

2021 ACF Winter  
Packet P (Finals 2)

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Tossups

1. In an essay about this city, the narrator imagines the lives of strangers on the street while searching for a lead pencil. While in this city, the title character of a book is jealous of “the hooded man” and is later ransomed by Mr. Taylor. In this city, an airplane is writing letters in the sky when a bell strikes eleven times, a sound repeated throughout a novel. In that novel set in this city, a man hallucinates about the dead soldier Evans, to the horror of his wife Rezia. Another character in this city reminisces about kissing Sally Seton and rejecting a proposal from Peter Walsh. The suicide of Septimus Smith occurs during Clarissa’s party preparations in this city, which was home to the real-life Bloomsbury Group. For 10 points, name this city, the setting of *Mrs. Dalloway* and the hometown of Virginia Woolf.

ANSWER: **London** (The first two sentences are from “Street Haunting: A London Adventure” and *Flush*.)  
<British Literature>

2. A protein designated by this letter, which is expressed by the vesicular stomatitis virus, is conjugated to a fluorescent protein to study vesicular transport. Along with proteins A and L, a streptococcal protein designated by this letter binds immunoglobulin. An amino acid designated by this letter occupies every third residue of collagen, but has a “helix-breaking” effect in most soluble proteins. This letter designates the only immunoglobulin isotype that crosses the placenta, which is also the most abundant. This letter names a group of proteins which are activated by 7-transmembrane domain receptors; those trimeric proteins named for this letter then activate PLC or adenylyl cyclase as part of a signaling cascade. For 10 points, name this letter that designates the only achiral amino acid and the purine that binds to cytosine.

ANSWER: **G** [accept **G**-proteins or **G**-protein-coupled receptors; accept Ig**G**; prompt on **GPCRs**] (The amino acid is glycine. The purine is guanine or guanosine.)  
<Biology>

3. In a likely forgery, this person either says “Let wicked people swell up” or an ungrammatical utterance. Karen King’s presentation of a text purportedly about a relative of this person was judged to be based on a forgery. This person relates the title woman’s rise and fall in the text *Pistis Sophia*. A collection of quotes from this person tell of how a servant invited random people to dine with his master and of how tenants killed the heir of a vineyard owner. A text discovered at Nag Hammadi contains purported sayings of this person that were written down by Didymos Judas Thomas. A saying of this person compares the Kingdom of Heaven to a mustard seed. For 10 points, name this person whose sayings are collected in the Gospel of Thomas in addition to the New Testament.

ANSWER: **Jesus** Christ [or **Jesus** of Nazareth or **Iesus** or **Iēsoûs** or **Yēšúa** or **Yeshua** or **Isho** or **Isa**; prompt on **Joshua** or **Yehoshua**]  
<Religion>

4. *Note to moderator: Read the answerline carefully.* James Daschuk's book about "clearing" this large natural region notes that the XY Company sold many gallons of rum to its smallpox-decimated Niitsitapi people, who kept travois-pulling dogs. The Saukteaux ("SAWL-toh") arose from Ojibwe who migrated to this region, which was dominated by the Iron Confederacy of the Assiniboine ("uh-SIN-ih-boyn"). It's not the Kootenays ("COOT-nees"), but Interior Minister Clifford Sifton reserved "block settlements" in this natural region for Ukrainians and Doukhobors, who built sod houses. This natural region formed the westernmost part of Rupert's Land before the Métis ("may-TEE") settled Selkirk's Red River Colony. Canada's Dominion Lands Act opened this "Last Best West" to homesteaders. For 10 points, Manitoba, Saskatchewan, and Alberta contain the north of what flat landscape that also defines the Dakotas?

ANSWER: Canadian **Prairies** [or Great **Plains**; accept **Plains** Cree or **Plains** Ojibwe; accept **Assiniboia** before "Assiniboine"; accept **Peace River** Country; accept *Clearing the Plains*; prompt on **Manitoba** or **MB** or **Alberta** or **AB** or **Saskatchewan** or **SK** before read by asking "the southern part of that province is in what natural region?"; prompt on **grasslands** or equivalents; prompt on Western **Canada** or **Keewatin**; prompt on **Rupert's Land** before read] <Other History>

5. East Asian plot techniques informed a writing manual named for this term "in the real world" by Matthew Salesses. This term is spelled with an ash in the title of an Alex Langlands book that recreates medieval beekeeping, haymaking, and thatching. Matthew B. Crawford outlines a "soul" form of this term in an "inquiry into the value of work" about shop class. This term names an anti-industrial decorative arts movement whose *Acanthus* wallpaper and Red House were designed by William Morris. Film crew snack services are known by this term, whose "studio" genre includes casting and woodworking. This term names a broad set of hobbies supplied by Michaels, Jo-Ann Fabrics, and Etsy. For 10 points, what term for skilled, artisanal trades that create handiwork follows "Mine" in a building video game?

ANSWER: **craft** [or word forms like **craftsman** or **crafting** or **handicrafts** or **Craeft**; accept **Minecraft**; accept Arts and **Crafts**; accept **craft** services; accept *Shop Class as Soulcraft*; accept **Craft in the Real World**; prompt on **handiwork**; prompt on **arts** by asking "what other term is it named for?"] <CE/Geo/Other/Pop Culture>

6. This molecule's HOMO has h-sub-1-u symmetry, and its triply-degenerate LUMO has t-sub-2-u symmetry. This molecule, which forms bright violet solutions in hydrocarbon solvents, was functionalized using brominated diethyl malonate and DBU in the first example of the Bingel reaction. Zellinger et al. fired this molecule through a grating to show it has a de Broglie ("duh BROY") wavelength of 2.5 picometers. An "at" sign is used to write complexes in which this molecule surrounds another, which are called endohedral. This molecule was first isolated using a laser to vaporize the surface of a graphite disk by Curl, Kroto, and Smalley. This molecule was the first to be discovered of a new allotrope that also includes nanotubes, and was named for the inventor of the geodesic dome. For 10 points, name this molecule that consists of sixty carbon atoms arranged in a soccer ball shape.

ANSWER: buckminster**fullerene** [accept **fullerenes**; accept **buckyball** or **C<sub>60</sub>** ("C-60")] <Chemistry>

7. A thinker with this surname predicted that future workers would likely form cooperatives to escape wage slavery in the essay “On the Probable Futurity of the Labouring Classes.” A book by a thinker with this surname uses the example of a Muslim country banning pork to demonstrate how morals can influence decisions without encroaching on opinions. An author with this surname argued that “women have as good a claim as men have... to the suffrage” in the essay “The Enfranchisement of Women.” A book by a thinker with this surname opens by warning against the oppression of minorities via “tyranny of the majority.” Harriet Taylor and her husband with this surname co-wrote that book, which put forth the “harm principle.” For 10 points, give this surname of the husband-and-wife duo who wrote *On Liberty*.

ANSWER: **Mill** [accept Harriet Taylor **Mill**; accept John Stuart **Mill**; accept Harriet **Taylor** or Harriet **Hardy** before “Muslim” is read, but prompt afterwards by asking “what surname was later taken by that philosopher?”]

<Philosophy>

8. A poem in this language inspired a novel that ends with the characters admiring a volcano outside an Argentine bakery. A 2019 play merges one of this language’s characters with Norma Jeane Baker. A character originally from this language titles a poem that ends “touch me and you’ll burn,” in which she “[does] Countertop Dancing.” One of this language’s poets inspired the work *Autobiography of Red* by Anne Carson, who translated another of this language’s poets in the collection *If Not, Winter*. Twelve hanged maids narrate a novella by Margaret Atwood that retells a poem in this language, including how a woman evaded suitors by repeatedly weaving and unweaving a shroud. For 10 points, Atwood’s *Penelopiad* was inspired by what language’s *Odyssey*?

ANSWER: Ancient **Greek** [or **Hellēniké**; accept **Ionic** Greek or **Homeric** Greek or **Aeolic** Greek]

<World Literature>

9. A set of “Pictures” named for this word sets five poems, including one by the composer’s wife Alice, for contralto and orchestra. A brass fanfare of B-flat minor chords opens a symphony named for this word, which soon abruptly transitions to a *fortissimo* D major chord. The choir enters with the Walt Whitman-derived text “Behold [this word]” at the beginning of Ralph (“rafe”) Vaughan Williams’s first symphony. A piece named for this word includes a movement that depicts the time “From dawn to noon” as the first of its three impressionist “symphonic sketches.” Benjamin Britten excerpted four “interludes” named for this word from his opera *Peter Grimes*. For 10 points, name this place, which is depicted during the “Play of the Waves” movement of Claude Debussy’s *La mer*.

ANSWER: the **sea** [accept the **ocean**; accept *Four Sea Interludes*; accept *La mer* before read; prompt on **water** or equivalents]

<Classical Music>

10. A Limes (“LEE-mace”) named for these people separated their Nordalbingian group from the Slavic Obotrites. These people paid 500 cows as tribute to Chlothar I. During the Carausian revolt, these people’s pirate raiders named a network of forts on Gaul’s shore. In the Ostsiedlung (“AWST-zeed-lung”), Franconians who were identified as these people colonized Sibiu and Sighișoara (“see-ghee-SHWAR-ah”) in Transylvania. These people’s oral history was recorded in a book of “deeds” by an Ottonian chronicler at Corvey Abbey; that man was named for the king who led these tree-worshipping people before they were massacred at Verden by Charlemagne, Widukind. During the heptarchy, the Jutes’ Kingdom of Kent was conquered by these people’s “Western” group in Wessex. For 10 points, name these Germanic people who invaded Britain alongside the Angles.

ANSWER: **Saxons** [or **seax**ana or specific subgroups such as West **Saxons**; accept *The Deeds of the Saxons* or *Res gestae saxonicae*; accept Limes **Saxonicus** or **Sachsenwall**; accept Transylvanian **Saxons** or **Sasi** ardeleni or Siebenbürger **Sachsen** or Erdélyi **szászok**; accept **Saxon** Shore; prompt on **Anglo-Saxons** or **Germanic peoples**]

<European History>

11. A thinker from this country outlined the “focal point approach” to law and economics in *The Republic of Beliefs*. A sufficient statistics approach is used to determine the economic effects of this country’s rail network in a 2018 paper by Dave Donaldson. An economist originally from this country directs Harvard’s Opportunity Insights, which identifies policies that improve upward mobility. Esther Duflo, Michael Kremer, and an economist from this country co-won the 2019 Economics Nobel Prize. An economist from this country created the capabilities approach with Martha Nussbaum and wrote *Development as Freedom*. For 10 points, name this country home to the highest number of people living in extreme poverty worldwide, and which is therefore often studied by development economists like Amartya Sen.

ANSWER: **India** [or Republic of **India**; or **Bhārat** Gaṇarājya]  
<Social Science>

12. A book on the “paradox of” this painting by William Schupbach argues against the claim that its main figure represents a certain author “redivivus,” as made in a monograph by William Heckscher. A fire destroyed most of a companion piece to this painting by the same artist, which was inspired by Mantegna’s *Dead Christ* and showed Jan Deijman (“yahn DAY-mun”). A poster at the rear of this painting, behind a man checking his notes, gives its date as 1632. Most of the figures in this painting look past the robber Aris Kindt towards a large book in the bottom right, which is usually thought to be by Vesalius. This painting’s main subject uses forceps to indicate the muscles of the forearm of a cadaver. For 10 points, name this Rembrandt painting of a medical demonstration.

ANSWER: *The **Anatomy Lesson** of Dr Nicolaes Tulp* [or *De **anatomische les** van Dr Nicolaes Tulp*]  
<Painting/Sculpture>

13. This character advises that another character not accept a gift of seven-hundred camels and a thousand falcons in a passage that mysteriously ends with the letters “A-O-I.” After stumbling upon a hill with four marble steps, this character accidentally shatters a rock while trying to break a sword. A man with a white beard grants this character aid from Count Gautier and a bow for protection. This character gives his right glove to the archangel Gabriel upon his death, which comes shortly after he witnesses the death of the archbishop Turpin. After he is betrayed by his stepfather Ganelon, this character dies when his temples burst from blowing on his horn, the oliphant. For 10 points, name this paladin of Charlemagne whose “Song” titles a medieval French epic.

ANSWER: **Roland** [or **Orlando**; accept *The Song of **Roland*** or *Le Chanson de **Roland***]  
<European Literature>

14. This commodity was obtained from “gardens” in Kibiro for the Bunyoro Kingdom in Uganda. The traveller Al-Bakri noted that this commodity was taxed twice as it passed downriver, unlike copper and other goods. David Livingstone explored an area named for this commodity in the Makgadikgadi (“mah-KHAH-dee-KHAH-dee”) region of Botswana. The hottest average temperature for an inhabited area was recorded at a site for processing this commodity in Dallol, Ethiopia. Caravans still go to Bilma to pick up this commodity, which was traded using a system of silent barter. Ahmad al-Mansur led an invasion of one empire after he demanded taxes from this commodity at Taghaza. This resource was cut into slabs in West African empires that traded it for gold. For 10 points, name this resource used to preserve food.

ANSWER: **salt** [accept rock **salt** or sea **salt** or table **salt** or **NaCl** or **sodium chloride**; accept **sodium carbonate** or **soda ash**; accept **sodium bicarbonate**; accept **sodium sulfate**; accept **potassium chloride** or **potash**]  
<World History>

15. This quantity is equal to the symmetrized gradient of the mechanical displacement field in a theory named after this quantity's approximation as infinitesimal. An "offset" of this quantity, typically equal to 0.2 percent, is used to define the offset yield point. Either work or this quantity names a phenomenon in which plastic deformation "hardens" a material. The negative ratio of the values of this quantity in the transverse and axial directions equals Poisson's ratio. At the maximum value for this quantity, fracture occurs. For an axial deformation, the change in length over original length gives the "engineering" definition of this quantity that appears in the denominator of the definition of Young's modulus. For 10 points, name this quantity often plotted in namesake curves alongside stress.

ANSWER: **strain** tensor [accept engineering **strain**; accept **strain** hardening]

<Physics>

16. Jennifer Keishin Armstrong's book *When Women Invented [this technology]* celebrates Hazel Scott for integrating it at DuMont. Jonathan Pontell used this technology to define "Generation Jones." Lynn Spigel's book *Make Room for [this technology]* argues that it shaped the domestic ideal in postwar suburbs. In the 1920s, a "mechanical" type of this technology used a Nipkow disc. In the 1960s, the Mountain Pass mine supplied europium for this technology, whose NTSC and PAL systems introduced distinct interlacing standards to improve raster scanning by cathode ray tubes. The "Radio Index" preceded the "Audimeter" that tracked this technology for Nielsen Ratings. For 10 points, Kennedy apocryphally won his first debate with Nixon thanks to what technology broadcast by networks like CBS?

ANSWER: **television** [or **TV** or the **telly**; accept specific types like color **TV**; accept National **Television** System Committee; accept *Make Room for TV* or *When Women Invented Television*; prompt on **telecommunications** or **media** or **screens** or similar; prompt on **broadcasting** before read; prompt on slang like "the **box**" or "the **tube**"]

<American History>

17. This process can be measured through a namesake "bump" in the power spectra of the CMBR. A transition in a substance that has undergone this process produces a spectral line used in PNLFs to measure distances. The end of the Gunn–Peterson trough in quasar spectra marks the beginning of an era named for this process that followed the recombination era. The degree to which this process occurs at thermal equilibrium is given as a function of temperature by the Saha equation. This process takes 13.6 electron volts of energy for a ground state hydrogen atom. Gases that undergo this process become plasmas. For 10 points, name this process in which an atom or molecule gains a net charge.

ANSWER: **ionization** [accept **reionization**; prompt on answers which indicate that particles become **charged**]

<Other Science>

18. This person builds a funeral pyre for the drowned Misenus shortly before following two doves to a tree. In one episode, this person relates how they built an empty tomb for Deiphobus while talking to his shade. An epithet given to this person is frequently translated as "pious." In a duel against a man who fails to lift a giant rock, this person flies into a murderous rage after seeing a belt stolen from his dead friend. While in the court of a kingdom in Libya, this man relates how the ghost of his wife told him to leave his homeland as he escaped a burning city carrying his father Anchises ("an-KY-sees") on his back. After incurring the wrath of Juno, this man is incited into falling in love with Dido. For 10 points, name this first hero of Rome and subject of a namesake epic by Virgil.

ANSWER: **Aeneas** [do not accept or prompt on "the *Aeneid*"]

<Mythology>

19. A desire to shoot the film entirely underwater led this director to be dropped from a live-action remake of *The Little Mermaid*. At the end of a film by this director, two characters whisper an inaudible goodbye to each other on a crowded street as the song “Just Like Honey” starts to play. In a film by this director, Cecilia, who leaps onto a fencepost, is the first of the Lisbon sisters to kill herself. A film by this director ends with “More Than This” being performed by the actor Bob Harris, who meets Scarlett Johansson’s character in Japan. This director appeared as the infant Michael Rizzi in a christening scene in a film directed by her father. For 10 points, name this director of *The Virgin Suicides* and *Lost in Translation*, whose father directed *The Godfather*.

ANSWER: **Sofia Coppola** [prompt on Coppola; do not accept or prompt on “Francis Ford Coppola”]

<Other Arts>

20. In this play, a character compares his father to “a shadow that followed you everywhere” which was “digging in your flesh. Trying to crawl in.” In this play, a woman laments to her husband, “I planted myself inside you and waited to bloom,” only to find that the “soil was hard and rocky.” This play’s protagonist ridicules his son Lyons when he asks for a loan of ten dollars. At this play’s end, a character performs a strange dance and song to open the gates of heaven after his trumpet fails to sound. In this play, the motherless baby Raynell is raised by Rose. In this play, Cory’s college football dreams are crushed by his father, who faced racism as a baseball player. For 10 points, name this Pittsburgh Cycle play about the garbage collector Troy Maxson, written by August Wilson.

ANSWER: **Fences**

<American Literature>

21. *Note to moderator: Read the answerline carefully.* According to legend, a leader of these people revolted after he was berated as a “blacksmith slave.” The semi-mythical capital of an empire ruled by these people, Ötüken, is described in the Orkhon inscriptions. While ruled by the Ashina tribe, these people overthrew the Rouran, who may have fled west to become the Pannonian Avars. Bumin founded an empire ruled by a group of these people, who called themselves “Celestial,” or “Gök.” These people founded a khaganate whose inhabitants were referred to as “Oghuz.” People of this large ethnolinguistic group later won the Battle of Manzikert and founded the Sultanate of Rûm in Anatolia. For 10 points, name this large ethnolinguistic group that included the Seljuks and Ottomans.

ANSWER: **Turks** [or Gök-**Turks** or Celestial **Turks** or Blue **Turks**; accept **Türük** Bodun or **Tüjué** or Kök **Türük** or **Türkler**; accept **Ashina** clan or **Asena** or **Açina** before “Ashina”; accept Oghuz **Turks** or Seljuk **Turks** or Ottoman **Turks**; accept **Turkic** peoples; prompt on **Oghuz** before read; prompt on **Türkmen** or **Türkmân** or **Turkmen** or **Turcoman** or **Seljuks** or **Ottomans** or **Osmanl** by asking “what larger ethnolinguistic group are they a part of?”]

<World History>

## Bonuses

1. Agnes Hsū-Táng (“shoo-tahng”) and Zhào Cóngcāng (“jow tsong-tshahng”) excavated a kingdom of this name that buried boat-shaped coffins and placed bronze heads with gold foil masks in “sacrificial pits” in Jīnshā (“jeen-shah”) and Sānxīngduī (“sahn-shing-dway”). For 10 points each:

[10h] Give this name of an ivory-importing Bronze Age kingdom legendarily founded by Cánóng, which followed the Bǎodūn (“bao-dwin”) culture near modern Chéngdū. Liú Bèi founded a later state of this name that was also based in Sìchuān.

ANSWER: **Shǔ** [accept **Shǔ** Hàn; prompt on Ji **Hàn** by asking “what other name is usually given to that state to distinguish it from the Hàn dynasty?”]

[10e] Shǔ, Wèi, and Wú divided China during a period that shares this name with the Korean states of Goguryeo (“ko-goor-yuh”), Silla (“shilla”), and Baekje (“beck-jay”), and also titles a classic novel by Luó Guànzhōng.

ANSWER: **Three Kingdoms** [or **Sānguó** Shídài; accept *Romance of the **Three Kingdoms*** or **Sānguó** Yǎnyì; accept **Three Kingdoms** of Korea or **Samguk**-sidae]

[10m] This was the collective name of three kingdoms among Xiàng Yǔ’s (“sh’yahng yew’s”) “18 Kingdoms.” A brief dynasty with this name invaded Shǔ and Bā via the Stone Cattle Road and ended the well-field system as part of its Legalist reforms.

ANSWER: **Qín** [accept **Qín** dynasty or **Qíncháo** or **Ch’in**; accept Three **Qíns** or **Sānqín**; do not accept or prompt on “Qīng dynasty” or “Dà Qīng”]

<Other History>

2. When this property for a system is greater than one, its correlation length diverges. For 10 points each:

[10h] Name this property, which in one formulation is the lowest derivative for which a discontinuity in a thermodynamic variable occurs. The Ehrenfest classification sorts phenomena by this property.

ANSWER: **order** of a phase transition [do not accept or prompt on “order parameter”]

[10e] The liquid-gas phase transition turns from first-order to second-order above this temperature. Above this temperature, the boundary between liquids and gases on a phase diagram stops.

ANSWER: **critical** point [or **critical** temperature]

[10m] This quantity approaches zero as a transition approaches second-order and as the sizes of discontinuities are reduced. This quantity is equal to the difference between the enthalpies of two phases across a transition.

ANSWER: **latent heat** [accept more specific answers such as the specific latent **heat of vaporization** or latent **heat of fusion**; do not accept or prompt on “heat”]

<Physics>

3. The première of a restaging of this ballet featured a *Valse champêtre* in which forty dancers held red, yellow, and blue ribbons around a maypole. For 10 points each:

[10e] Name this Tchaikovsky ballet in which a ballerina performs an iconic series of 32 fouettés (“fweh-tays”). In this ballet, the sorceress Odile curses Odette to turn into the title bird.

ANSWER: **Swan Lake** [or **Lebedinoye ózero**]

[10m] Most modern performances of *Swan Lake* are based on an 1895 restaging of it by Lev Ivanov and this choreographer, who also choreographed *Don Quixote*.

ANSWER: Marius **Petipa** [or Marius Ivanovich **Petipa** or Victor Marius Alphonse **Petipa**]

[10h] Petipa’s version of *Swan Lake* includes a “Dance of the Little Swans,” in which four dancers link arms while performing 16 of these sideways jumps consecutively.

ANSWER: **pas de chats** (“PAH duh SHAH”)

<Other Arts>

4. Octavia E. Butler's final novel, *Fledgling*, is narrated by one of these characters who suffers from amnesia and becomes part of the Ina community. For 10 points each:

[10h] Name this type of character. In another novel, the orphan Aubrey travels around Europe with one of these characters named Lord Ruthven, who kills his wife on their wedding night.

ANSWER: **vampires** [accept "The **Vampyre**"]

[10m] John Polidori's "The Vampyre" was inspired by this author's "Fragment of a Novel" which he wrote during a literary horror contest with Mary and Percy Shelley. This Romantic poet wrote the Gothic closet drama *Manfred*.

ANSWER: Lord **Byron** [or George **Gordon**]

[10e] That literary horror contest also led to Mary Shelley's development of this novel, which is about a mad scientist who brings a monstrous creature to life.

ANSWER: **Frankenstein** [or *Frankenstein; or, The Modern Prometheus*]

<British Literature>

5. According to legend, the first ruler of an empire centered around this modern-day country was descended from a sky-god and was sent to earth after being eaten and revived. For 10 points each:

[10h] Name this modern-day country whose rulers took the title "Tu'i." The British-born Shirley Baker became the first prime minister of this country under George Tupou I.

ANSWER: **Tonga** [or Kingdom of **Tonga** or Pule'anga Fakatu'i 'o **Tonga**; accept Tu'i **Tonga** empire]

[10m] The Tongan prince Enele Ma'afu forcibly converted people to Christianity on the Lakeba island of this Melanesian country. Indian laborers were brought to this other Pacific island country by the British.

ANSWER: **Fiji** [or Republic of **Fiji** or Matanitu Tugalala o **Viti** or **Fiji** Ganarājya]

[10e] The Tu'i Tonga empire used *kalia* examples of these boats to cross vast swathes of the Pacific. Outrigger examples of these single-oar vessels, such as the Māori *waka*, were often used by Polynesian cultures.

ANSWER: **canoes** [accept dugout **canoes** or outrigger **canoes**; accept **pirogue** or **piragua** or **piraga**; prompt on row**boats** or **ships**; do not accept or prompt on "kayaks"]

<World History>

6. In a 2019 essay collection titled after this mental disorder, Esmé Weijun Wang ("way-joon wahng") describes her experience with this disorder when she recounts hallucinations of the phrase "I hate you." For 10 points each:

[10e] Name this disorder whose name translates to "split mind," a term that Wang calls "ableist and inaccurate."

ANSWER: **schizophrenia** [or **SZ**; accept *The Collected Schizophrenias: Essays*]

[10h] Wang compares her experience to this 1887 exposé of Blackwell's Asylum. This book's author, Nellie Bly, pretended to be mentally ill in order to investigate the asylum's abusive conditions.

ANSWER: ***Ten Days in a Mad-House***

[10m] This author criticized the "romantic idea that the disease expresses the character" in her book *Illness as Metaphor*. Wang's essay "L'Appel du Vide" discusses *On Photography*, a book by this author of "Notes on Camp."

ANSWER: Susan **Sontag**

<American Literature>



7. The *Andantino* theme of this piece's second movement theme and variations ends with the flute playing four descending notes accompanied by grace notes an octave higher. For 10 points each:

[10h] Name this C major piece that opens with an *andante* clarinet solo. It was paired with a similar piece by Maurice Ravel on a landmark 1974 recording featuring Claudio Abbado and Martha Argerich.

ANSWER: Sergei **Prokofiev's Third Piano Concerto** [or Sergei **Prokofiev's Piano Concerto** No. **3**; prompt on partial answers]

[10e] Prokofiev's second piano concerto contains a second movement in this form that requires the soloist to play rapid 16th notes continuously throughout. This light-hearted form's name comes from the Italian for "joke."

ANSWER: **scherzo** ("SCARE-tso")

[10m] Prokofiev's fourth piano concerto was among a set of piano concertos commissioned by Paul Wittgenstein with this characteristic, the best-known of which was composed by Ravel.

ANSWER: for the **left hand** only [prompt on "for **one hand**" by asking "which one?"]

<Classical Music>

8. Howard E. Aldrich suggested that entrepreneurship is facilitated by these structures, whose constituents may exhibit *tertius gaudens* or *tertius iungens* orientations. For 10 points each:

[10e] Name these sociological structures that link individuals. The internet has allowed online services such as Myspace and Facebook to create virtual ones.

ANSWER: **social networks** [prompt on **social** media; prompt on **networks**]

[10h] Social networks are made up of these smallest sociological relationships, which are classified by triviality and intimacy. Close friendships exemplify these connections that involve long-term one-to-one relationships.

ANSWER: **dyads**

[10m] Georg Simmel, who extended dyads to triads, analyzed modernization in an essay on these places "and Mental Life." Lewis Mumford wrote a 1961 book on [*This type of place*] in *History*.

ANSWER: **city** [or **metropolis**; accept **Grossstadt** or **Metropole**; accept **metropolization** or **metropolitan** area or **metro** area or macrometropolis; accept *The Metropolis and Mental Life* or *Die Grossstädte und das Geistesleben*; accept *The City in History*]

<Social Science>

9. A group of astronauts become stranded on the Moon and adopt a religious cult in a series of sci-fi novels in this language called *The Lunar Trilogy*. For 10 points each:

[10h] Name this language. In another sci-fi novel in this language, the protagonist sees his dead lover on a spaceship also occupied by Sartorius and Gibarian.

ANSWER: **Polish** [or język **polski**] (The unnamed novel is *Solaris*.)

[10m] Polish author Stanisław ("stah-nee-swaff") Lem wrote a sci-fi collection partially titled for this adjective about the robots Trurl and Klapaucius. William Gibson's novel *Neuromancer* pioneered a subgenre of sci-fi named for this adjective and the word "punk."

ANSWER: **cyber** [accept *The Cyberiad* or *Cyberiada*; accept **cyberpunk**]

[10e] A diary from the "Neogene Era" makes up Lem's novel titled for "Memoirs found in" one of these objects. In Peter Weiss's play *Marat/Sade*, prisoners put on a play that climaxes with Jean-Paul Marat's murder in one of these objects, also depicted in a Jacques-Louis David ("dah-VEED") painting.

ANSWER: bath**tubs** [accept *Memoirs Found in a Bath**tub*** or *Pamiętnik znaleziony w **wannie***]

<European Literature>

10. W. V. O. Quine argued that propositions of this type cannot be grounded in a non-circular fashion because they rely on synonymy. For 10 points each:

[10h] Name this property. According to Immanuel Kant, propositions are of this type if they are true by definition, such as with the sentence “All bodies are extended.”

ANSWER: **analytic** propositions

[10e] Quine argued that the “indeterminacy” of this process implied that analytic statements are only grounded in meanings. This process is the act of rendering the words of one language into another.

ANSWER: **translating** [or word forms like **translation**]

[10m] *Two answers required.* Kant contrasted the analytic–synthetic distinction with the distinction between these two qualities. Propositions have one of these two qualities depending on if their justification relies on experience or not.

ANSWER: **a priori** AND **a posteriori** [accept “**from the earlier**” AND “**from the later**” or close synonyms; accept answers in either order]

<Philosophy>

11. Hasse (“HAH-suh”) diagrams can be used to visualize these structures. For 10 points each:

[10h] Name these structures which contain maximal elements if they satisfy conditions given by Zorn’s lemma.

These structures contain a binary relation that is antisymmetric and transitive but not necessarily connected.

ANSWER: **poset** (“POH-set”) [or **partially ordered** set]

[10e] Hasse diagrams visualize posets as directed acyclic examples of these structures that contain vertices connected by edges.

ANSWER: **graphs**

[10m] A common example of a poset is the power set equipped with this relation, which establishes the empty set as the minimum element. This relation’s symbol resembles a capital letter U opening to the right.

ANSWER: **inclusion** [accept answers indicating **subsets**; accept descriptions indicating that one set is **contained** within the other]

<Other Science>

12. In 1982, this artist exhibited a portrait of Joseph Beuys at Germany’s documenta exhibition. For 10 points each:

[10m] Name this artist, who included a skeleton holding a zero-dollar bill in the predominantly-red 1986 mural *Crack is Wack*. Many of his works address the crisis surrounding AIDS, which he died of in 1990.

ANSWER: Keith **Haring** [or Keith Allen **Haring**]

[10e] Haring worked mainly in this US city’s graffiti scene. He also took part in the 1983 Whitney Biennial in this city, which is also home to the Metropolitan Museum of Art.

ANSWER: **New York** City [or **NYC**]

[10h] At this exhibition’s 1984 iteration, Haring exhibited a painting that shows Mickey Mouse considering sex with the devil. The US pavilion at this exhibition is displayed at the Peggy Guggenheim Museum.

ANSWER: Venice **Biennale** [or Venice **Biennial** or Art **Biennale**; prompt on **Venice** or **Venezia**]

<Painting/Sculpture>

13. Joseph II and Frederick the Great's troops both dug this crop up with bayonets to survive winter in the War of the Bavarian Succession. For 10 points each:

[10e] Name this crop that may have reached Europe from the Andes, via Colombia. Antoine-Augustin Parmentier extolled this crop, which suffered *Phytophthora* blights that caused famines in the Scottish Highlands and Ireland. ANSWER: **potatoes** [or ***Solanum tuberosum***; prompt on ***Solanum*** or ***Solanaceae***; accept **potato** blight; accept Irish **Potato** Famine or Highland **Potato** Famine; accept **Potato** War or **Kartoffelkrieg**; accept specific potato varieties but do not accept or prompt on "sweet potatoes" or "yams" or "ube"]

[10m] European potatoes may also originate from an island governorate of this former Spanish colony. Amédée-François Frézier introduced Europe to the giant strawberries grown by this country's cattle-raiding Mapuche people. ANSWER: **Chile** [or Republic of **Chile**; or República de **Chile**; accept **Araucanía**; accept Captaincy General of **Chile** or Capitanía General de **Chile**] (The islands were the Governorate of Chiloé.)

[10h] Moche pots north of Chile depicted domestic ducks that Europeans named for this historical region. Richard Chancellor, Sebastian Cabot, and Hugh Willoughby formed an early joint-stock company named for this region. ANSWER: **Muscovy** [accept **Muscovy** duck or *Cairina moschata*; accept **Muscovy** Company; accept **Moscow** or Grand Duchy of **Moscow** or **Muscovite** Russia; prompt on **Russia** or **Rus**; prompt on Company of **Merchant Adventurers** to New Lands]

<European History>

14. Three of these quantities are the free parameters that arise when solving the Schrödinger equation in a radial potential. For 10 points each:

[10m] Name this set of four quantities, three of which are symbolized  $n$ ,  $l$  ("ell"), and  $m$ -sub- $l$  ("M-sub-ell"). ANSWER: **quantum numbers**

[10e] For an electron, this fourth quantum number is either plus or minus one-half. Its existence was shown in the Stern–Gerlach experiment.

ANSWER: **spin** [or **intrinsic angular momentum** or **spin angular momentum**; do not accept or prompt on partial answers]

[10h] This is the number of radial nodes in a 4f atomic orbital. It may help you to know that the angular momentum quantum number of an f orbital is 3.

ANSWER: **zero** (The number of angular nodes equals  $n - \ell - 1 = 4 - 3 - 1 = 0$ .)

<Chemistry>

15. *Walam Olum* was a hoaxed epic of this people, who settled Moraviantown, "Hell Town," and "Murdering Town," and founded the commercial cities of Kittanning and Shamokin. For 10 points each:

[10m] Name this people whom the Penn family robbed in the "walking purchase." Benjamin West painted William Penn's earlier Shackamaxon peace treaty with Chief Tamanend of this native people of New Netherland.

ANSWER: **Lenape** people [or Lenni **Lenape**; or **Delaware**; accept **Lenape**hoking; accept **Choptank** or **Esopus** or **Hackensack** or **Kechemече** or **Munsee** or **Nanticoke** or **Navesink** or **Okehocking** or **Pamapon** or **Pompton** or **Raritan** or **Siwanoy** or **Tappan** or **Unalachtigo** or **Unami**; prompt on **Algonquian** or **Algonquin**]

[10h] In 1654, Lenape sachems settled the favorable Tinicum treaty with this fort's last leader Johan Risingh. The Susquehannock who traded here waged the Peach Tree War after the Dutch besieged this capital of New Sweden.

ANSWER: Fort **Christina** [or Fort **Altena**; or **Hopokahacking**; prompt on **Wilmington**]

[10e] Savo-Karelian "forest-destroyer" Finns who were exiled to Fort Christina brought saunas and these structures to America. In Charleston, Illinois, you can visit one of these dwellings modeled on Abraham Lincoln's birthplace.

ANSWER: **log cabins** [accept **log houses** or **log buildings**; prompt on partial answers; prompt on **wooden** houses or equivalents]

<American History>

16. The Aztec monster *ahuizotl* (“AH-hwee-zoh-tul”), which took the form of this animal, dragged unsuspecting people to their death. For 10 points each:

[10h] Name these animals. A deity with the head of this animal wept so hard during the sacrifice for Tōnatiuh that his eyes fell out of their sockets.

ANSWER: **dogs** [accept *itzcuintli*; accept *tz’i’*; accept *oc*; prompt on Xolotl by asking “Xolotl had the head of what animal?”]

[10m] The dog-headed god Xolotl served in this mythological role of guiding spirits to the afterlife. In this role, Xolotl would reunite dead dogs on the shore of Mictlan with their recently-deceased owners.

ANSWER: **psychopomps**

[10e] Colorful dogs on the shore of Mictlan would accompany souls to prevent them from experiencing this fate in the afterlife. The euphemism “visiting Davy Jones’s Locker” referred to people who died in this fashion.

ANSWER: death by **drowning** [accept equivalents; accept **shipwreck**]

<Mythology>

17. The ideas of Allan Kardec developed into the religion of Spiritism primarily in this country, which contains its largest number of practitioners. For 10 points each:

[10h] Name this country where Chico Xavier helped spread Spiritism, a religious belief about contacting the dead, by channeling a spirit called Emmanuel.

ANSWER: **Brazil** [or **Brasil**; or Federative Republic of **Brazil** or República Federativa do **Brasil**]

[10e] Kardec wrote an instructional book for Spiritist examples of these people, such as Chico Xavier. These people channel spirits using methods like séances (“SAY-on-sizz”) and Ouija boards.

ANSWER: **mediums** [prompt on spirit channelers]

[10m] Kardec titled one of his books on Spiritism *Heaven and Hell*, a title he likely borrowed from this Swedish theologian. This mystic also described his revelations in *True Christian Religion*.

ANSWER: Emanuel **Swedenborg** [or Emanuel **Swedberg**]

<Religion>

18. In a story by this author, the farm worker Petrus pays the morgue for the body of his illegal immigrant brother, only to be given the wrong corpse to bury. For 10 points each:

[10m] Name this author of the story “Six Feet of the Country.” A similar situation arises in a novel by this author which incorporates Zulu myth to describe how Jacobus finds the body of a Black man on Mehring’s farm.

ANSWER: Nadine **Gordimer**

[10e] Gordimer’s works, like the aforementioned novel *The Conservationist*, often oppose this policy, according to which White and Black people were segregated in her native South Africa.

ANSWER: **apartheid**

[10h] A white apartheid activist tries to prove his own Black heritage in a Gordimer story titled for how “[this historical figure] was One-Sixteenth Black,” which titles a 2008 collection by her.

ANSWER: Ludwig van **Beethoven** [accept *Beethoven was One-Sixteenth Black*]

<World Literature>

