

2022 Winter Closed

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Packet G

Tossups

1. In 1997, Eli Leon convinced BAMPFA to showcase works in this medium by a pseudonymous artist from Arkansas. “Accident,” “Fire,” and “Homecoming” are the three sections of a triptych in this medium. Cuesta Benberry popularized works in this medium by the Gee’s Bend collective. Twenty-six portraits with yellow and brown backgrounds surround a script in a work in this medium that was partially inspired by its artist’s experience with (*) overweight stereotypes. Works in this medium were created by Rosie Lee Tompkins and the artist of *Who’s Afraid of Aunt Jemima*, Faith Ringgold. Works in this medium were mass-produced during namesake “bees,” which drew on designs such as the “shoofly” and “wagon wheel” made by enslaved peoples. For 10 points, name this medium consisting of patches of cloth stitched together.

ANSWER: **quilts** [accept story **quilts**; accept **patchwork** quilts; prompt on **textiles** or **cloth**] (The second clue refers to Faith Ringgold’s *Street Story Quilt*.)

<Parameswaran, Painting and Sculpture>

2. Freeboard values for this substance are precisely measured by the Synthetic-Aperture Interferometric Radar Altimeter, or SIRAL. So-called “flowers” that form on this substance appear as bright bands on satellite images. Large formations of this substance contain lower-albedo features called leads (“leeds”) and polynyas (“pah-LIN-yahs”). Collisions of this substance form ridges and keels, which erode to hummocks and bummocks, respectively. The two main historical proxies for this substance are levels of phytoplankton-derived organic compounds and records of (*) whaling catch positions. This substance is classified as “fast” if it is attached to some surface and “drift” otherwise. The IPCC Sixth Assessment Report states that the extent of this substance will drop below one million square kilometers before 2050. For 10 points, name this substance that exists in packs near the Earth’s poles.

ANSWER: sea **ice** [reject “water” or “glaciers” or “icebergs” or “ice shelves”] (SIRAL is an instrument on CryoSat-2.)

<Settle, Other Science>

3. Before the Revolutionary War, a town in this state’s west issued the “Hanna’s Town Resolves” to defy the British. Ann Rinaldi’s *A Ride Into the Morning* recounts how soldiers from this state forced Temperance Wick to hide with her horse inside a cabin during a “line mutiny.” Alexander Hamilton corresponded with a politician from this state in formulating his “First Report on Public Credit.” The Potts family sheltered soldiers in this state, and Isaac Potts wrote of how a general (*) prayed in the snow while in this state. A politician from this state, known as the “Financier of the Revolution,” was Robert Morris. Soldiers camped in this state trained using the “Blue Book,” a manual promulgated by Baron von Steuben (“SHTOY-bin”). For 10 points, the Continental Army stayed in what state’s Valley Forge during the Revolutionary War?

ANSWER: **Pennsylvania**

<Parameswaran, American History>

4. *Description acceptable.* After entering this place, the narrator of a novel dreams that he is castrated by some white men and declared “free of illusions.” This place was inspired by the setting of a Richard Wright novel not published until 2021 about the fugitive Fred Daniels. A photo-essay by Gordon Parks shows a novel’s protagonist emerging from this place, which he does after asking, “Who knows but that, on the lower frequencies, I speak for you?” In the prologue, the narrator smokes a reefer in this place as (*) Louis Armstrong’s “Black and Blue” plays. To see in this place, the narrator burns the contents of his briefcase, including his diploma and Tod Clifton’s sambo doll, but later illuminates it with 1,369 light bulbs. The narrator is chased here by police during a race riot sparked by Ras the Exhorter. For 10 points, the title character of a Ralph Ellison novel abandons society to live in what place?

ANSWER: **underground** [or the **sewers**; accept answers that include both *Invisible Man* and the **basement** or **room** or **hole** where the protagonist lives; prompt on **apartment** building] (The Richard Wright novel is titled *The Man Who Lived Underground*.)

<R. Keyal, Long Fiction>

5. In mechanism design, a type of these things names the stronger of the two forms of incentive-compatibility, contrasted with Bayesian incentive-compatibility. In situations with perfect recall, an equivalence involving “behavior” examples of these things is given by Kuhn’s theorem. The order of removal of some of these things is irrelevant in an iterative procedure abbreviated IESDS, which is similar to backward induction. It’s not an equilibrium, but under certain conditions, (*) John von Neumann proved the existence of a mixed one of these things that attains the minimax gain. The “grim trigger” is an example of one of these options for the repeated Prisoner’s Dilemma, in which these options for a single iteration are simply “Cooperate” and “Defect.” For 10 points, name these options that a player has for how they will play a game.

ANSWER: **strategies** [or **strategy**; accept more specific answers such as pure **strategy** or dominant **strategy**]
<Morrison, Social Science>

6. The distortion of these things can be minimized by end-capping with TMCS or HMDS. When all of these things have the same type of distortion, voids or blocked frits are likely interfering with sample delivery. If the asymmetry factor of one of these things is less than one, its deviation from ideality is called “fronting.” Plate height is determined from average velocity and three factors that affect these things: eddy diffusion, longitudinal diffusion, and resistance to mass transfer. These things are more regularly spaced and have better resolution for (*) temperature-programmed experiments as compared to isothermal experiments. Ideally, each of these things is centered on a compound’s retention time. When the column is over- or underpacked, these things deviate from an ideal Gaussian shape. For 10 points, what objects in the graphs produced from chromatography experiments correspond to different components of a mixture?

ANSWER: **peaks** (in chromatograms) [accept **bands** or **bands** of color; accept **spots**] (The fourth sentence refers to the van Deemter equation.)

<A. Keyal, Chemistry>

7. **This woman's face is superimposed over rock formations five times in a photo by Richard Avedon, who shot a highly overexposed close-up of her face for a poster. Louis Vuitton designed his smaller Speedy 25 handbag for this woman, who also wore the specially-made perfume L'Interdit ("lan-tair-DEE"). This woman donned Oliver Goldsmith's oversized Manhattan sunglasses with Roger Scemama's ("seh-MA-ma's") layered pearl necklace for a film role in which she uses a foot-long (*) cigarette holder. As part of Hubert de Givenchy's ("yoo-BAIR duh zhee-von-SHEE's") close collaboration with this woman, she wore opera gloves and his iconic "little black dress" for a 1961 film that opens with her visiting the title luxury jewelry store in New York City. For 10 points, name this fashion icon and star of the films *Funny Face* and *Roman Holiday*, who played Holly Golightly in *Breakfast at Tiffany's*.**

ANSWER: Audrey **Hepburn** [reject "Katharine Hepburn"] (The first sentence describes a poster for the film *Funny Face*, whose protagonist was based on Avedon.)

<R. Keyal, Other Arts>

8. **Silvia Tebrick suddenly transforms into one of these animals in a novel by Bloomsbury Group author David Garnett. Mary asks a writer named for these animals to stop killing off his female characters in a novel based on Joseph Jacobs's version of "The Robber Bridegroom." One of these animals causes a rival to freeze his tail while ice-fishing in a mock epic by Nivardus of Ghent. Pertelote's husband learns not to trust flattery after narrowly fleeing the mouth of one of these animals in (*) "The Nun's Priest's Tale," which adapts a cycle about a trickster one of these animals who bests the wolf Isengrim. Archilochus's ("ar-KILL-uh-kuss's") claim that this animal "knows many things" inspired an Isaiah Berlin essay contrasting it with the hedgehog. For 10 points, the farmers Boggis, Bunce, and Bean are tricked in a children's novel by Roald Dahl about what "Fantastic" animal?**

ANSWER: **foxes** [accept Reynard the **Fox** or *Lady into Fox* or *Fantastic Mr. Fox* or *Mr. Fox* (by Helen Oyeyemi); prompt on **Reynard**]

<R. Keyal, Misc. Literature>

9. **According to legend, after a farmer in this country fished up and captured a mermaid, that mermaid prophesied ("PROFF-uh-sighed") the destruction of this country's town of Saeftinghe ("SAFF-ting-uh"); the town was actually destroyed in 1570, when this country experienced the second of two floods on All Saint's Day. This was the westernmost country where settlers built raised villages known as *terpen* ("TAIRP-in"), many of which were destroyed in the 1287 St. Lucia's Flood. During the English Civil War, an engineer from this country was hired to (*) drain the Bedford Level. Beginning in the 1200s, provincial and national "water boards" managed this country's water. This country's newest province of Flevoland ("FLAY-vo-lont") is filled with dams, dikes, and polders that reclaimed portions of the Zuiderzee ("ZOWD-er-zay"). For 10 points, name this home country of Cornelius Vermuyden ("fer-MAO-dun"), whose waterworks are often seen alongside windmills.**

ANSWER: the **Netherlands** [or the **Dutch** Republic; prompt on **Holland**]

<Parameswaran, European History>

10. This figure partially reversed a boon given to his brother when Saraswati (“SAH-ruh-swuh-tee”) tied that brother’s tongue. After losing a challenge, this figure was tied up and carried around under Vali’s armpits. Alongside Vijaya (“VEE-jay-uh”), a previous incarnation of this figure turned away the Kumaras and was cursed to several reincarnations. While trapped under Mount Kailash, this figure sang the *Shiva Tandava Stotra* (“STOH-truh”) for a thousand years using a veena strung with his own tendons. This figure, who stored amrita (“am-rih-tah”) in his (*) navel after receiving a boon from Brahma, did succeed in seizing his half-brother Kubera’s throne. This brother of Kumbhakarna was assisted by Maricha (“mah-ree-chah”), who transformed into a golden deer, during the kidnapping of Sita. For 10 points, name this ten-headed *rakshasa* (“RUCK-shah-suh”), a king of Lanka and the primary antagonist of the *Ramayana* (“ruh-MAH-yuh-nuh”).

ANSWER: **Ravana** (“RAH-vah-nah”)

<Kulkarni, Mythology>

11. This element is stored in a ceramic material surrounded by vitrified HLW in the “can-in-canister” method. A dioxide of this element is used to generate electricity in the MMRTGs that power the *Curiosity* and *Perseverance* rovers. This element and an element with a [emphasize] lower atomic number are recycled by the PUREX process for use as MOX. More of this element is produced than consumed in fast breeders. An alloy of gallium and this element was bombarded with (*) neutrons from a polonium–beryllium initiator dubbed the “Urchin” in a design codenamed “The Gadget.” That design containing a core with this element was used in the Trinity test and again for Fat Man, but not Little Boy. Beta decay of neptunium-239 gives this element’s 239 isotope. For 10 points, name this element first synthesized in the 1940s by using deuterons to bombard uranium-238.

ANSWER: **plutonium** [or **Pu**; accept common isotopes like **plutonium**-238 or **plutonium**-239]

<Evans, Physics>

12. On this region’s largest island, American archeologist Betty Meggers researched a series of burial mounds and ceramics. This region’s archeological site of Kuhikugu may have supported up to 50,000 residents in a series of villages on the Xingu (“sheen-GOO”) River. In 2017, researchers announced the discovery of geoglyphs that may have been used as ritual sites in Acre (“AH-cree”) state in this region. A 2009 David Grann book details British explorer Percy Fawcett’s search for this region’s “Lost City of (*) Z.” For centuries, researchers believed that reports of a dense population along this region’s longest river were fabricated by Francisco de Orellana (“oh-reh-YAH-nah”), the first European to sail down it. The Tupi people originated in this region before moving southeast, where they encountered Portuguese explorers. For 10 points, name this forested region centered around South America’s longest river.

ANSWER: **Amazon** rainforest [accept any answers mentioning **Amazon** or **Amazonian**; prompt on **Brazil**, **Bolivia**, **Peru**, **Colombia**, **Ecuador**, **Venezuela**, **Guyana**, **Suriname**, or **French Guiana** by asking “what is the broader region?”; prompt on **South America** by asking “what part?”]

<Raje, Other History>

13. A harp is introduced to match the piano bass line in the last section of a film score by this composer that also includes the section “Vanessa and the Changelings.” That film score by this composer was rearranged for solo piano by Michael Riesman, who conducts this composer’s namesake ensemble. In a different film, this composer wrote an opening piece in which an ominous descending four-note organ ostinato plays while bass vocalists repeatedly chant a (*) five-syllable word. This composer, who was nominated for an Academy Award for his score for *The Hours*, scored an apocalyptic Godfrey Reggio movie whose name in Hopi translates to “life out of balance.” This composer’s Third String Quartet is an adaptation of his music for the film *Mishima: A Life in Four Chapters*. For 10 points, name this minimalist composer of *Koyaanisqatsi* (“ko-YAH-nis-KAHT-see”) who also created the opera *Einstein on the Beach*.

ANSWER: Philip **Glass**

<Parameswaran, Classical Music>

14. Ariane Mnouchkine’s (“noosh-keen’s”) biopic (“bio-pic”) of this playwright draws on an “impromptu” one-act play of a stage rehearsal that was written as a response to critics. The multi-day performance *Pleasures of the Enchanted Island* featured the scandalous premiere of a play by this co-founder of the Illustrious Theater Company that was later translated into English by the poet Richard Wilbur. In a play by this author, the Music Master and the Dancing Master stage (*) ballet scenes for their student, the social-climbing aristocrat Jourdain (“zhoor-DAN”). This playwright suffered a fatal tubercular coughing fit while starring in one of his plays as a hypochondriac. One of this author’s plays ends with a *deus ex machina* in which his royal patron arrests the title scheming religious hypocrite. For 10 points, name this French comic playwright of *Tartuffe*.

ANSWER: **Molière** (“mole-YAIR”) [or Jean-Baptiste **Poquelin**] (The first line refers to Ariane Mnouchkine’s *Molière* and Molière’s *The Impromptu of Versailles*.)

<R. Keyal, Drama>

15. After this text was revealed, Satan put mud in his ears and lamented for the fourth and last time. An angel that had never descended from heaven opened a heavenly door that had never been opened to bring news of “two lights”: this text and the end of the text following it. A group of men was paid in sheep for curing a scorpion sting using this text. The sixth verse of this text enjoins its addressee to “Guide us to the (*) straight path.” One *hadith* records God saying that “[He] has divided [this text] into two halves, between [Himself] and [His] servant.” This is the only chapter of a larger text in which the phrase *bismillah ar-Rahman ar-Raheem* is numbered as a verse. In another *hadith*, Muhammad referred to this text as “the seven oft-repeated verses” because this text is recited 17 times daily during *salat*. For 10 points, name this first surah of the Qur’an.

ANSWER: Surah Al-**Fatihah** [or Al-**Fātihah**; or The **Opening**; or The **Opener**; or The **Key**; accept The **Mother of the Book**, The **Mother of the Qur’an**, *Umm al-Kitab*, or *Umm al-Qur’an*; accept *Ash-Shifa*, *Ar-Ruqya*, or *Al-Hamd*; prompt on the first surah or first chapter of the Qur’an until read; prompt on the Qur’an until read]

<Settle, Religion>

16. A member of this dynasty was dubbed the “Black Panther” for her gambling habits on the French Riviera. A queen from this dynasty had Andy Warhol’s silkscreen of her placed in a contemporary art museum designed by Kamran Diba. The passage of two Family Protection Acts by this dynasty effectively ended a temporary marriage practice known as *sigheh*. Ali Shariati’s lecture “Expectations from the Muslim Women” ran counter to this dynasty’s liberalization policies, leading the (*) SAVAK (“saw-VAWK”) to closely monitor him. A ruler from this dynasty granted women’s suffrage as part of a series of 1963 reforms dubbed the White Revolution. This dynasty’s queen Farah married a man who had gained power after a coup against Mohammed Mossadegh. For 10 points, name this dynasty that ruled Iran under Mohammad Reza Shah.

ANSWER: **Pahlavi** dynasty

<Parameswaran, World History>

17. A location for this activity in the UK contains a series of cast-iron posts with encoded lines of verse whose first letters spell out “MILLENNIUM POEM”; that puzzle about this activity was created by the charity Sustrans. The Hovenring (“HO-ven-ring”), which was created for people to perform this activity, is located on a suspended bridge above a motorway in North Brabant near Eindhoven (“AINT-ho-vin”). Large groups of people may use a tactic known as “corking” to better perform this activity during (*) Critical Mass protests. Dutch *fietsstrataats* (“FEETS-strotts”) were made to enable this activity, which is also done on greenways or neighborways. This activity is performed competitively by athletes in an annual race that ends at the Champs-Élysées (“SHAWN-zay-lee-zay”). For 10 points, name this form of transportation performed in the Tour de France.

ANSWER: **biking** [or **bicycling**; or **cycling**; accept equivalents that mention riding a **bicycle**] (The first line refers to the Millennium Time Trail.)

<Lo, Geography>

18. An approach named for this adjective is synthesized with insights from Michel Foucault in a book titled for “reflective stages” in it by Axel Honneth (“HAWN-it”). That approach named for this adjective must seek “human emancipation” as its goal, according to a definition that contrasts it with “traditional theory.” Jürgen Habermas (“YUR-gun HAH-ber-mahs”) has contributed to a tradition of social philosophy named for this adjective developed by (*) Max Horkheimer, Theodor Adorno, and other members of the Frankfurt School. Legal scholars like Richard Delgado, Derrick Bell, and Kimberlé Crenshaw helped found a movement named for this adjective that questions liberal tenets like meritocracy and color-blindness. For 10 points, give this adjective that describes a “race theory” that some lawmakers have banned from public schools.

ANSWER: **critical** [accept **critical** theory or **critical** social theory or **critical** race theory; prompt on **social** or **social** theory until “social philosophy” is read by asking “what adjective describes the social theory?”]

<French, Philosophy>

19. Frank Albani modified a model of this phenomenon that relied on “characteristics” charts and was proposed by Richard Rothermel. The cambium necrosis and hydraulic dysfunction hypotheses differ on whether this phenomenon impairs true growth due to carbon starvation. Though not measured directly, this phenomenon’s frequency is predicted through the Palmer index. Sclerophyll leaves and lignotubers are two adaptations of (*) *Eucalyptus* to this phenomenon, which triggers serotinous (“suh-ROT-in-us”) seed spread and epicormic bud growth. These phenomena are named “crawling” or “ladder” based on their direction and are a common cause of secondary succession. For 10 points, name this phenomenon whose common natural occurrence starts with dry, uncontrolled vegetation being struck by lightning.

ANSWER: forest **fires** [or **wildfires**; or synonyms such as **blazes**]

<Evans, Biology>

20. In a poem by this author, a “hawk [that] hovers in the air” reminds the speaker that he stands “alone with a thousand sorrows.” A passerby questions the “sound of weeping rising above to heaven” in a poem by this author about men who hear “the new ghosts complain and the old ghosts weep” after decrying tax collection and having sons. This poet lamented his thinning white hair and wrote “the country is broken, but mountains and rivers remain” in one of many eight-line poems in regulated verse, titled (*) “Spring Scene.” A poem by this author describes how autumn’s high winds “angrily howl” and tear the roof off of his thatched cottage. This “Poet-Sage” described dust obscuring a bridge as “horses whinny” and the title war vehicles “squeak and trundle” in his “Ballad of the Army Carts.” For 10 points, name this Tang-dynasty poet and friend of Li Bai.

ANSWER: **Du** Fu [or **Tu** Fu; or **Dou** Fu] (The eight-line form is *lüshi*.)

<R. Keyal, Poetry>

Bonuses

1. Followers of Babalú Aye use cowrie-adorned brooms to ritually sweep diseases like this one and, in more recent times, HIV, away from the body. For 10 points each:

[E] Name this disease, which priests of Babalú Aye protected against with variolation. The Yoruba deity of this disease, Obaluaiye, wields a broom known as a *shashara*, whose name refers to the pockmarks left by this disease.

ANSWER: **smallpox**

[M] Followers of this religion centered in Bahia (“ba-EE-uh”) perform dances with a *shashara* for Omolu, the orixá of smallpox. Like Umbanda and Quimbanda, this religion features priests and priestesses known as *pai* and *mãe-de-santo* (“my jee SAHN-too”).

ANSWER: **Candomblé**

[H] The rough clothing worn by smallpox deities’ devotees reflects the deities’ status as poor outcasts. For example, priests of Omolu wear gowns of this material made from an eponymous palm tree to hide pockmarks.

ANSWER: **raffia**

<Yang, Religion>

2. The protagonist of this play often addresses an unnamed Listener, whom the author claimed existed in “an area where God, a friend, a judge, or a psychiatrist overlap.” For 10 points each:

[H] Name this semi-autobiographical play whose austere setting, consisting of a single dimly-lit chair before a Nazi concentration camp tower, represents the mind of its protagonist.

ANSWER: **After the Fall**

[M] Arthur Miller’s *After the Fall* was first directed by this member of the Group Theatre, whose testimony in front of HUAC (“HYOO-ack”) later caused a rift between the two. This man also directed the film version of *A Streetcar Named Desire*.

ANSWER: Elia **Kazan** [or Elias **Kazantzoglou**]

[E] Kazan also directed the original 1949 production of this Miller play, whose set design by Jo Mielziner (“meel-ZEE-ner”) took inspiration from Miller’s desire to stage this play within the skull of its protagonist, Willy Loman.

ANSWER: **Death of a Salesman**

<R. Keyal, Drama>

3. *Note to moderator: Read the answer to the first bonus part carefully.* Assuming this condition allows the center of mass velocity to be set to the radius times the angular velocity. For 10 points each:

[M] Name this condition in which the velocity is always zero at the point of contact between a rotating object and a surface.

ANSWER: rolling **without slipping** [or an object that rolls **without slipping**; accept answers indicating that the object is **not slipping**; reject the specific phrases “no-slip” or “no-slip condition”]

[E] This force opposes motion between moving surfaces, and is zero for an object that rolls without slipping.

ANSWER: kinetic **friction** [reject “static friction”]

[H] These structures determine the true contact area, and thus the frictional force, between two objects sliding over one another. These structures are atom-to-atom contacts between two objects.

ANSWER: **asperities** [or **asperity**]

<Settle, Physics>

4. Massive improvements in Chinese scientific and technological education were key to this leader's Four Modernizations. For 10 points each:

[E] Name this Chinese leader who outmaneuvered Mao's chosen successor Hua Guofeng ("hwa gwoh-fung"). He introduced free market policies to China in the 1980s.

ANSWER: **Deng** Xiaoping ("dung shao-ping")

[H] During the Down to the Countryside movement of the Cultural Revolution, Mao canceled this college entrance exam and sent many students to rural villages. This exam was reinstated by Deng in 1977.

ANSWER: **gaokao** [or **gāokǎo** ("gow-cow"); accept **National College Entrance Examination** or **NCEE**]

[M] The "sent-down" youth who did not complete high school are now referred to as the "three classes" described by this adjective. The Red Guards desecrated Confucian altars as part of a campaign to destroy "habits" and "customs" with this quality.

ANSWER: **old** [or **jiù**; or **lǎo**; accept "three **old** classes"; accept Four **Olds**]

<Parameswaran, World History>

5. In a 2001 La Scala production of one opera, the antagonist periodically turns around and conducts the chorus during an aria about this activity, which he sings after a storm passes. For 10 points each:

[H] Name this action central to that aria, "Innaffia l'ugola!" In another opera, Alfredo sings a leap from a short F up to a long D to begin a waltz-like duet about this action, during which he first encounters the protagonist.

ANSWER: **drinking** [or word forms; accept **getting drunk**; accept **drinking** song; prompt on **libiamo**; prompt on **toasting** or **brindisi**]

[M] "Innaffia l'ugola" starts the plot of this opera since it involves getting a captain drunk so he will act belligerent. Plácido Domingo gained renown as the protagonist of this Verdi opera set in Cyprus.

ANSWER: **Otello** (The 2001 La Scala production was Domingo's last performance as Otello.)

[E] The roles of Otello and Alfredo, who sings the brindisi in *La Traviata*, are sung by this voice type. With José Carreras and Luciano Pavarotti, Plácido Domingo was part of a trio named for this highest male voice type.

ANSWER: **tenor** [accept the Three **Tenors**]

<Egol, Classical Music>

6. Nancy Cartwright argued against this position in *The Dappled World*, contending that supposedly universal laws only hold in specific situations. For 10 points each:

[H] Name this philosophical position opposed by the so-called "Stanford Mafia." A reductionist, ontological variant of this position might hold that fields like psychology and economics can be entirely explained by a more fundamental theory, like quantum mechanics.

ANSWER: **unity of science**

[E] The unity of science may be ontological, or it may be epistemological, such as the claim that science must always use this procedure. In this procedure, hypotheses are made and then tested experimentally.

ANSWER: scientific **method**

[M] This thinker argued that prescribing any particular method for all of science would necessarily hinder progress in his book *Against Method*, which advocates for "epistemological anarchism."

ANSWER: Paul **Feyerabend** ("FYE-ur-AH-bint")

<R. Keyal, Philosophy>

7. This organ's "function tests" include the coagulative PT and PTT, which rely on this organ's role in synthesizing factors II, VII ("seven"), IX ("nine"), and X ("ten"). For 10 points each:

[E] Identify this organ responsible for producing albumin. Another test, the AST/ALT, appears elevated in patients with cirrhosis of this organ.

ANSWER: **liver**

[M] This compound's damage to the liver often presents with ASTs and ALTs over 5,000. N-acetylcysteine ("N uh-SEE-til-SIS-teen") is administered to treat overdoses of this drug.

ANSWER: **acetaminophen** [or **Tylenol**; or **Paracetamol**]

[H] Comparing serum levels of AST and ALT to those of this enzyme helps determine whether a patient's disease process is hepatic or cholestatic ("ko-luh-STAT-ick"). This enzyme is also elevated in Paget's ("padget's") disease.

ANSWER: **alkaline phosphatase** [accept **ALP** or **ALKP** or **ALPase** or **Alk Phos**]

<Naveh-Benjamin, Biology>

8. This officer was the subject of the 2013 film *The Man Who Saved the World*. For 10 points each:

[H] Name this Cold War-era Soviet officer who judged a malfunctioning system's warnings of a US missile launch to be a false alarm, thus possibly preventing a nuclear war.

ANSWER: Stanislav **Petrov** [or Stanislav Yevgrafovich **Petrov**]

[E] Another close call in the Cold War was prevented by Vasili Arkhipov, a flotilla commander who stopped his captain from launching torpedoes at a US ship off this Caribbean island where the Soviets had deployed missiles.

ANSWER: **Cuba**

[M] In a third close call, the northern lights caused American officer Charles Maultsby to accidentally enter Soviet territory while in one of these specific vehicles, but he was able to navigate it away before being discovered.

ANSWER: Lockheed **U-2** [accept any answers including **U-2**; prompt on less specific descriptions like airplane or aircraft or spy plane]

<Lo, Other History>

9. *The Eyre Affair* is the first entry in Jasper Fforde's ("ford's") series about a woman with this first name, which is set in an alternate-history, literature-obsessed England. For 10 points each:

[M] Give this word. Gabriel Syme infiltrates the Central Anarchist Council upon being elected to a post of this name over the poet Lucian Gregory in a comedic thriller by G. K. Chesterton.

ANSWER: **Thursday** [accept **Thursday** Next or *The Man Who Was Thursday*]

[E] Like Chesterton's Father Brown, Thursday Next works in this occupation, which is also practiced by Miss Marple and Hercule Poirot ("air-kyool pwah-roh").

ANSWER: **detective** [or private **investigator**; or **inspector**; accept literary **detective** or **LiteraTec**]

[H] The name of Thursday's uncle references this other character, who is the subject of some recent novels co-written by Kareem Abdul-Jabbar. He was introduced in a story titled for the Greek interpreter Mr. Melas.

ANSWER: **Mycroft** Holmes [prompt on **Holmes**; reject "Sherlock Holmes"]

<R. Keyal, Long Fiction>

10. UN Secretary General António Guterres supported a measure put forward to the WTO to allow waivers for patents on these products. For 10 points each:

[E] Name these products that have been unevenly distributed throughout the world since 2021. Common versions of these products have been made by Pfizer and Moderna.

ANSWER: COVID-19 **vaccines** [or coronavirus **vaccines**; or SARS-CoV-2 **vaccines**]

[H] In 2021, the Biden administration announced that it would petition the WTO for a vaccine waiver as part of this agreement over international IP.

ANSWER: **TRIPS** [or Agreement on **Trade-Related Aspects of Intellectual Property Rights**]

[M] Vaccine shortages in Africa are partly caused by this Asian country's Serum Institute, the world's largest vaccine producer, halting exports in April 2021 to deal with a major domestic outbreak. This country and South Africa first proposed the TRIPS waiver.

ANSWER: **India** [or Republic of **India**; or **Bharat**]

<Raje, Current Events>

11. One man who claimed to be able to perform this action used a 23-chemical compound in a 20-foot tower that he constructed. For 10 points each:

[H] Name this action that Charles Hatfield promised he could perform to benefit the city of San Diego for a ridiculous price. A description is acceptable.

ANSWER: make it **rain** [or artificial **rain**; or **pluviculture**; accept equivalents involving **rain**; prompt on **cloud seeding** by asking "for what purpose?"]

[M] While working at this company, Vincent Schaefer and Irving Langmuir ("LANG-myoor") developed consistent methods for cloud seeding. This company's ruthless CEO Jack Welch popularized the "rank and yank" employment scheme.

ANSWER: **General Electric** [or **GE**]

[E] During this conflict's Operation Popeye, cloud seeding was used to slow down cargo traveling along the Ho Chi Minh Trail.

ANSWER: **Vietnam War**

<Raje, American History>

12. In their book *Anti-Oedipus*, Gilles Deleuze ("zheel duh-LOOZ") and Félix Guattari ("fay-leeks gwah-tah-REE") discuss so-called "desiring machines" in a number of literary works. For 10 points each:

[E] This author, whom Deleuze and Guattari viewed as producing a "minor literature," is credited with originating a prototypical "desiring machine" with the torture device found in his story "In the Penal Colony."

ANSWER: Franz **Kafka**

[H] *Anti-Oedipus* asks "what relationship does the bicycle-horn machine have with the mother-anus machine?" in reference to this novel's protagonist, who spends an eighty-page paragraph on a bicycle searching for his mother.

ANSWER: **Molloy** (by Samuel Beckett)

[M] Deleuze and Guattari's ideas inspired a bizarre Angela Carter novel titled for the "Infernal Desire Machines" of a doctor with this surname. An author with this surname wrote a story about Nathanael's love for an automaton.

ANSWER: **Hoffman** [accept E. T. A. **Hoffmann** or Ernst Theodor Amadeus **Hoffmann**; accept *The Infernal Desire Machines of Doctor Hoffman*] (That story is "The Sandman.")

<R. Keyal, Misc. Literature>

13. This legal obligation in the UK was outlined in *Donoghue v Stevenson*, a case that ensued after Mrs. Donoghue became ill after drinking a bottle of ginger beer containing a decomposed snail. For 10 points each:

[M] Name this obligation held by people to avoid foreseeably harmful effects on others. Negligence occurs when this obligation is breached.

ANSWER: **duty of care** [prompt on **care**]

[E] When people of this profession breach their duty of care and cause harm, they can be sued for malpractice. In the United States, preventable adverse errors made by these people are the third-leading cause of death.

ANSWER: **doctors** [accept equivalents such as **physicians**]

[H] In tort law, this rule states that negligence occurs even if the defendant was unexpectedly vulnerable to injury. For example, injuring someone with weakened bones leaves you as culpable as if you injured someone healthier.

ANSWER: **eggshell skull** rule [or **eggshell** rule; or **thin skull** rule; or **talem qualem** rule; reject “crumbling skull”]
<Lo, Social Science>

14. In the radial velocity method, the mass of an exoplanet is undetermined up to a factor of the sine of this quantity. For 10 points each:

[M] Name this orbital element that is the angle formed by the orbital plane and a reference plane.

ANSWER: orbital **inclination** [prompt on **i**]

[E] This effect is observed in a star’s emissions when its radial velocity is modified by an exoplanet. In this effect, a wave’s frequency is shifted due to the motion of a source or an observer.

ANSWER: **Doppler** effect [prompt on **redshift** or **blueshift**; reject “gravitational redshift” or “cosmological redshift”]

[H] A term equal to the semiamplitude times the cosine of the sum of the argument of periapsis and this other orbital element is found in the equation for the radial velocity curve of a star in a binary system. This quantity is the angle along the orbital path from perigee to the orbiting object, measured in the direction of motion.

ANSWER: **true anomaly** [reject “anomaly”]

<Liu, Other Science>

15. Answer the following about the Glamour Boys, a group of Tory MPs who opposed appeasement, for 10 points each.

[E] The group was derisively called the Glamour Boys by Neville Chamberlain because they had this identity. Alan Turing held this identity, which was not decriminalized in the UK until 1967.

ANSWER: **homosexuality** [or being **gay**; or **LGBTQIA+**]

[M] The Glamour Boys instead supported Churchill and this other Tory politician. This man, who was Foreign Secretary during World War II, became prime minister after Churchill’s second term.

ANSWER: Anthony **Eden** [or Robert Anthony **Eden**; or 1st Earl of **Avon**]

[H] Glamour Boy Victor Cazalet (“KAZ-uh-let”) died in a plane crash along with an exiled general from this country. A group of pilots from this country formed the 303 (“3-oh-3”) squadron of the RAF, the highest-scoring squadron during the Battle of Britain.

ANSWER: **Poland** [accept **Polish** or **Poles**] (The Polish general is Władysław Sikorski.)

<Raje, European History>

16. The first single-molecule magnet to be discovered is a cluster compound with a core of 12 atoms of this metal and 12 oxygen atoms. For 10 points each:

[H] Name this metal complexed to salen in a reaction whose mechanism remains mysterious, but likely involves the oxidation of that complex by bleach to form an oxo-complex with this metal in its plus-5 oxidation state.

ANSWER: **manganese** [or **Mn**] (That is the Jacobsen–Katsuki reaction.)

[E] This number is the oxidation state of manganese in the strong oxidizing agent potassium permanganate.

Halogens have this many valence electrons.

ANSWER: **seven**

[M] Alkenes are converted to these molecules by the application of potassium permanganate under basic conditions. However, the most common method of converting alkenes to these molecules uses osmium tetroxide.

ANSWER: **diols** [accept vicinal **diols** or vic-**diols** or **glycols**; prompt on **alcohols**; reject “geminal diols” or “gem-diols”]

<A. Keyal, Chemistry>

17. A block of this material known as “Il Gigante” (“eel jee-GAHN-tay”) was used to sculpt a statue now located in Florence’s Academia. For 10 points each:

[E] Name this metamorphic rock whose Carrara variety was used to sculpt Michelangelo’s *David*.

ANSWER: **marble**

[M] Prior to carving marble, Italian sculptors would often create models out of this material. The Florentine della Robbia family was known for ornate, glazed sculptures with this material.

ANSWER: **terracotta** [prompt on **clay**, **ceramic**, or **earthenware**]

[H] While wood was more popular in the Northern Renaissance, this sculpture by Claus Sluter showcases Dutch prowess with marble. Its hexagonal base depicts Jesus on the way to Calvary, surrounded by six prophets.

ANSWER: ***Well of Moses***

<Parameswaran, Painting and Sculpture>

18. The essay “A Tale of Two Profiles” from Roxane Gay’s *Bad Feminist* compares the media’s reactions to Dzhokhar Tsarnaev (“jo-KAR tsar-NA-yev”) and this person. For 10 points each:

[E] The cover of Claudia Rankine’s (“RANK-in’s”) book *Citizen* depicts a torn hoodie in reference to the sweatshirt worn by what 17-year-old when he was fatally shot by George Zimmerman?

ANSWER: Trayvon **Martin** [or Trayvon Benjamin **Martin**]

[M] A Pittsburgh teen whose last name is the word for these objects wrote a poem opening “I AM NOT WHAT YOU THINK!” prior to his 2018 shooting. A Tupac Shakur poem praises one of these objects that “grew from concrete.”

ANSWER: **roses** [accept Antwon **Rose**; accept “The **Rose** That Grew From Concrete”; prompt on **flowers** or **plants**]

[H] A poem by this author lists George Zimmerman among people like John Wilkes Booth for whom he “pours a punch of piss.” This creator of a poetic form called the “Golden Shovel” also wrote the collection *Lighthouse*.

ANSWER: Terrance **Hayes**

<R. Keyal, Poetry>

19. Manaveda, a Zamorin of Calicut, is credited with developing this dance's subgenre of *Krishnanattam*, which tells the life of Krishna. For 10 points each:

[H] Name this Indian classical dance form that originated in Kerala ("kay-ruh-lah"). Performers of this dance often wear highly-decorative papier-mâché masks that can be green or blue.

ANSWER: **Kathakali** ("kuh-tha-kuh-lee")

[M] Kathakali dancers must learn nine facial expressions, or *navarasa*, and 24 of these hand gestures. In art, the Buddha is typically shown performing one of these gestures, which include *dhyana* and *dharmachakra*.

ANSWER: **mudras**

[E] Kathakali performances must be set to particular *ragas*, the Indian analog of this Western musical concept.

"Dorian" and "Mixolydian" are examples of these scales that have similar note patterns but distinct characters due to differing starting pitches.

ANSWER: musical **modes**

<Parameswaran, Other Arts>

20. An ice pick was the murder weapon of choice for Abe Reles, a notorious agent for this organization. For 10 points each:

[H] Name this organized crime syndicate that essentially acted as the assassination wing of the Mafia. It was initially led by Albert "Mad Hatter" Anastasia.

ANSWER: **Murder, Inc.** [or **Murder, Incorporated**]

[E] Ramón Mercader ("mair-ka-DAIR") apocryphally used an ice pick to kill this communist while he was in exile in Mexico. This rival of Joseph Stalin argued for a "permanent revolution."

ANSWER: Leon **Trotsky** [or Lev Davidovich **Bronstein**]

[M] Walter Freeman modified an ice-pick for an especially speedy form of this procedure that he popularized while traveling around in the country. Demonstrations by António Egas Moniz inspired James Watts to popularize this procedure in the US.

ANSWER: **lobotomy** [or **leucotomy**]

<Parameswaran, Other Academic>