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Collaboration vIa Network (MRNA VACCINE)

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Packet 8: "I buzzed too fast and my screen crashed"

1. In a short story by this author, a man who is twice seen lying on a bed "with all of his clothes on" tells another character "There ain't anything to do now." In a one page long short story by this author, a soldier who is rejected by Luz catches gonorrhoea in the back of a taxi. In a memoir by this author, a man who is described as having "the face of a frog" watches (*) Ezra Pound and the narrator as they box. This author supposedly wrote a six word short story to win a bet with friends; that story is "For sale: baby shoes, never worn." This author wrote many stories about Nick Adams including "The Killers." In a novel by this author, a former Princeton boxing champion travels to Spain with Jake Barnes. For 10 points, name this author of *The Sun Also Rises*.

ANSWER: Ernest Hemingway (The one page short story is "A Very Short Story.")
<Andrew Hanna, American Literature>

2. During this decade, newspapers like the avant-garde *International Times* and the socialist *Black Dwarf* were first published. A study of a conflict that [emphasize] *began* in this decade led Stanley Cohen to coin the term "moral panic." During this decade, a sensationalized series of fights sometimes called the "Second Battle of Hastings" broke out in resort towns on the English South Coast. Jean Shrimpton was an icon of a lively fashion and music scene during this decade, which was part of a greater youth cultural movement in (*) "Swinging London." Censorship-avoiding pirate radio stations in the U.K. first emerged during this decade, which birthed the rival sub-cultures of mods and the rockers. For 10 points, name this decade in which British cultural influence expanded through the musical "British Invasion."

ANSWER: 1960s [prompt on just the 60s]
<Erik Christensen, European History>

3. This thinker claimed that he would teach anyone who offered him a dried bundle of meat. Later philosophers struggled to properly define this thinker's ideas on reading about nature and society called the "investigation of things." A follower of this thinker wrote ten chapters of commentary to create the book of (*) *Great Learning*. This thinker originated the idea that social order is troubled by using names that do not reflect the "truth of things," which was solvable with the rectification of names. In a system developed by this thinker, one's "humaneness" is endowed by heaven, or *tian*, and espoused a respect for well-ordered rituals and elders called *li*. For 10 points, name this Chinese thinker whose teachings are compiled in the Five Classics and the Analects.

ANSWER: Confucius [or Kǒng Fūzǐ; or Kǒngzǐ; or Master Kong]
<Erik Christensen, Philosophy>

4. The change in this quantity with respect to another is compared to an ideal system by the Ostwald efficiency factor. Gustave Eiffel noted that a dimensionless quantity that characterizes this force suddenly drops at high Reynolds number, which is called its namesake crisis. In the transonic regime, the “wave” version of this force is minimized by the Sears-Haack body. For an inviscid and incompressible flow, this quantity drops to zero at constant velocity per (*) d’Alembert’s paradox. For a spherical object, its magnitude is equal to six pi times viscosity times radius times the square of velocity according to Stokes law, which is used to calculate the terminal velocity of a falling object. For 10 points, name this force that points the opposite direction of thrust, which opposes the motion of an object through a fluid.

ANSWER: drag [prompt on friction]

<Eric Mukherjee, Physics>

5. A photographer quipped “[this artist] has shown us his moon” in a cartoon responding to a painting by this artist in which a falling towel reveals a woman’s behind. The effects of the 1848 revolution on this artist are considered in T.J. Clark’s *Image of the People*. Jacques Lacan was the last private owner of a painting by this artist who depicted himself staring at the viewer while running both hands through his hair in a self-portrait as (*) *The Desperate Man*. A painting by this artist is hypothesized to depict Joanna Hiffernan’s exposed torso and vulva. A white dog turns its head away from the central scene in a painting by this artist which depicts a man holding a crucifix behind a black-robed priest at his uncle’s funeral. For 10 points, name this French Realist artist of *The Origin of the World* and *A Burial at Ornans*.

ANSWER: Gustave Courbet [or Jean Désiré Gustave Courbet] (The photographer mentioned in the first sentence is Nadar; the painting critiqued is *The Bathers*.)

<Chandler West, Painting/Sculpture>

6. A history of this empire contains a prophecy declaring the founder of the Massina state to be the Mahdi. Nehemia Levitzion argued that a copy of a history of this empire, dubbed “Manuscript C,” was forged by Shehu Amadu. The supposedly 125-year old Mahmud Kati is attributed an account of this empire’s history named the Chronicle of the Seeker, or the *Tarikh al-fattash*. That chronicle was commissioned by this empire’s ruler (*) Dawud, who fought over the salt mines of Taghaza with Morocco. The earlier hajj of Mansa Musa was plagiarized for the account of the pilgrimage of this empire’s ruler Aski Muhammad, the successor of Sonni Ali. For 10 points, name this West African empire, ruled from Gao, which supplanted Mali.

ANSWER: Songhai Empire

<Owen Riley, Other History>

7. Amaryll Chanady’s 1985 book on this term names “authorial reticence” as one of its key characteristics. A literary movement seeking to move away from writing described by this two-word term spawned from a 1996 anthology edited by Alberto Fuguet [“foo-get”]. Angel Flores created the first definition of this term in English while tracing its origins to the collection *A Universal History of Infamy*. In the introduction to (*) *The Kingdom of this World*, Alejo Carpentier coined a phrase often conflated with this term; this term later became associated with novels like *The House of the Spirits* and *One Hundred Years of Solitude*. For 10 points, name this genre associated with Latin American literature that combines fantastical events and mundane settings.

ANSWER: magical realism [or magic real; or realismo mágico; or marvelous realism; or lo real maravilloso; do NOT accept or prompt on “realism”] (The 1996 anthology is titled *McOndo*.)

<Henry Atkins, World Literature>

8. Anthropologist Anna Roosevelt has argued that an island in this natural region was home to a sophisticated mound building agricultural civilization. A community in this region lives in oval-shaped communal villages called *shabono*. Farming communities in this region added charcoal, compost, and pottery to create fertile “terra preta” soil. Betty Meggers called this natural region a “counterfeit paradise” because of the low health of its soil. The controversial book (*) *Darkness in El Dorado* claims that researchers “devastated” this region and encouraged violence by trading metal weapons. That book also criticizes fieldwork by Napoleon Chagnon, who describes how a tribe in this region who practices slash-and-burn horticulture lives in constant war. For 10 points, name this natural region that is home to tribes like the Yanomami and Piraha in South America.

ANSWER: Amazon rainforest [or Amazonia, accept Marajo]

<Erik Christensen, Social Science>

9. Members of this religious tradition are sometimes referred to using a term that literally translates to “desirous ones.” Followers of this tradition originated the idea of the Insan-i Kamil, or the “Perfected Man” who heads a hierarchy of saints who uphold the world order. Followers of this tradition have a “silsila” forming a chain of teachers back to Muhammad, and may be organized into a “tariqa” or order. Many followers of this tradition engage in highly ritualized forms of (*) *dhikr*, a form of meditation or repetition of words to aid in contemplating God. A 13th century poet who wrote the *Spiritual Couplets* inspired the Mevlevi Order of this tradition, which includes whirling dervishes. For 10 points, the poetry of Rumi was inspired by what tradition of Islamic mysticism?

ANSWER: Sufism [or Tasawwuf; prompt on more general answers like Islam or Islamic mysticism before read]

<Lia Rathburn, Religion>

10. In *Arabidopsis*, the gene *CYS-Cone* codes for an enzyme that removes this compound from the organism. That protein performs a similar function to the protein coded by the mammalian *M-P-S-T* gene. A greenish-blue result after adding HCl [“H-C-L”] in the Lee-Jones test indicates the presence of this compound. The glucosides linamarin and lotaustralin [“lot-aus-TRAHL-in”], found in cassava, degrade into this compound in the G-I tract. Sulfanegen removes this compound from the bloodstream by complexing it in its thio- derivative and could serve as a substitute for the commonly used hydroxo-cobalamin. This compound binds to (*) cytochrome c oxidase with far greater affinity than oxygen. Overexposure to this compound can be seen in individuals who consume large amounts of apple seeds or bitter almonds. For 10 points, name this compound, the simplest nitrile, with formula CN-minus.

ANSWER: cyanide [or CN⁻ before mentioned; or HCN]

<Andrew Hanna, Biology>

11. This state’s marketing firm of Wieden and Kennedy created a slogan borrowed from the last words of murderer Gary Gilmore for a highly successful company in this state. In this state, Bill Bowerman used his wife’s waffle iron to create products later designed by Tinker Hatfield. A runner in this state wore a tee shirt with a stop sign. That running-boom era prodigy died in a car crash in this state after setting almost every American-middle distance record. Doping and abuse allegations shut down Alberto (*) Salazar’s distance-running project in this state, which was located at a university that hosts the Prefontaine Classic. The Vaporfly and the Air Max are made by a company in this state founded by Phil Knight. For 10 points, name this state home to Nike and the city of Eugene.

ANSWER: Oregon

<Henry Atkins, Other>

12. In Japanese folklore, this phenomenon is said to cause rice plants to go to seed, so it's given a name meaning "rice plant's wife." Eight parts of Izanami's rotting corpse become gods of this phenomenon that chase Izanagi out of Yomi. A youkai embodying this phenomenon sleeps in people's navels. That creature accompanies a god of this phenomenon who has a circle of tomoe ["toh-moh-eh"]-emblazoned (*) drums and is paired with the bag-carrying god Fuujin. Either seafoam or this phenomenon is used to kill Vritra by a god of this phenomenon. In Hinduism and Buddhism, this phenomenon is identified with diamonds as a metaphor for cutting through illusion; both are called vajra. The Hindu god of this phenomenon rides a white elephant and lives in a palace atop Mount Meru as the ruler of the devas. For 10 points, name this meteorological phenomenon that is embodied by Raijin and is the weapon of Indra.

ANSWER: lightning [or thunderbolts; or inazuma; or vajra before mentioned; accept thunder or kaminari; accept raiden; accept rakurai; prompt on weather or storms but do not accept or prompt on things like "rain" or "wind"]

<Gerhardt Hinkle, Mythology>

13. A leader of this country hung red lanterns to ward off a scarlet fever epidemic instead of buying vaccines. Alexander Sedgwick's book *Coffeeland* describes conditions in this country that precipitated a Feliciano Analed revolt of coffee workers that was put down by Maximiliano Hernández Martínez. The Reagan administration purportedly tried to cover up the murders of a group of American missionaries in this country like the Maryknoll sisters. This country's native Pipil people were almost eradicated in "La Matanza." This country's civil war pitted a liberation front named for (*) Farabundo Martí against the ARENA party, and was precipitated by the killing of Archbishop Oscar Romero. For 10 points, name this Central American country whose unstable politics has led to the rise of gangs like MS-13 and which fought Honduras in the Soccer War.

ANSWER: Republic of El Salvador [or Republica de El Salvador]

<Vishal Puppala, World History>

14. The functional equation relating L of s , χ and L of one minus s , χ -bar has a factor named for this mathematician; those sums have absolute value equal to the square root of the modulus for primitive χ . Using cyclotomic fields, this mathematician proved that integers that are the product of a power of two and distinct Fermat primes have a certain property. This mathematician also found six different proofs of quadratic reciprocity. The set of complex numbers with (*) integer real and imaginary parts is named for this mathematician. This mathematician characterized the regular polygons constructible with compass and straightedge and found a construction of a regular 17-gon. In elementary school, this mathematician reportedly found how to quickly add the integers from one to one hundred. For 10 points, name this namesake of the normal distribution.

ANSWER: (Johann) Carl Friedrich Gauss [or Gauss sums; or Gaussian sums; or Gaussian integers; or Gaussian distribution]

<Gerhardt Hinkle, Other Science>

15. This poet's "bedspread" is the title of a fictional biography of him by Daisy Dunn. Algernon Swinburne opens a poem addressed to this author by calling him "my brother." Poems five and six in "The Forest" by Ben Jonson draw from a poem by this author in which he values the "rumors of the old men" to be "worth just one penny." That poem is addressed to a figure from whom this author demands "a thousand (*) kisses, then a hundred, then another thousand." In another poem, this author attempts to "speak, though in vain, to your silent ashes." This poet, who wrote about his lover's sparrow in another poem, addressed his dead brother with the lines "Hail and Farewell," or "Ave Atque Vale." For 10 points, name this Roman poet who wrote many love poems to Lesbia.

ANSWER: Gaius Valerius Catullus

<Vikshar Athreya, European Literature>

16. A fashion designer with this first name dressed the drag queen Marcia Pantera and designed skull prints that gained popularity among his country's youth rebel culture; that designer's surname is Herchcovitch. Diet Prada aired Owen Mooney's sexual assault allegations against another designer with this first name who succeeded Nicolas Ghesquière ["ghess-kiare"] at Balenciaga. A hologram of (*) Kate Moss used in a runway show by a designer with this first name was revived for the exhibition "Savage Beauty." Sarah Burton presented the unfinished collection "Angels and Demons" after a designer with this first name committed suicide in 2010. For 10 points, give this first name shared by Chinese American designer Wang and British designer McQueen.

ANSWER: Alexander [or Alexandre; or Alexandre Herchcovitch; or Alexander Wang; or Alexander McQueen]
<Bryanna Shao, Other Fine Arts>

17. The financier Ralph Baggaley backed an invention by this man which was synchronized using the quick-action triple valve. This man invented the reversible frog, which allowed trains to jump rails at a junction. This man paid for the appeal of the death sentence of William Kemmler, who died in a "death machine" created by Alfred P. Southwick. The failure of the Knickerbocker Trust and this man's company caused the Panic of 1907. This man won contracts for the (*) Niagara Falls hydroelectric project and for lighting the Columbian Exposition. This man's company bought out the patent for Nikola Tesla's induction motor and was the largest rival of General Electric. For 10 points, name this inventor of the air brake who promoted alternating current against Thomas Edison.

ANSWER: George Westinghouse Jr. [or Westinghouse Electric Corporation]
<Eric Mukherjee, American History>

18. A set of variations on this work by Vladimir Horowitz is based on a theme that opens with the motif "grace note A sharp, B" repeated three times. Rodion Shchedrin wrote a ballet based on this work that is scored for string orchestra and percussion. The film *Humoresque* includes a violin showpiece based on this work written by Franz Waxman. This work's *aragonaise* is featured in the first movement of a (*) "fantasy" for violin written by Pablo de Sarasate. A Prosper Mérimée novel inspired this opera, which includes an aria that begins with a descending chromatic scale starting on D. That aria is sung by this opera's title mezzo-soprano character in which she declares that love is like a "rebellious bird." For 10 points, name this Georges Bizet opera about a Spanish Roma woman.

ANSWER: Carmen
<Owen Riley, Classical Music>

19. One of these events titles a manuscript that a monk claimed to have received firsthand from the Irish knight Tundale. A discussion of these events opens a poem in which the speaker recounts the wrongs of Aeneas from a brass tablet. Eight of these events broken into twenty *passi* structure a poem in which the speaker seeks Dowel ["do well"], Dobet ["do bet"], and Dobest ["do best"]. In an Anglo-Saxon poem titled for one of these events, the speaker talks with the (*) cross on which Jesus was crucified. *The House of Fame* and *Piers Plowman* exemplify a medieval genre of poetry in which experiencing these events bestows allegorical wisdom. For 10 points, what sort of nightly event titles a play in which Nick Bottom gets a donkey's head from Puck?

ANSWER: dreams [or visions; or *The Vision of Tundale*; or "The Dream of the Rood"; or *A Midsummer Night's Dream*; prompt on falling asleep and equivalents]
<Henry Atkins, British Literature>

20. A negatively-charged covalent cubic lattice of this element can be stabilized by deca-methylferrocenium cations. Hydrogen peroxide causes oscillations between this element and its oxyanion in the Bray-Liebhafsky ["Bray lee-eb-HAFF-ski"] reaction, the first chemical oscillator found in stirred homogeneous solution. Using this element to dope polyacetylene generates a prototypical conducting polymer. In one reaction, a molecule containing this element accepts two electrons from (*) thio-sulfate. The water-solubility of this element's pure form is improved by adding anions of this element, which causes the formation of a linear triatomic anion. This element is used in a namesake clock reaction in which a delayed color change is caused by this element's reaction with starch. For 10 points, name this element that sublimates to give a purple vapor, the heaviest stable halogen.

ANSWER: **iodine** [or **I**]

<Gerhardt Hinkle, Chemistry>

1. In the early part of this century, women readers and writers dominated the prose genre of Amatory Fiction. For 10 points each:

[10m] Name this century, during which Eliza Haywood and Delarivier Manley became literary celebrities. Ian Watt's *The Rise of the Novel* analyzes three writers from this century, including the author of *Moll Flanders*.

ANSWER: **18th** century [or **1700s**]

[10h] Haywood and Manley made up the "fair triumvirate of wit" along with this author of *The Fair Jilt*. One of this author's characters throws a bit of his own throat at a man who finds him over the body of Imoinda.

ANSWER: Aphra **Behn** (The second clue refers to *Oroonoko*.)

[10e] Eliza Haywood so dominated the novel market that this writer satirized her as "Mrs. Novel" in *The Author's Farce*. This rival of Samuel Richardson is better known for *Shamela* and *Tom Jones*.

ANSWER: Henry **Fielding**

<Henry Atkins, British Literature>

2. This feature was originally discovered by Farman, Gardiner, and Shanklin and published in *Nature*. For 10 points each:

[10e] Name this feature over the south pole, which occurs during the spring. In this feature, the concentration of a certain substance drops below 220 Dobson units.

ANSWER: **hole** in the **ozone** layer [accept equivalents mentioning **ozone** and a **hole**]

[10m] The Montreal protocol phased out the use of these refrigerants, like Freon, that were thought to cause ozone depletion. These chemicals are heavily halogenated.

ANSWER: **HCFC** [or hydro**chlorofluorocarbons**; or **CFCs**]

[10h] These clouds over Antarctica catalyze the formation of active chlorine, leading to ozone depletion. Nacreous clouds are a subset of them.

ANSWER: **polar stratospheric** clouds [or **PSC**; prompt on partial answer]

<Eric Mukherjee, Other Science>

3. This kingdom defeated a Swedish army aided by Scottish mercenaries at the battle of Kircholm ["KEER-kholm"], despite being outnumbered four to one. For 10 points each:

[10m] Name this kingdom founded in Lublin in 1569, which Sweden would later ravage during a brutal invasion called the Deluge.

ANSWER: **Poland-Lithuania** [prompt on either country by itself]

[10h] This Polish-Lithuanian ruler and victor at Kircholm also became King of Sweden for seven years upon the death of his father John III. This ruler also led an invasion of Russia during the Time of Troubles in an attempt to become Tsar.

ANSWER: **Sigismund III** Vasa [or **Sigismund Vasa**; prompt on **Sigismund** or **Zygmunt** or **Zygmantas**]

[10e] Sigismund III signed the Treaty of Khotyn with this empire after failing to conquer Moldavia. This empire's Sultan Osman II was killed by his janissaries after he blamed them for losing to the Poles.

ANSWER: **Ottoman** Empire

<Owen Riley + Erik Christensen, European History>

4. A text named for this system was described as the first to “derive a theory of jazz harmony from the immanent laws of jazz.” For 10 points each:

[10h] Name this system that George Russell posited as the basis of tonality in a book titled for its *Chromatic Concept of Tonal Organization*. It can be made by successively stacking fifths above the tonic to give seven notes and has no avoid note.

ANSWER: **Lydian** mode [or **Lydian** scale; or **Lydian Chromatic Concept of Tonal Organization**; do NOT accept or prompt on "Mixolydian mode" or "Mixolydian scale"; do not accept or prompt on "Lydian dominant scale" or "Lydian flat-7 scale" or "Lydian augmented scale" or "Lydian sharp-5 scale" or "Lydian diminished scale" or "Lydian flat-3 scale"]

[10e] The *Lydian Chromatic Concept* established the system of jazz improvisation in which scales are associated with these things. In jazz, these things almost always have extensions like sevenths or ninths.

ANSWER: **chords** [or **chord**-scale system; or **chord** extensions]

[10m] Improvisation commonly includes this scale that’s made by just removing the dissonant notes from a major scale; like the Lydian mode, it can be made by stacking fifths above the tonic.

ANSWER: major **pentatonic** scale
<Gerhardt Hinkle, Other Fine Arts>

5. Ra dyes this substance red and tricks Sekhmet into drinking it, preventing her from destroying humanity. For 10 points each:

[10e] Name this substance. Tjenenet [“TEN-en-et”] was the goddess of this liquid, which was typically started from bread in Egyptian recipes.

ANSWER: **beer** [or **heqet**]

[10m] In this work, two female brewers send a squirrel, a marten, and a bee to fetch ingredients for a blacksmith’s wedding. A man in this work receives a glass of beer full of snakes before being resurrected with a copper rake.

ANSWER: *The **Kalevala***

[10h] This divine alewife and tavern-keeper in the *Epic of Gilgamesh* is reached via a tunnel underneath Mount Mashu. She tries in vain to dissuade Gilgamesh from his quest and tells him how to find the boatman Urshanabi.

ANSWER: **Siduri**
<Jaimie Carlson, Mythology>

6. This author described their struggle with breast cancer in their *Cancer Journals*. For 10 points each:

[10h] Name this author whose biomythography describes their decision to change their name to the Carriacou name Zami. A collection by them includes the essay “The Master’s Tools Will Never Dismantle the Master’s House.”

ANSWER: Audre **Lorde** [or Audrey Geraldine **Lorde**; or Gamba **Adisa**]

[10m] While being treated for breast cancer and never mentioning it, this author wrote about cancer as a disease of “repression” in her work *Illness as Metaphor*. This author also wrote the essay collection *On Photography*.

ANSWER: Susan **Sontag**

[10e] In his collection *Terminalia*, Daniel Menaker describes his time working in this industry before passing away from pancreatic cancer in 2020. Firms in this industry include Penguin Random House and Alfred. A Knopf.

ANSWER: book **publishing** industry [or word forms; prompt on answers mentioning **books** alone]
<Andrew Hanna, American Literature>

7. Multiple prominent book series targeted at young readers have been written by authors with this quality, such as Erin Hunter, the author of the *Warriors* series. For 10 points each:

[10m] Describe this unusual quality of writers such as Carolyn Keene. In 2021, it was revealed that Carmen Mola, a Spanish author of crime thrillers who received a million-euro prize, had this quality.

ANSWER: they are a **collective pseudonym** [accept any answer indicating that it is a **pseudonym** or **name** that is **shared** or used by **multiple people**; prompt on answers that just indicate that they are **pseudonymous**]

[10h] The collective pseudonym Luther Blissett was used by artists from this country to perpetrate several media hoaxes and publish the novel *Q*, after which they retired the pseudonym through symbolic seppuku and began writing as Wu Ming.

ANSWER: **Italy** [or **Italia**]

[10e] Nicolas Bourbaki, the collective pseudonym of a number of French members of this profession, has been writing and updating textbooks since 1939 on such subjects as real analysis, algebraic topology, and set theory.

ANSWER: **mathematicians** [prompt on **academic**, **professor**, or **thinker**]

<Conor Thompson, Other>

8. The Dancing Girl sculpture and the Pashupati seal, which may depict a man with an erect penis or a horned deity, were both found at this site. For 10 points each:

[10m] Name this site, the site of the Great Bath and potentially the earliest evidence of indoor plumbing. Unlike Harappa to the northeast, this site does not have city walls.

ANSWER: **Mohenjo-Daro**

[10e] Mohenjo-Daro and Harappa were centers of a civilization on this river, the earliest civilization in South Asia.

ANSWER: **Indus** River Valley

[10h] The earliest remains of a dock in history were found at this site in modern-day Gujarat, at the south end of the Indus Valley Civilization's influence. Seals at this site from the Persian Gulf suggest it was a key trade center.

ANSWER: **Lothal**

<Erik Christensen, Other History>

9. In the Marangoni effect, flow can occur between two liquids due to a difference in this property. For 10 points each:

[10m] Name this property which can be reduced by wetting agents. The Young-Laplace equation calculates capillary pressure differences due to this property.

ANSWER: **surface tension** [prompt on **wall tension**]

[10h] The Young-Laplace equation states that the pressure difference equals the surface tension times the difference between the reciprocal of two instances of *this quantity* along two axes.

ANSWER: **radius of curvature** [prompt on partial answer]

[10e] The Kelvin equation relates surface tension to the pressure exerted by this substance, which equals atmospheric pressure at a liquid's boiling point.

ANSWER: the **vapor** [or **vapor** pressure; or **vapor** density; prompt on **gas**]

<Vikshar Athreya, Physics>

10. A well-known use of this technique is Card and Krueger's study of minimum wage in New Jersey and Pennsylvania. For 10 points each:

[10h] Name this technique for observational panel data that relies on the parallel trends assumption. It compares change over time in "treatment" and "control" groups without a full randomized trial.

ANSWER: **difference-in-differences** [or **DID** or **diff-in-diff**]

[10e] Techniques like DID allow researchers with observational data to more confidently infer this relationship. A common maxim states that correlation does not imply this relationship.

ANSWER: **causation** [or word forms like **causality** or **causing**]

[10m] Card and Krueger's DID study is an example of this general kind of research design. In this kind of study, researchers find exogenous sources of variation in observational data, which approximate how treatments might be assigned in a lab.

ANSWER: **natural experiment** [or **quasi-experiment**]

<Henry Atkins, Social Science>

11. *Two answers required.* One of these brothers wrote an *Essay on the True Art of Playing Keyboard Instruments* while the other arranged a series of public concerts in London with Carl Friedrich Abel. For 10 points each:

[10h] Name these two brothers. One of these two brothers was the foremost composer of the "empfindsamer Stil," or "sensitive style," which contrasted with the "galant" style of the other.

ANSWER: **Carl Philipp Emanuel Bach** AND **Johann Christian Bach** [or **C.P.E. Bach** AND **J.C. Bach**, prompt on just **Bach**; don't accept or prompt on any other Bach, such as J. S. Bach]

[10e] Unlike their father J.S., who was a Baroque composer, C.P.E. and J.C. Bach were two early composers of this period of music history which included composers like Haydn and Mozart.

ANSWER: **Classical** period

[10m] C.P.E. and J.C. Bach worked on keyboard suites and cantata excerpts as part of a *Notebook* for this wife of J.S. Bach. That collection written for her includes a long-misattributed *Minuet in G Major* by Christian Petzold.

ANSWER: **Anna Magdalena** Bach [or *Notebook for **Anna Magdalena** Bach*; or *Notenbüchlein für **Anna Magdalena** Bach*; or **Anna Magdalena**'s Notebooks, prompt on partial answers]

<Aidan Fein, Classical Music>

12. A prostitute gives birth to a hideous daughter named for this concept while interned by the Japanese army. For 10 points each:

[10h] Name this concept that "is a wound" in the title of an Eka Kurniawan novel. This concept also titles a 2005 retelling of *Howard's End* centered on the Belsey and Kipps families.

ANSWER: **beauty** [or ***Beauty is a Wound***; or *On **Beauty***] (*On Beauty is* by Zadie Smith.)

[10m] Eka Kurniawan is an author from this country, also the home of Pramoedya Ananta Toer. The novel *Max Havelaar* criticized colonial extraction in this modern day country.

ANSWER: Republic of **Indonesia** (*Max Havelaar* is by Multatuli.)

[10e] A crime novel by Kurniawan follows a boy who has one of these animals living inside him, driving him to commit murder. The title character of *Life of Pi* shares a lifeboat with one of these animals named Richard Parker.

ANSWER: a **tiger** [or *Man **Tiger***]

<Henry Atkins, World Literature>

13. A self-complementary version of this viral vector was developed to facilitate transduction, which is typically rate-limited by its second strand synthesis. For 10 points each:

[10h] Name this viral vector commonly used in gene therapy and optogenetics which integrates its genome into human chromosome 19.

ANSWER: **adeno-associated virus** [or **A·A·V**; do not accept “adenovirus”]

[10m] A·A·V-based therapy for the “wet” form of this age-related condition is being developed. It causes deterioration of the central visual field and its aforementioned “wet” form is caused by neovascularization in the choroid.

ANSWER: age-related **macular degeneration** [or **A·M·D**; or **A·R·M·D**]

[10e] Glybera is an A·A·V-based therapy for LPL deficiency, a disease which can destroy this organ. This organ has both endocrine and exocrine portions, the former of which secretes insulin to control blood glucose.

ANSWER: **pancreas**

<Vishal Puppala, Biology>

14. During debates in Buddhist monastery courtyards, standing Challengers perform a loud version of this action at the end of their questions, which seated Defenders accept with an open hand. For 10 points each:

[10e] Name this action. A popular koan asks what the sound of one hand performing this action is.

ANSWER: **clapping** [or **ovation**]

[10h] Thích Nhất Hạnh [“tick nyut hun”] popularized flapping hands to indicate applause during Buddhist debates. His theory of “Enlightened Buddhism” is practiced as part of a “Village Tradition” named after these fruits which merges Mahāyāna or Theravāda traditions.

ANSWER: **plums** [or the **Plum** Village Tradition; or **mân**]

[10m] At Japanese Buddhist temples, instead of clapping after an omairi cleansing, participants use these musical instruments. Sutras during Buddhist rituals are introduced with these instruments, small examples of which named *sawari* are found at individual altars.

ANSWER: **gongs**

<Ganon Evans, Religion>

15. A 2020 Rachel Blum book argues that this faction reoriented its goals under Donald Trump after original massive gains in the 2010 Midterm Elections. For 10 points each:

[10e] Name this Republican Party faction whose low tax, small government goals were advocated for by Sarah Palin. Their name derives from Rick Santelli comparing it to a 1773 Sons of Liberty action in Boston.

ANSWER: **Tea Party**

[10m] The Tea Party supported Scott Brown’s upset in a special election for this Democratic Senator’s seat in 2010. In 1969, this man pleaded guilty to leaving the scene of a drunk driving accident that killed Mary Jo Kopechne.

ANSWER: **Ted Kennedy** [both underlined portions required; or **Edward Kennedy**; prompt on **Kennedy**]

[10h] This Tea Party advocate promoted the Taxpayer March on Washington as part of his 9/12 Project to promote a “post-9/11 sense of unity.” This activist founded the media company *The Blaze*.

ANSWER: Glenn **Beck**

<Liam Thompson, American History>

16. Unlike Raman spectroscopy, in which modes are active based on polarizability, modes in this form of spectroscopy are active if they have dipole moments. For 10 points each:

[10e] Name this form of spectroscopy used to determine functional groups. A “fingerprint region” can distinguish compounds in this form of spectroscopy, which uses electromagnetic radiation longer than visible light.

ANSWER: **infrared** spectroscopy [or **I-R** spectroscopy]

[10h] In molecules with this property, vibrational modes cannot be both I-R and Raman active. Xenon tetrafluoride and benzene have this property, which is possessed by linear molecules in the D-sub-infinity-h point group.

ANSWER: molecule contains an **inversion center** [or **center** of **inversion**; accept **center** of **symmetry** in place of center of inversion; or **centrosymmetric**]

[10m] A molecule with N atoms has 3N of these things. A nonlinear molecule has 3 of these for translation and 3 of these for rotation, leaving 3N-6 vibrational modes.

ANSWER: **degrees** of **freedom** [or **DoF**]

<Vikshar Athreya, Chemistry>

17. A sawed-off shotgun was shot at a painting which depicts St. Anne performing this action while surrounded by two babies. For 10 points each:

[10m] Identify this physical action performed by a red-robed Plato while carrying a copy of the Timaeus and talking to Aristotle in Raphael’s *The School of Athens*. A description is acceptable.

ANSWER: **pointing up** [both underlined parts required; prompt on partial answers; accept the action being performed physically]

[10e] A depiction of Plato resembling this artist points upwards in Raphael’s *The School of Athens*. Thomas points upwards next to Jesus with outstretched hands in this artist’s fresco *The Last Supper*.

ANSWER: **Leonardo** da Vinci [or Leonardo **da Vinci**]

[10h] A dark portrait of a man with this name by Leonardo depicts him grasping a reed cross and pointing upwards. Scholars debate whether a feminine depiction of another man with this name to the right of Jesus in *The Last Supper* is actually Mary Magdalene.

ANSWER: **John** [or St. **John**; or St. **John** the Baptist]

<Ganon Evans, Painting/Sculpture>

18. A character in a novel by this author inadvertently confuses the name of his *converso* classmate with that of Pontius Pilate. For 10 points each:

[10h] Name this author, who wrote about the protagonist running away with Don Diego to a boarding school owned by Cabra, who starves the students, in his novel *El Buscon*.

ANSWER: Francisco de **Quevedo** [or Francisco Gómez de **Quevedo** y Santibáñez Villegas]

[10m] Quevedo was friends with this other author, who called his lover Elena Osorio “Filis” in his poems. His plays include one where every villager says, while being tortured, that a cruel commander was killed by the town of fuenteovejuna [“fwen-tay oh-vay-hoo-nah”].

ANSWER: **Lope** de Vega [or **Lope** Felix de Vega Carpio]

[10e] While attacking *culteranismo*, Quevedo wrote a book called *The Craze for Speaking* [this language]. After failing to become a courtier, Quevedo found comfort in the Stoic works of Seneca, who wrote in this language.

ANSWER: **Latin** [or *The Craze for Speaking* **Latin**; or *La culta latiniparla*]

<Vikshar Athreya, European Literature>

19. A book by this thinker argues that a universal human right must disregard personal capacity and derive from the needs of all beings. For 10 points each:

[10m] Name this thinker, who argued in a 1975 book that the capability to suffer should be the basis for rights, instead of the “speciesist” grounding in intelligence.

ANSWER: Peter **Singer**

[10e] Peter Singer’s support for animal rights is based on this ethical school’s concept of the “greatest good”. Jeremy Bentham, the founder of this school, based on pleasure and pain.

ANSWER: **utilitarianism**

[10h] Late in his career, Singer has shifted from preference utilitarianism to a utilitarianism based on this position. Singer has cited the paradox of *this position*, identified by Henry Sidgwick, to argue in favor of moral actions that are “intrinsically worthwhile”.

ANSWER: **hedonism** [accept word forms, prompt on pleasure or happiness and ask for the position that centers on pleasure]

<Erik Christensen, Philosophy>

20. Komaram Bheem led a rebellion of Gond tribals against this state, where rulers of the Asaf Jahi dynasty used *janglaat* forest officers to assert their claim to tribal land. For 10 points each:

[10h] Name this state where Qasim Rizvi founded the *Razakar* militia. Operation Polo removed its last Nizam Osman Ali Khan from power.

ANSWER: **Hyderabad** State [accept **Hyderabad** Deccan]

[10e] The Hyderabad state was eventually annexed because it refused to join either India or this Muslim-majority country. Qasim Rizvi eventually fled to this country, which was partitioned from India.

ANSWER: **Pakistan**

[10m] The Telangana rebellion pitted fighters of a party with this ideology against the Razakar militias of Hyderabad. Later in India, people with this ideology would issue the Historic Eight Documents and form Naxalite militias.

ANSWER: **communism** [or **Maoism**; or **Marxism**; or **Leninism**; prompt on **socialism**]

<Vikshar Athreya, World History>