2021 WORKSHOP: How did I never notice that your username is Santa Claus and mine is reindeer?
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Packet 12

Tossups

1. **An epidemiological analysis of this idea's spread in the Philippines used Bettencourt's SEIZ ("S-E-I-Z") model to describe the effect of the Dengvaxia ("deng-VAHK-sha") controversy. An uptick of this idea in France spurred several meta-analyses on the role of HBsAg in multiple sclerosis. A 1976 increase in the incidence of Guillain–Barré ("ghee-YANN ba-RAY") syndrome contributed to this idea, which is mainly held by women. People with this idea are described as (*)** "hesitant" and may express concern about the efficacy of Gardasil. This idea often fixates on the use of aluminum adjuvants or thimerosal. In 1998 Andrew Wakefield published a since-retracted paper promoting, for 10 points, what idea, held by individuals who do not wish themselves or their children to be immunized against disease?
ANSWER: **anti-vaccination** sentiment [accept **anti-vax** sentiment or **anti-vaxxer**s; accept **vaccine hesitancy** before "hesitant" is read; accept answers expressing the idea that **vaccines are harmful**, that the MMR **vaccine causes autism**, or that the hepatitis B **vaccine causes multiple sclerosis**; accept "immunization" in place of "vaccination" until read; prompt on medical distrust]
<KW, Biology>

2. **"Buzz" Butler's labor riots in this country led to the formation of his namesake Home Rule Party. Following the police killing of the protestor Basil Davis, students organized in this country's National Joint Action Committee led this country's Black Power Revolution. *Capitalism and Slavery* was the doctoral thesis of this country's first prime minister, who asserted that British abolitionism was primarily fueled by economic interests. This country left the (*)** West Indies Federation under the leadership of its first prime minister, Eric Williams. For 10 points, name this Caribbean country known for its oil production, where parliamentary debates in its capital of Port of Spain have erupted over economic divisions between this country's two namesake principal islands.
ANSWER: **Trinidad and Tobago** [prompt on Trinidad or Tobago]
<EL, World History>

3. **One character with this profession recalls triumphantly eating oranges while he feeds his old colleague's carp. A character with this job watches a film with his cowboy-obsessed grandson Ichiro and frequents Mrs. Kawakami's bar. The protagonist kills a man with this job in a book whose preface mentions "the rage of Caliban" seeing his face in a glass. After he kills a character with this job, a man engages in a relationship with (*)** Hetty Merton and asks Alan Campbell to destroy the corpse. Masuji Ono features in a Kazuo Ishiguro novel titled for this profession *of the Floating World*. A character with this profession introduces his muse to Lord Henry Wotton. For 10 points, name this profession of Basil Hallward, who creates the title piece in *The Picture of Dorian Gray*.
ANSWER: **artist**s [or **painter**s; accept An ***Artist** of the Floating World*; prompt on people who create propaganda]
<HG, British Literature>

4. **The energy due to anisotropies ("an-eye-SAW-truh-peez") of this quantity can be found by solving the Stoner–Wohlfarth model or by computing the sine of the angle between this quantity and the "easy axis." This quantity is isentropically decreased in a "salt pill" connected to a helium bath in a common refrigeration technique. A material's bound surface current equals the cross product of this quantity and the unit (*)** normal vector. When this quantity cannot be increased by application of an external H-field, a material is said to be

saturated. This quantity, which equals the magnetic susceptibility times the auxiliary field, is defined as the magnetic dipole moment density. For 10 points, name this magnetostatics analogue of the polarization field, symbolized M.

ANSWER: **magnetization** [or **magnetic polarization**; prompt on M until read; do not accept or prompt on "magnetic field"; do not accept or prompt on "polarization"]

<AF, Physics>

5. A leader with this name elevated Federigo II from a marquis to a duke while serving as regent of Mantua. During an earlier regency, that leader with this name negotiated for the release of Francesco Gonzaga after his capture by French king Charles VIII ("the eighth"). Along with a Marcher lord, another person with this name launched a rapid invasion of England that resulted in the murders of Hugh Despenser and King Edward II. The Treaty of Alcáçovas ("all-KAH-soo-vuss") confirmed the victory of a (*) queen with this name in a succession war against Juana la Beltraneja ("HWA-na la bel-tra-NAY-ha"). That queen of this name received the surrender of Muhammad XII Boabdil after the Siege of Granada and propagated the Alhambra Decree. For 10 points, give this name shared by the "she-wolf of France" and a ruler of Castile who married Ferdinand of Aragon.

ANSWER: **Isabella** [accept **Isabella** d'Este, **Isabella** of France, or **Isabella** I of Castile; accept **Isabel**]

<RW, European History>

6. The "art" of creating this situation is compared to "critical yeast" and "web watching" in John Paul Lederach's book *The Moral Imagination*. A journal devoted to research on this situation annually publishes the data on this situation's [emphasize] *opposite* collected at Uppsala University. The "negative" and "positive" forms of this situation were differentiated by Johan Galtung, a pioneering theorist of this situation who introduced the notion of (*) "building" this condition. An essay by Immanuel Kant foreshadowed the "democratic theory" of this situation. "Blue berets" use the DDR strategy in missions to enforce this situation. Juan Manuel Santos and Abiy Ahmed have received prizes for their efforts to create, for 10 points, what situation, the absence of armed conflict?

ANSWER: **peace** [accept **nonviolence**; accept equivalents to the **end** of, **resolution** of, or **absence** of **conflict**, civil **war**, or **violence**; accept terms like **peace**building or **peace**keeping]

<JB, Social Science>

7. This poet repeated "give the engines room!" in a poem accompanied by the sounds of "fire-engines pumping." This poet called Death "an elephant, / Torch-eyed and horrible" in a poem partially set to the tune of the hymn "Hark, Ten Thousand Harps and Voices." Directions for an "imitation of camp-meeting racket" are part of a poem by this author where he used the (*) refrain "boomlay, boomlay, boomlay, BOOM." That poem by this author describes a river "cutting through the jungle with a golden track" and depicts the "hoodoo" of Mumbo-Jumbo. A poem about the founder of the Salvation Army by this author repeats, "are you washed in the blood of the lamb?" For 10 points, name this author of "singing poetry," such as "The Congo" and "General William Booth Enters into Heaven."

ANSWER: (Nicholas) Vachel **Lindsay**

<JVN, American Literature>

8. The powerful demon Lobhasura surrendered after merely hearing of this deity's strength from Vishnu. This god, who knocked a peacock egg down from a mango tree, later slayed the demon Sindhu in an incarnation known as Mayuresvara. In one story, this deity's mother demanded that Shani gaze fully upon him, which resulted in grievous harm. Dumplings known as (*) modaka ("MO-da-ka") are a favorite food of this god and are offered to him during his ten-day festival that begins on Chaturthi. Shiva attacked this god after he refused to allow Shiva access to Parvati while she was bathing. For 10 points, Shiva beheaded what Hindu god of wisdom who was then given the head of an elephant?

ANSWER: **Ganesh**a [or **Ganapati**; or **Vinyaka**; or **Gajanana**; accept **Mayuresvara** until read]

<KT, Religion>

9. **It's not Boeing, but in 2019, the NLRB ruled that this company could restrict its employees to wearing "small, non-distracting" union insignias. Bethany Moreton highlighted this company's Christian rhetoric of "servant leadership" in a book titled *To Serve God and* [this company]. In December 2020, the Department of Justice accused this company of violating the Controlled (*)** Substances Act hundreds of thousands of times by providing illicit opioid prescriptions. In recent years, this company has started to convert dozens of its Sam's Club stores into e-commerce fulfillment centers in order to compete with Amazon. For 10 points, name this largest company in the world by revenue, an American retailer with headquarters in Bentonville, Arkansas.
ANSWER: **Walmart**, Inc. [accept *To Serve God and **Walmart***]
<WHM, CE/Geo/Other>

10. **After listening to cellist Joseph Merk, this composer asserted that he is the "only cellist I really respect" and dedicated a "*brillante*" ("bree-YONT") piece for cello and piano to him. The trio section of a piece by this composer opens with six loud E major arpeggios that give way to a rapid left-hand ostinato with the notes E, D-sharp, C-sharp, B in octaves. This composer's Opus 40 consists of two "twin" pieces that, according to Arthur (*)** Rubinstein, each represented the "glory" and "tragedy" of this composer's home country. This composer was exiled in Paris when he wrote an A-flat major dance piece in 3/4 ("three-four") time that allegedly depicts charging cavalry. For 10 points, name this virtuoso pianist and composer of the "Military" and "Heroic" Polonaises.
ANSWER: Frédéric (François) **Chopin** [or Fryderyk (Franciszek) **Szopen**]
<JE, Auditory Arts>

11. **Paul Erlich used this country to name the "fallacy" of ignoring the environmental impact that affluent nations leave overseas. Cordon and Neary analyzed the "spending effect" caused by the "booming sector" in a model inspired by this country's discovery of natural gas reserves. Economists like Arvind Subramanian and Dambisa Moyo have argued that foreign aid causes that phenomenon, which explains the "resource curse" and is known as this country's namesake (*)** "disease." The seller sets a high price, and lowers it until a bidder accepts, in a type of auction named for this country. Modern economists have disputed Charles Mackay's account of an economic bubble in this country in which flower bulbs sold for vastly inflated prices. For 10 points, name this country where Tulipmania occurred.
ANSWER: The **Netherlands** [accept **Holland**; or **Netherland**en; accept **Netherlands** fallacy, **Dutch** disease, or **Dutch** auction]
<JB, Social Science>

12. **Many Victorian buildings that were abandoned during this event are preserved in downtown Port Townsend, Washington. Justin Raimondo claimed that *Atlas Shrugged* plagiarized from *The Driver*, a novel about a rail magnate during this event. The first protest march to Washington, D.C., occurred during this event when Jacob (*)** Coxey led his namesake "Army" to the Capitol. Banks failed after the Sherman Silver Purchase Act devalued government bonds, partly causing this event along with the failure of the Pennsylvania & Reading ("RED-ing") Railroad. For 10 points, name this economic depression that occurred during Grover Cleveland's second term.
ANSWER: **Panic of 1893**
<ZK, American History>

13. **A syndrome can be uniquely defined for bursts of these phenomena with arbitrary shifts if they lie in distinct cosets of a Galois ("gal-WAH") field. Elwyn Berlekamp applied his work on polynomial factoring to finding these phenomena in cyclic examples of Reed and Solomon's approach. If the incidence of these phenomena is less than two out of seven, then a (7,4) ("seven four") code is sufficient to eliminate them. Selectively overlapping XOR ("ex-or") operations can (*)** detect these phenomena with more robustness than a simple parity check. A non-zero Hamming distance indicates the presence of these phenomena in a message, which

can be corrected for by including redundant data or a checksum. For 10 points, noisy channels are defined by what phenomena that cause bits to take on the wrong value?

ANSWER: **error**s [accept **error** correcting, **error** detecting, **error-correcting code**s, burst **error**s, **transposition**s, or **deletion**s; accept **bit flip**s until "bit" is read; prompt on noise, interference, distortions, mistakes, or data changes]

<DB, Other Science>

14. **Sophie de Grouchy published her magnum opus as a companion to her translation of a book by this philosopher. In an example possibly inspired by *A Treatise of Human Nature*, this author argued that no one would let China be destroyed by an earthquake to save their little finger. The meta-ethical theory of the "ideal observer" popularized by Roderick Firth resembles this thinker's idea that actions are moral if they would be sympathetic to an (*)** "impartial spectator." This close friend of David Hume drew on his mentor Frances Hutcheson's ideas in a book on ethics. He wrote of the self-interest of "the butcher [and] the baker" in a book that uses a pin factory to illustrate the division of labor. For 10 points, name this author of *A Theory of Moral Sentiments* and *The Wealth of Nations*.

ANSWER: Adam **Smith** (Sophie de Grouchy's work is *Letters on Sympathy*.)

<JB, Philosophy>

15. **In 2015, François de Mazières, the mayor of Versailles, criticized a sculpture by this artist by saying that he had "slipped up" on the palace lawn. This artist, who referred to his work *Dirty Corner* as "the vagina of the queen," escalated a feud with contemporary artist Stuart Semple by posting an Instagram picture of his middle finger covered in (*)** pink dye. This artist garnered controversy after striking a deal with Surrey NanoSystems and buying exclusive rights to the "blackest black" material, Vantablack, and also installed a ten-pound concave dish in Nottingham for his artwork *Sky Mirror*. He installed a curved stainless steel sculpture in Chicago's Millennium Park that is often nicknamed for its bean-like shape. For 10 points, name this British-Indian sculptor of *Cloud Gate*.

ANSWER: Anish **Kapoor**

<FW, Visual Arts>

16. **The narrator of a story by this author compares the protagonist to a performer who shells a pound of pecans. At the end of that story by this author, the title character fakes a limp, feigns exhaustion, then disappears entirely. In a story by this author, the title character's frequent bouts of rage force a man to distribute photographs that depict him in the (*)** fortieth day of the central activity. This author created a character who shortens her whistling-like performances in a story whose alternate title suggests she is a mouse. At the end of a story by this author, a panther replaces the title performer, who almost disappears into the straw in his cage after a prolonged period of fasting. For 10 points, name this author of "Josephine the Singer" and "A Hunger Artist," who wrote about Gregor Samsa in *The Metamorphosis*.

ANSWER: Franz **Kafka**

<HG, European Literature>

17. **Despite being at war with them, the ruler Teos was forced to flee to this empire after being deposed by his brother, whereupon he was retrieved by the physician Wennefer. The pink granite Shaluf Stele was erected by a ruler of this empire, who was the first foreign ruler to construct a canal connected to the Bitter Lakes. A ruler of this empire was advised by Phanes of Halicarnassus during his victory against Psamtik III at the Battle of (*)** Pelusium. Herodotus claims that a ruler of this empire was killed after a blade pierced his thigh in the exact spot where that ruler, Cambyses II, had stabbed the Apis Bull. This empire lost Egypt to Alexander the Great shortly before its defeat at Gaugamela. For 10 points, satraps were regional governors of what empire, whose rulers include Darius I?

ANSWER: **Achaemenid** Empire [or **Persian** Empire or **Xšāça**]

<KT, Ancient History>

18. *Two answers required.* **The isochore hypothesis suggested that the distribution of these two molecules is a mosaic of very long, fairly homogeneous sections. Spontaneous deamination ("dee-am-in-ation") affects one of these molecules when they are adjacent because such regions are typically hypermethylated. It is one-fifth as likely as expected that one of these molecules will follow the other in the (*)** 5-prime direction. The increased stability of polymers that contain more of these two molecules is largely due to their higher stacking free energy, rather than their higher melting temperature. These molecules form three hydrogen bonds with each other as part of the DNA double helix. For 10 points, name these paired nucleobases that are counterparts to adenine and thymine.
ANSWER: **cytosine** AND **guanine** [accept **cytidine** AND **guanidine**; accept **guanine–cytosine** content; prompt on C AND G; prompt on CpG islands or sites, CG islands or sites, GC-content, G+C, or C+G]
<KW, Chemistry>

19. **One building in this city was designed so that its "alternation between solid and void" represents binary digits. That brutalist building in this city resembles a circuit board when viewed from one side. One building developer based in this city takes its name from the phrase "Simple Office, Home Office." Stephen Holl Architects designed a large geothermal housing complex in this city, Linked Hybrid. A recently built (*)** airport that serves this city has been nicknamed "The Starfish"; that airport, designed by Zaha Hadid Architects, is the largest in the world. A skyscraper designed by Rem Koolhaas in this city resembles a large pair of pants and is the headquarters of CCTV. For 10 points, Herzog and de Meuron designed the "Bird's Nest" Stadium for the 2008 Olympics in what city?
ANSWER: **Beijing** [or **Peking**]
<FW, Other Arts>

20. **In this novel, a look "somewhere between indifference and despair" causes Larry McCaslin to divorce an architecture student. In the final chapter of this novel, a woman who tells her lover "tomorrow" has sex with him by a river every night for two weeks and frequently refers to her children as "millstones." A boy who tries to escape to the History House in this novel is (*)** molested while attending *The Sound of Music*. In this novel, Chacko is convinced by Baby Kochamma that his sister is responsible for the drowning of Sophie Mol. A Paradise Pickles Factory worker named Velutha is beaten in this novel when his affair with Ammu is discovered. For 10 points, name this novel about the twins Rahel and Estha, written by Arundhati Roy.
ANSWER: The *God of Small Things*
<CM, World Literature>

Bonuses

1. During this regime, the Straperlo affair revealed that officials had been bribed to introduce an electronically-controlled roulette wheel. For 10 points each:
[10h] Name this regime. The Straperlo affair triggered elections in this regime that elevated the left-wing Popular Front to power over a coalition including the conservative Catholic CEDA party.
ANSWER: Second **Spanish Republic** [or Segunda **República Española**; prompt on Spain]
[10m] Among the many right-wing groups active during the Second Spanish Republic was this faction that aimed at establishing an alternative branch of the Bourbon dynasty. This faction also names a set of wars in 19th-century Spain.
ANSWER: **Carlism** [accept **Carlist**s or **Carlismo**]
[10e] The 1936 coup against the Spanish Republic started by taking control of the Spanish colony in this modern-day country, which still claims the exclaves of Ceuta ("SAY-oo-tah") and Melilla ("meh-LEE-yah") as part of its territory.
ANSWER: **Morocco** [accept Kingdom of **Morocco** or al-**Maghreb**]
<CSI, European History>

2. RESOLFT methods like ground-state depletion aim to decrease the amount of this phenomenon. For 10 points each:
[10h] Name this phenomenon, which is distributed in time to allow stochastic reconstruction of single molecules. A toroid of stimulated emission confines this phenomenon to a small area in a technique pioneered by Stefan Hell.
ANSWER: **fluorescence** [accept, but DO NOT REVEAL, **fluorescence** microscopy; prompt on light emission or electromagnetic radiation by asking "how is it produced?"]
[10e] Hell shared the 2014 Nobel Prize in Chemistry for exceeding the diffraction limit using fluorescence forms of this technique. A high-resolution form of this imaging technique uses the small de Broglie ("duh BROY") wavelength of electrons.
ANSWER: **microscopy** [or super-resolution fluorescence **microscopy**; accept electron **microscopy**, stimulated emission depletion **microscopy**, or STED **microscopy**]
[10m] PALM takes advantage of this phenomenon spontaneously occurring to reduce the number of active fluorophores. The phospholipid bilayer's fluidity can be assessed using the fluorescent recovery after this irreversible process.
ANSWER: **photobleaching** [accept fluorescent recovery after **photobleaching**; prompt on fading or FRAP]
<KW, Biology>

3. Suetonius relates that this goddess appeared before the emperor in a dream, withdrawing her protection only days before he was assassinated. For 10 points each:
[10h] Name this goddess whom Domitian regarded as his personal protector. The annual festival of Quinquatria celebrated this goddess, who is considered to be equivalent to an Etruscan goddess in a triad with Tinia and Uni.
ANSWER: **Minerva** [accept **Menvra**; do not accept or prompt on "Athena"]
[10m] Along with Jupiter and Juno, Minerva was part of a triad named for and worshipped on this Roman hill. The Sibylline Books were destroyed in the burning of the Temple of Jupiter Optimus Maximus on this hill.
ANSWER: **Capitoline** Hill [or **Capitolium**; accept **Capitoline** Triad]
[10e] Minerva's Greek equivalent Athena remained important in the form of the Palladium, a statue brought from Troy by this hero, the namesake of Virgil's epic about the founding of Rome.
ANSWER: **Aeneas** [prompt on the *Aeneid*]
<KT, Mythology>

4. Bruce Johansen and Donald Grinde's *Exemplar of Liberty* promoted this theory, which Oren Lyons got Congress to acknowledge in a resolution passed in 1988. For 10 points each:
[10h] Name or describe this theory whose adherents often cite a speech that Canasatego delivered at the 1744 Treaty of Lancaster and passages about the "vesting" of power in the Great Law of Peace.
ANSWER: **Iroquois influence** thesis [accept anything indicating the **Iroquois** Confederacy's form of government influenced the **Constitution**, the **Bill of Rights**, the **United States** government, etc.; accept **Haudenosaunee** or **Six Nations** in place of "Iroquois"]
[10e] Iroquois influence theorists also cite a letter by this man that suggests, in rather racist fashion, that the Iroquois government shows how easy it would be to unite the colonies. This man also published *Poor Richard's Almanack*.
ANSWER: Benjamin **Franklin**
[10m] Iroquois and colonial statesmen supposedly discussed models of federal union at this 1754 meeting, which gathered representatives of the 13 colonies in preparation for the brewing Seven Years' War.
ANSWER: **Albany** Congress [or **Albany** Convention]
<JB, American History>

5. While hiding out on the deserted island of Villings, the protagonist of this novel sees two suns and two moons appear in the sky. For 10 points each:
[10h] Name this novel in which a fugitive discovers a machine that can record and reproduce reality itself. This novel's unnamed protagonist is ignored by Faustine and the other tourists when he tries to speak to them.
ANSWER: The *Invention* of *Morel* [or *La invención de Morel*, or *Morel's Invention*] (by Adolfo Bioy Casares)
[10m] *The Invention of Morel* was described as having a perfect plot, unlike the "mere sequential variety" of this other literary classic. In a short story, the author Pierre Menard recreates this novel word-for-word.
ANSWER: *Don Quixote* [or *El Ingenioso Hidalgo Don Quijote de la Mancha*; prompt on the Quixote]
[10e] This critic praised *The Invention of Morel*'s "perfect plot" and wrote "Pierre Menard, Author of the Quixote." This Argentine author also wrote "The Library of Babel."
ANSWER: Jorge Luis **Borges**
<VB, World Literature>

6. Atomic examples of these states have been used to reduce the noise of atomic clocks below the projection limit. For 10 points each:
[10h] Name these states that asymmetrically saturate the uncertainty principle. They are commonly modeled by applying a namesake operator followed by the displacement operator to the ground state.
ANSWER: **squeezed** coherent states
[10e] This system readily admits squeezed coherent states, since its ground state is already a coherent state. Both this system and its classical analogue, which is used to model springs, have a quadratic potential term.
ANSWER: quantum **harmonic oscillator** [or Q**HO**; prompt on partial answer]
[10m] For the QHO, the displacement operator is defined in terms of the exponential difference of this operator and its conjugate. Coherent states are the eigenstates of this operator denoted alpha or a, which removes one unit of energy.
ANSWER: **lowering** operator [or **annihilation** operator; or **destruction** operator; prompt on ladder operators]
<AF, Physics>

7. Ludwig van Beethoven objected to Carl Czerny ("CHAIR-nee") performing this way when playing his piano sonatas because he felt that it could undermine the "correct expression" of his music. For 10 points each:
[10h] Name this practice that was once discouraged in favor of improvisation because it could draw focus to the soloist and away from the music. It became more popular after Clara Schumann made it a custom for her recitals.
ANSWER: **perform**ing music from **memory** [or equivalents such as **play**ing music **by heart**; or **perform**ing **without** sheet **music** or **perform**ing **without** a **score**; or **memorizing** music]

[10m] Schumann's first performance from memory was of this sonata when she was 17. Beethoven first used three *p*'s as a dynamic in this sonata's *Allegro assai* first movement, which opens with F minor arpeggios in both hands.
ANSWER: "**Appassionata**" Sonata [or Piano Sonata No. **23** in F minor; accept **Op. 57**]
[10e] The first pianist to perform all 32 Beethoven sonatas from memory was Hans von Bülow ("BYOO-loh"), who took up this profession after his solo career. While he held this job in Meiningen, Bülow had his orchestra perform entirely from memory.
ANSWER: **conductor** [accept music **director**; accept **kapellmeister**]
<JE, Auditory Arts>

8. David Cass and Karl Shell asked "Do [these variables] Matter?" in a paper that introduced them. For 10 points each:
[10h] Give this term for extrinsic random variables that don't directly affect an economic model. They are named after a real-world phenomenon that was correlated with commercial crises in an 1878 work.
ANSWER: **sunspot**s
[10m] Sunspots get their name from the work of this Victorian economist, a leader of the marginal revolution. In *The Coal Question*, he noted a namesake paradox in which increased efficiency of a resource's use causes increased consumption of that resource.
ANSWER: Stanley **Jevons**
[10e] Cass and Shell also theorized a "sunspot" type of this situation, in which economic forces are balanced. Unlike studies of its "general" type, theories of the "partial" type of this situation only analyze it in individual markets.
ANSWER: **equilibrium** [or **equilibria**]
<JB, Social Science>

9. Varvara Stepanova complained that "the work of the artistic atelier is divorced from production" during her time at a factory working in this medium. For 10 points each:
[10e] Tapestries are created with what medium that frequently uses wool and silk? A Stepanova striped red-and-black work in this medium was used to create a unisex sports uniform.
ANSWER: **textile**s [or **cloth** or **fabric**]
[10m] Stepanova's husband, Aleksander Rodchenko, presented three canvases with this characteristic at the 5×5=25 exhibition. An off-white square is in the center of a Kazimir Malevich painting with this quality.
ANSWER: **monochrome** [accept anything indicating it's **one color** or **entirely blue**, **yellow**, **red**, or **white**]
[10h] Lyubov Popova, a member of this Moscow-based group of artists, declared that easel painting should be abandoned at 5×5=25. Natalia Goncharova left this group to help form the more provocative Donkey's Tail group.
ANSWER: **Jack of Diamonds** [or **Knave of Diamonds** or *Bubnovyi Valet*]
<CM, Visual Arts>

10. Anne Carson's illustrated translation of this play starts with the protagonist discussing whether the quote "We begin in the dark" was written by Hegel or Beckett. For 10 points each:
[10m] Name this play. The protagonist asks, "Have you ever thought how lovely a garden is when it is not yet thinking of men?" in Jean Anouilh's ("ah-NOO-ee's") update of this play, which is set in Vichy France.
ANSWER: *Antigone* [accept *Antigonick*]
[10h] A feminist theater with this name featured Patricia Keeney-Smith's production of *Antigone*. In a novel with this name, Robin Vote leaves her lover, Nora Flood, for the four-time widow Jenny Petherbridge.
ANSWER: **Nightwood** [accept **Nightwood** Theatre] (The novel is by Djuna Barnes.)
[10e] Anne Carson is from this country. This country's oldest professional women's theatre, Nightwood Theatre, is based in its city of Toronto.
ANSWER: **Canada**
<CM, British Literature>

11. All differentiable functions have this property, but not vice-versa. For 10 points each:
[10e] Name this property of a function that allows you to draw its graph without lifting up your pencil.
ANSWER: **continuous** [or **continuity**]
[10m] A complex-valued function has this analog of differentiability if and only if it satisfies the Cauchy–Riemann ("koh-SHEE REE-mon") conditions. Due to the wonders of the complex numbers, all complex-valued functions with this property are necessarily analytic.
ANSWER: **holomorphic** [accept **entire**; prompt on smooth]
[10h] The proof that holomorphic functions are analytic involves a power series expansion of Cauchy's integral formula, which states that the value of a function f at an arbitrary point a equals the following: [read slowly] 1 over two pi i, times the integral over the boundary of a disk containing a, of f-of-z times this expression dz. Answer in terms of z and a.
ANSWER: $1/(z − a)$ [or $−1/(a − z)$; or all **over $z − a$**; or **z minus a to the negative one** power; or the **inverse** of **z minus a**]
<ALI, Other Science>

12. A philosopher currently at this university used the example of a couple deciding whether to go to the bank to defend his thesis that the existence of knowledge is partly determined by practical interests. For 10 points each:
[10h] Name this current university of that proponent of interest-based invariantism, Jason Stanley, who also wrote *How Fascism Works*. Tamar Gendler and the creator of a popular course about death, Shelly Kagan, also teach here.
ANSWER: **Yale** University
[10e] Stanley's *Knowledge and Practical Interests* defends interest-based invariantism against the "radical" form of this position. The "moral" form of this position holds that values can only be judged from within a culture.
ANSWER: **relativism** [accept radical, moral, or cultural **relativism**]
[10m] In the paper "Shifting Sands," Delia Graff Fara presented an "interest-relative" account of this concept. This concept is the subject of the sorites ("so-RYE-teez") paradox, which concerns the definition of a heap.
ANSWER: **vague**ness [prompt on synonyms; prompt on boundary problems or boundaries]
<JB, Philosophy>

13. Answer the following about early modern Thailand, for 10 points each.
[10m] This kingdom conquered Sukhothai to become the predominant Thai state from the 14th to 18th centuries, before falling to the Burman Konbaung dynasty.
ANSWER: **Ayutthaya** Kingdom [or Anachak **Ayuthya**; prompt on Siam]
[10h] This polarizing Ayutthaya king was overthrown in 1688 after pursuing close relations with France and appointing a Greek merchant as his chief advisor.
ANSWER: **Narai** the Great [or **Ramathibodi III**; prompt on Ramathibodi]
[10e] King Naresuan, an ancestor of Narai, apocryphally fended off an attack by the Taung Ngu ("town goo") Empire while riding one of these animals into combat. These four-legged animals were mounted with guns to fight the French during the Franco-Siamese War.
ANSWER: **elephant**s
<MM, World History>

14. Théophile Gautier ("tay-oh-FEEL goat-YAY") wrote *The History of* [this movement], which was described as "the abuse of adjectives" by one member, Alfred de Musset. For 10 points each:
[10e] Name this movement characterized by the passionate embrace of nature, emotion, and individualism. Percy Shelley was a member of this movement, which was described as "the spontaneous overflow of powerful feelings."
ANSWER: **Romantic**ism [accept French **Romantic**ism or British **Romanticism**]
[10m] Gautier's declaration of "art for art's sake" inspired this other literary movement. This literary movement values objectivity and restraint instead of romantic emotionality and is named after the home of the Muses.
ANSWER: **Parnassian**ism [or **Parnassism**]

[10h] Gautier was called "the perfect magician of French letters" and was given "unhealthy flowers" in this part of *Les Fleurs du Mal*. This part of *The Little Prince* addresses "Leon Werth, when he was a little boy."
ANSWER: **dedication** [or word forms like **dedicate** or **dedicating**]
<PS, European Literature>

15. This city was the namesake of a dark, reddish-brown pigment that was mined in Cappadocia. For 10 points each:
[10h] Name this city on the coast of the Black Sea whose tyrant Timesilaus was deposed by Lamachus on the orders of Pericles. This city is better known for being captured by Lucullus while serving as the capital of Pontus.
ANSWER: **Sinop**e
[10m] Sinope was colonized by this city-state in Anatolia whose other colonies include Panticapaeum ("pan-tick-uh-PAY-um") in the Crimea and Colchis. A philosopher from this city predicted a 585 BCE eclipse that overshadowed the Battle of Halys and became wealthy off an olive oil monopoly.
ANSWER: **Miletus** (The philosopher is Thales.)
[10e] Settlers from Miletus also settled alongside this major Egyptian river at the city of Naukratis with the support of Pharaoh Amasis II after they had helped him seize the throne in a revolt against King Apries.
ANSWER: **Nile** River
<KT, Ancient History>

16. This method combines the self-consistent field algorithm with the Slater determinant ansatz ("ON-zotts"). For 10 points each:
[10m] Name this doubly-eponymous method for solving for the energies of a many-body system. Numerically solving this method consists of repeatedly solving the Schrodinger equation until the energies are stable.
ANSWER: **Hartree–Fock** method [or **HF** method]
[10e] The Hartree–Fock method has been superseded because of its inability to account for Coulomb correlations between these particles. Molecular orbitals represent the probability density of these negatively charged particles.
ANSWER: **electron**s [accept **electron**ic correlations]
[10h] One post-Hartree–Fock method uses an ansatz that the wave function equals an exponential of an operator with this name that accounts for all excitations times a reference wavefunction. Molecular aggregates of intermediate size, such as met-cars, are known by this term.
ANSWER: molecular **cluster**s [accept **coupled cluster** method; prompt on CC method]
<AF, Chemistry>

17. A character in this novel scratches himself against the pane of a Walgreens store before attempting to convince himself not to watch horror flicks about Devil's Island Penitentiary and a baboon named Lonnie. For 10 points each:
[10m] Name this novel about the veteran Hazel Motes, who forms the "Church Without Christ" in Taulkinham, Tennessee after meeting the preacher Asa Hawks and his daughter Sabbath Lily.
ANSWER: *Wise Blood*
[10e] *Wise Blood* was the first novel by this Southern Gothic author of "Everything That Rises Must Converge" and "A Good Man is Hard to Find."
ANSWER: (Mary) Flannery **O'Connor**
[10h] Hazel Motes is disappointed that Asa fakes having this condition. During a visit to the narrator's wife in a short story, a man with this condition watches TV while smoking weed and asks the narrator to draw him a picture.
ANSWER: **blind**ness (The short story is Raymond Carver's "Cathedral.")
<KP, American Literature>

18. One of these creatures transformed into a young woman to trick a peasant, but when they asked to urinate, the peasant said they should just do so on his back. For 10 points each:
[10h] Name these mischievous creatures that often pass off leaves as money. These creatures frequently enter disguise contests as the daimyo's procession passes, tricking their opponents into being killed by the guards.

ANSWER: **tanuki** [or bake-**danuki**; accept Japanese **raccoon dog**]
[10e] These animals feuded with the famous tanuki Danzaburō after he drowned one in the sea. These servants of the rice goddess Inari could have up to nine tails and were called kitsune.
ANSWER: **fox**es [accept nine-tailed **fox**]
[10m] One of these animals set a tanuki on fire and attributed the noise to the nearby Kachi-kachi Mountain. Ōkuninushi is told he will marry Princess Yakami after helping a recently-flayed one of these animals from Inaba.
ANSWER: white **hare** [accept **rabbit** or shiro**usagi**]
<KT, Mythology>

19. This mountain range gives its name to both a river alternatively known as the Yaik as well as a federal district of Russia. For 10 points each:
[10e] The city of Yekaterinburg lies in this mountain range, which is often recognized as the northern portion of the boundary between Europe and Asia.
ANSWER: **Ural** Mountains [or **Ural** Tauźarı or **Uralskie** Gory]
[10h] This republic on the western side of the Urals is home to a namesake ethnic group that speaks a Uralic language of the Permic branch. This republic is home to the former gulag town of Vorkuta and has its capital at Syktyvkar ("sick-tiff-CAR").
ANSWER: **Komi** Republic [or **Komi** Respublika]
[10m] In May 2020, politicians proposed a merger between the Komi Republic and this oblast, centred around a namesake White Sea city. This oblast takes its name from a legend that Michael's defeat of the Devil occurred there.
ANSWER: **Arkhangelsk** Oblast [or **Arkhangelskaya** Oblast; accept **Archangel**]
<MM, CE/Geo/Other>

20. Domenico da Cortona designed the four enormous round towers of one of these buildings. For 10 points each:
[10m] The Loire ("lwahr") Valley is the site of many elaborate Renaissance buildings of what sort, such as one built for Francis I at Chambord ("shawm-BOR")? This French word refers to manor houses in the country.
ANSWER: **château**x
[10e] Leonardo da Vinci is often claimed to have designed the unusual double-helix-shaped one of these structures in the Château de Chambord. Medieval turrets often featured "spiral" structures of this sort.
ANSWER: **stair**cases [or **stair**ways; or **step**s]
[10h] The Château de Maisons is one of the classic works of French Baroque architecture by a member of this family. His grandnephew designed the Grand Trianon at Versailles and, like him, used a style of roof featuring two slopes on every side.
ANSWER: **Mansart** [accept **Mansard** roof, François **Mansart**, or Jules Hardouin-**Mansart**]
<JB, Other Arts>