorithm approximates an unknown distribution as the (\*) stationary distribution of a process named for this person. Monte Carlo methods often use processes named for this person that have stochastic transition matrices. Dynamic programming is used to decode “hidden” models named for this person. The next state of a random process named for this person depends only on the current state. For 10 points, what Russian mathematician names a type of memoryless “chain?”

ANSWER: Andrey Andreyevich Markov [accept Markov blankets; accept hidden Markov models; accept Markov chains]

<IZ, Other Science: Math>

12. King Lear claims, “When we are born, we cry that we are come to” one of these “great” places “of fools.” In the prologue to *Henry V*, the chorus pleads, “a kingdom for” one of these places before trying to imagine the Battle of Agincourt in a “wooden O.” A speech often titled for this type of place describes “the infant, / Mewling and puking in the nurse’s arms.” A speech whose first line mentions one of these places concludes with the line, (\*) “Sans teeth, sans eyes, sans taste, sans everything” and is delivered to Duke Senior when he returns to camp in the Forest of Arden. That speech, also known as the “Seven Ages of Man” speech, says “all the men and women” in this place are “merely players.” For 10 points, a speech by Jaques in *As You Like It* claims that “All the world’s” one of what places?

ANSWER: stages [accept “All the world’s a stage”; prompt on the world by asking, “What kind of place is it being compared to?”] ([The “wooden O” is a name for the Globe Theatre.](#))  
<CM, British Literature>

13. Diplomat Eldred Pottinger was dubbed the “Hero of” one city in this country after defending a siege and was named envoy to this country after the death of William Hay MacNaughten. This country was dubbed “an earthen pipkin between two metal pots” by Lord Lytton during a conflict whose name was coined by the spy Arthur Conolly. Soldiers wielding jezail rifles ambushed an expedition to this country commissioned by Lord Auckland that resulted in a disastrous (\*) retreat to Jalalabad for William Elphinstone’s army. This country is separated from its eastern neighbor by the Durand Line. In this country, the Barakzai and Durrani dynasties feuded during the 19th century. For 10 points, name this country at the center of the Great Game between Russia and Great Britain.

ANSWER: Afghanistan [or the Islamic Emirate of Afghanistan] ([Pottinger was called the “Hero of Herat.”](#))  
<GE, Other History: British>

14. This person stands to the left against a background of teeth in the triple portrait *Yes, One Must Think* by Chéri Samba. Vinson Cunningham compared a portrait of this person to a Byzantine icon because of how a foot appears floating over a blue lily. One depiction of this person was adapted from an uncredited photograph by Mannie Garcia and originally contained a button depicting a star with Andre the Giant’s eyes. In (\*) 2018, a portrait of this person was unveiled along with a Gee’s Bend quilt-inspired portrait by Amy Sherald. This man is depicted seated against a leafy background in a portrait by Kehinde Wiley. Sheperd Fairey created a red, white, and blue poster depicting, for 10 points, what person who used the slogan “HOPE” during a 2008 presidential campaign?

ANSWER: Barack Obama [or Barack Hussein Obama II] ([Yes, One Must Think](#) also depicts [Patrice Lumumba](#) and [Nelson Mandela](#).)  
<AS, Visual Arts>

15. This thinker added temporal and alethic (“uh-LETH-ick”) modalities to Aristotelian logic’s analysis of propositions, which led him to reject the square of opposition. This thinker posited that the essence of contingent things was “indifferent” to their existence. This philosopher originated an argument for God’s existence based on proving that there is a necessary existent, and then showing that the necessary existent would possess all of God’s properties, called the proof of the (\*) truthful. This philosopher argued that even without any perceptual experience, humans still possess self-awareness and therefore have a soul in his “floating man” argument. For 10 points, name this author of the *Book of Healing* and the *Canon of Medicine*, a Persian doctor.

ANSWER: Ibn Sina [or Avicenna, or Abū ‘Alī al-Husayn bin ‘Abdullāh ibn al-Hasan bin ‘Alī bin Sīnā al-Balkhi al-Bukhari]  
<MB, Philosophy>

16. A character in this novel calls the world a “hat trick in a medicine show” before throwing a coin that returns to his hand. This novel’s opening pages quote Wordsworth’s line “The child is the father of the man” and describe a baby born during a meteor shower. A man in this novel explains that he exhaustively catalogs flora and fauna because “Whatever in creation exists without my knowledge exists without my consent.” That character tells an ex-priest named (\*) Tobin that “War is god” and later claims that he will live forever while dancing naked during this novel’s climax. A completely hairless 7-foot man in this novel buys Toadvine’s hat after a tribe of Yuma Indians ambushes their group of scalp hunters. For 10 points, the Kid joins Judge Holden and the Glanton gang in what novel by Cormac McCarthy?

ANSWER: Blood Meridian, or the *Evening Redness in the West*  
<HG, American Literature>

17. A member of this faction nicknamed the “Tiger of the Maestrazgo” summarily executed civilians, including the wives of four political opponents, to avenge the death of his mother. The marriage of a duke whose name was amusingly anglicized as Francis of Assisi sank a ploy masterminded by this faction to elevate the Count of Montemolín. Government forces called Cristinos fought this faction’s volunteer army of Requetés (“reh-keh-TAYSS”) led by Tomás de (\*) Zumalacárregui (“soo-mah-lah-CAR-ray-ghee”). A leader of this faction won popular support by pledging to uphold the *fueros* in the Basque country. This faction opposed the succession of Isabella II over the brother of Ferdinand VII in 1833. For 10 points, name this traditionalist faction that names a set of three wars fought in 19th-century Spain.

ANSWER: Carlists [accept Carlist Wars] (The Duke of Cádiz was named Francisco de Asís.)

<GP, European History>

18. This mountain range’s Zakopane (“zah-ko-PAH-nay”) Style of architecture features folk motifs like a six-petal “thunder mark” of the Goral people. Pit houses called *burdei* found in this mountain range have largely switched to oak to not threaten this mountain range’s primeval beech forests, the largest in the world. Wooden *tserkvas* built in the Hutsul and Halych (“HAH-lich”) styles of this mountain range are used for worship in the historic region of (\*) Galicia by Rusyn (“ROO-sin”) peoples south of Lviv. Ski resorts and pollution from Ostrava have damaged the Tatras, a subrange of this mountain range, as well as tourism from a city to the north home to Wawel (“VAH-vell”) Castle. That city north of this mountain range is Kraków. For 10 points, name this mountain range that arcs from Czechia to Romania in Eastern Europe.

ANSWER: Carpathian Mountains [or Carpathians; or Karpaty or Karpaten or Carpati or Kárpátok; accept High Tatras or Tatry Wysokie until “burdei” is read and anti-prompt (ask, “Can you be less specific?”) afterward; anti-prompt on specific subranges like the Beskids]

<AS, Geography>

19. This book cites an adage about “practice” and “training” to explain how the father is a “respect-object” and a “depersonalized symbol of hierarchy.” Introduced in *The Anatomy of Dependence*, the concept of *amae* references an idea put forth in this book about “obligations” among children to their parents. Those obligations form a “shallow U-curve” proposed in this book that affords babies and the elderly the most freedoms and indulgences. This book probes a concept of (\*) limitless indebtedness called *gimu*. The militaristic yet aesthetic culture of one society is reflected in the title of this classic example of “anthropology at a distance” commissioned by the U.S. Office of War Information during World War II. For 10 points, name this comparison of American “shame culture” and Japanese “guilt culture” by Ruth Benedict.

ANSWER: *The Chrysanthemum and the Sword: Patterns of Japanese Culture* (The adage in the first clue translates as “for the practice, for the training.”)

<GP, Social Science>

20. These particles were the original particles used in devices developed at Chalk River Laboratories, which can measure the scattering function in position and momentum space at any point inside the device. A backscattering technique that uses these particles and has micro-electron volt resolution can detect shifts in samples through vessel walls. Bertram Brockhouse and Clifford Shull won the 1994 Nobel Prize in Physics for using these particles in techniques similar to those that use (\*) x-rays. Inelastic scattering techniques that use these particles typically use their “cold” variant. The “thermal” variant of these particles is produced by moderators like graphite or water, which are used to maintain nuclear chain reactions. For 10 points, name these neutral particles contained in the atomic nucleus.

ANSWER: neutrons

<JF, Physics>

## Bonuses

1. In “Self-Interest and Interest in Selves,” Susan Wolf challenges the way that this thinker derives normative claims from metaphysical reductionism about identity. For 10 points each:

[10m] Name this thinker who utilizes reductionism about personal identity in *Reasons and Persons* to argue that we should be less selfish, since our personal identity is less real than we think. He critiqued utilitarianism with the “repugnant conclusion” in another work.

ANSWER: Derek Parfit [or Derek Antony Parfit]

[10h] *Reasons and Persons* seeks to reduce identity to this specific concept, which Parfit introduces as a degree of psychological connectedness and continuity.

ANSWER: Relation R [or R-relation]

[10e] Parfit’s ideas about identity draw on this Enlightenment philosopher’s ideas of identity as extended and self reflective consciousness, as expressed in his *Essay Concerning Human Understanding*.

ANSWER: John Locke

<MB, Philosophy>

2. Congenital shunts of this organ allow abnormal blood flow from its left to its right side. For 10 points each:

[10e] Name this major circulatory organ whose septa divide its atria from its ventricles.

ANSWER: heart

[10h] In Eisenmenger’s syndrome, an untreated shunt results in this phenomenon, which destroys delicate capillary beds in the lungs and causes right ventricular hypertrophy. This condition causes shortness of breath, cyanosis, and in Eisenmenger’s syndrome, coughing up blood.

ANSWER: pulmonary hypertension [or PH or PHTN; prompt on hypertension]

[10m] Another common shunt is a patent foramen ovale, or PFO, which predisposes people to strokes and these other events. Low brain perfusion triggered by PFO-enabled paradoxical embolisms may trigger these events, which are preceded by scintillating scotomas or other visual disturbances.

ANSWER: migraines [or status migrainosus; prompt on headaches]

<AY, Biology>

3. A character staring at human entrails discovers that “man was matter” and “ripeness was all” before hearing this character die. For 10 points each:

[10h] Name this character who repeatedly insists, “I’m cold,” while dying of blood loss from a grisly armpit wound, to which the protagonist of a novel responds by saying, “There, there.”

ANSWER: Snowden

[10e] Yossarian is unable to save the young soldier Snowden, whom he later claims froze to death, in this World War II novel by Joseph Heller.

ANSWER: Catch-22

[10m] Sammy Singer, the tailgunner who repeatedly faints while Yossarian tends to Snowden’s wounds on their plane, is revisited in this 1994 Heller novel that acts as a sequel to *Catch-22*.

ANSWER: Closing Time

<HG, American Literature>

4. In 1997, a team under Marc Levoy noticed that this statue’s eye diverged in the first 3D scans of the Stanford Large Statue Scanner. For 10 points each:

[10e] Name this statue, which appears with a broken leg in the film *Children of Men* in reference to its wear from tourist footsteps in the Galleria dell’Accademia. This statue with a massive right hand holds a sling over his back.

ANSWER: David (by Michelangelo)



[10h] *David*'s companion piece for the Piazza della Signoria was Baccio Bandinelli's marble statue of this figure clutching the curly hair of a defeated enemy. A 10-foot-tall statue of this figure by Lysippos was discovered in the Baths of Caracalla.

ANSWER: **Hercules** [accept *Hercules* and *Cacus*; accept *Farnese Hercules*]

[10m] Instead of *David*, one of these artworks created by Bartolommeo Amanatti was given the nickname "Big White Dude" and vandalized by Florentines. Four figures in one of these artworks in the Piazza Navona surround an Egyptian obelisk.

ANSWER: **fountain** [or **fontana**; accept **Fountain** of Neptune; accept the **Fountain** of the Four Rivers or **Fontana dei Quattro Fiumi**]

<GE, Visual Arts>

5. A landmark 2018 report by Felwine Sarr and Bénédicte Savoy recommended that Emmanuel Macron pursue this policy, marking a sharp departure from his predecessors, like Jacques Chirac's support of the Musée du Quai Branly. For 10 points each:

[10e] Name or describe this action. The Benin Bronzes, Elgin Marbles, Koh-i-Noor Diamond, and Bust of Nefertiti are among the most famous of many items that have controversially not yet been subject to this action.

ANSWER: **repatriation** of cultural property [accept descriptions of **returning** art to its country or people of origin; accept **decolonization** of **museums**]

[10h] The first art to be repatriated due to the Sarr–Savoy report was looted during the sacking of this kingdom's Royal Palaces of Abomey ("**ab-oh-MAY**").

ANSWER: **Dahomey** [or Kingdom of **Dahomey** or Axóśúto **Danxomè**]

[10m] Savoy notes that this leader's 1973 speech to the United Nations marks the "Year Zero" of the restitution debate. This leader promoted *authenticité* after overthrowing Joseph Kasa-Vubu.

ANSWER: **Mobutu** Sese Seko [or **Mobutu** Sese Seko Kuku Ngbendu Wa Za Banga or Joseph-Désiré **Mobutu**]

<AS, World History>

6. The quickstep combines the Charleston and this dance, which Vernon and Irene Castle helped popularize via their performance in Irving Berlin's musical *Watch Your Step*. For 10 points each:

[10m] Name this 4/4-time dance that mimics the rise and fall of the waltz. This dance's American Social style is more beginner-friendly as dancers close their feet at the end of each figure, unlike its American Continuity style.

ANSWER: **foxtrot** [prompt on **trot**]

[10e] The foxtrot was originally danced to this style of music, popularized by pieces like Scott Joplin's *The Entertainer*.

ANSWER: **ragtime** [or **rag**]

[10h] Foxtrot dancers enter this position by performing a twinkle and exit it with a chassé. In this position, the lead and follow form a V-shape with their bodies and turn their feet on a diagonal, allowing them to move in the same direction.

ANSWER: **promenade** position [or **PP**]

<GE, Other Arts: Auditory>

7. Yaël Farber's reimagining of this play, which sets it in post-apartheid South Africa, turns the title character into the daughter of an Afrikaans landowner and her lover into a Xhosa laborer. For 10 points each:

[10e] Name this August Strindberg play in which Kristin admonishes her fiancé, the valet Jean, for his affair with the title woman.

ANSWER: **Miss Julie** [accept **Mies Julie**]

[10h] Kristin claims that Julie's affair is hypocritical since Julie wanted to take this action when her dog became pregnant. After insisting that Julie leave nothing behind, Jean takes Serena and performs this violent action.

ANSWER: **kill** Julie's **pet** [accept answers like **poison**, **shoot**, **decapitate**, or **murder** in place of "kill"; accept purebred **dog**, **pug**, **bird**, **canary**, green**finch**, or **animal** in place of "pet"; prompt on partial answers like **kill**] (*Diana is the dog, Serena is the bird.*)

[10m] Kristin prevents Jean and Julie from escaping before this character's return. This character employs Jean as a valet, his boots loom over the play, and a bell announcing his return precedes Miss Julie's suicide.

ANSWER: the **Count** [accept answers like Miss **Julie's father** or Miss **Julie's dad**]

<PS, European Literature>

8. In Germany, a thick, fat example of this food sacrifices itself to feed three hungry orphans. For 10 points each:

[10m] Name this foodstuff whose "fleeing" action names a class of folktales. Butter, eggs, and milk are used to make thin varieties of this foodstuff consumed during the Slavic festival of Maslenitsa. This food is also associated with Shrove Tuesday.

ANSWER: **pancakes** [or **crepes**; accept **blini** or **bliny**]

[10h] The Kolobok, a living spherical bun, survives several near-death experiences by doing this action, until it performs this action on a fox's tongue. Heer Halewijn's penchant for luring women to their deaths by performing this magical action is reminiscent of similar stories of the *strömkarlen* and water nix.

ANSWER: **singing**

[10e] This figure gives a play-by-play of his demise by saying "I'm quarter gone...half gone...all gone." This figure foolishly taunts its pursuers by saying "Run, run, as fast as you can!"

ANSWER: the **Gingerbread Man** [or the **Gingerbread Boy**]

<KT, Beliefs>

9. In 2021, Swiss engineers used animation code from *Frozen* and experiments on cadavers done by General Motors to model how a "slab" one of these events could have caused the Dyatlov Pass incident. For 10 points each:

[10e] Name these landslide events during which masses of snow flow rapidly down a slope.

ANSWER: **avalanches** [accept slab **avalanches**]

[10m] Mountaineers have noted that the Dyatlov Pass victims made a mistake by setting up camp on this side of the Kholat Syakhl ridge. The slip face of a sand dune is on this side, and rain shadow deserts form on this side of a mountain range.

ANSWER: **lee** side [or **leeward** side; prompt on **downwind** or **away from wind**]

[10h] This phenomenon likely contributed to the snow accumulation on Kholat Syakhl that caused the avalanche. This phenomenon created Antarctica's McMurdo Dry Valleys and occurs when cold, dense air is pulled down slopes by gravity.

ANSWER: **katabatic wind** [prompt on **wind**]

<AS, Other Science: Earth Sciences>

10. This event began when attendees of Daniel Auber's opera *La Muette de Portici* joined Catholic rioters outside the theater doors after hearing the duet "Sacred Love of the Fatherland." For 10 points each:

[10m] Name this 1830 event led by Charles Rogier ("**roh-zhee-AY**"). The Ten Days' Campaign supported by William I failed to topple a monarch installed during this event.

ANSWER: **Belgian Revolution** [or **Révolution Belge**; or **Belgische Revolutie**; or **Belgische Opstand**; or **Belgische Omwenteling**; prompt on **Belgian independence**]

[10e] The Belgian Revolution was incited by France's July Revolution, during which Louis Philippe overthrew this "restored" ruling house of Henry IV.

ANSWER: House of **Bourbon**

[10h] The July Revolution also guided an uprising in this city that popularized the term "putsch" ("**pooch**") when rural citizens disapproved of David Strauss's appointment to its university. Christoph Froschauer hosted a controversial sausage-eating party in this city during Lent.



ANSWER: Zürich [accept Züriputsch]  
<GE, European History>

11. In an “unnatural history” of this event, Elizabeth Kolbert uses the American chestnut as an example of how the “New Pangaea” of globalization is fueling this event. For 10 points each:

[10m] Name or describe this event. The Aichi targets were set to combat this event, whose protesters often use a black hourglass symbol that has been hailed as “the peace sign of our generation.”

ANSWER: Holocene extinction [or sixth mass extinction or Anthropocene extinction; accept descriptions of an extinction event that is ongoing or caused by human activity; prompt on mass extinctions or extinction events or defaunation or biodiversity loss; prompt on climate change or global warming or similar answers by asking, “Which contributes to what event?”] (Kolbert’s book is *The Sixth Extinction: An Unnatural History*.)

[10h] This organization created the Red List in 1964 to provide information on species at risk of extinction by evaluating them with a conservation status ranging from Least Concern to Extinct. This organization also created the World Wildlife Fund for Nature.

ANSWER: International Union for Conservation of Nature [or IUCN; accept IUCN Red List]

[10e] The July 2022 update to the IUCN Red List finds that sturgeons are the “world’s most Critically Endangered group of animals,” largely due to their overexploitation in making this luxury dish of salt-cured roe.

ANSWER: caviar  
<AS, Other Academic>

12. In 2021, Elena Giorgi, Sergiu Klainerman, and Jeremie Szeftel (“seff-tell”) completed their 900-page proof of the nonlinear stability of solutions in this family. For 10 points each:

[10m] Name this family of solutions to the Einstein field equations that describe the geometry of spacetime around an uncharged rotating black hole.

ANSWER: Kerr metric

[10h] The black hole stability problem treats solving the Einstein equations as one of these problems, which Yvonne Bruhat proved is well-posed. In this formalism, spacetime is split into spatial slices, and the solution is the maximal Cauchy development of input data on one slice.

ANSWER: initial-value problem [accept initial-value formalism; accept IVP]

[10e] The uniqueness of solutions to the IVP relies on the strong cosmic censorship conjecture, which in its weak form forbids “naked” examples of these infinitely dense points found at the center of black holes.

ANSWER: singularity  
<VD, Physics>

13. In *The Good Polity*, Joshua Cohen argues that participants in this type of democracy should have no substantive hierarchy and should not feel bound by the authority of prior norms or requirements. For 10 points each:

[10h] Name this form of democracy. Amy Gutmann and Dennis Thompson suggest that under this system, citizens and their representatives should have mutually agreeable justifications for enacted laws.

ANSWER: deliberative democracy [or discursive democracy]

[10e] Under Cohen’s principles for a deliberative democracy, this decision rule should be used if a consensus is not possible. The threshold for support for the “super” type of this rule exceeds the one-half needed for its “simple” type.

ANSWER: majority

[10m] Cohen has cited this thinker’s work *The Structural Transformation of the Public Sphere* as influential to deliberative democracy due to its analysis of an overwhelming representational culture.

ANSWER: Jürgen Habermas  
<KJ, Social Science>

14. The oral epic poem *Sirat Bani Hilal* now survives largely by being performed in these places. For 10 points each:

[10h] Name these places. The pedophilic Kirsha replaces an oral poet with a radio for entertainment in one of these places that he owns in the novel *Midaq Alley*.

ANSWER: cafes [or coffee houses; accept restaurants]

[10e] Though once popular throughout North Africa, *Sirat Bani Hilal* is now only performed at cafes in this country, the home country of *Midaq Alley* author Naguib Mahfouz.

ANSWER: Egypt [or Misr]

[10m] In this Mahfouz novel, the cafe owner Tarzan gives a gun to Said Mahran, who plans to use it to murder his former wife Nabawiyya and her husband Ilish.

ANSWER: *The Thief and the Dogs* [or *al-liṣ wal-kilāb*]

<AS, World Literature>

15. In 17th-century colonial America, Thomas(ine) (“thomasine”) Hall was legally determined to have this characteristic after a liaison with a maid that sparked controversy in the town of Warrosquyoacke (“warr-ah-SCOY-ack”). For 10 points each:

[10h] Name this characteristic. Recent analyses of Casimir Pulaski’s exhumed skeleton have led to hypotheses that the Revolutionary War hero had this characteristic, as popularized in a 2019 Smithsonian documentary.

ANSWER: being intersex

[10m] Thomas(ine) Hall was ruled to be intersex and forced to wear male and female clothing simultaneously by this city’s Quarter Court. The *Sea Venture* crashed in Barbados on its way to this city with the Third Supply.

ANSWER: Jamestown

[10e] Kathleen M. Brown argued that Hall’s genderfluidity undermined the influence of Jamestown’s married women, in part because Hall was one of these European laborers who worked without pay for a set amount of time.

ANSWER: indentured servants [accept word forms like indentured servitude; accept indentured laborers; prompt on partial answers; reject “slaves”]

<AS, American History>

16. The Tswana people of Botswana consider AIDS to be a *boswagadi* curse from these figures. For 10 points each:

[10h] Name these figures whose *razana* type are honored in Madagascar with zebu sacrifices. The *famadihana* ritual for these figures has been linked to pneumonic plague transmission.

ANSWER: ancestors [prompt on family members or parents or elders or other equivalents; prompt on heroes; prompt on the dead]

[10m] Some of the Shona conflate AIDS with *runyoka*, an illness that afflicts individuals who commit this action. A woman who commits this immoral action is seen by the narrator of Proverbs 7, who warns his son that her house is the way to hell.

ANSWER: adultery [accept adulterers; accept descriptions like cheating on your spouse or not being faithful to your spouse; accept fornication]

[10e] Members of this profession have been linked to HIV transmission because of their usage of razor blades. The *sangoma* of Southern Africa are examples of this profession, who combat illnesses caused by witchcraft.

ANSWER: traditional healers [accept witch doctors or shamans]

<AS, Beliefs>

17. This catalyst is more environmentally friendly than metal catalysts like the lanthanum- and lithium-based LLB catalyst. For 10 points each:

[10h] Name this organic catalyst that 2021 Chemistry Nobel Laureate Benjamin List used to catalyze an aldol condensation.

ANSWER: proline [accept P]

[10m] By using optically pure proline as the catalyst, List was able to create a high percentage of this value for his aldol condensation reaction, indicating that the product has high stereochemical purity.

ANSWER: enantiomeric excess [accept %ee; accept enantiomeric ratio or ER; prompt on diastereomeric ratio or DR]

[10e] Proline is an efficient enantioselective catalyst because it has this property. All proteinogenic alpha amino acids except glycine have this property, which is often related to “handedness.”

ANSWER: chirality [accept L-configuration; reject “S-configuration,” “R-configuration,” or “D-configuration”]  
<JZ, Chemistry>

18. Marc Antony’s line “Friends, Romans, countrymen, lend me your ears” in *Julius Caesar* employs the rule of this number, often used in rhetoric. For 10 points each:

[10e] Give this number, which Shakespeare frequently used throughout his writing, such as Macbeth repeating “tomorrow” this many times as well as meeting this number of witches.

ANSWER: three

[10h] Shakespeare’s Troilus repeats this thrice when asked what a letter from Cressida says. A play repetitively titled for these things features a trio of intelligent monkeys named Kafka, Milton, and Swift.

ANSWER: words [accept “words, words, mere words” or Words, Words, Words] (*The play is by David Ives.*)

[10m] Shylock demands that a loan of three thousand ducats be paid in three months in *The Merchant of Venice*, in which Portia’s suitors must choose one of these three objects, each made of gold, silver, or lead.

ANSWER: caskets

<JF, British Literature>

19. Luzzasco Luzzaschi primarily wrote for the first of these ensembles, which performed *musica secreta* for the d’Este court. For 10 points each:

[10h] Name this type of early ensemble. That Ferrarese group of these professional female singers influenced the development of the *seconda pratica* and composers such as Monteverdi.

ANSWER: concerto delle donne [or concerto di donne or concerto delle dame or concerto di dame; accept consort of women or consort of ladies]

[10e] The highly ornamented, virtuosic style of its *concerto delle donne* made Ferrara an epicenter for the development of these songs. Monteverdi wrote nine books of these secular songs, which are contrasted with motets.

ANSWER: madrigals

[10m] A few years after murdering his wife and her lover, this madrigalist moved to Ferrara and worked with its *concerto delle donne*. This composer’s deeply chromatic songs include “Moro, lasso, al mio duolo.”

ANSWER: Carlo Gesualdo [or Carlo Gesualdo da Venosa]

<VD, Auditory Arts>

20. During an attempt to install himself in power for a third time, this man received a prophecy which claimed that a net had been cast for the tuna to swim through. For 10 points each:

[10h] Name this tyrant who rose to power with the populist support of Athens’s *hyperakrioi* (“hy-per-ACK-ree-oy”) faction. During his first return to power, this man feigned divine favor by having Phye (“FYE-ee”) disguise herself as Athena.

ANSWER: Pisistratus [or Pesistratus]

[10e] Pisistratus’s land reforms endeared him to poor farmers who took advantage of his economic aid by shifting to this cash crop. This crop’s *moria* trees were sacred to Athena.

ANSWER: olive [accept olive trees or olive oil]

[10m] Following his second exile, Pisistratus made a third grab at power by landing troops at this town before marching on Athens. Miltiades won a victory on the outskirts of this town against a force led by the Mede Datis.

ANSWER: Marathon

<MB, Other History: Ancient>