2022 ACF Winter

Packet 13 by Purdue A, Purdue C, Berkeley B, Western A

Edited by Joseph Krol, Eric Mukherjee, Justin Zhang, Henry Goff, Eve Fleisig, Athena Kern, Ani Perumalla, Hari Parameswaran, Govind Prabhakar, Ethan Ashbrook, Nick Jensen

Packet 13

Tossups

1. The US Embassy in this country is one of the few buildings to credit the Black architect Norma Merrick Sklarek as having designed it with César Pelli. In 2020, an architect from this country unveiled transparent glass toilet stalls whose walls turn opaque if occupied. An architect from this country designed the glass roof of the Metz (“mess”) Centre Pompidou. An architect from this country allowed sunshine to penetrate a crucifix-shaped gap in the altar of his Church of the Light. An architect from this country arranged shipping containers as walls of the Christchurch Cardboard Cathedral and often uses recyclable materials like paper. A black lintel and two vermilion pillars often adorn religious structures from this country called *torii* gates. For 10 points, Shigeru Ban designed earthquake shelters for what country’s city of Kobe?

ANSWER: **Japan** [or **Nihon** or **Nihon**-koku; or **Nippon** or **Nippon**-koku] (The transparent toilets were designed by Shigeru Ban. The Church of the Light is by Tadao Andō.)

<Other Fine Arts (Architecture)>

2. The earliest of these texts, which contains six “family books” of hymns written by members of particular clans, took 25 years for Max Müller to critically translate. Each of these texts contains a section whose name means “forest books,” which describe sacrifices. These texts were preserved by what is often cited as the longest-ever oral tradition, called their namesake “chant.” The oldest part of each of these texts is a collection of benedictions called the Saṃhitās, which were followed by the Āraṇyakas and the Brāhmanas (“BRAH-muh-nuzz”). These texts are accompanied by around 108 commentaries called the Upanishads (“oo-PUH-nee-shuts”). For 10 points, the “Yajur” and “Atharva” are among what four Hindu scriptures, the earliest of which is the “Rig”?

ANSWER: **Ved**as [accept Rig**ved**a, Sāma**ved**a, Yajur**ved**a, or Atharva**ved**a; accept **Vedic** chants; prompt on śrutis; prompt on Hindu scriptures or similar until “Hindu” is read; prompt on Upanishads until read]

<Religion>

3. The discoverer of a result about these constructs gave Peter Doyle a 50-dollar prize after he intuitively explained the existence of their Kemeny constant. “Absorbing” examples of these constructs have at least one singleton communicating class. A matrix-multiplication-like identity arises when these constructs are the subject of the Chapman–Kolmogorov identity. These constructs are defined by an initial distribution and a single transition matrix, in which each row and column corresponds to an element in the state space. These mathematical constructs’ namesake property is that the probability of a given event depends solely on the result of the previous event. For 10 points, random walks exemplify what probabilistic constructs that represent a sequence of states and are named for a Russian mathematician?

ANSWER: **Markov chain**s [or **Markov process**es or **Markov model**s; accept discrete-time **Markov chain**s; prompt on Andrey Markov or Andrey Andreyevich Markov or Markov property; prompt on stochastic processes or random processes or random walks; prompt on MCs]

<Other Science>

4. This comet-fearing ruler is praised as a misunderstood reformer who donated 10,000 taels (“tails”) to a new medical college in a 2013 biography by the author of *Wild Swans*. This ruler’s refusal to pay a 250-million franc indemnity provoked an undeclared war during the Tonkin Campaign. This ruler, who was born into the Yèhè (“yuh-huh”) Nara clan, financed a marble boat at the New Summer Palace with funds from the Běiyáng (“bay-yahng”) Fleet created by the Self-Strengthening Movement. Despite later supporting the “New Policies,” this ruler placed the Guāngxù (“gwahng-shyoo”) Emperor under house arrest after he launched the Hundred Days’ Reform. This ruler’s designated successor was the future puppet emperor of Manchukuo (“mon-choo-kwoh”), Pǔyí (“poo-ee”). For 10 points, the Boxer Rebellion was supported by what Late Qīng (“cheeng”) regent who *de facto* ruled as “empress dowager”?

ANSWER: **Cíxī** (“tsih-shee”) [or Empress Dowager **Cíxī** or Empress Dowager **T’zu-hsi** or **Cíxī** Tàihòu; accept **Yèhènàlā** Xìngzhēn until “Yèhè” is read; prompt on empress dowager or dowager empress or empress mother until “empress dowager” is read; prompt on húangtàihòu] (Jung Chang wrote the biography in the first line, which discusses Peking Union Medical College. The second line refers to the 1884–1885 Sino-French War.)

<World History>

5. This event, which [emphasize] *did* *not* occur in the 1900s, is depicted in John Petts’s “Wales Window” for a building that had been bombed. A sinking boat appears in the bottom left of a painting titled for this event, to the left of a black donkey and below an angel holding a candle near a large green scroll. A man in green carrying a sack runs to the right in a painting titled for this event that was modified to remove a Nazi armband from a soldier in the background and the phrase “Ich bin Jude” from a placard on a man’s neck. A Lithuanian flag appears behind a burning synagogue in a 1938 painting titled for this biblical event. For 10 points, Marc Chagall painted *Yellow* and *White* versions of what event, whose depictions may include the letters “INRI” above a dying Jesus?

ANSWER: **crucifixion** [or equivalents such as Jesus’s **crucifixion** or **Christ** on the **cross**; accept *White* ***Crucifixion***; accept *Yellow* ***Crucifixion***] (The Wales Window is in the 16th Street Baptist Church.)

<Painting & Sculpture>

6. This poem’s speaker thinks to hang “pictures… with the fourth-month eve at sundown” before rhapsodizing a “gentle soft-born measureless light.” This poem imagines “long panoramas of visions” showing men who “suffer’d not,” while “the living remain’d and suffer’d.” After comparing the knowledge of death and the thought of death to “holding the hands of companions,” this poem’s narrator flees into a swamp and hears a song describing “lovely and soothing death” being sung by a hermit-thrush. While mourning with “ever-returning spring,” this poem’s narrator follows a “western orb sailing the heaven,” which is also described as a “great star early droop’d in the Western sky.” For 10 points, name this Walt Whitman poem, an elegy to Abraham Lincoln titled for some flowers.

ANSWER: “**When Lilacs Last in the Dooryard Bloom’d**”

<American Literature>

7. A corruption investigation in this country was sparked by the arrest of a geriatric home owner who received bribes from a garbage collection company. A prime minister of this country was the first to break the existence of a CIA stay-behind operation in Europe. Two magistrates were killed with car bombs in the middle of this country’s largest criminal proceedings, known as the Maxi Trial. A long-time socialist prime minister of this country was investigated for corruption as part of the so-called “clean hands” investigation. The Red Brigades kidnapped a prime minister of this country during the Years of Lead. Another prime minister of this country was accused of paying for sexual services during so-called “bunga bunga” parties. For 10 points, name this country once led by Silvio Berlusconi.

ANSWER: **Italy** [or **Italia**; or **Italian** Republic or Republic of **Italy** or Repubblica **Italiana**] (The second line refers to Operation Gladio.)

<European History>

8. An actor’s London debut playing this character is the subject of Lolita Chakrabarti’s play *Red Velvet*. A character in a later novel declares that this character “was a lie” as he describes the deaths of his four wives. Bento Santiago identifies as this character after seeing a theater performance in the novel *Dom Casmurro.* This stage character, who was portrayed by Ira Aldridge in a landmark performance, partially inspired the protagonist of Tayeb Salih’s (“TAH-yib SAW-lih’s”) *Season of Migration to the North*. This character, who “loved not wisely but too well,” tells a dead character, “I kissed thee ere I killed thee.” This character sees Bianca’s copy of a strawberry-embroidered handkerchief and smothers his wife with a pillow. For 10 points, name this title Shakespeare character who is tricked by Iago into killing Desdemona.

ANSWER: **Othello** [prompt on “the Moor of Venice”]

<World Literature>

9. This property of a substance is predicted by the parameters “delta-d,” “delta-p,” and “delta-h,” which are plotted in Hansen space. The distribution coefficient includes consideration of this property for ionized compounds. Measurements of this property for uncharged compounds in a water-octanol system are used to find the partition coefficient. Because lead (II) (“two”) phosphate [emphasize] *lacks* this property, phosphates can be added to water supply systems to avoid lead leaching. The common ion effect can reduce the molar form of this quantity since, for specific compounds, this quantity’s “product” is constant. If this property is mutual for two liquids, they are described as miscible. For 10 points, what property describes the ability of “like” compounds to be dissolved by “like” solvents?

ANSWER: **solubility** [or word forms like **soluble**; accept **solubility** product; prompt on dissolve or word forms until “dissolved” is read; prompt on becoming a solute; prompt on miscibility or miscible until “miscible” is read; prompt on hydrophilicity; prompt on Ksp by asking “what does that stand for?”]

<Chemistry>

10. A postscript for this book labels beliefs, values, and “symbolic generalizations” as components of a shared understanding between professionals called the “disciplinary matrix.” It’s not by Wittgenstein, but this book uses an experiment involving incorrectly colored playing cards to describe an ability to switch perspectives, or “Gestalts.” Inexplicable “anomalies” interrupt periods of regular development that this book analogizes to “puzzle-solving.” This book coined a term for changes in the foundations of its title field, as exemplified by quantum mechanics and the Copernican Revolution. For 10 points, paradigm shifts are discussed in what book on the history of science, written by Thomas Kuhn?

ANSWER: *The* ***Structure of Scientific Revolutions***

<Philosophy>

11. This territory’s segregation, as discussed in the books *Dying to Better Themselves* and *Sovereign Acts*, was enforced with gold and silver rolls. The West Indian Employees Association organized after a 1920 strike of this territory’s Martinican and Jamaican ICC workers. Deadly 1964 riots protested this territory’s occupiers after they tore a two-starred, red, white, and blue flag. William C. Gorgas fumigated this territory to control yellow fever and malaria during a project celebrated by 1915 expos in San Diego and San Francisco. Under the Hay–Bunau-Varilla Treaty, the US governed this territory from Balboa until the Torrijos–Carter Treaties enacted its 1999 transfer to a country that, in 1903, separated from Colombia. For 10 points, what territory controlled a waterway between the Atlantic and Pacific?

ANSWER: **Panama Canal** Zone [or Panama **Canal Zone**; or Zona del **Canal de Panamá** or **Zona del Canal** de Panamá; accept **Panama Canal** West Indian Employees Association; prompt on Panama or Republic of Panama or República de Panamá; prompt on Isthmus of Panama or Istmo de Panamá or Istmo de Darién; prompt on Panama–Pacific International Exposition or Panama–California Exposition] (The ICC was the Isthmian Canal Commission.)

<Other History>

12. The dialect of an island in this body of water employs words like “snapjacksfirecrackers” and “coferdbent” and a manner of speech called “talking backwards.” Holland Island sank into this body of water, whose fishing industry uses boats called skipjacks. This body of water is where roughly 80 percent of the world’s striped bass spawn. This is the wider body of water among the two that meet near the town of Havre de Grace (“HAV-er dee grace”). Tourism to a non-New Jersey Ocean City was boosted by this body of water’s namesake 18-mile-long bridge-tunnel. Yellow cans dispense a celery salt-based spice blend named for this body of water that is used to season blue crabs fished near the Delmarva Peninsula. For 10 points, the Susquehanna and Potomac Rivers empty into what bay off the coast of Virginia and Maryland?

ANSWER: **Chesapeake** Bay [accept **Chesapeake** Bay Bridge-Tunnel; prompt on Old Bay Seasoning] (The island in the first line is Tangier Island.)

<Geography>

13. Kaolinite for use in this process is sold as *kalaba* in Cameroon and Gabon. Symptoms of a disorder in this process include Russell’s sign, which manifests as calluses. Tilmann Habermas argued that two disorders named for this physiological process are Western culture-bound syndromes. The Maudsley method is used to treat a class of disorders named for this process, which often induce amenorrhea (“ay-men-ur-EE-uh”) in their sufferers. In an 1897 study, even when this process did not occur, the sound of a metronome elicited a classically conditioned secretory response. After engaging in this process, sufferers of its namesake disorders may engage in purging. For 10 points, Pavlov’s dogs [emphasize] *initially* associated salivation with what process whose namesake class of disorders includes bulimia and anorexia?

ANSWER: **eat**ing [or equivalents like **feed**ing; accept **eat**ing disorders; accept **vomit**ing or **purg**ing until “classically-conditioned” is read]

<Social Science>

14. Trilobites had types of these structures called holochroal, schizochroal, and abathochroal. Ogre-faced spiders regenerate these structures daily. The development of these structures is regulated across several species by *Pax6*. In *Drosophila*, the development of these organs is [emphasize] *inhibited* in a particular imaginal disc by *antennapedia*,and the *sevenless* gene is required for the development of their R7 cells. Depending on if they are located laterally or dorsally, “simple” types of these organs in insects are called stemmata or ocelli. In arthropods, these organs are composed of ommatidia. Sex-linked traits were discovered in *Drosophila* in which these organs were white instead of red. For 10 points, name these organs that are often “compound” in insects.

ANSWER: **eye**s [or **ocular** organs; accept **retina**; accept **lens**; accept compound **eye**s; accept simple **eye**s or **pigment pit**s; accept **ommatidia** or **ocelli** or **stemmata** until each is read]

<Biology>

15. The Englishman John Symmes (“sims”) theorized that the north and south of this location led to a peaceful civilization called Symzonia (“sim-ZONE-ya”). Some theories hold that a so-called “Pac-Man Effect” allows people to teleport between the borders of this location to prevent leaving it. A biography by Washington Irving promulgated a so-called “error” regarding beliefs about this location in the Middle Ages. A treatise by Aristotle relates that Thales was the first person to believe this location floated like a log on water. It’s not the underworld, but stories about realms such as Shamballa and Patala led ancient civilizations to believe this location is hollow, a theory repopularized by a Jules Verne novel. For 10 points, name this astronomical body that a modern conspiracy theory argues is flat.

ANSWER: **Earth** [accept flat **Earth**; accept hollow **Earth**; accept round **Earth** or spherical **Earth**; accept **Gaia**] (The “flat Earth error” is the misconception that medieval scholars thought the Earth was flat until Columbus sailed to the Americas; knowledge of a spherical Earth was passed down in Greek and Arabic texts with few gaps.)

<Mythology>

16. These devices’ value for a quantity denoted “gamma” is reduced in the PDH technique, which is used in [emphasize] *another* technique whose lower limit is “h-bar times gamma over twice the Boltzmann constant.” Two of these devices are oppositely oriented in a technique developed by Claude Cohen-Tannoudji (“clode CO-ehn-tan-OO-jee”), which is named for Sisyphus. Cornell and Wieman used one of these devices coupled with a magnetic field in order to trap rubidium atoms, and thus produced the first Bose–Einstein condensate by using these devices to perform Doppler cooling. Theodore Maiman invented these devices, which can use pumping to produce a population inversion in a gain medium. For 10 points, name these devices that produce collimated, coherent beams of intense light.

ANSWER: **laser**s [accept **laser** cooling; accept **light amplification by stimulated emission of radiation**; prompt on beams; prompt on MOTs or magneto-optical traps by asking “in which what device is coupled with a magnetic field?”] (Gamma denotes a laser’s linewidth.)

<Physics>

17. This movement’s founder wrote that “Jesus is now upon the Earth. He appears like a cloud” in the “Messiah Letter,” which was spread by Caspar Edson. Inaccurate reporting on this movement was countered by a comparative study by James Mooney. Caroline Weldon, an activist for the NIDA, was present when American troops killed a follower of this movement at Fort Yates. “Garments” in the Book of Mormon may have inspired the belief that clothes worn by this movement’s adherents would gain resistance to bullets. Wovoka promoted this movement, whose adherents were massacred in 1890 on the Pine Ridge Reservation. For 10 points, name this Native American spiritual movement that sought to bring about the return of the buffalo through an eponymous performance.

ANSWER: **Ghost Dance** movement [or **Nanissáanah**; prompt on circle dance or round dance; prompt on millenarianism or new religious movements or NRMs]

<American History>

18. In this novel, a character sees a dying crow as “a reflection of her own fate,” since she has “no one left in the world” but her husband. A character in this novel for whom “all women were potential mistresses” calls love and sex “two separate passions; not merely different but opposite.” A character in this novel orders another to “strip!” after she poses for nude photographs in her studio. In this novel, a character moves to America soon after she declares, “My enemy is kitsch!” This novel’s protagonist refuses to retract an article comparing the government to Oedipus and has an affair with a painter who wears her grandfather’s bowler hat during sex; that artist is Sabina. For 10 points, name this novel that follows Tomáš and Tereza during the Prague Spring, written by Milan Kundera.

ANSWER: *The* ***Unbearable Lightness of Being*** [or ***Nesnesitelná lehkost bytí***]

<European Literature>

19. In a movement of this piece, violins play a high E alternating with descending seconds on the G string to possibly mock music critics. Poems are read at performances of this piece in a tradition started by Ogden Nash. In a movement of this piece, an offstage clarinet plays only a repeated descending C-A flat third over slow piano chords. A movement in this piece quotes popular songs that translate as “Leaving for Syria” and “I Have Good Tobacco.” The double bass solo in a movement of this piece quotes Berlioz’s “Dance of the Sylphs.” Players imitate a beginner practicing scales in this piece’s movement “Pianists.” The xylophone quotes the *Danse macabre* (“donse mah-COB”) in this piece’s movement “Fossils.” For 10 points, name this Camille Saint-Saëns (“san-SAWNS”) suite that includes “The Elephant” and “The Swan.”

ANSWER: *The* ***Carnival of the Animals*** [or *Le* ***Carnaval des animaux***]

<Classical Music>

20. John Gawsworth took his pseudonym from this poet’s description of “scrannel pipes of wretched straw” in a poem that tells a “two-handed engine” to “smite once, and smite no more.” In another poem, this author laments his “one Talent which is death to hide” and fears the question “doth God exact day-labour?” This poet coined the phrase “look homeward Angel” in a poem in which an “uncouth swain” tells shepherds to “weep no more” for the title figure, who was based on this author’s drowned friend Edward King. Patience assures the speaker that “they also serve who only stand and wait” in a poem by this author that meditates on his blindness, “When I consider how my light is spent.” For 10 points, name this author of “Lycidas” and *Paradise Lost*.

ANSWER: John **Milton** (Gawsworth’s pseudonym was Orpheus Scrannel.)

<British Literature>

TB. A lithograph by this artist depicts four singers wearing fezzes whose shadows fall on a picture of Egyptian pyramids. In another painting, this artist of *Shrine Quartet* depicted a red truck and a black car driving towards each other next to a cross-shaped telephone pole as seen from above. A painting by this artist depicts an oddly spherical cherry tree being chopped down by a young George Washington. This artist of *Death on the Ridge Road* and *Parson Weems’ Fable* depicted three women standing in front of Emmanuel Leutze’s *Washington Crossing the Delaware* in the painting *Daughters of Revolution*. In another painting by this artist, a woman and a man modeled on this artist’s dentist, who holds a pitchfork, stand in front of a house. For 10 points, name this painter of *American Gothic*.

ANSWER: Grant **Wood** [or Grant DeVolson **Wood**]

<TB (Painting & Sculpture)>

Bonuses

1. This queen, whose cloth hoard included Yoruba textiles, allegedly used an attendant as a human chair to assert her equality with the capitão-mor (“kah-pee-TAO-mokh”) of Cape Verde. For 10 points each:

[10h] Name this 17th-century queen of Ndongo and Matamba, whose brother forcibly sterilized her. This queen joined an Imbangala warriors’ kilombo before she fought Kasanje (“kah-SAHN-jay”) and its ally Portugal in modern Angola.

ANSWER: **Nzinga** (“n’JING-ah”) [or **Njinga** or variants like **Jinga** or **Ginga** or **Zinga** or **Singa**; or **Nzinga** of Ndongo and Matamba; or **Nzinga** Mbande; accept Ana de Sousa **Nzinga** or Ana **Nzinga**; prompt on Ana or de Sousa]

[10e] During the “Grand Design,” Nzinga allied with the Dutch in this city located on a bay famed for its nzimbu shells. Today, it is the capital of Angola.

ANSWER: **Luanda**

[10m] Álvaro I (“AHL-vah-roo the first”) Europeanized his capital of M’banza-Kongo by giving it this name after he ceded Luanda to Portugal. Africans created Candomblé (“con-doam-BLAY”) in a Brazilian city with this name in Bahia (“bah-EE-ah”).

ANSWER: **Salvador** [or **savior**; accept São **Salvador** or San **Salvador**; accept **Salvador** da Bahia or São **Salvador** da Bahia; prompt on são or san or saint by asking “followed by what word?”] (The Dutch also captured Salvador da Bahia during the Groot Desseyn.)

<World History>

2. Ilhan Omar tweeted a picture of a man in this sort of attire in response to an ExxonMobil tweet declaring that they were “working to mitigate the risks of climate change.” For 10 points each:

[10h] Name this sort of outfit worn by a man who claims, “we’re all trying to find the guy who did this,” after a similarly styled vehicle crashes into a Brooks Brothers outlet.

ANSWER: **hot dog** suit [or descriptions indicating that he’s dressed like a **hot dog**]

[10e] The mysterious Wienermobile car crash appears in *I Think You Should Leave with Tim Robinson*, which Robinson created after leaving this long-running NBC sketch comedy show.

ANSWER: ***Saturday Night Live*** [or ***SNL***]

[10m] In a sketch from Season 2 of *I Think You Should Leave* set in one of these places, a college professor tries to force his former students to say they’ll kill the president. This sort of place is the setting of the Hulu show *The Bear*.

ANSWER: **restaurant** [or equivalents like **dining** establishment; accept Italian **restaurant**; accept **sandwich shop**; accept **kitchen** or equivalents]

<Pop Culture>

3. This quantity is assumed to be constant for a Newtonian fluid. For 10 points each:

[10e] Name this quantity that describes how “thick” a fluid is. Syrup has a high value for this quantity, as it strongly resists flow.

ANSWER: **viscosity** [accept dynamic **viscosity**; accept kinematic **viscosity**; accept **viscous** fluids; accept, but DO NOT OTHERWISE REVEAL, shear **viscosity**]

[10m] Oobleck exemplifies a class of non-Newtonian fluids named for this word and the word “thickening.” Viscosity is typically defined in terms of a type of stress named for this word, which acts tangentially to a substance, unlike normal stress.

ANSWER: **shear** [accept **shear** stress; accept **shear**-thickening fluid]

[10h] While shear-thickening fluids have a viscosity that increases as shear increases, these fluids have a viscosity that increases with time under [emphasize] *constant* shear. These fluids are the opposite of thixotropic fluids.

ANSWER: **rheopectic** (“ree-oh-PECK-tick”) fluids [or **rheopecty** or **rheopexy**]

<Physics>

4. A composer from this country wrote a symphonic poem based on Cuban writer Nicolás Guillén’s (“ghee-YEN’s”) poem *Sensemayá* (“sen-say-mah-YAH”). For 10 points each:

[10e] Name this home country of Silvestre Revueltas and Arturo Márquez. This country’s folk music styles include norteño (“nor-TEN-yoh”) and mariachi.

ANSWER: **Mexico** [or **Méjico**; or United **Mexican** States; or Estados Unidos **Mexicanos**]

[10m] *Sensemayá* begins with a trill on the bass type of this instrument. A different type of this instrument plays the opening glissando of a piece that was orchestrated by Ferde Grofé.

ANSWER: **clarinet** [accept bass **clarinet** or B flat **clarinet**] (The piece is George Gershwin’s *Rhapsody in Blue*.)

[10h] Arturo Márquez is best known for his second piece with this title, which is named for a Cuban musical form.

ANSWER: **danzón** [or **danzon**es; accept **Danzón** No. 2]

<Classical Music>

5. Recently developed CMP foams with this property have the potential to retain desirable features in traditionally unfavorable conditions. For 10 points each:

[10m] Foams with what property tend to be lightweight and good thermal insulators? Molecular sieves and size-exclusion chromatography beads also have this property, which is quantified by the void fraction.

ANSWER: **porous** [or **porosity**; accept micro**porous**]

[10e] Porous structures are prone to absorbing water, meaning that their thermal conductivity decreases when exposed to high values of this quantity, which is a percentage measurement of the amount of water vapor in the air.

ANSWER: **humid**ity [accept relative **humid**ity]

[10h] The thermal stability of CMP foams can be quantified with this technique, which measures the change in mass with respect to a slowly increasing temperature.

ANSWER: **thermogravimetric analysis** [or **TGA**]

<Chemistry>

6. In this story, the narrator’s brother becomes upset if the peasants do not refer to him as “Your Lordship.” For 10 points each:

[10h] Name this short story whose narrator remarks that “there ought to be someone standing with a little hammer” to remind “every contented, happy man” that “there are unhappy people” as he recounts watching his brother cheerfully eat the title objects.

ANSWER: “**Gooseberries**” [or “**Kryzhovnik**”]

[10e] ”Gooseberries” is by this Russian author, who also wrote the play *The Cherry Orchard*.

ANSWER: Anton **Chekhov** [or Anton Pavlovich **Chekhov**]

[10m] In a Chekhov novella titled for one of these places numbered 6, Andrey Ragin begins intellectual conversations with Ivan Gromov on visits to one of these places before being sent there permanently. Oleg goes to one of these non-gulag places in Tashkent in an Alexander Solzhenitsyn novel.

ANSWER: **ward** [accept **hospital**; accept mental **ward** or mental **asylum**; accept *Cancer* ***Ward*** or *Rakovy* ***korpus***; accept “**Ward** No. 6” or “**Palata** No. 6” or “**Palata** nomer shest”]

<European Literature>

7. Number 410 of the Aarne–Thompson–Uther Index index groups fairy tales in which people experience this fate, such as in the Punjabi tale of Princess Aubergine. For 10 points each:

[10h] Pliny the Elder claimed the first person to observe the moon’s movements was a Greek shepherd who experienced what fate, making him unaware he sired 50 daughters with the moon goddess Selene?

ANSWER: eternal **sleep** [or equivalents like **sleep**ing forever; accept falling **asleep**; reject “death” or “dreaming”] (The shepherd was Endymion.)

[10e] In Abrahamic legend, a group of this many boys slept in an Ephesus cave for over 300 years to escape persecution. A group of this many sisters called the Pleiades turned into stars after committing suicide.

ANSWER: **seven** [or **7**; accept the **Seven** Sleepers of Ephesus; accept the **Seven** Sisters]

[10m] Another common motif involves heroes such as Ogier the Dane and King Arthur sleeping under these geographical features, waiting to awaken and lead their nations to conquest.

ANSWER: **mountain**s [accept king in the **mountain** motif or equivalents; accept **hill**s]

<Mythology>

8. This town’s Reverend Burgess finds a note that reveals the second part of a secret remark, which states, “some day, for your sins you will die and go to hell or [this town]—try and make it the former.” For 10 points each:

[10h] Name this town that changes its motto to “Lead Us Into Temptation” after 19 different couples lay claim to a bag of gold coins that turn out to be gilded lead.

ANSWER: **Hadleyburg** [accept “The Man That Corrupted **Hadleyburg**”]

[10e] This author of the story “The Man That Corrupted Hadleyburg” also wrote novels such as *The Adventures of Huckleberry Finn*.  
ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**]

[10m] Twain may have based Hadleyburg on Oberlin, Ohio, where he gave a poorly received reading of a work in this genre titled for a “tramp.” Another Twain book in this genre titled for “Innocents” calls itself “A New Pilgrim’s Progress.”

ANSWER: **travelogue** [or **travel** writing; prompt on memoir, autobiography, diary, or humor book] (The books are *A Tramp Abroad* and *The Innocents Abroad*.)

<American Literature>

9. An item named for these phenomena has been passed from survivors of the Red Lake school shooting to other survivors across the country, including those of Columbine, Sandy Hook, and Parkland. For 10 points each:

[10e] Identify these phenomena that name web-like protective devices traditionally hung over babies’ cradleboards, which in English are called “catchers” of these phenomena.

ANSWER: **dream**s [accept **dream**catchers]

[10m] Dreamcatchers were created by members of this Great Lakes Native American group, whose religious beliefs were sometimes recorded on birch bark scrolls called wiigwaasabak.

ANSWER: **Ojibwe** [or ​**Ojibwa**​; or ​**Chippewa**​; accept **Saulteaux**; prompt on Anishinaabe or Anishinaabeg]

[10h] A legend states that dreamcatchers originate from a woman who is named for this type of animal. In Lakota belief, Iktomi (“ick-toh-mee”) is a trickster figure who often appears in the form of this animal.

ANSWER: **spider** [accept **arachnid**s; or **Araneae**; accept **Spider** Woman; prompt on arthropods or invertebrates; reject “insects”]

<Religion>

10. As president of the International Olympic Committee, this man threatened to ban the entire American track team for not suspending John Carlos and Tommie Smith in 1968. For 10 points each:

[10h] Name this president of the American Olympic Committee who vigorously opposed boycotting the 1936 Berlin Olympics despite reports of anti-Semitism.

ANSWER: Avery **Brundage**

[10e] The IOC was accused of anti-Semitism after this athlete and Ralph Metcalfe replaced Sam Stoller and Marty Glickman on the American team. This African-American sprinter won four gold medals at the 1936 Olympics.

ANSWER: Jesse **Owens** [or James Cleveland **Owens**]

[10m] In a surprise American victory at the 1936 Olympics, rowers from a university in this state defeated seasoned athletes to win a gold medal. The Franklin Delano Roosevelt reservoir was created after the completion of this state’s Grand Coulee Dam.

ANSWER: **Washington** [or **WA**; accept University of **Washington**]

<American History>

11. Along with other beliefs, the Arabic philosopher al-Rāzī’s (“ahl-RAH-zee’s”) idea that this concept mixed with matter as two of five eternal principles caused some later writers to dub him “the Heretic.” For 10 points each:

[10m] Name this concept whose existence was argued for by Avicenna’s (“ah-vee-SEN-nah’s”) floating man thought experiment.

ANSWER: the **soul** [or **spirit**; or **nafs**]

[10e] Al-Razi believed that the soul was the foolish counterpart to this figure, whom most Islamic scholars regard as the perfectly rational creator of the universe.

ANSWER: **God** [or **Allāh**; accept the **One**]

[10h] The rational and imaginative faculty makes human souls unique from other living beings, according to this philosopher’s treatise *The Virtuous City.* This early Arabic philosopher was known as the “Second Teacher.”

ANSWER: al-**Farabi** (“ahl-fah-RAH-bee”) [or Abu Nasr Muhammad al-**Farabi**; accept **Alpharabius**]

<Philosophy>

12. This painting was part of a series commissioned to decorate the walls of the Buen Retiro Palace. For 10 points each:

[10h] Name this painting whose upper left background is filled by soldiers’ upright weapons. A man hands a key to a victorious general in the foreground of this 1635 painting.

ANSWER: *The* ***Surrender of Breda*** [or *La* ***rendición de Breda***; or *The* ***Lances*** or *Las* ***lanzas***]

[10m] *The Surrender of Breda* is by this artist. In another painting, this artist depicted a boy holding a melon while watching the title *Old Woman Frying Eggs*.

ANSWER: Diego **Velázquez** [or Diego Rodríguez de Silva y **Velázquez**]

[10e] This painting by Velázquez depicts the Infanta Margarita sitting on a chair, surrounded by her maids.

ANSWER: *Las* ***Meninas*** [or *The* ***Ladies-in-Waiting***; or *The* ***Maids of Honor***]

<Painting & Sculpture>

13. In a play by this author, Maurya laments that “there isn’t anything more” the title entity “can do to me” after learning that her son fell off his horse and drowned in the Aran Islands. For 10 points each:

[10m] Name this author of *Riders to the Sea*. In another play, this author created a character who tries to kill his father Old Mahon and romances the barmaid Pegeen Mike.

ANSWER: John Millington **Synge** (“sing”)

[10e] A shocked crowd rioted after Synge’s (“sing’s”) play *The Playboy of the Western World* premiered at the Abbey Theatre in this country, the home country of Synge and the playwright Sean O’Casey.

ANSWER: **Ireland** [or **Éire**; or Republic of **Ireland** or Poblacht na h**Éire**ann]

[10h] Along with *Riders to the Sea*, Synge used the Aran Islands as the setting for his play titled for one of these things “of the Glen.” The poet Donal Davoren receives a bag full of bombs in an O’Casey play titled for one of these inanimate things.

ANSWER: **shadow**s [accept ***Shadow*** *of a Gunman*; accept *In the* ***Shadow*** *of the Glen*]

<British Literature>

14. In early spring, amateurs sometimes attempt a “marathon” in which they try to observe all the objects in this catalog in one night. For 10 points each:

[10m] Name this catalog first published in 1774, which contains 110 objects. The first object in this catalog is the Crab Nebula.

ANSWER: **Messier** (“MESS-ee-ay”) catalog [or **Messier** objects; accept **Messier** marathon]

[10e] Since it is both dim and early to set, one of the hardest objects to see during a Messier marathon is M74, which is this type of galaxy. These galaxies have arms, in contrast to elliptical galaxies.

ANSWER: **spiral** galaxies [accept grand design **spiral** galaxy]

[10h] Messier marathons are very difficult in the southern hemisphere due to the high declinations of objects like M82, a spiral galaxy in this evolutionary phase. Galaxy mergers often lead to the creation of these galaxies, which have exceptionally high rates of stellar formation.

ANSWER: **starburst** galaxies

<Other Science>

15. The enslaved woman Marie-Joseph Angélique (“mah-REE zho-ZEFF on-zhay-LEEK”) was accused of burning a city in this colony, whose western frontier was called the Pays d’en Haut (“peh-EE don oh”). For 10 points each:

[10h] Name this colony whose settlers, such as the “King’s daughters,” mothered “pure laine” (“len”) descendants known by the dog whistle “Old Stock.” Fort Anne (“on”) defended this colony’s Habitation at Port-Royal before the “Great Upheaval.”

ANSWER: **New France** [or La **Nouvelle-France**; accept **Acadia** or **Acadie**; accept **Ville-Marie**; prompt on, BUT DO NOT OTHERWISE REVEAL, Québec by asking “that region was originally part of what larger colony?”; prompt on Montréal or Canada or Nova Scotia or Nouvelle-Écosse or Trois-Rivières by asking “what colony controlled that location at the time?”; reject “Louisiana” or “La Louisiane”; reject “Lower Canada” or “Upper Canada”]

[10e] The Company of One Hundred Associates traded from this fortified capital of New France built on the Iroquoian city of Stadacona (“stah-dah-KOH-nah”). It is now the capital of a francophone Canadian province of the same name.

ANSWER: **Quebec** City [or Ville de **Québec**]

[10m] Rupert House in Waskaganish (“VAHSS-kah-gah-NEESH”), Québec was the first fur trading post created by this company, which founded York Factory. The North West Company merged with this company after the Pemmican War.

ANSWER: **Hudson’s Bay** Company [or **HBC**; or Compagnie de la **Baie d’Hudson**; accept The **Bay** or La **Baie**; accept **Hudson Bay** Company]

<Other History>

16. Drugs that can modulate this measure include diuretics and ACE inhibitors. For 10 points each:

[10e] Name this quantity that is measured using an inflatable cuff called a sphygmomanometer (“s’FIG-moh-muh-NAH-mih-ter”). This measurement is usually given as two numbers, such as “120 over 80” with “systolic” being above “diastolic.”

ANSWER: **blood pressure** [or **BP**; prompt on systolic pressure or diastolic pressure]

[10m] This measure is used in conjunction with blood pressure. This quantity times stroke volume equals cardiac output.

ANSWER: **heart rate** [or **HR**]

[10h] A law named for this scientist and Otto Frank states that increasing preload increases cardiac output. This scientist also names an equation used to calculate the movement of fluid across a capillary membrane.

ANSWER: Ernest **Starling** [or Ernest Henry **Starling**; accept Frank–**Starling** law or **Starling**’s law; accept **Starling** equation]

<Biology>

17. Answer the following about the African-American soprano Angel Blue, for 10 points each.

[10h] In 2021, Blue performed in this opera as three “internal voices” in the mind of its protagonist Charles. This second opera by jazz trumpeter Terence Blanchard was the first by a Black composer to be performed at the Met.

ANSWER: ***Fire Shut Up in My Bones***

[10e] In July 2022, Blue pulled out of a performance at the Verona Arena after condemning Russian soprano Anna Netrebko’s blackface makeup to play the title Ethiopian princess of this Giuseppe Verdi opera at the venue.

ANSWER: ***Aida***

[10m] Blue’s Met debut was as this seamstress, who sings the aria “Sì, mi chiamano” (“see, mee k’YAH-mah-noh”) to introduce herself to Rodolfo, a poet who had sung “Che gelida manina” (“kay JEH-lee-dah mah-NEE-nah”) to her after hiding her key.

ANSWER: **Mimì** [accept “Sì, mi chiamano **Mimì**”] (She appears in *La Bohème* by Giacomo Puccini.)

<Other Fine Arts (Opera)>

18. This poet reportedly died leading a two-man cavalry charge at the Battle of Dos Ríos. For 10 points each:

[10m] Name this poet who asked “Have a bouquet of flowers on my grave, and a flag!” in a poem from his 1891 collection *Versos Sencillos* (“VAIR-sohss sen-SEE-yohss”).

ANSWER: José **Martí** [or José Julián **Martí** Pérez]

[10e] Martí was a fierce advocate for the independence of this island country. Poems by Martí provide the lyrics of a song named for a city in this country, “Guantanamera.”

ANSWER: **Cuba** [or Republic of **Cuba** or República de **Cuba**]

[10h] The line “the conceited villager believes the entire world to be his village” opens this Martí essay, which argues against the dominance of US values in Latin American countries.

ANSWER: “**Our America**” [or “**Nuestra America**”]

<World Literature>

19. This model was first posited in an Air Force technical report by Ernest Tupes and Raymond Christal. For 10 points each:

[10h] HEXACO is a proposed extension of what model, which aims to provide a minimal set of traits?

ANSWER: **Big Five** model [or **Five Factor** Model; or **FFM**; accept **OCEAN** or **CANOE**]

[10m] This trait, one of the Big Five, is characterized by a tendency to feel negative emotions in response to stress. Psychoanalyst Karen Horney (“HORN-ai”) devoted the latter part of her career to studying this personality trait.

ANSWER: **neurotic**ism [accept **neurosis**]

[10e] The “E” in the mnemonic “OCEAN” for the “Big Five” refers to this trait. Carl Jung popularized the name of this trait, which describes people whose emotions are generally outwardly directed.

ANSWER: **extroversion** [or **extraversion** or **extrovert**ed]

<Social Science>

20. This European ruler allied with Morocco’s Saadi dynasty and established a lucrative trade agreement with Murad III. For 10 points each:

[10h] Name this ruler who was introduced to Spanish leather shoes by the Muslim girl Aura Soltana, who was brought to this ruler’s court by Anthony Jenkinson after he returned from his travels.

ANSWER: **Elizabeth I** [prompt on Elizabeth; prompt on the Virgin Queen or Gloriana]  
[10e] One of England’s main imports from Morocco was this foodstuff, which turned Elizabeth I’s teeth black. The English extracted this good by milling cane in colonies such as Barbados.

ANSWER: **sugar** [or **sucrose**; accept **molasses**; accept **sugar**cane or ***Saccharum***]

[10m] Anthony Jenkinson traveled Europe on behalf of an Elizabethan joint-stock company named after this city. Letters by the monk Filofei proclaimed this city to be a “Third Rome.”

ANSWER: **Moscow** [or **Moskva**; or **Muscovy** or **Moscovia**; accept Grand Duchy of **Moscow** or **Muscovite** Rus’ or Grand Principality of **Moscow** or Velikoye knyazhestvo **Moskovskoye**; accept **Muscovy** Company or **Moskovskaya** kompaniya]

<European History>

TB. Emperor Valens agreed to appoint the orthodox bishop Moses after a confederation of this ethnicity, including the Tanûkhids, revolted under Queen Māvia (“MAH-wee-ah”). For 10 points each:

[10e] Name this ethnic group whose states included the ancient Ghassanids (“GASS-uh-nids”) and Lakhmids (“LOCK-mids”) and the Rashidun Caliphate that conquered Sasanian Persia.

ANSWER: **Arab**s [or **Arabian**s or **ʿarab** or **arab**īyun; accept **Arab** conquests; accept **Bedouin**s or **Bedu** or **badū** or **badawī**; accept **Quraysh**; accept **Ishmaelite**s or Bani **Isma'il**; accept Banu **Hashim** or **Hashemite**s or **Hashimid**s; accept **Salīḥ**ids; accept **Thamud** or **Ṯamūd**; accept ʿ**Adnan**ites; accept ʿ**Ād**; accept **Qahtan**ites or **Qaḥṭān**ī; accept Banu **Abs** or Banu **Ghaṭafān**; accept **Hawāzin** or **Qays** ʿAylān or **Otaibah**]

[10m] Emperor Philip the Arab was born in an Arabian province named for this “rose city” that carved deep cisterns. The Bedouin Nabataean (“nab-uh-TEE-in”) Kingdom was based in this rock-cut city south of Roman Philadelphia.

ANSWER: **Petra** [or Al-**Batrā**ʾ; or **Raqmu** or **Raqēmō**; accept Arabia **Petraea**] (Philadelphia was the Roman name of Amman, Jordan.)

[10h] Strabo reports that the Petraean guide Syllaeus (“sill-LAI-oose”) delayed Aelius (“AI-lee-oose”) Gallus’s trip to one of these structures at Ma’rib that supported Sabaʾ and Ḥimyar. These structures were built at Jawa and Subiaco.

ANSWER: **dam**s [accept **reservoir**s; accept gravity **dam**s or arch **dam**s or buttress **dam**s; accept Subiaco **Dam**s; accept Marib **Dam** or **Sadd** Ma’rib or **Sudd** Ma’rib; prompt on flood control systems or irrigation systems or water sources or water management systems or equivalents; reject “hydroelectric dams”; reject “aqueducts”]

<TB (Other History)>