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Collaboration vIa Network (MRNA VACCINE)

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Packet 12: "MRNAVACCINE read live on television, ratings plummet; 'what the fuck is a dialectic' -Fox News viewers"

1. A soldier who failed to kill a prince with this name was executed in the first documented instance of scaphism. After the death of a prince with this name, the Spartan Clearchus led Greek mercenaries at one battle before being betrayed by Tissaphernes. Xenophon's *Anabasis* recounts the defeat of a prince with this name at the Battle of Cunaxa and the subsequent retreat of the Ten Thousand back to Greece. Harpagus encouraged another ruler of this name to revolt against his grandfather (*) Astyages. Croesus legendarily escaped after a ruler with this name ordered that he be burned on a pyre after the fall of Sardis. A namesake "cylinder" created by a ruler with this name is sometimes considered the first declaration of human rights. For 10 points, give this name of the first ruler of the Achaemenid Empire, nicknamed the Great.

ANSWER: Cyrus [or Cyrus the Younger; or Cyrus the Great; or the Cyrus Cylinder]

<Vikshar Athreya, World History>

2. St. Francis De Sales argued one of these objects implied the importance of "chaste words." In 2014, Vincent Icke claimed that one of these objects was made of Venetian glass due to its lacquered shine and pear shape. The Met contains a painting which prominently features one of these objects that depicts a woman tuning a lute in front of a map of Europe. A 1999 Tracy Chevalier ["sheh-val-yay"] novel popularized the theory that the owner of one of these objects was a (*) maid named Griet. Scans of a painting nicknamed "The *Mona Lisa* of the North" have revealed that one of these accessories lacks a hook. For 10 points, a girl in a blue and yellow turban wears what title piece of jewelry in a Johannes Vermeer painting?

ANSWER: pearl earrings [or *Girl with a Pearl Earring*; prompt on pearl or *Meisje met de Parel*]

<Ganon Evans, Painting/Sculpture>

3. The Fiat–Shamir heuristic can be applied to improve Sigma-protocols for this task. Shamir’s theorem equates PSPACE with a class of problems which admit a certain method for this task. If a system for performing this task does not produce false positives, then it has soundness, which is the converse of completeness. In “interactive” systems for performing this task, the party with the power to perform this task has unlimited computational resources, but may be (*) dishonest. In Arthur–Merlin protocols, the oracle Merlin performs this task while Arthur verifies. Performing this task for a given statement is equivalent to performing this task on the claim that the statement is in the language of all theorems. For 10 points, name this task that may be performed “by contradiction” or “by induction.”

ANSWER: proof-writing [or proving; or automated theorem proving; or interactive proof system; or zero-knowledge proof]

<David Bass, Other Science>

4. In models with scale effects, GDP per capita growth accelerates when this process occurs. When estimating the rate of this process, the CCF50 is less liable to fluctuations than TFR. After spending decades trying to reduce it, Singapore’s government *promoted* this process with a slogan that said “if you can afford it” in brackets. A fifth stage of one model has been proposed for wealthy countries with negative (*) rates of this process and a high dependency ratio like Japan. As a country advances economically, this process peaks in the second stage of the DTM before declining in the third stage as women enter the education and the workforce. For 10 points, name this process affected by fertility rate and fatality rate which Chinese governments sought to curb with the One Child Policy.

ANSWER: population growth [or things like “having kids” or “having more kids” or equivalents; or birth rate or fertility as most clues are about that aspect of population growth.]

<Erik Christensen, Social Science>

5. A character created by this author dies of Bright’s Disease after moving to London to work on the railway system. The protagonist of a series by this author is bankrupted and eventually imprisoned after the Great Fire of Chicago. This author used the streetcar tycoon Charles Yerkes as the model for the protagonist of his *Trilogy of Desire*, Frank Cowperwood. The protagonist of a novel by this author is forced to leave his job at a Kansas City hotel after his friend (*) Sparsen runs over a young girl. In a novel by this author, being struck in the face with a camera causes a character to drown in Big Bittern Lake after her boat capsizes. This author based one of his novels on Chester Gillette’s murder of his pregnant girlfriend Grace Brown. For 10 points, what author wrote about the execution of Clyde Griffiths in *An American Tragedy*?

ANSWER: Theodore Dreiser [or Theodore Herman Albert Dreiser]

<Chandler West, American Literature>

6. One man known for this skill is entrusted with caring for three knives, but drops one into the sea. One man known for practicing this skill cuts Amilias in half so precisely that he does not notice it until he moves. That man is hamstrung and enslaved by the king Nithung to practice this activity, but kills Nithung’s sons before escaping with a winged cloak. Loki turned into a gadfly to prevent people from performing this activity for a (*) bet, resulting in his lips being sewn shut. Cutting a flake of wool in two is used to test Wayland and Regin’s skill in this activity. In order to replace Sif’s hair, the sons of Ivaldi compete against Brokk and Eitri, dwarves skilled in this activity. For 10 points, name this skill, which results in the forging of the ring Draupnir and the hammer Mjollnir.

ANSWER: blacksmithing [accept forging or word forms before it is mentioned]

<Jaimie Carlson, Mythology>

7. In this technique, samples containing crude oil often produce a hump of unresolved complex mixture. The volume that should be injected in this technique is governed by the rule of ten. The inverse form of this technique measures the surface energy of a solid. In this technique, compounds may be given a number found by interpolating between alkanes, where each alkane is assigned 100 times its carbon number. This technique is the primary application of thermal conductivity detectors and flame (*) ionization detectors. The output of this technique is often immediately subjected to mass spectrometry. This technique uses a retention index named for Kováts. In this technique, the most common carrier is helium, which forms the mobile phase. For 10 points, name this technique in which a column is used to separate compounds that are volatile.

ANSWER: gas chromatography [or GC; or vapor-phase chromatography; or VPC; or gas-liquid partition chromatography; or GLPC; prompt on chromatography; do NOT accept or prompt on other specific types of chromatography]

<Gerhardt Hinkle, Chemistry>

8. This character acts in a production of their own supposed death in a Max Frisch play subtitled *The Love of Geometry*. In a different play, this character eats a dinner of snakes and scorpions set on the cover of a tomb. Laura's lover rebukes her for singing a song written by this character, who then disguises himself as a monk. This character defiantly takes the hand of another character knocking at the door to end one of the *Little* (*) *Tragedies*. Tirso de Molina created the first adaptation of a story in which this character foolishly invites the dead Commander to dinner. In Pushkin's *The Stone Guest*, a statue of Doña Ana's husband takes this character to hell. For 10 points, Lord Byron wrote an epic poem about what Spanish womanizer?

ANSWER: Don Juan [or Don Giovanni]

<Henry Atkins, European Literature>

9. A 2017 Marshall Curry documentary about an event in this city shows Isadore Greenbaum shouting "Down with Hitler!" A gossip writer from this city invented terms like "Ratzis" and "swastinkas" to avoid censorship when attacking Nazi sympathizers; that man was Walter Winchell. Swastikas were draped next to a massive flag of George Washington during a German American Bund rally in this city. A mayor of this city was photographed smashing Frank Costello's (*) slot machines. The Grand Sachem ["SAY-chum"] of a political machine in this city helped Al Smith run for president in 1928. A mayor of this city appointed the "master builder" Robert Moses to design its highways. For 10 points, name this city where the election of Fiorello La Guardia as mayor weakened the power of Tammany Hall.

ANSWER: New York City [or NYC]

<Erik Christensen, American History>

10. A book titled *Living Without* this concept, which argues that denying it will improve our lives by reducing moral anger, was written by Derek Parboom. One thinker's argument *against* this concept states that M must be in accordance with r1, which requires r2, which requires r3 in an infinite regress called his "basic argument." Thought experiments called "Frankfurt cases" argue that the existence of this concept is not needed to hold someone (*) morally responsible, contrary to the Principle of Alternative Possibilities. Opposing schools that disagree over the existence of this concept are compatibilism and incompatibilism, which disagree whether it is possible in a deterministic universe. For 10 points, name this concept that fatalists and most determinists do not believe in, the ability for one to choose actions.

ANSWER: free will [or freedom of choice; prompt on moral responsibility until mentioned by asking "what concept do these thinkers link to moral responsibility?"]

<Erik Christensen, Philosophy>

11. **Though this author was long dead, a selection of their poems led off the influential *Faber Book of Modern Verse*. In one poem, this author asks if they should cheer a “heaven-handling” Hero while reflecting on a dark year wrestling with God. This poet lists “rose-moles all in stipple upon trout that swim” and “Fresh-firecoal chestnut-falls” before stating “He (*) fathers-forth whose beauty is past change.” This poet created a meter that uses diacritics to mark unusual stressed syllables followed by a variable number of unstressed syllables. This poet wrote six *Terrible Sonnets* expressing a crisis of faith, including “Carion Comfort.” The line “Glory be to God for dappled things” is an example of this poet’s Sprung Rhythm. For 10 points, name this Jesuit poet of “Pied Beauty.”**

ANSWER: Gerard Manley Hopkins

<Henry Atkins, British Literature>

12. **The *Sefer Yetzirah*, or *Book of Creation*, divides these things into "mother," "double," and "simple" and says that God used them to create the material world. The *Sefer HaTemunah* originated the belief that one of these things will be revealed by God to bring about the transition to the next sephira and repair the world. In Jewish tradition, Psalm 119 is known as "eight faces" or by the names of two of these things since each of its eight-verse stanzas is associated with one of these things. One of these things is required on the outside of (*) mezuzah cases and tefillin. In Jewish mysticism, these things are assigned numerical values to perform gematria. Four of these things make up the tetragrammaton. One of these things appears on each side of a dreidel. For 10 points, name these things that include aleph.**

ANSWER: Hebrew letters

<Gerhardt Hinkle, Religion>

13. **In a 2017 Barrie Kosky production, two members of this occupation simultaneously act as older and younger versions of the opera’s composer. A member of this occupation titles an opera with Dresden, Paris, and Vienna versions which frequently references the pagan goddess Holda. A member of this occupation scratches mistakes on a chalkboard after one character is introduced by Veit Pogner. In that opera, (*) Walther [“VAHL-tur”] attempts to become a member of this occupation over the objections of Beckmesser. The historical Hans Sachs [“ZAKS”] is included in an 1868 opera centered on members of this occupation, which is its composer’s only mature comedy. A contest for people with this occupation at the Wartburg [“VART-burg”] is the subject of the opera *Tannhäuser* [“TAHN-hoy-zur”]. For 10 points, name this occupation whose Nuremberg “masters” title an opera by Richard Wagner [“REE-khart VAG-nur”].**

ANSWER: singers [or Sänger, accept Meistersinger or master singers or Minnesinger, accept *Die Meistersinger von Nürnberg* or *The Master-Singers of Nuremberg*, prompt on musicians]

<Chris Sims, Classical Music>

14. **The alpha subunit of this protein contains a conserved salt bridge between Arg-551 on the N-domain and Glu-223 on the A-domain. The gamma subunit of this protein contains a conserved regulator F·X·Y·D sequence. One drug that inhibits this protein can cause a paroxysmal atrial tachycardia with an A·V block, particularly in patients with low magnesium. Rostafuroxin [“ROSS-tuh-FEW-rocks-in”] and ouabain [“WAA-bain”] both act on this protein. Cardiac glycosides like (*) digoxin inhibit this protein, leading to increased contractile force due to calcium accumulation. Because plants do not possess this protein, they rely on proton pumps after repolarization. This protein is responsible for restoring resting membrane potential in neurons after action potentials by moving two ions into the cell and three ions out. For 10 points, name this protein that actively exchanges 2 alkali metal cations using A·T·P.**

ANSWER: sodium-potassium pump [or Na+/K+ ATPase]

<Vikshar Athreya, Biology>

15. **One group of impoverished, ruthless, and possibly cannibalistic participants in this conflict were called tafurs. Though disliking its “insipid vacuity,” a man from Nogent paraphrased an account of this conflict, the anonymously written Gesta Francorum. In this conflict, one army narrowly escaped defeat after being surrounded by horse archers commanded by Kilij at this conflict’s battle of Dorylaeum. This conflict ended after a surprise attack led by Godfrey of Bouillon won the battle of (*) Ascalon. In a city captured during this conflict, Raymond of Toulouse refused to be crowned King and the True Cross was found. According to some sources, men about to launch this conflict broke into chants of “deus vult” at the Council of Clermont. For 10 points, name this conflict supported by Pope Urban II which led to the foundation of the Kingdom of Jerusalem.**

ANSWER: First Crusade [accept the Prince’s Crusade]

<Erik Christensen, European History>

16. **In a story, this author recalled writing baseball poetry with lines like “I enjoy gazing at the butts of outfielders.” In a story by this author, the protagonist opens a bar in the lower level of his aunt’s apartment, which he later abandons on the advice of a mysterious customer. In a novel by this author, two characters share lunch on the rooftop of a bookstore while a fire burns in the surrounding neighborhood. This author paid homage to Faulkner with a story about a mysterious yuppie who claims to set fire to barns. This author of (*) *First Person Singular* included “Kino” in his collection *Men Without Women*. In a novel by this author, the protagonist has love affairs with Midori, Reiko, and Naoko, which he is reminded of by the title song. For 10 points, name this author who wrote about Toru Watanabe in *Norwegian Wood*.**

ANSWER: Haruki Murakami (The first story is “The Yakult Swallows Poetry Collection.”)

<Henry Atkins, World Literature>

17. **The University of Kansas’s first home night game in football was a 6-0 loss to a school primarily serving people of this ethnicity, the Haskell Institute, which was known in the 1920s as the “Powerhouse of the West.” Pop Warner was the long-time football coach at a school for people of this ethnicity, which was dominant in early 1900s college football before closing in 1918. A high school primarily attended by people of this ethnicity won 27 consecutive state championships in boys cross-country in (*) Arizona before their streak ended in 2017. The Irish national team gave up their spot in a 2021 lacrosse tournament to allow a team representing this ethnicity to play. For 10 points, name this ethnicity, one subgroup of which is represented in international lacrosse by the Iroquois Nationals.**

ANSWER: Native Americans [or Indigenous Americans; or American Indians; or the Hopi; accept the Iroquois or the Haudenosaunee or the Ganonsyoni until read and anti-prompt (ask, “can you be less specific?”) afterwards]

<Conor Thompson, Other>

18. **In 2002, an artist from this non-US country wore a suit made of meat to protest the War on Terror as part of the performance piece *My New York*. That artist from this country shed light on this country’s poor sanitation by sitting on a public toilet covered in honey. Another artist born in this country created the memorial video *4851* and made a sculpture of a hand giving the middle finger as a part of his (*) *Study of Perspective*. In 2011, the Tate Museum hung a sign requesting the release from prison of that artist from this country who also created the exhibit *Sunflower Seeds*. That artist from this country helped design a steel stadium known as the Bird’s Nest for the 2008 Summer Olympics. For 10 points, name this home country of**

Ai Weiwei [“eye way-way”].

ANSWER: The People’s Republic of China [or PRC or Zhōngguó or Zhōnghuá Rénmín Gònghéguó]

<Beni Keown, Other Fine Arts>

19. **Perturbations of these things may cause two parameters to periodically exchange, with the critical point having one parameter stably equal to the arccosine of the square root of three-fifths, in an effect partly named for Lidov. The namesake parameters that uniquely define one of these things can be converted to and from Cartesian state vectors. A transition between two of these things can be done with only two impulses in a procedure that often has the lowest delta-v, a (*) Hohmann transfer. Their defining parameters include the true anomaly and the argument of periapsis. A conserved quantity of one type of these things is the Lagrange-Runge-Lenz vector. In one type of these things, a line sweeps out equal areas in equal times according to the second of three laws. For 10 points, name this system described by Kepler's laws.**

ANSWER: orbits [or two-body problem; or n-body system where n is any integer greater than or equal to 2; before "Kepler", accept Kepler problem; prompt on central-force problem; do NOT accept or prompt on "orbitals"]
<Gerhardt Hinkle, Physics>

20. **Prohibiting immigrants from this modern-day country was the near-exclusive goal of Canada's continuous journey regulation. A 1917 gun running trial in San Francisco tried immigrants from this country. Immigrants from this country were forced to return after the Komagata Maru passenger ship was denied entrance to Vancouver. After being kicked off a train in Pietermaritzburg, a person from this country created a (*) South African commune based on correspondence with Leo Tolstoy. Uganda lost almost its entire economy when people from this country were exiled by Idi Amin in the 1970s. The diaspora of people from this country make up a plurality of the population in Fiji where they moved to work on British sugar plantations in the 1800s. For 10 points, name this country whose independence protests involved the idea of satyagraha coined by Mahatma Gandhi.**

ANSWER: India [accept Bharat; accept Pakistan; accept Bangladesh; accept Burma; accept Myanmar; prompt on the British Raj]
<Gerhardt Hinkle, World History>

1. The opening of this book addresses the reader as an “ugly” traveler, who is not quite able to realize that “they do not like me.” For 10 points each:

[10h] Name this long work of creative nonfiction by Jamaica Kincaid, which critiques the effects of tourism on her home country of Antigua.

ANSWER: **A Small Place**

[10e] Kincaid resigned from this magazine after a guest editorial appearance by Rosseane Barr. This magazine published Shirley Jackson’s story “The Lottery”

ANSWER: **The New Yorker**

[10m] *The New Yorker* serialized a Kincaid novel about a West Indian au pair with this first name. A character with this first name tours Florence with Miss Bartlett in *A Room With a View*.

ANSWER: **Lucy** [or **Lucy** Honeychurch]

<Henry Atkins, World Literature>

2. Answer some questions about the pre-Kool-Aid career of Peoples Temple leader Jim Jones, for 10 points each:

[10m] Jones adopted several nonwhite children and referred to his family as one of these phenomena. Conservative Christians often attempt to “reclaim” this phenomenon as a symbol of the Noachide covenant rather than a more progressive modern-day usage.

ANSWER: **rainbow**

[10e] To avoid overtly endorsing communism, Jones referred to a communal lifestyle as “living” this book of the Bible. This book, which directly follows the four Gospels, describes the founding of the church after Jesus’s death.

ANSWER: **Acts** of the Apostles

[10h] Jones claimed to be a reincarnation of this Black spiritual leader who himself claimed to be God and founded the International Peace Mission.

ANSWER: Father **Divine** [or Reverend M. J. **Divine**]

<Conor Thompson, Religion>

3. Raila Odinga backed the clearance of this city’s Kibera slum, which a 2012 *Economist* article called “the most entrepreneurial place on the planet.” For 10 points each:

[10m] Name this African city whose urban underclass speaks the creole Sheng.

ANSWER: **Nairobi**

[10e] Nairobi is the capital of this East African country.

ANSWER: **Kenya**

[10h] This ethnicity of Barack Obama Sr. and Odinga Odinga forms a plurality of the Kibera population.

Traditionally, widows of this ethnicity were cleansed of impurity by having sex with a “cleanser” without a condom.

ANSWER: **Luo** people

<Vishal Puppala, Other>

4. These devices contain an undulator or wiggler, which is a periodic magnetic field that holds the gain medium, which can be tuned to change the output wavelength. For 10 points each:

[10h] Name this device that produces a coherent beam of photons from a standing wave of negatively charged particles.

ANSWER: **free electron laser** [or **FEL**]

[10m] An FEL is an example of a light source that uses this kind of radiation, which is emitted when relativistic charged particles accelerate perpendicular to their velocity.

ANSWER: **synchrotron** radiation

[10e] A variation of the Larmor formula is used to calculate this quantity for synchrotron radiation or any other charged particle in motion. This quantity is also equal to work done over time.

ANSWER: **power**

<Eric Mukherjee, Physics>

5. Daisy Bates was attacked in this state during its “Lost Year” in which a referendum closed all of the schools in its capital to prevent integration. For 10 points each:

[10e] Name this state whose Governor Orval Faubus used the National Guard in an attempt to bar nine Black students from attending its Little Rock Central High School.

ANSWER: **Arkansas** [or **AR**]

[10h] Black sharecroppers at a meeting of the Progressive Farmers and Household Union of America were attacked in this 1919 massacre in Arkansas. The case *Moore v. Dempsey* concerned mob-dominated trials after this event.

ANSWER: **Elaine** massacre [or **Elaine** Race Riots]

[10m] The NAACP sent Walter F. White to investigate the Elaine massacre, where he published his findings in this magazine. W.E.B Du Bois founded and served as the first editor of this official magazine of the NAACP.

ANSWER: *The **Crisis***

<Vikshar Athreya, American History>

6. The Solovay model rejects the axiom of choice and assumes the existence of an inaccessible cardinal so that all subsets of the real numbers have this property. For 10 points each:

[10h] Name this property notably lacked by Vitali sets, which are maximal subsets of the unit interval such that the distance between any two points is irrational.

ANSWER: Lebesgue **measurable** [or word forms]

[10m] All sets named after this mathematician are Lebesgue measurable. This man’s namesake sigma-algebra comprises the smallest sigma-algebra in a given space that contains all open sets.

ANSWER: Émile **Borel** [or **Borel** sets; or **Borel** algebra; or **Borel** sigma-algebra]

[10e] The Lebesgue measure is used in a definition of this operation that is more powerful than the Riemann definition. According to the fundamental theorem of calculus, this operation is the opposite of differentiation.

ANSWER: **integration** [or word forms such as the **integral**; prompt on antidifferentiation or antiderivative]

<David Bass, Other Science>

7. This ruler appointed a commoner to live the kingly life in his place while he hid from evil spirits, calling himself “The Farmer.” For 10 points each:

[10h] Name this father of Ashurbanipal who conquered Egypt. This ruler rebuilt Babylon after his father Sennacherib destroyed it.

ANSWER: **Esarhaddon**

[10m] After his conquest of Babylon, Sennacherib kidnapped a statue of Marduk and brought it to this city. Arda-Mulissu murdered Sennacherib in a temple in this capital of the neo-Assyrian empire.

ANSWER: **Nineveh** [or **Ninua**]

[10e] Ashurbanipal built one of these buildings in Nineveh in which the Epic of Gilgamesh was found. Along with the Great Lighthouse, Alexandria was home to a Great one of these buildings during the Ptolemaic period.

ANSWER: **Library**

<Owen Riley, Other History>

8. Brahms’s G major first piece in this genre uses themes from his art songs *Regenlied* [“RAY-gun-leet”] and *Nachklang* [“NAKH-klung”] in an example of cyclic form. For 10 points each:

[10h] Name this genre, which Brahms wrote later examples of in A major and D minor. Grieg considered his C minor third piece in this genre to have a “broader horizon” than his “Norwegian” second one in G major.

ANSWER: **violin sonata** [or **sonata for violin** and piano; or **sonata for piano** and **violin**; or **sonata for violin**; prompt on **sonata**, do NOT accept or prompt on “sonata for solo violin”]

[10m] A slow *Recitativo-Fantasia* movement forms the centerpiece of the cyclic form in this Belgian organist and composer’s massive A major violin sonata, written for the wedding of Eugène Ysaÿe [“oo-ZHEN ee-ZYE”].

ANSWER: César **Franck** (“FRONK”)

[10e] This composer’s E-flat major violin sonata contains some cyclical elements such as having a dotted rhythm followed by a triplet. This composer’s tone poems include *Ein Heldenleben* [“ine HELL-dun-lay-bun”] and *Also Sprach Zarathustra* [“ull-ZO shprakh tsah-rah-TUS-trah”].

ANSWER: **Richard Strauss** [prompt on **Strauss**]

<Chris Sims, Classical Music>

9. This poem asks “where can we find light in this never-ending shade?” and calls the 2021 Capitol attack “a force that would shatter our nation rather than share it.” For 10 points each:

[10h] Name this poem that Amanda Gorman read at the inauguration of Joe Biden.

ANSWER: “The **Hill We Climb**”

[10e] Critics compared Gorman’s performance favorably to this poet’s recitation of “The Gift Outright” at the 1961 inauguration of JFK. This New Englander also wrote “Mending Wall.”

ANSWER: Robert **Frost**

[10m] Many also compared “The Hill We Climb” to this poem, which tells its addressees to “lift up your eyes” and “lift up your hearts.” Maya Angelou read this poem at Bill Clinton’s first inauguration.

ANSWER: **“On the Pulse of Morning”**

<Henry Atkins, American Literature>

10. Francis Hutcheson linked this concept to moral goodness and believed it was a real property of an object, which we contemplate with an “internal sense.” For 10 points each:

[10m] Name this concept, which Edmund Burke contrasted with the sublime. In the *Phaedra*, Socrates claims that all men desire this concept and connects it with the good and divine.

ANSWER: **beauty**

[10e] Similar to Hutcheson, this Scottish thinker’s *Treatise on Human Nature* heavily linked beauty and ugliness with good and bad ethics. This thinker also wrote *An Enquiry Concerning Human Understanding*.

ANSWER: David **Hume**

[10h] *Aesthetica*, the text that coined the term aesthetics and developed an idea of good and bad taste, was written in this language. Another thinker using this language argued that greater appreciation of art could curb “lawless instincts” in *Letters in Aesthetic Education*.

ANSWER: **German** [or **Deutsch**] (Those thinkers are Alexander Gottlieb Baumgarten and Frederick Schiller.)

<Erik Christensen, Philosophy>

11. This artist created a portrait of Booker T. Washington in gray suit for the National Portrait Gallery. For 10 points each:

[10h] Name this student of Thomas Eakins who depicted an old man and young boy praying at a table in *The Thankful Poor*. In another painting by this artist, a boy sits on what is believed to be his grandfather’s lap to receive a music lesson.

ANSWER: Henry Ossawa **Tanner** (The second painting is *The Banjo Lesson*.)

[10m] Another Tanner painting depicts an extremely illuminated version of this scene. Fra Angelico depicted the figure on the right side of this religious scene with her arms crossed in three depictions of it.

ANSWER: The **Annunciation** [or **Annunciation** to the Blessed Virgin Mary; or **Annunciation** of Our Lady; or **Annunciation** of the Lord]

[10e] Tanner’s painting *The Thankful Poor* depicts a boy and his grandfather praying before a meal, similar to this painter’s scene of a family gathering around a lowered turkey as part of his Four Freedoms series for the Saturday Evening Post.

ANSWER: Norman **Rockwell**

<Ganon Evans, Painting/Sculpture>

12. In this novel, a character who lives in a mountain for seven years realizes that he does not produce any scent. For 10 points each,

[10h] Name this novel by Patrick Süskind about Jean-Patrick Grenouille [“gren-uh-wee”], a man who murders a series of young women in order to capture their scents.

ANSWER: **Perfume: The Story of a Murderer** [or *Das **Parfum**: Die Geschichte eines Mörders*]

[10m] This author’s short story “The Name, The Nose” features a prehistoric man and a musician who smells the dead body of a woman. In a short story by this author, Qfwfq [“quiff-fixs”] talks about how people used to jump between the Earth and moon.

ANSWER: Italo **Calvino**

[10e] In this French play by Edmond Rostand, a large-nosed knight helps the inarticulate Christian woo Roxane.

ANSWER: **Cyrano de Bergerac**

<Andrew Hanna, European Literature>

13. The preface of one book with this title describes the difficulty of making “King Lear” seem like “Cinderella.” For 10 points each:

[10m] Name that book, which is often printed with pen-and-ink illustrations by Steele Savage. Bulfinch’s book with this title is divided into “The Age of Fable” and “The Age of Chivalry.”

ANSWER: **Mythology** [or Bulfinch’s **Mythology**; accept, but DO NOT REVEAL, Edith Hamilton’s **Mythology**]

[10h] This classical scholar of *The Greek Way* and *The Roman Way* discusses how the humanist Greeks were the first who “made their gods in their own image” in the preface to her *Mythology*.

ANSWER: Edith **Hamilton**

[10e] James Frazer titled this work of comparative mythology after an object Aeneas uses to descend into the underworld. It compares Greek myths of dying kings and human sacrifice to modern practices.

ANSWER: *The **Golden Bough***

<Jaimie Carlson, Mythology>

14. The story of the maiden Theodora and other cultural histories of these people appear in the books of Chilam Balam. For 10 points each:

[10e] Name these people who fought the Caste War for greater autonomy over the Yucatán peninsula. These people abandoned the city of Chichen Itza during their postclassical period.

ANSWER: **Mayans**

[10m] After their defeat at Potonchan, the Maya gifted 20 women including this Nahua slave to Hernan Cortés. This woman served as a translator during Cortés’ conquest of the Aztecs..

ANSWER: La **Malinche** [or **Malintzin**; or Doña **Marina**; or “The Sons of La **Malinche**”]

[10h] Glyphs in the recently discovered tomb of Lady K’abel, a military leader of El Peru-Waka, revealed she is a member of the “Snake Lord” dynasty of this other city. This rival city of Tikal created extensive snake glyphs to mark their territory.

ANSWER: **Calakmul**

<Vikshar Athreya, World History>

15. Answer some questions about chirality in organic chemistry, for 10 points each:

[10e] Chiral centers in organic molecules usually consist of a carbon atom bonded to four different groups, creating this geometry. In this geometry, the bond angle is about 109 degrees.

ANSWER: **tetrahedral**

[10m] Compounds with two stereocenters and a mirror plane between them are given this designation. One-two-substituted cyclohexanes have this designation.

ANSWER: **meso** compound

[10h] This type of chirality occurs due to twisting of the molecule in three dimensions. Calixarenes with an X·X·Y·Z or W·X·Y·Z substitution pattern have this property.

ANSWER: **inherent** chirality

<Eric Mukherjee, Chemistry>

16. In the 13th century, these events took place six times annually, lasting six weeks each and rotating between the towns of Bar-sur-Aube, Lagny, Provins and Troyes. For 10 points each:

[10h] Name these events whose attendees were granted the royal right to safe passage under Phillip Augustus.

ANSWER: **Champagne fairs** [prompt on fairs or trade fairs]

[10m] This commodity came south to the Champagne fairs to be traded across Europe. Communes like Ghent and Bruges grew wealthy from producing this good from raw materials from England and Provins.

ANSWER: **cloth** [accept textiles or clothes or linen or wool]

[10e] The decline of the Champagne trade fairs led to greater importance of Cologne, a center of this trade league which dominated trade in Northern Europe for centuries.

ANSWER: **Hanseatic** League [or **Hansa**]

<Erik Christensen, European History>

17. After a chapter about small cities titled “Local Society,” this book discusses the advent of the highly curated New York Social Register in a chapter titled “Metropolitan 400.” For 10 points each:

[10m] Name this book, which describes Chief Executives, Celebrities, and the Political Directorate as parts of the title group.

ANSWER: *The **Power Elite***

[10e] C. Wright Mills’ *The Power Elite* identifies the power of this institution in American society. In his farewell address, Dwight Eisenhower warned about a self-reinforcing complex of this institution and certain industries.

ANSWER: the American **military** [accept individual parts of the Armed Forces like the U.S. **Army**; or **Navy**; or **Air Force**, etc.]

[10h] In the chapter “Metropolitan 400,” Mills discusses how this thinker “seems to confuse aristocratic and bourgeois traits.” This thinker identified the disdain for women’s work as an element of “higher barbarian culture.”

ANSWER: Thorstein **Veblen**

<Erik Christensen, Social Science>

18. In a story by this author, the Marquis presses a bloody key into the forehead of his wife after he returns home early from a business trip. For 10 points each:

[10m] Name this author who included that retelling of the Bluebeard story as well as “The Erl-King” in her collection *The Bloody Chamber*. She also wrote about Sophie Fevvers in her novel *Nights at the Circus*.

ANSWER: Angela **Carter** [or Angela Olive **Pearce**; or Angela Olive **Stalker**]

[10e] This author adapted a Brothers Grimm fairytale similar to Bluebeard for her novel *The Robber Bride*. This Canadian is more famous for writing *The Handmaid’s Tale*.

ANSWER: Margaret **Atwood**

[10h] This British-Nigerian author adapted the Snow White story for a novel about racial passing titled *Boy, Snow, Bird*. This author also wrote the short story collection *What Is Not Yours Is Not Yours*.

ANSWER: Helen **Oyeyemi**

<Chandler West, British Literature>

19. A book titled for this concept describes the “simultaneous recognition...of the significance of an event as well as of a precise organization of forms which give that event its proper expression.” For 10 points each:

[10h] Name this concept from street photography, which focuses on the exact point at which to take a picture. It was popularized by a photographer who captured a man jumping over a puddle at a railway station.

ANSWER: the **decisive moment**

[10e] *The Decisive Moment* was written by Henri Cartier-Bresson, who also photographed this Indian independence leader at Birla House hours before his assassination.

ANSWER: Mohandas Karamchand **Gandhi** [or Mahatma **Gandhi**; prompt on **Mahatma**]

[10m] This much-earlier French photographer depicted a man getting boots polished in *View of the Boulevard du Temple*, despite the exposure lasting for minutes. He lends his name to the earliest widely-used photographic image.

ANSWER: Louis-Jacques-Mandé **Daguerre** [or **daguerreotype**]

<Michael Borecki, Other Fine Arts>

20. The “ghost of competition present” and the “ghost of competition past” can both affect this process. For 10 points each:

[10m] Name this process by which two organisms coexist despite the competitive exclusion principle. It has been theorized that the varying temperature ranges of Anole lizards in the Caribbean is a result of this process.

ANSWER: **niche partitioning** [or **niche differentiation**; or **niche segregation**; or **niche separation**]

[10h] In contrast to niche partitioning, this hypothesis proposes that tree diversity in tropical rainforests is controlled through specialized predators which prevent overpopulation of particular tree species.

ANSWER: **Janzen-Connell** hypothesis

[10e] The Janzen-Connell hypothesis and niche partitioning are both used to explain this quantity when considering species that compete. Tropical rainforests are very high in this quantity, which can be measured by species richness.

ANSWER: **biodiversity**

<Vikshar Athreya, Biology>