2021 WORKSHOP: How did I never notice that your username is Santa Claus and mine is reindeer? Produced by Olivia Murton, Kevin Wang, Wonyoung Jang, Jordan Brownstein, Adam Fine, Will Holub-Moorman, Athena Kern, JinAh Kim, Zachary Knecht, Caroline Mao, Christopher Sims, and Will Grossman Packet 11

Tossups

1. This state failed to conquer the British-controlled Anomabu Castle in an attack simultaneous with the economically-harmful 1807 ban on the slave trade. A leader of this state named "whale" conquered a neighboring confederacy that repeatedly debased this state's gold under their high king, the *brafo*. This state's unifier founded his capital on the site where a Kum tree planted by the priest (*) Okomfo Anokyo prospered; that king, who also defeated the Denkyira, was Osei Tutu. After a later king was abducted to the Seychelles, the Queen Mother of this Kumasi-based state led an unsuccessful war provoked by the British governor's demand to sit on this state's symbol. For 10 points, name this West African state that was represented by the Golden Stool.

ANSWER: <u>Asante</u> Empire [or <u>Asante</u>man or <u>Ashanti</u> Empire; accept "Kingdom" or "Confederacy" in place of "Empire"]

<MM, World History>

2. In a short story by this author, a woman tips a coin to a waiter who bows to her "as before a princess of royal blood" before she shares a box of candy at a matinee. A man in a story by this author falls in love with a girl "as if struck by a pistol shot" when he sees her standing in the shadow of a stone pillar. The owner of the L'Abri estate reads a letter from his mother after burning a (*) willow cradle in a story by this author. This author created Mrs. Sommers, who spends fifteen dollars on herself instead of her children, and Armand Aubigny, who learns about his black ancestry. After her affair with Robert Lebrun, the protagonist of a novel by this author of "Désirée's Baby" drowns herself in the Gulf of Mexico. For 10 points, name this author who wrote about Edna Pontellier in *The Awakening*.

ANSWER: Kate <u>Chopin</u> [or Katherine <u>O'Flaherty</u>] (The first clue is from "A Pair of Silk Stockings.") <CM, American Literature>

3. Donald Davidson introduced his "Swampman" to entertain listeners who might be "weary" of a thought experiment illustrating this philosophical position. An "active" version of this position was created by Andy Clark and David Chalmers. A paper arguing for this position ends by telling philosophers of mind to focus on man as a social animal, rather than "individualism," and explores the incorrect belief that you can have arthritis in the thigh; that paper is by Tyler (*) Burge. In the most famous argument for this position, "Oscar" and his doppelganger both hold beliefs about water, but Oscar 2's "water" is actually XYZ, not H2O. For 10 points, Hilary Putnam's "Twin Earth" thought experiment argues for what theory that the content of mental states relies partly on factors outside the mind?

ANSWER: semantic <u>externalism</u> [or content <u>externalism</u>; accept <u>broad content</u>; prompt on the <u>extended</u> mind] <RW, Philosophy>

4. Georges Destriau ("zhorzh dess-tree-OH") discovered an effect in which applying this phenomenon to a copper-doped zinc sulfide lattice caused luminescence. That effect can be exploited in phosphor powders named for this phenomenon to make low-cost, printable displays. Wye and Delta configurations are two three-phase systems that transmit this phenomenon. By braiding multiple wire strands into uniform patterns, (*) Litz wire minimizes resistances specific to this phenomenon known as the proximity and skin effects. This phenomenon is transmitted over long distances at high voltages, after which it is stepped down using a transformer. For 10 points, name this phenomenon, a periodically reversing flow of charge often contrasted with its "direct" counterpart.

ANSWER: <u>alternating current</u> [or <u>AC</u>; prompt on <u>current</u>; prompt on answers involving <u>electricity</u> (e.g. "electrical conduction")] <PS, Physics>

5. A phrase coined by this thinker titles a [emphasize] later book that examines the modes of "expressive" and "utilitarian" individualism through dozens of interviews with middle-class Americans. This thinker names the paradoxical "effect" that social frustration increases as social conditions improve. A group of sociologists led by Robert Bellah adapted this thinker's concept of the "habits of the heart," which this writer viewed as a guard against a "network of small complicated rules" he called (*) "soft despotism." This thinker predicted the rise of Russia as a global power and warned against the tyranny of the majority in a book written after he and Gustave de Beaumont conducted a tour of a prison system. For 10 points, name this French author of Democracy in America.

ANSWER: Alexis de <u>Tocqueville</u> [or Alexis Charles Henri Clérel, comte de <u>Tocqueville</u>] <JB, Social Science>

6. In this play, a character with a "Mephistophelean laugh" breaks another character into a thousand pieces. A woman "did not show her teeth, nor did she throw her socks very far" in Nicolas Bataille's production of this play. A clock's strokes become "more nervous" in this play before a woman yells "Krishnamurti!" three times. A rapid sequence of speeches in this play ends with the characters (*) screaming, "It's not that way, it's over here," before swapping roles. The adjective "English" is used 17 times at the start of this play set in "a middle-class English interior." The doorbell rings four times before the entrance of the Fire Chief, who says that this play's title character "always wears her hair in the same style." For 10 points, name this play about the Smiths and the Martins, written by Eugene Ionesco.

ANSWER: *The <u>Bald Soprano</u>* [or *La <u>Cantatrice Chauve</u>] < CM, European Literature>*

7. It's not France, but a 1789 revolution in a city in this country restored some policies of the enlightened Prince-Bishop Velbrück ("FELL-brook") after the overthrow of his successor, the "tyrant of Seraing." Disputes between the revolutionary Statist and Vonckist factions in this modern-day country are often compared to later ones between its Liberal and Catholic Parties. Baron Haxo and the Army of the North successfully besieged a city in this country in the aftermath of the (*) Ten Days Campaign. Austrian control over most of this modern-day country was tested in the Brabant Revolution. A performance of the opera *La Muette de Portici* ("la myoo-ET duh por-TEE-chee") was a key event in this country's independence. For 10 points, name this country whose 1830 revolution saw King Leopold I unite Wallonia and Flanders.

ANSWER: Kingdom of <u>Belgium</u> [or Royaume de <u>Belgique</u>, or Koninkrijk <u>België</u>, or Königreich <u>Belgien</u>; accept <u>United Belgian States</u>; do not accept or prompt on "Austrian Netherlands"] (The first sentence refers to the Liège Revolution.)

<KT, European History>

8. Dosso Dossi added a pheasant to the landscape of a painting of one of these events that was commissioned for the Duke of Ferrara's alabaster study. That painting of one of these events includes an early depiction of Chinese porcelain, which is carried by two figures near Silenus's ass. The inclusion of German soldiers in a painting of one of these events spurred accusations of (*) heresy that forced the artist to change the painting's name. Giovanni Bellini painted one of these events of the Gods, and a Paolo Veronese painting set in the House of Levi depicts one of them. One of these events titles a painting whose two primary sources of light are a ceiling lamp and the central figure's halo. For 10 points, what kind of event is portrayed in a diagonally-oriented Tintoretto painting?

ANSWER: <u>feast</u> [accept <u>meal</u> or <u>supper</u> or <u>dinner</u> or other equivalents; accept <u>convito</u> or <u>festino</u>; accept <u>The <u>Feast</u> of the Gods or <u>Il festino</u> degli dei; accept <u>The Feast</u> in the House of Levi; accept <u>The Last Supper</u>]</u>

9. A co-catalyst in which two of this element are coordinated to an oxygen activates metallocene chlorides by alkylating and unsaturating them, thereby catalyzing the formation of plastics. An isobutyl hydride containing two atoms of this element reduces carboxylic acids and esters to aldehydes via a hemiacetal intermediate; that reducing agent is (*) DIBAL ("DIE-ball"). A class of minerals that are naturally microporous, known as zeolites, all contain silicon and this metal. Titanium and this metal are found in heterogeneous Ziegler—Natta catalysts. Iron trichloride and this element's chloride are the most common metal chloride catalysts for Friedel—Crafts reactions. For 10 points, name this lightweight metal with symbol Al.

ANSWER: <u>aluminum</u> [accept <u>Al</u> until read] <EGU, Chemistry>

10. After a short introduction, one piece in this genre opens with three D major chords in a long-short-short rhythm, with the first two marked *forte* and the last marked *piano*. The score to that piece in this genre, which its composer considered his greatest work, is included in a portrait where its composer wears a red scarf. Constanze Weber ("kon-STAHNT-suh VAY-bur") likely premiered the melismatic E-flat major solo from the first movement of Mozart's (*) unfinished "great" C minor piece in this genre. Rudolf of Austria was the dedicatee of a D major piece in this genre that includes a massive fugue on the words "et vitam venturi" in its third movement "Credo." Ludwig van Beethoven wrote an extravagant "solemnis" piece in, for 10 points, what liturgical choral genre?

ANSWER: <u>mass</u> [accept <u>Missa</u> Solemnis or Great <u>Mass</u> in C Minor or Grosse <u>Messe</u> in C-moll] <CSI, Auditory Arts>

11. In a short story by this author, the title character forces a hungry poet to crank a music box in the garden. The speaker smells orange blossoms and compares the title character to "a lark singing in my soul" in a poem by this author addressed to Margarita Debayle. This author of "The Bourgeois King" quips that he is "not in a bed of roses" in a poem accusing the addressee of thinking, "life is fire, and progress is eruption." Two letters by (*) Juan Valera popularized a collection by this author, which includes four seasonal poems in "The Lyrical Year." This author of "Symphony in Gray Major" calls the title figure "Alexander-Nebuchadnezzar" and claims that he "lacks one thing: God" in the poem "To Roosevelt." For 10 points, Azul... was written by which modernismo poet from Nicaragua?

ANSWER: Rubén <u>Darío</u> [or Félix Rubén <u>García</u> Sarmiento] <HG, World Literature>

12. According to a 1994 paper by Jacobs and Shapiro, the winner of this election based policy positions on public opinion in an effort to "prime" voters' views of his personal attributes. To avoid a constitutional crisis, the loser of this election asked Earl Mazo to stop writing about possible voter fraud. Two debates in this election focused primarily on the U.S.'s stance on the disputed islands of (*) Quemoy and Matsu. Slates of unpledged electors voted for segregationist Harry Byrd in this election. This election's winner railed against the "missile gap" with the Soviet Union. The first televised presidential debates were held in, for 10 points, what presidential election won by John F. Kennedy?

ANSWER: U.S. presidential election of <u>1960</u> <ABD, American History>

13. In one musical, a cook persuades a "Black chorus" to support characters with this job in her "Ballyhoo." A character with this job who passes as white surprises that cook, Queenie, by singing a song that Queenie "never heard anybody but Black people sing." This is the job of a character who sings that men "should be kept like piggies in a pen" and intercepts flowers that her ex-husband had sent to a character who sings (*) "Tom, Dick, or Harry." After Julie is forced to quit this job on the *Cotton Blossom*, she is replaced by Magnolia

Hawks. In a Cole Porter musical about characters with this job, two gangsters improvise advice on how to "brush up your Shakespeare." For 10 points, name this job of the characters in *Kiss Me, Kate*, who perform in a stage production.

ANSWER: <u>actors</u> [accept traveling <u>performers</u> or <u>entertainers</u> until "perform" is read] (The unnamed song in the third line is "Can't Help Lovin' Dat Man" from *Show Boat*.)

<JE, Other Arts>

14. These compounds are the intended ligands for the vanilloid receptor, which also binds capsaicin. These compounds and nitric oxide are the most common examples of retrograde neurotransmitters. Fatty-acid binding proteins transport examples of these compounds like 2-AG and anandamide, which are derived from arachidonic acid. Endogenous examples of these non-peptides are regulated by ghrelin and leptin to control appetite. The receptors for these compounds are unique to chordates and include (*) CB1 and CB2. In 2018, the FDA approved a diol in this class of compounds to treat epileptic seizures. For 10 points, name these compounds that were discovered in *C. sativa* and include the psychoactive THC.

ANSWER: <u>cannabinoid</u>s [accept endo<u>cannabinoid</u>s or phyto<u>cannabinoid</u>s; accept herbal, synthetic, plant, or endogenous <u>cannabinoid</u>s; prompt on <u>anandamide</u>, 2-<u>arachidonoyl glycerol</u>, <u>AEA</u>, or <u>2-AG</u> until read; prompt on <u>THC</u>, delta-9-<u>tetrahydrocannabinol</u>, <u>CBD</u>, or <u>cannabidiol</u>; do not accept or prompt on "cannabis," "hemp," "marijuana," "weed," or equivalents] <EGU, Biology>

15. In 2018, a legislator in this state held up the passage of its annual budget until it agreed not to pursue reforms advocated by the organization Young Advocates for Fair Education. That legislator, although elected as a Democrat, caucused with this state's Republicans and Independent Democratic Conference until 2019. A current U.S. representative from this state founded the Cornerstone Academy for Social Action before successfully primarying Eliot (*) Engel on the way to becoming the only male member of "The Squad." Between March and June 2020, this state's current governor delivered a daily televised briefing on his administration's response to COVID-19. Simcha Felder and Jamaal Bowman are politicians from, for 10 points, what state currently governed by Andrew Cuomo?

ANSWER: <u>New York</u> <EGR, CE/Geo/Other>

16. The "breastplate of righteousness" adopted by "covert deviants" is theorized in a study of these places, in which the author discusses the "intensive dozen" he met while serving as a "watchqueen." The folklorist Alan Dundes coined the term for art in these places, which Alfred Kinsey erroneously concluded is created less frequently by women. In a textbook violation of research ethics, Laud Humphreys noted his subjects' license plates and entered their homes in disguise while working on (*) Tearoom Trade, which uses these places to study gay practices analogous to British "cottaging." Jack Halberstam used this sort of place to name the "problem" of the gender binary, which results in policing like North Carolina's HB2. For 10 points, what sort of public place is often the subject of transphobic bills?

ANSWER: public <u>restroom</u>s [or public <u>bathroom</u>s; or <u>toilet</u>s; or <u>latrine</u>s; accept <u>tearoom</u>s until "Tearoom" is read; prompt on <u>public</u> places] (The term for art in toilets is "latrinalia.")

<JB, Social Science>

17. In Spheres of Justice, Michael Walzer argued that one of this country's policies could only be justified by reducing its land area. Annie O'Keefe's successful court action to avoid deportation and the arrival of the "Beautiful Balts" after World War II weakened one of this country's policies. The phrase "populate or perish" was coined by a leader of this country who strongly opposed the inclusion of a (*) racial equality clause in the League of Nations Covenant. One of this country's policies was adopted to stem the arrival of Chinese labourers following discoveries at Bendigo and Ballarat. A "Whites Only" policy heavily favored British

immigration to, for 10 points, what country that formally ended race-based discrimination under Liberal Prime Minister Harold Holt?

ANSWER: Australia [or Commonwealth of Australia]

<EL, Other History>

18. Bundahishn 17 enumerates five kinds of this thing, including Urvazisht and Spenisht. Farnabag, Gushnasp, and Burzen-Mihr were known as the three "Great" examples of this thing and corresponded to priests, warriors, and laborers, respectively. It's not Airyaman, but during the Frashokereti, a yazata embodying this substance will act upon the (*) metal of Shahrewar. The highest grade of this substance, known as "Behram," is created from gathering this substance from sixteen different sources. On the last Wednesday before Nowruz, the Chaharshanbe Suri Festival sees people jump over this substance in a purification ritual. This agent of ritual purity in Zoroastrianism is known as Atar. For 10 points, Zoroastrians worship in temples named after what substance?

ANSWER: <u>fire</u>s [accept <u>Atar</u> until read; or <u>Atash</u>, <u>Azar</u>, or <u>Adar</u>; accept <u>fire</u> temple; accept Great <u>Fire</u>s and Royal <u>Fire</u>s]

<KT, Religion>

- 19. High metallicities prevent this process from decreasing radiation pressure enough to trigger thermal runaway in most stars, but can still trigger pulses of instability in Population III stars. Curved field lines are assumed to cause this process in the derivation of death lines on a period—magnetic field diagram. The term one-over-15,360 appears in the luminosity of a phenomenon that relies on this process polarizing the (*) vacuum. Synchrotron radiation is emitted from the poles of pulsars using the charged products of this process. When this process occurs near an event horizon, half of its products escape in the form of Hawking radiation. For 10 points, name this process in which high-energy photons convert into an electron and a positron.

 ANSWER: pair production [prompt on pulsational pair-instability supernovae; prompt on vacuum polarization or Hawking radiation until read; prompt on production of an electron and a positron or production of a particle and its antiparticle until "electron and positron" is read; prompt on synchrotron radiation, magnetobremsstrahlung, braking radiation, or deceleration radiation until "synchrotron" is read by asking "what process comes after that?"]

 <KW, Other Science>
- 20. A woman in this novel claims that the profusion of the laurels reminds her of the estate of Maple Grove. In this novel, a woman refuses to discuss the sea air when a man mentions the conflicting recommendations of Mr. Wingfield and Mr. Perry. Another character in this novel makes his friend blush by playing the words "blunder" and "Dixon" in a word game. In this novel, the protagonist's (*) reminder of a limit of three dull statements during an outing to Box Hill embarrasses Miss Bates. The protagonist of this novel lives at Hartfield with her hypochondriac father and tries to set up Harriet Smith with Frank Churchill before marrying George Knightley. For 10 points, name this Jane Austen novel about the failed matchmaking attempts of the title character.

ANSWER: <u>Emma</u> <AD, British Literature>

Bonuses

1. This book's sequel, informed by its author's experience as a widow, explains how to run a household and suggests that it is women's job to keep men from fighting with their neighbors. For 10 points each:

[10h] Name this novel where Reason gives the author a mirror to see herself as she truly is without men's disdain. In this novel, the author excavates the Field of Letters to make a refuge inspired by powerful, chaste, and holy women.

ANSWER: *The <u>Book of the City of Ladies</u>* [or *Le <u>Livre de la Cité des Dames</u>*; do not accept or prompt on "*The Treasure of the City of Ladies*," which is the sequel]

[10m] This author of *The Book of the City of Ladies* argued that women cannot be vile or foolish if men expend so much effort to trick and seduce them in her response to Jean de Meun's addition to *The Romance of the Rose*.

ANSWER: Christine de Pizan

[10e] This translator of *The Romance of the Rose* used it as inspiration for a story where an old hag tells a knight what women most desire. The Wife of Bath tells that story in this author's *The Canterbury Tales*.

ANSWER: Geoffrey <u>Chaucer</u> <PS, European Literature>

2. These phenomena are grouped into universality classes based on the behavior of critical exponents. For 10 points each:

[10m] Name these phenomena that are characterized by discontinuities in quantities such as entropy and isothermal compressibility in their "first-order" and "second-order" types, respectively.

ANSWER: phase transitions [or phase changes]

[10e] Peierls ("PIE-erls") first demonstrated that this simple model of interacting spins on a lattice *does* demonstrate a phase transition in two or more dimensions. This model was inspired by the phenomenon of ferromagnetism.

ANSWER: Ising model [accept any dimension preceding the answer, such as "1D Ising model"]

[10h] Solving the 2D Ising model uses one of these relations named for Kramers and Wannier, since the critical temperature can be uniquely identified as its fixed point. A "revolution" in string theory unified the five major string theories into M theory using these relations.

ANSWER: <u>duality</u> [accept word forms; accept specific types such as Kramers–Wannier <u>duality</u>] <AF, Physics>

3. William Sutherland wrote the first colonial-era treatise on this industry in 1711. For 10 points each:

[10m] Name this industry, whose major production centers included Essex, Massachusetts. Designs in this industry by architects like Joshua Humphreys used the technique of caulking by using oakum and pine pitch to fill in seams.

ANSWER: **shipbuilding** [accept answers referring to the **construct**ion of **ship**s]

[10e] U.S. commercial transport ships transitioned from sail power to using this energy source. Robert Fulton created the first commercially successful ship that was powered by this energy source.

ANSWER: steam power [accept steam engine]

[10h] Congress passed the first American safety regulation of a private industry after the steamboat *Moselle* exploded and killed nearly two hundred passengers in this city. This city's burgeoning meatpacking industry earned it the nickname "Porkopolis."

ANSWER: <u>Cincinnati</u>, Ohio <RW, American History>

4. This film ends with child soldier Peter Kranz and secretary Traudl Junge escaping a war-torn city on a bicycle. For 10 points each:

[10m] Name this 2004 Oliver Hirschbiegel film starring Bruno Ganz as its central figure, who in one scene launches into an angry tirade upon learning that Felix Steiner disobeyed orders and refused to launch a counterattack.

ANSWER: *Downfall* [or *Der Untergang*] (Bruno Ganz played Adolf Hitler.)

[10e] *Downfall* depicted the last days of World War II in this country. The propaganda film *Triumph of the Will* was released in this country four years before World War II began.

ANSWER: Nazi Germany [or the Third Reich; or Deutschland; or German Reich]

[10h] This Swedish actress was contracted to work for Nazi Germany's state-owned Universum Film AG company, which caused her to be identified with Nazi propaganda for the rest of her life, despite not being a Nazi herself.

ANSWER: Zarah **Leander** [or Sara Stina **Hedberg**]

<JVN, Other Arts>

5. Unlike its novel's usual third-person narration, a preface by this author is narrated in first-person by the orphan Esteban and describes a guillotine being constructed on the ship *La Pique*. For 10 points each:

[10m] Name this author of *Explosion in a Cathedral*. The shape-shifting slaves Macandal and Ti Noel appear in his novel recounting the Haitian Revolution, *The Kingdom of this World*.

ANSWER: Alejo <u>Carpentier</u> (y Valmont)

[10e] In the prologue to *The Kingdom of this World*, Carpentier coined the name of this literary genre that blends fantastical events with ordinary, real-world settings.

ANSWER: magical realism [or realismo mágico; accept marvelous realism or real maravilloso]

[10h] In *The Kingdom of This World*, Henri-Christophe's family flees to this country, where Solimán howls after seeing a bust of his lover Pauline. A musician from this country installs a piano in *One Hundred Years of Solitude*.

ANSWER: <u>Italy</u>

<VP, World Literature>

6. The skeleton of a 15-year-old boy suffering from spina bifida was found at a site in this state and provides insight into how that culture cared long-term for its handicapped members. For 10 points each:

[10h] Name this state where 91 skulls containing brain tissue have been found at the Windover Archaeological site. This state's Mound Key site is thought to have been the Calusa people's capital.

ANSWER: Florida

[10e] The bodies found at the Windover site were found buried in this substance. In Europe, this substance, which is found in namesake bogs, preserved the remains of individuals like the Lindlow Man and the Tollund Man.

ANSWER: black **peat** [accept **turf**]

[10m] Like Florida's Little Salt Spring, sinkholes called cenotes ("seh-NO-tays") in this region contained human remains. Pitted scars on the skull of Chan Hol 3, which was found outside this region's city of Tulum, have been blamed on a relative of syphilis.

ANSWER: Yucatán Peninsula [prompt on Mexico]

<KT, Other History>

7. In sorting networks, which represent this operation with vertical wires, the number of times this operation acts on any individual item may be proportional to the logarithm of the input's size. For 10 points each:

[10m] Name this operation that must happen at least log-base-two of *n*-factorial times in any sorting algorithm that uses it to account for all possible permutations.

ANSWER: <u>comparison</u> and swap [accept <u>comparison-based sort</u>ing algorithms or <u>comparator</u> networks; accept answers that indicate <u>comparing</u> two values to determine which is larger; prompt on swapping]

[10h] Batcher's odd-even construction is a parallelized implementation of this algorithm that outperforms the AKS network on realistic input sizes. Network implementations of this algorithm alternate between comparing increasingly large subsets and linking the upper and lower halves, and must be a power of two in size.

ANSWER: mergesort [accept Batcher odd-even mergesort]

[10e] This tree-based data structure was named for its use in a namesake sorting algorithm with worst case runtime big omega of $n \log n$. In the max type of this data structure, all children are smaller than their parents.

ANSWER: max-heap [accept heapsort or min-heap]

<KW, Other Science>

8. The "new mechanical philosophy" kicked off by Machamer, Darden, and Craver's paper "Thinking About Mechanisms" is named to distinguish it from the mechanical philosophy begun in this century. For 10 points each: [10e] Name this century in which Rene Descartes argued that animals were mechanistic automata. Classical

mechanics was introduced late in this century by Isaac Newton's Principia Mathematica.

ANSWER: 17th century [or 1600s]

[10h] The "MDC" paper uses the concept of "mechanism" to synthesize substantivalism and ontologies based on this concept. A 20th-century school of philosophy named for this concept conceptualizes being as "becoming."

ANSWER: **process** [or **process** philosophy]

[10m] The paper closes by arguing that mechanisms are a better model for scientific explanation than this method, which uses "bridge laws" to explain a complex field or phenomenon in terms of a more "basic" one.

ANSWER: reductionism

<JB, Philosophy>

9. A ballet by this composer opens with two girls discovering bouquets at their door before encountering a masked port merchant and the title figure. For 10 points each:

[10h] Name this composer of the ballet *The Bird Merchant*. While in exile in Philadelphia during World War II, this composer revised her *Cantata of Narcissus*, a previous collaboration with Paul Valéry.

ANSWER: Germaine Tailleferre ("jair-MAIN tie-FAIR")

[10m] Tailleferre was a member of this group of composers, who produced the ballet *The Wedding Party on the Eiffel Tower*. Another member of this group quoted Brazilian *choro* melodies in his ballet *The Ox on the Roof*.

ANSWER: Les Six ("lay SEESE") [or The Six] (The Ox on the Roof is by Darius Milhaud.)

[10e] Tailleferre composed a piece in this genre for *The Wedding Party on the Eiffel Tower* that was inspired by telegrams. This type of piece in triple meter originated from Viennese ballroom dances.

ANSWER: waltz [or valse]

<RW, Auditory Arts>

10. Neogrammarians who popularized this technique implemented it using the principle of regular sound changes, with rules such as Grimm's law accounting for differences in pronunciation. For 10 points each:

[10h] Name this technique that aims to reconstruct earlier language forms by examining related words and phrases in different descended languages and dialects.

ANSWER: comparative method [prompt on linguistic reconstruction or historical linguistics]

[10e] The comparative method was used to reconstruct this language family's ancestor, which was spoken in the Pontic steppe according to Marija Gimbutas's Kurgan hypothesis. This family includes Hindi, English, and German.

ANSWER: <u>Indo-European</u> [accept Proto-<u>Indo-European</u>; accept <u>PIE</u>]

[10m] Antoine Meillet ("may-YAY") said that anyone wishing to know how Indo-Europeans spoke should listen to this native language of Gimbutas. This language's mobile stress patterns distinguish it from the other major surviving Baltic language.

ANSWER: Lithuanian [or lietuvių kalba]

<PS, Social Science>

11. The initially unpopular Cry of La Villa de Los Santos issued by the residents of this region's Azuero Peninsula officially began this region's path to independence. For 10 points each:

[10h] Name this modern-day country that first gained independence under the military leader José de Fábrega.

ANSWER: Panama [or Isthmus of Panama, or Republic of Panama, or República de Panamá]

[10m] A later attempt at Panamanian independence from Gran Colombia was caused by this near-impassable region, which cuts a namesake "gap" in the Pan-American Highway. A failed colony in this region nearly bankrupted Scotland and spurred the Act of Union.

ANSWER: **<u>Darién</u>** Gap [accept <u>**Darien**</u> scheme]

[10e] The third and final independence of Panama occurred with the support of this U.S. president who wanted U.S. control of the Panama Canal, in an example of his "big stick diplomacy."

ANSWER: <u>Theodore <u>Roosevelt</u> [or <u>Teddy <u>Roosevelt</u>; or <u>TR</u>; prompt on <u>Roosevelt</u>] <MM, World History></u></u>

12. *Two answers required*. The nationalist political party VMRO-DPMNE boycotted a vote over the 2018 Prespa Agreement, which ended a naming dispute between these two countries. For 10 points each:

[10h] Name these two countries. As part of the Prespa Agreement, one of these two countries agreed to stop using the ancient symbol of the Vergina Sun in public displays.

ANSWER: <u>Greece</u> AND <u>North Macedonia</u> [accept <u>Hellas</u> or <u>Hellenic Republic</u> or <u>Elláda</u> or <u>Ellinikí Dimokratía</u> in place of "Greece"; accept Republic of <u>North Macedonia</u> or Republika <u>Severna Makedonija</u> in place of "North Macedonia"; prompt on <u>Macedonia</u> or <u>FYROM</u> or <u>Former Yugoslav Republic of Macedonia</u> in place of "North Macedonia"]

[10e] North Macedonia agreed to the stipulations of the Prespa Agreement so that it could gain entrance into this international organization, which was historically opposed by the Warsaw Pact.

ANSWER: NATO [or North Atlantic Treaty Organization; or North Atlantic Alliance]

[10m] The Greek Prime Minister present at the signing of the Prespa Agreement was Alexis Tsipras ("t'SEE-prahs"), a member of this far-left political party that lost power to the conservative New Democracy party following elections in 2019.

ANSWER: <u>Syriza</u> [or the <u>Coalition of the Radical Left</u> or <u>Synaspismós Rizospastikís Aristerás</u>] <EL, CE/Geo/Other>

13. Local painter Otto van Schriek inspired this artist to use moss to apply paint and butterfly wings to add texture to the canvas. For 10 points each:

[10h] Name this artist, the apprentice of Willem van Aelst. Her father's medical knowledge influenced her many paintings of flowers and insects.

ANSWER: Rachel Ruysch

[10e] Ruysch was one of the first Western painters to include cacti in paintings in this genre. Maya Kopitseva and Evgenia Antipova contributed to 20th-century innovations in this genre that depicts inanimate objects.

ANSWER: **still life**s [or *nature morte*]

[10m] This artist's still lifes include her depiction of sliced watermelons in *Viva La Vida* and a painting of a small skeleton sitting next to a cactus and five fruits. A volcano floats in a bathtub in this artist's *What the Water Gave Me*.

ANSWER: Frida <u>Kahlo</u> (de Rivera) [or Magdalena Carmen Frida <u>Kahlo</u> y Calderón] <CM, Visual Arts>

14. According to Einhard, 4,500 of these people were executed in a single day at Verden. For 10 points each: [10m] Name these people, who were defeated at the battle of Bornhöved ("born-HER-vet") during an invasion of their homeland that began in 772.

ANSWER: Saxons [accept Nordalbingian Saxons; do not accept or prompt on "Anglo-Saxons"]

[10e] The Saxons were invaded and subjugated by this king of the Franks, who was later crowned "Emperor of the Romans" by Pope Leo III on Christmas Day, 800 AD.

ANSWER: Charlemagne [or Charles the Great or Carolus Magnus or Charles I or Karl der Grosse]

[10h] According to the Royal Frankish Annals, Charlemagne destroyed one of these pillar-like structures sacred to Germanic paganism during his Saxon Campaigns. The Nazi amateur archaeologist Wilhelm Teudt proposed that a symbol on the Exernsteine relief resembling a "bent tree" should be interpreted as one of these structures.

ANSWER: <u>Irminsul</u> [prompt on great <u>pillar</u> by asking "what is the original-language term?"]

<JVN, European History>

15. These instruments are played continuously during *aarti* in order to welcome the arrival of the gods and to ward off evil. For 10 points each:

[10m] Name these instruments, which are played by Hindu devotees upon entering a temple. These instruments are said to mimic the sound "Om."

ANSWER: **bell**s [or **ghanta**]

[10e] Bells are also played during this kind of Hindu ritual ceremony, during which prayers and offerings are made to the gods. The *aarti* is usually performed at the end of this kind of ritual ceremony.

ANSWER: puja

[10h] During a puja, worshippers may perform this action with a *chāmara* ("CHA-ma-ra") to create a comfortable atmosphere for the deity. In Sikhism, this action is performed continuously to the Guru Granth Sahib during the day. ANSWER: **fanning** the idol [accept descriptive equivalents, including "waving" and "whisking"] <VB, Religion>

16. To adapt to life in the Southern Ocean, notothenioids ("noh-toh-THEN-ee-oids") evolved glycoproteins with this function. For 10 points each:

[10m] Name or describe this function of proteins that induce thermal hysteresis in the blood of icefish. Avoidant proteins with this function form pits on the basal faces of crystalline water and inhibit their growth.

ANSWER: acting as <u>antifreeze</u> [or <u>lowering the freezing point</u>; accept answers indicating that they <u>prevent</u> blood or water <u>from freezing</u>; accept <u>antifreeze</u> proteins, <u>antifreeze</u> glycoproteins, or <u>ice structuring</u> proteins; prompt on binding ice by asking "what function does that accomplish?"; prompt on AFPs or AFGPs

[10e] Crocodile icefish blood is colorless from lack of this protein, which carries oxygen throughout the body.

ANSWER: **hemoglobin** [accept **Hb** or **Hgb**]

[10h] The truncation of the globin region in icefish was a neutral fixation that resulted in one of these non-functional entities in the icefish genome. A unitary example of these entities is found in place of GULO in primates, making them some of the few mammals that cannot synthesize ascorbic acid.

ANSWER: **pseudogene**s [accept globin **pseudogene**, GULO **pseudogene**, or L-gulono-gamma-lactone oxidase **pseudogene**; prompt on GULOP, <u>dead gene</u>, <u>vestigial gene</u>, or descriptions indicating <u>genes that don't work</u>] <JE, Biology>

17. A woman with this condition explains that she hates a certain sound because "It won't let you alone. It keeps reminding you, and warning you, and calling you back." For 10 points each:

[10h] Name this condition. A woman with this condition stands in the doorway with a white wedding gown draped around her arm while her son recites lines from the poem "A Leave-Taking."

ANSWER: morphine addiction [prompt on drug addiction by asking "what is she addicted to?"]

[10e] Jamie's alcoholism and his mother Mary's morphine addiction lead to the downfall of the Tyrone family in this autobiographical Eugene O'Neill play.

ANSWER: Long Day's Journey into Night

[10m] The Tyrones frequently complain that the sound of this object keeps them awake. Mary Tyrone says that she hates the sound of this object, which "moans like a mournful whale in labor."

ANSWER: the <u>foghorn</u> <KJ, American Literature>

18. This compound is the most notable analogue of ALD-52. For 10 points each:

[10h] Name this compound whose synthesis involves hydrolyzing ergotamine, then activating the resulting compound using phosphoryl chloride. This compound's indole ring reacts strongly with chlorine.

ANSWER: <u>LSD</u> [or <u>lysergic acid diethylamide</u>; accept <u>acid</u>, blotter <u>acid</u>, <u>dots</u>, <u>mellow yellow</u>, or <u>window pane</u>] [10e] In basic conditions, LSD readily interconverts with non-psychoactive iso-LSD since it has this property. This property arises because LSD has four different substituents on its 5th and 8th carbons, thereby making iso-LSD and LSD mirror images of each other.

ANSWER: <u>chiral</u>ity [prompt on stereo<u>isomerism</u> or <u>isomerism</u> or word forms by asking "what property of a molecule leads to the existence of stereoisomers?"]

[10m] Rather than hydrolyzing ergot derivatives, Fujii and Ohno published a method in 2011 for total synthesis of lysergic acid using a catalyst containing this metal, which is also used in most cross-coupling reactions.

ANSWER: **palladium** [or **Pd**]

<AF, Chemistry>

19. An English poem whose title is in this language begins, "I, too, saw God through mud—/ The mud that cracked on cheeks when wretches smiled." For 10 points each:

[10m] Name this language that [emphasize] *titles* a poem whose speaker watches someone "flound'ring like a man in fire or lime" and sees him drowning "under a green sea."

ANSWER: Latin

[10e] This author titled his poems "Apologia Pro Poemate Meo" and "Dulce et Decorum Est" for Latin phrases. The speaker notes "a drawing-down of blinds" in this poet's "Anthem for Doomed Youth."

ANSWER: Wilfred (Edward Salter) Owen

[10h] The line "Died some, pro patria, non 'dulce' non 'et decor'" is in part four of this long poem, whose speaker wishes to "wring lilies from the acorn." This poem's two parts respectively end with "Envoi" and "Medallion."

ANSWER: Hugh Selwyn Mauberley

<AD, British Literature>

20. Sigurdur Nordal made the Icelandic word for "computer" a feminine noun by coining it as a portmanteau of *tala*, meaning number, and this word. For 10 points each:

[10h] Give this word from Old Norse that refers to the same group as *spákona* and *seidkona*. The first work from the *Poetic Edda* is named for and delivered by a figure of this name.

ANSWER: völva [or völur; prompt on tölva or Völuspa]

[10m] The *Poetic Edda* is contrasted with the *Prose Edda* of Snorri Sturluson, who also wrote works in this genre like the *Heimskringla*. An Icelandic work in this genre following the viking Egil may have also been by Snorri.

ANSWER: Icelandic sagas [or family sagas]

[10e] In what is generally thought to be an effort to reconcile pagan and Christian traditions, the prologue to the *Prose Edda* states that Norse gods descend from Priam, the final king of this city sacked in the *Iliad*.

ANSWER: **Troy** [or **Ilium**]

<KW, Mythology>