

## Chicago Open 2023

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**Packet 2** by Saint Peter Andre 3000 (Shahar Schwartz, Zach Foster, Jason Golfinos, Taylor Harvey) + [moderator voice] yes that is so tenpointscore! is your team feeling bonuspilled? (Joy An, Joel Miles, Conor Thompson, Ethan Ashbrook)

## Tossups

1. In a poster by an artist with this surname, a hand covered in corporate logos wields Gerald Ford as a puppet over a backdrop of stock transactions. The posters for Spike Lee's *Da 5 Bloods* drew on a magazine cover by an artist with this surname in which a crying Black soldier's helmet is overlaid with Civil Rights-era atrocities. An artist with this surname made newspaper graphics for the Black Panthers as their Minister of Culture and has the first name (\*) Emory. An artist with this surname depicted a man holding a saxophone who looks toward the Statue of Liberty as he stands atop a wheel in *Song of the Towers*. That artist with this surname used concentric circles, radiating beams, and silhouettes in a set of murals that includes *An Idyll of the Deep South* and *Slavery through Reconstruction*. For 10 points, give this surname of the Harlem Renaissance artist of the *Aspects of Negro Life* series.

ANSWER: **Douglas** [accept Emory **Douglas** or Aaron **Douglas**]

<Tim Morrison, Visual Fine Arts>

2. Fernand Braudel cited this city's archives, which contain collections like the *Diversa Cancellare* and the *Diversa Notaria*, as "the most valuable for our knowledge" of its region. After this city suffered a devastating earthquake in 1677, many of its buildings were repaired with money from the Bona and Kaboga families, who dominated this city's politics. This city reached its zenith after it received territory in 1358 from the Patriarchate of (\*) Aquileia. The nobles of this city elected its leaders to a position known as either Rector or *knez* ("k'nez"). Beginning in the 14th century, this city enforced the first state-mandated quarantines for travelers. Though beginning a period of functional independence, this state was taken from Venetian control and placed under the *de jure* control of Hungary per the Treaty of Zadar. For 10 points, name this state on the Adriatic Sea that controlled most of Dalmatia until the early 19th century.

ANSWER: **Ragusa** [or **Dubrovnik**] (The work mentioned in the first clue is *The Mediterranean and the Mediterranean World in the Age of Philip II*.)

<Zachary Foster, European History>

3. A magical blue one of these objects gifted by the *nāgas* cures King Indrabodhi of his blindness. Kisshōten is depicted holding one of these objects, two of which were used by Śāgara ("sha-GA-ra") to destroy the Korean army at the behest of Empress Jingū. A future Sultan of Brunei steals one of these objects by using a kite to evade Mount Kinabalu's dragon. Princess Tamatori uses her wounded breast to hide one of these objects, (\*) "flaming" examples of which are chased by Chinese dragons in a motif that alludes to eclipses. A grateful snake gifts the Marquis of Sui one of these objects, two of which are given to Ho-ori in the Lost Fishhook tale by the father of Toyotama-hime, Watatsumi. "Wish-granting" examples of these objects include the *bāozhū* and *cintāmani*. For 10 points, Ryūjin controls the tides by using what jewels harvested by Japan's *ama* divers?

ANSWER: **pearls** [accept **jewels** or **gems** until "jewels" is read; accept **tide jewels** until "jewels" is read; accept **nyoihōju**; accept **mani**, **chintamani**, or **cintāmani** until "cintāmani" is read; accept rúyì **bāozhū** until "bāozhū" is read; prompt on **stones**]

<Kevin Thomas, Beliefs>

4. A method for manipulating this quantity suffers from namesake “holes” that arise as fixed points of the dynamics of a recursively defined “chain” of replicas of the method. Artifacts due to changing this quantity are the typical cause of erroneous velocity rescaling that results in a “flying cube” effect. A method for controlling this quantity that employs weak coupling is named for Berendsen and is typically used to make significant changes to this quantity before it is swapped out for a method named for Nosé (“no-SAY”) and Hoover.

**Equilibration in (\*)** molecular dynamics simulations typically begins by stabilizing this quantity. Total energy may vary freely when the number of particles, volume, and this quantity are held constant in the canonical ensemble. For 10 points, name this quantity controlled by algorithms called thermostats.

ANSWER: **temperature** [prompt on T] (The lead-in refers to Hoover holes, which can affect Nosé–Hoover chains.

The “flying cube” is the flying ice cube.)

<David Bass, Physics>

5. While talking to a keeper in the forest, Henry VI claims that he has one of these objects in his heart, which is called “content” (“kun-TENT”). A character declares, “With mine own tears I wash away my balm,” and waffles, “Ay, no; no, ay,” when asked about one of these objects in a scene missing from the first three quartos. That character compares himself to a “bucket down and full of tears” and one of these objects to “a deep well / That owes two buckets, filling one another” while telling his “cousin” to (\*) “seize” it from one side as he holds the other. A rant on the Welsh coast that claims “within [one of these objects]... keeps Death his court” titles a BBC adaptation of Shakespeare’s *Henriad*. One of these objects that Richard II had earlier called “hollow” is held by him and Bolingbroke in the Deposition Scene. For 10 points, Henry IV complains, “Uneasy lies the head that wears” what kind of object?

ANSWER: **crowns** [accept specific answers like the **crown** of England; accept *The Hollow Crown*]

<Henry Atkins, British Literature>

6. In 2017, Alex Szpilman’s group showed that unpoled examples of these species were the intermediates in a class of hypervalent iodine-induced reactions. A six-membered ring transition state determines the stereochemistry of these species according to a dubious model named for Robert Ireland. David Evans pioneered the use of ox·azo·lidinones as auxiliaries to instill chirality in these reactive species. Lithium (\*) di-isopropyl·amide’s most common use is for generating the kinetic variants of these species. An O·R group is kicked off after an attack by this chemical species in an intramolecular reaction named for Dieckmann. Due to resonance with an alpha oxygen, these species unusually have a nucleophilic carbon. For 10 points, aldol condensations proceed via electrophilic attack with what chemical species, the anions of a tautomerization product of ketones?

ANSWER: **enolates** [reject “enols”]

<Jane Doe, Chemistry>

7. In one work, after mocking the idea of coherence as an “old, old story,” this character quips to an unnamed interlocutor, “You are a nonentity whom I’m filling up with wine.” In a story, this character claims that, if it were commanded that they be helped, “all would lie in their beds, the blanket pulled over their heads, the entire planet a hostel” to a man who had earlier insisted “I’m not laughing.” A “Fragment” on this character extends a story in which their arrival is heralded by a talking (\*) dove the size of a rooster, collected in *The Great Wall of China*. This character dies after falling off a cliff while chasing a chamois in the Black Forest. This character relates how, because their boatswain (“BOH-sun”) made a “steering error,” they are condemned to forever “ply the earthly waters” in a conversation with Salvatore, the Burgomaster of Riva. For 10 points, name this title “Hunter” of a Kafka story.

ANSWER: **Gracchus** [accept “The Hunter **Gracchus**” or “Der Jäger **Gracchus**”; accept “The Hunter **Gracchus**: a Fragment”, “Fragment of ‘The Hunter **Gracchus**’”, “Der Jäger **Gracchus**: Ein Fragment”, or “Fragment zum ‘Jäger **Gracchus**’”]

<Tim Morrison, European Literature>

8. In one folk tradition, the Moon gifted this product as a sign of friendship to an old hunter who saved her from a pouncing cat. According to that tradition, this product is protected by a blond, boyish creature named Jasy Jatere (“ya-SOO ya-tey-REY”). Syria is the world’s largest importer of this product due to its ubiquitous adoption by Druze from returning emigrants in the 19th and 20th centuries. Governor Hernandarias attempted to ban use of this product as a vice in 1616 after settlers began (\*) importing it en masse from Jesuit missions. Cattle horns called *guampas* are sometimes used with this product, especially for a cold mixture called *tereré*. Most people consume this originally Guaraní product with metal straws called *bombillas* (“bom-BEE-yahz”) and calabash gourds. For 10 points, Uruguay and Argentina are the largest drinkers of what herbal infusion?  
ANSWER: yerba **mate** (“YAIR-bah MAH-tay”) [or **ka’a**, **erva-mate**, **cimarrón**, or **chimarrão** (“she-ma-HOW”)]; accept **tereré** until read; prompt on yerba or tea  
<Henry Atkins, Geography>

9. According to a 2018 book by William Middleton, a patron of this building declared, “Frankly, I expected color” upon first seeing it. This building’s notoriously poor original skylight stemmed from the more intense light in its final site than at the New York gymnasium where many of the works inside it were made. The southern entrance wall to this building has a black and maroon panel directly inspired by Last Judgment paintings that the artist saw in Italy. This (\*) octagonal building was designed by Howard Barnstone and Eugene Aubry after creative differences with original architect Philip Johnson. This building’s namesake committed suicide a year before its completion. One of Barnett Newman’s *Broken Obelisks* is located outside of this Texas building. For 10 points, name this building next to Houston’s Menil Collection, a nondenominational structure named for a color field artist.  
ANSWER: **Rothko Chapel** [prompt on Menil Collection until read]  
<Mike Bentley, Other Fine Arts>

10. Idoma oral tradition holds that a war named for these animals drove them from their ancestral homeland to the land that they currently occupy. Ouedraogo (“way-drah-OH-goh”), the founder of the Tenkodogo Mossi Kingdom and grandfather of the founder of Ouagadougou (“wah-gah-DOO-goo”), was named for one of these animals. The connection of these animals to officials called *esos* declined over time in the Oyo Empire. The raids of the Bornu Empire funded its acquisition of these animals, which, as recorded by Leo Africanus, were exchanged for 15-20 (\*) slaves each. Some crossings of the Dongola and Barb varieties of these animals developed resistance to trypanosomiasis. A typical translation of the name “Janjaweed” is “devils on” these animals. For 10 points, name these animals that were commonly brought across the Sahara to the Sahel to serve as faster mounts than camels.  
ANSWER: **horses** [accept different ages/sexes of horses, such as **mares**, **colts**, or **stallions**; accept African breeds of horses including, but not limited to, **Mossi**, **Yagha**, **Tawleed**, **M’Bayar**, or **Hausa**; accept **Barb** or **Dongola**wi horses until read]  
<Alex Fregeau, World History>

11. It’s not the Sorbonne, but Robert Bellarmine and a thinker at this university argued that grace becomes efficacious when God engineers circumstances where it will be freely accepted, a view known as “congruism.” In an appendix to his manual for confessors, a thinker at this university explained inflation using an early form of the quantity theory of money. A thinker at this university considered the truth of sentences like “the gryphon is fierce” that concern *entia rationis*, or (\*) “beings of reason,” at the end of his *Metaphysical Disputations*. A thinker at this university argued that restraint of proselytization or trade provided “just title” for war, but papal supremacy and discovery did not in his lectures *De Indis*, which influenced the Valladolid debates. For 10 points, name this university, whose namesake “school” of scholastic philosophy included Francisco de Vitoria and Francisco Suárez.  
ANSWER: University of **Salamanca** [or Universidad de **Salamanca** or School of **Salamanca**] (Martín de Azpilcueta Navarro independently discovered the quantity theory of money.)  
<Jason Golfinos, Philosophy>

12. **At the first of these events, one politician claimed that another could “prove a horse chestnut to be a chestnut horse.” Prior to one of these events in Charleston, spectators held up a large banner reading “Negro Equality,” which showed a white man, a Black woman, and a mixed-race child. Harry Jaffa wrote a 1959 book arguing that these events marked a revival of the Socratic tradition. A participant in these events described another’s ideas as “thin as a (\*) homeopathic soup made by boiling the shadow of a pigeon that starved to death.”** Pitman shorthand allowed reporters to cover these events, which started in a non-Canadian Ottawa and ended in Alton. At the second one of these events, a participant presented his Freeport Doctrine. For 10 points, name these seven 1859 debates that pitted an incumbent Illinois senator against his Republican challenger.

ANSWER: Lincoln–Douglas debates [accept equivalent descriptions that mention both Stephen Douglas AND Abraham Lincoln; prompt on partial answers]  
<Caleb Kendrick, American History>

13. **A chapter of this book ends by observing that a review of the play *Mr. Budhoo’s Resignation Letter from the I.M.F.* was the only time that economist Davison Budhoo was mentioned in *The New York Times*. The launch of Bono’s brand Red serves as the backdrop for an interview with Jeffery Sachs in this book, who discusses how his work in the 1990s was meant to resemble the Marshall Plan. This book, which opens with an anecdote about its author talking to a survivor of Hurricane Katrina in a food line, details incidents of (\*) “voodoo politics” such as the privatization of industries in junta Argentina and post-Soviet Russia. This book repeatedly compares psychiatrist Ewen Cameron’s CIA-sponsored research into electrical torture to the neoliberal policies of Milton Friedman. For 10 points, the rise of “disaster capitalism” is explored in what 2007 book by Naomi Klein?**

ANSWER: *The Shock Doctrine*  
<Taylor Harvey, Modern World>

14. **The bounded version of this algorithm has a maximum runtime more or less linear in the problem size by the unfortunately false Hirsch conjecture. A pathological construct created to prove the exponential worst-case complexity of the unbounded version of this algorithm is named after Klee and Minty. Degeneracies that cause cycling in this algorithm are fixed by Bland’s rule, which guarantees finite termination time. (\*)** Pivot rules are applied when performing this algorithm by hand to choose a non-basic and a basic variable to swap within a tableau. This algorithm begins by using slack variables to convert constraint inequalities to equations that define the feasible region. For 10 points, name this linear programming technique created by George Dantzig that solves optimization problems by moving between the vertices of a convex polytope.

ANSWER: simplex method [or simplex algorithm; prompt on linear programming until read by asking “what linear programming method?”]  
<Alistair Gray, Other Science - Computer Science>

15. **Remarkably, four separate instances of these events happened to author Antonio di Benedetto during his imprisonment under the Videla regime. In one novel, a former teacher organizes one of these events with a scarecrow after making arbitrary decrees such as animals out after six becoming public property. One of these events occurs at the end of a story whose protagonist habitually hides in the hills after hacking a (\*) landowner to death with a machete. A father addresses his son Justino (“hoo-STEE-no”) before one of these events in that story from *The Burning Plain*. A character who is said to have survived “fourteen attempts on his life, seventy-three ambushes,” and one of these events spends it thinking about the time he saw a diamond-like object at a tinkers’ camp. For 10 points, Colonel Aureliano Buendía remembers seeing ice with his father while facing death by what method?**

ANSWER: firing squads [accept mock firing squad; prompt on executions or mock executions] (The Juan Rulfo story is “Tell Them Not to Kill Me!”)  
<Henry Atkins, World Literature>

16. **Historian John M. Riddle has controversially argued that this practice was much more prevalent in the Middle Ages than often thought. In the absence of more standard ways of doing this practice, writers like al-Rāzī and Soranus of Ephesus advised jumping backwards seven times and sneezing repeatedly. The exploitation of *barbasqueros* in the mid-20th century followed Russell Marker’s creation of a new method for this practice using Mexican yams. The Kahun Papyrus recommends (\*) crocodile dung for this practice. This practice allegedly drove the *silphium* plant to extinction. Writers like Hippocrates described methods for this practice such as primitive forms of the pessary. For 10 points, for much of human history, the most effective form of what practice was *coitus interruptus*?**

ANSWER: **contraception** [or **birth control** or **abortion**; accept any answer describing the **prevention of pregnancy**]  
<Jason Golfinos, Other History>

17. **The hypothesis that nematomorphs lack these structures is supported by a 2023 paper by Tauana J. Cunha et al., which finds that both species studied lack most conserved eukaryotic genes for these structures. These non-molecular structures are affected by dye-filling mutations like *dyf-5*. In *C. elegans*, ADF and ADL cells are named for “dual” pairs featuring these structures. Four of these structures from wing cells do not continue into a cuticle pore via a socket cell after twelve of them pass through the lumen of a sheath cell in an (\*) amphid. Flame cells in protonephridia are distinguished from solenocytes by a form of these structures. In *C. elegans*, the ends of the dendrites of sixty sensory neurons feature the “primary,” or “non-motile,” type of these structures. For 10 points, name these ubiquitous small cellular protrusions that are often involved in cell locomotion.**

ANSWER: **cilia** [accept primary **cilia** or non-motile **cilia**; prompt on descriptions of **organs** involved in **sensation**, like **sensilla** or **sensory endings**, by asking “what cellular structure intakes sensory stimuli?”; accept singular nouns that end in “-um” instead of “-a”; prompt on **undulipodia**]  
<David Bass, Biology>

18. **A study by Roder, Bushnell, and Sassville that used this measure demonstrated how two different preferences compete to affect this measure. This measure was the dependent variable in a study by Kelly et al. that used the other-race effect to demonstrate perceptual narrowing. This measure is recorded for different stimuli in the VPC task. Studies that use (\*) habituation as a research technique use the change in this measure as a dependent variable. The change in this quantitative measure was the subject of a pioneering 1964 experiment by R. L. Fantz that introduced the notion of novelty preference. Psychological attention experiments on preverbal infants usually use this measure in studies where subjects are exposed to new fixed images. For 10 points, what temporal measure is measured by tracking the fixity and change in visual focus?**

ANSWER: infant **look duration** [accept **time** in place of **duration**; accept any descriptive answers that mention how **long** a subject **looks** at some object; prompt on **time**; prompt on **eye movement**; prompt on **attention** by asking “how is attention measured?”]  
<Taylor Harvey, Social Science>

19. **The *Allegro vivace* Benedictus of a mass by this composer opens with a long keyboard solo. In the *Pie Jesu* of a mass by this composer, the basses start a fugue with the *forte* eighth notes “G, G, G,” dotted eighth “G” and sixteenth “F-sharp,” and quarter “F-sharp,” which repeat in the next movement. In 2019, Ulrich Leisinger published a complete reconstruction of a mass that this composer reused in his cantata *Davide penitente*. The (\*) Organ mass is one of three C major masses that this composer wrote within one year. In the first part of a mass by this composer, the basses sing “A, short A, F, high B-flat, low C-sharp” to begin a double fugue. “Et incarnatus est” is the last section that this composer wrote for his Great Mass in C minor. In the 12/8 (“twelve-eight”) final section of a mass by this composer, all but the first eight bars were written by Franz Xavier Süssmayr. For 10 points, name this composer whose last of 18 masses was his unfinished *Requiem*.**

ANSWER: Wolfgang Amadeus **Mozart** [or Johannes Chrysostomus Wolfgangus Theophilus **Mozart**] (The second clue refers to the *Quam olim abrahamae* section of the Requiem’s *Pie Jesu* and *Hostias* movements.)  
<Ethan Ashbrook, Classical Music and Opera>

20. An anthology titled for these objects includes fifteen “diaspora” essays, including one whose every section begins “OK, people, let’s do this one last time. Spider-Man has always been Black.” These objects title an open letter that urges “third world women writers” to “write from the body.” An essay titled for these objects includes a short interlude that identifies with “nightmares” and “aberrations” who are “culturally crucified.” These objects title an essay within a larger book that examines a (\*) “tradition of silence” and begins with an anecdote about a dentist who becomes exasperated while trying to drain a tooth. A section on “linguistic terrorism” appears in that essay titled for these objects, which describes how Chicanas feel shame over speaking “poor” Spanish. For 10 points, a chapter of Gloria Anzaldúa’s *Borderlands/La Frontera* is titled “How To Tame a Wild” what object? ANSWER: wild tongues [accept How to Tame a Wild Tongue; accept “Speaking in Tongues: A Letter to Third World Women Writers”; accept Wild Tongues Can’t Be Tamed]  
<Joy An, American Literature>

## Bonuses

1. In a 2013 paper with Sandeep Prasada and George Newman, this philosopher argued that concepts like “scientist” have a “dual-character.” For 10 points each:

[h] Name this experimental philosopher at Yale who discovered that people are more likely to call a CEO’s actions “intentional” if they harm the environment as a side effect than if it benefits the environment.

ANSWER: Joshua **Knobe** [or Joshua Michael **Knobe**]

[e] Weinberg, Nichols, and Stich’s 2001 study about these scenarios showed East Asians had differing intuitions about them. These cases from a 1963 paper show that knowledge is not justified true belief.

ANSWER: **Gettier** cases

[m] Machery et al. found that East Asians were also less likely to agree with this book’s intuitions about a story in which Godel stole his theorems from Schmidt. This book attacks a “cluster theory” of one of its title concepts.

ANSWER: **Naming and Necessity** (by Saul Kripke)

<Jason Golfinos, Philosophy>

2. In a story in which this character attempts to locate a Jewish lamp with a jewel hidden within it, he receives a letter from a rival informing him of that rival’s “tragic death,” and inviting him to the funeral. For 10 points each:

[h] Give this name of a character whose “friend and confidant” is named Wilson. That character received this name to avoid legal action after the publishing of a story in which he “Arrives Too Late.”

ANSWER: **Herlock Sholmès** [or Herlock **Sholmès**, **Holmlock** Shears, or Holmlock **Shears**; prompt on **Sherlock Holmes** or **Sherlock Holmes** by asking “what was the name changed to?”]

[m] This mystery writer of the Belle Époque created Herlock Sholmès in their stories about the “gentleman thief” Arsène Lupin.

ANSWER: Maurice **Leblanc** [or Maurice Marie Émile **Leblanc**]

[e] A Leblanc novel in which Arsène Lupin locates a crystal stopper inside a box of Maryland tobacco was inspired by this Edgar Allan Poe story, whose title object is similarly hidden in plain sight. Lacan’s *Écrits* (“ay-KREE”) begins with a “Seminar on” this story.

ANSWER: “The **Purloined Letter**” [or “La **lettre volée**”; accept “Seminar on ‘The **Purloined Letter**’” or “Le séminaire sur ‘La **lettre volée**’”]

<Taylor Harvey, European Literature>

3. In 2016, chemistry professors Haoyu Yu and Donald Truhlar at this university used DFT to determine that Pt O four two-plus has a +10 oxidation state, the highest known of any stable compound. For 10 points each:

[h] What university names a family of popular meta-GGA functionals, the most recently-developed of which are the 15 and 15-L functionals?

ANSWER: University of **Minnesota**, Twin Cities [accept **UMN**; accept the **Minnesota** functionals; prompt on **Myz**]

[e] Functionals based on the GGA approximation assume a gradient for this quantity across a molecular system. This quantity is the “D” in “DFT.”

ANSWER: electron **density** [accept probability **density** or **density** functional theory]

[m] The Minnesota functionals are natively included in this most popular computational chemistry software, designed by John Pople. This software is named for the type of orbital it uses for calculations instead of Slater-type orbitals.

ANSWER: **Gaussian-16** [accept **Gaussian** orbitals]

<Ethan Ashbrook, Chemistry>

4. Historian Dalton Woods argues that using the name of these ships to describe one region's pre-colonial polities is a result of long-running mistranslations. For 10 points each:

[h] Name these ships, which have come to name pre-colonial polities governed by leaders called *rajahs* or *lakans* in regions like the Visayas.

ANSWER: **balangay** [or **barangay**; accept "**Barangic** Phase," which is a historiographic term sometimes used for the relevant historical/sociopolitical period]

[m] The title *datu* was one of several used by leaders of *barangays* and held by this leader. This leader's forces killed Ferdinand Magellan at the Battle of Mactan.

ANSWER: **Lapu-Lapu** [or **Lapulapu** or Si **Lapulapu**]

[e] One of the more prominent *barangays* names this city on the Pasig River. Miguel López de Legazpi founded the modern incarnation of this city in 1571, which replaced Cebu as the capital of the Spanish East Indies.

ANSWER: **Manila** [or **Maynila**]

<Jason Golfinos, World History>

5. This artist won the Pulitzer Prize for an editorial cartoon showing a house teetering from "world control" to "world destruction" on an atomic bomb. For 10 points each:

[e] Name this cartoonist best known for a series about Professor Lucifer Gorgonzola Butts, who creates absurdly complex analog machines to accomplish simple tasks.

ANSWER: Rube **Goldberg** [or Reuben Garrett Lucius **Goldberg**]

[h] Goldberg won the Pulitzer while cartooning for this defunct newspaper. This printer of the "Yes, Virginia, There is a Santa Claus" editorial never retracted six articles claiming that John Herschel had discovered bat-winged moonmen.

ANSWER: *The Sun* [accept *The New York Sun*] (The last clue refers to the Great Moon Hoax.)

[m] Rube Goldberg also made several cartoon parody versions of these works for the company Pathé. The film *Citizen Kane* features a fictional one of these works that parodies a real-life one called *The March of Time*.

ANSWER: **newsreels**

<Henry Atkins, Other Academic>

6. Fascinated with the idea of the New World paralleling the Old, Giacomo Gastaldi created a map with this place at the same latitude as a similarly named European city. For 10 points each:

[h] Name this mythical place located in what is now Maine, whose name comes from an Algonquin phrase meaning roughly "quiet stretch of water."

ANSWER: **Norumbega** [accept **Oranbega**] (The European city is Nuremberg.)

[e] A map created by this explorer contains the first written reference to Norumbega. This Italian explorer sailed on behalf of France and was the first European to explore New York Harbor, where a bridge is now named after him.

ANSWER: Giovanni da **Verrazzano** [accept **Verrazzano**-Narrows Bridge or **Verrazano**-Narrows Bridge]

[m] Had it existed, Norumbega would have been in the lands of this later Native American Confederacy, which included nations like the Penobscot, Passamaquoddy, and Mi'kmaq ("meeg-mahg").

ANSWER: **Wabanaki** Confederacy [or **Wabenaki** or **Wobanaki**; prompt on member nations of the Wabanaki Confederacy, such as, but not limited to, the Abenaki, Maliseet, Wəlastəkwewiyik, Sokoki, Missiquoi, Cowasuck, Cowass, Androscoggin, or Arisgantegok]

<Zachary Foster, US History>



7. Cycnus beheaded strangers in order to erect a temple of skulls dedicated to this god, whom Alexander the Great offered sacrifices to on the eve of the Battle of Gaugamela. For 10 points each:

[e] Name this lion-headed son of Ares and Aphrodite who routs the enemy by inducing panic. Though some translations refer to this personification of fear as “Terror,” that moniker usually refers to his brother Deimos.

ANSWER: **Phobos** [or **Pavor**; reject “Phoebus”]

[m] In the *Dionysiaca*, Eris takes the form of this goddess while Phobos takes the form of Attis, the consort of her [emphasize] *Phrygian counterpart*. This skilled wrestler cast her predecessor, Eurynome (“yer-IN-uh-mee”), into Tartarus.

ANSWER: **Rhea** [or **Rheia** or **Ops**; accept **Rhea**-Cybele; prompt on Meter Theon]

[h] In the *Iliad*, Phobos hangs like a garland off of this object that is imbued with the powers of “heart-freezing” Ioke (“eye-O-kee”) and Alke (“Al-kee”). The *kursas*, a sacred Hittite hunting bag, may have inspired the tales of this non-golden object.

ANSWER: **agis** [or **aigis**; prompt on the shield or cloak of Athena or Zeus] (The *kursas* is also linked to the Golden Fleece.)

<Kevin Thomas, Beliefs>

8. Abbott Labs gifted this organization Thomas Hart Benton’s series *The Year of Peril*, which includes a painting that depicts a man sowing skulls like seeds. For 10 points each:

[h] Name this organization that removed a painting of its possibly-queer employees after Hugh Rodman claimed that it represented “a most disgraceful, sordid, disreputable, drunken brawl.”

ANSWER: **United States Navy** [or the **US Navy**; prompt on the United States Military or US Military; prompt on the navy by asking “of what country?”; prompt on sailors]

[m] Paul Cadmus’s *The Fleet’s In!* was removed from this museum that also canceled Robert Mapplethorpe’s *Perfect Moment* exhibition in 1989. This DC museum distributed its collection for free after it closed in 2014.

ANSWER: **Corcoran** Gallery

[e] Cadmus photographed queer men on Fire Island alongside Jared and Margaret, two magical realists with this surname. An earlier sculptor with this surname created a massive seated Abraham Lincoln.

ANSWER: **French** [accept Jared **French**, Margaret **French**, or Daniel Chester **French**]

<Joel Miles, Visual Fine Arts>

9. William Blake was likely inspired to depict John Milton returning to Earth after reading a biography by this author, which seeks to rebut Samuel Johnson's characterization of Milton as a “most unamiable being.” For 10 points each:

[h] Name this author of a *Life of Milton*. Blake moved to a cottage in Felpham (“FELP-um”) upon being hired by this author in 1800.

ANSWER: William **Hayley**

[m] Blake was specifically commissioned to illustrate William Hayley’s biography of this other poet with the given name William, who wrote “The Stricken Deer” and collaborated with John Newton on the *Olney Hymns*.

ANSWER: William **Cowper** (“cooper”)

[e] While employed by Hayley, Blake wrote this poem, which he included in the preface to the prophetic book *Milton*. This poem’s speaker asks if a city was “builded here / Among these dark Satanic Mills?”

ANSWER: “**Jerusalem**” [or “**And did those feet in ancient time**”]

<Joy An, British Literature>

10. You are trying to prove that a sequence of random variables converges to a limit, so you get one of these functions out of the Skorokhod space that you keep in your backpack. For 10 points each:

[e] You first try to show convergence of these functions, which is called “weak convergence.” These functions can be calculated by taking the integral of a probability density function.

ANSWER: **cumulative distribution** functions [or **CDFs**; prompt on **distribution** functions]

[m] To prove convergence in probability, you apply this statement that places an upper bound of “expectation of  $X$  over  $c$ ” on the probability of a positive random variable  $X$  exceeding a constant  $c$ .

ANSWER: **Markov’s inequality**

[h] If the event that  $X$  sub  $n$  is more than epsilon away from  $X$  has summable probability for any epsilon, then you can apply the first of these statements to get almost sure convergence. Both of these statements concern the probability of the limit supremum of a sequence of events.

ANSWER: **Borel–Cantelli** lemmas

<Tim Morrison, Other Science - Mathematics>

11. This effect contributes a coefficient of one minus the voltage gain in the Miller effect. For 10 points each:

[m] Name this effect in which circuit elements inhibit the efficiency of a circuit by storing charge, thus creating a voltage barrier. It is a limiting factor for the operating frequency and bandwidth in many circuits.

ANSWER: **parasitic capacitance** [or **stray capacitance**; prompt on **capacitance** or **self-capacitance**]

[h] *Description acceptable.* Miller capacitance equals capacitance times one minus the voltage gain when this assumption about the general value of a quantity holds. Violating this assumption results in voltage gain attenuation that warrants the use of Miller’s approximation.

ANSWER: **low frequency** [accept equivalents; accept answers that describe the **frequency** in the system being **less than** the **cutoff** frequency; accept answers that describe the **frequency** being too **low** for **roll-off** to occur; prompt on answers that describe **no** occurrence of **roll-off**; accept “**nu**” or “**f**” in place of “frequency”]

[e] Parasitic capacitance often occurs between the bases and collectors of these devices exemplified by MOS-FETs and BJTs.

ANSWER: **transistors** [accept metal-oxide-semiconductor field-effect **transistors** or bipolar junction **transistors**]

<Shahar Schwartz, Physics>

12. In her paper “Sometimes I’ll start a sentence in Spanish Y TERMINO EN ESPAÑOL,” Shana Poplack notes that people with this trait would code-switch mid-sentence, while others would code-switch between sentences. For 10 points each:

[m] Name this specific trait defined by having roughly equal competence in an L1 and L2.

ANSWER: **balanced** bilingualism [prompt on **bilingualism**]

[h] Jim Cummins proposed this hypothesis about second language acquisition, which holds that learners who are more proficient at their first language will manifest that proficiency more quickly in a second language.

ANSWER: **interdependence** hypothesis

[e] True balanced bilingualism is very rare, and is most likely to happen if a child learns both languages during this period of increased ability to learn a new language.

ANSWER: **critical** period

<Conor Thompson, Social Science>

13. Christopher Pearse Cranch amusingly illustrated this literary image as a creature with long legs and a top hat strolling the countryside. For 10 points each:

[m] Give this metaphor from an 1836 essay for pure, spiritual perception of the natural world. An author claims to be this image before stating “I am nothing; I see all.”

ANSWER: the “**transparent eye-ball**” [prompt on partial answers]

[e] Emerson’s call for “solitude” in his essay “Nature” was a primary inspiration for this book, whose author “wished to live deliberately, to front only the essential facts of life.”

ANSWER: **Walden** (by Henry David Thoreau)

[h] After suggesting “an occult relation between man and the vegetable,” Emerson claims that the world seems alternately happy and melancholy to us because Nature always does *this*. An exact six-word answer is required.

ANSWER: “Nature always **wears the colors of the spirit**.”

<Taylor Harvey, American Literature>

14. This piece’s second movement, “Story,” begins with one voice repeating “once upon a time, a time, a” while another voice repeats “ti ti ti ti” to create a beat. For 10 points each:

[h] Name this piece in which that movement consists entirely of phrases from Gertrude Stein’s “The World is Round.” This piece’s third movement contains a melody intended for “any suitable instrument.”

ANSWER: **Living Room Music**

[e] John Cage composed *Living Room Music* for an ensemble of these instruments. Cage also featured this class of instruments in his *First Construction (in Metal)*, which uses several gongs.

ANSWER: **percussion** [accept **percussion** ensemble]

[m] *First Construction (in Metal)* also uses four unusual instruments taken from these objects. A musicologist at Michigan found that four [emphasize] *other* instruments taken from these objects are pitched “A-flat, B-flat, D, A” rather than “A, B, C, D.”

ANSWER: **cars** [or **automobiles** or **taxis**; accept **car** drum brakes or **taxi** horns]

<Joy An, Classical Music and Opera>

15. Defenders of this ideology cited Tacitus’s descriptions of the central people’s ancestors building no permanent homes to critique contemporary building practices. For 10 points each:

[h] Name this nationalistic ideology, which traced the origins of a social class to an ancient people of the steppe. By sporting a mustache and a coat called a *delia*, one could demonstrate adherence to this ideology.

ANSWER: **Sarmatism** [or **Sarmatianism**, **Sarmatyzm**, or **Sarmatizmas**]

[m] This class promoted their Sarmatian ancestry during the Early Modern period, which they claimed was not held by the commoners of their country. This class increased their power with a set of rules forced on Henry of Valois.

ANSWER: **szlachta** (“SH’LAKH-tah”) [or **Polish nobility**, **Lithuanian nobility**, or **Polish-Lithuanian nobility**; accept word forms]

[e] Much of the fashion the *szlachta* used to show their Sarmatism, such as the *delia* and *żupan* (“ZHOO-pahn”), may have come from contact with this empire. Jan Sobieski relieved this empire’s 1683 Siege of Vienna.

ANSWER: **Ottoman** Empire [or Devlet-i Aliye-i **Osmaniye**, **Osmanlı** Devleti, or **Osmanlı** İmparatorluğu, **Ottoman** Sultanate, or **Ottoman** Caliphate]

<Alex Fregeau, European History>

16. In the 15th chapter of this work's first canto, this work's title entity reveals her identity to Vishnu as he sits on a banyan leaf. For 10 points each:

[h] Name this alleged *mahāpurāna* whose "Gita" section includes its title entity announcing her rebirth as Pārvatī while answering Himavat's questions on the feminine nature of the universe.

ANSWER: **Devī-Bhāgavata** Purāna ("DAY-vee BAH-guh-vuh-tuh poo-RAH-nuh") [or **Devī Bhāgavatam** or Śrīmad **Devī Bhāgatavatam**; prompt on **Devī Gītā** by asking "what larger text is that part of?"; prompt on **Devī** Purāna, **Bhāgavata** Purāna, **Bhāgavatam**, Śrīmad **Bhāgavatam**]

[e] The Devī-Bhāgavata Purāna is a major text in this major Hindu sect, which centers its worship on its namesake creator goddess whose forms include Devī and Sarasvatī.

ANSWER: **Shāktism** [or **Śāktism**; or **Shākta** or **Śakta**; accept **Shākteyas** or **Śakteyas**; accept Ādi **Shakti** or Abhaya **Shakti**]

[m] The Devī-Bhāgavata Purāna references the "parā-" form of this concept, in which a devotee loves a goddess while desiring no boon or liberation. The Ālvārs spread a movement named for this concept that originated in Tamilakam.

ANSWER: **bhakti** ("BUCK-tee") [accept parā**bhakti**; accept **Bhakti** movement]

<Jason Golfinos, Beliefs>

17. Tourists often wonder why a building designed by this artist with a pink façade lined with brown stripes is called the Green Citadel. For 10 points each:

[h] Name this artist whose manifesto *The Holy Shit* describes his motivations for designing a set of toilets. This artist used the term "tree tenants" for plants that stick out from his namesake mosaic-heavy apartment house in Vienna.

ANSWER: Friedensreich **Hundertwasser** ("FREE-denz-ryke HOON-dert-vahss-uh") [or Friedrich **Stowasser** or Friedensreich Regentag Dunkelbunt **Hundertwasser**; accept **Hundertwasserhaus**]

[m] Hundertwasser's proposed design for this specific object used a green koru, a traditional spiral motif. A Kyle Lockwood design whose background is split into black and blue by a white fern won a 2016 referendum on this object.

ANSWER: **flag** of **New Zealand** [or **flag** of **NZ** or **flag** of **Aotearoa**]

[e] Hundertwasser's designs were motivated by his belief that straight lines are the "devil's tools," a stance similar to the one held by this architect who eschewed "unnatural" straight lines in his wavy Casa Milà.

ANSWER: Antoni **Gaudí** [or Antoni **Gaudí** i Cornet]

<Ani Perumalla, Other Fine Arts>

18. Answer the following about Emma Miller, an activist known as "Mother Miller" for her involvement in a variety of labor agitations in Australia, for 10 points each:

[m] Miller was present at the "Tree of Knowledge" in Barcaldine, where the Australian Labor Party's forerunner was formed during "great" strikes of workers in this industry. The Mesta was a guild in this industry.

ANSWER: **wool** industry [or **sheep** industry; accept the **Shearers' Strike**; prompt on **livestock**, **shepherding**, **herding**, or similar answers; prompt on **shipping** or answers like **longshoremen** or **dockworkers** by asking "unions in those industries were specifically backing workers in what other industry in the 1891 and 1894 strikes?"]

[e] Later in life, Miller campaigned against conscription for this conflict, which led to a split in the labor party under Billy Hughes. Australian participation in this conflict prompted the establishment of Anzac Day.

ANSWER: **World War I** [or **WWI**, **First World War**, or **Great War**]

[h] During a 1912 general strike led by tram workers in this city, Miller took out a woman-beating police chief by stabbing his horse's butt with a hatpin. The "Hillbilly Dictator" Joh Bjelke-Petersen ("B'YELL-kuh Petersen") was based in this city.

ANSWER: **Brisbane**

<Jason Golfinos, Other History>

19. A philosopher in this novel who frequently farts while tending his garden is the father of the investigative journalist Melanie, whom the police eventually ban from entering the country. For 10 points each:

[m] Name this novel focused on the schoolteacher Ben Du Toit (“twah”), whose life slowly implodes after he starts investigating the death of the Black janitor Gordon.

ANSWER: *A Dry White Season* [or *'n Droë wit seisoen*] (by André Brink)

[e] André Brink’s *A Dry White Season* is often compared to this other South African political novel, in which Stephen Kumalo journeys to Johannesburg in search of Absalom and Gertrude.

ANSWER: *Cry, the Beloved Country* (by Alan Paton)

[h] In *A Dry White Season*, Ben befriends and is assisted by the part-time criminal Stanley, who also has this job. A queer Tamil woman has this job in the 2023 debut novel of Priya Guns.

ANSWER: taxi **driver** [accept rideshare **driver** or Uber **driver**; accept *Your Driver is Waiting*]

<Taylor Harvey, World Literature>

20. Introduction of the 3Dpol mutation to RDRP and movement of the Cre5 cis-acting replication element reduced the risk of reversion in a vaccine against this virus. For 10 points each:

[e] Name this paralysis-inducing virus whose heat-killed vaccine was invented by Jonas Salk.

ANSWER: **polio**virus

[m] The poliovirus genome exists in this form while in the viral particle. Viruses in Baltimore class 4 have this type of genome, which can replicate its own RNA [emphasize] *without* packaging RNA-dependent RNA polymerase in the virion.

ANSWER: **positive-sense** single-stranded RNA [or **+ssRNA**; accept **plus-sense** single-stranded RNA; prompt on **RNA** or **single stranded RNA**]

[h] Due to their lack of a 5-prime cap, polioviruses use these 5-prime UTR-localized sequences to recruit ribosomes. These RNA elements form secondary structures in the viral genome and bind to initiation factors to initiate translation.

ANSWER: **internal ribosome entry sites** [or **IRESs**]

<Shahar Schwartz, Biology>