

2021 ACF Winter

Packet D by Claremont A, CWRU B, Illinois A, Rutgers A

Edited by Tim Morrison, Ethan Ashbrook, Vikshar Athreya, Nick Jensen, Joseph Krol, Angela Lin, Steven Liu, Benjamin McAvoy-Bickford, Eric Mukherjee, and Chris Sims

Tossups

1. This quantity is adjusted to form the “tortoise” coordinate in Eddington–Finkelstein coordinates. Perihelion precession can be derived by adding a term that is inversely proportional to the cube of this quantity to the classical effective potential. The magnitude of gravitational redshift is equal to the [read slowly] “inverse square root of one minus a constant divided by this quantity.” A coordinate singularity occurs in one system when this quantity is equal to [read slowly] “two times big  $G$  times mass over the speed of light squared.” That value for this quantity characterizes the event horizon of a black hole and is named for Schwarzschild. For 10 points, name this quantity whose inverse square is proportional to gravitational force, and which is typically symbolized with a lowercase  $r$ .

ANSWER: **radius** [accept Schwarzschild **radius**; accept **distance** from a black hole or similar answers; prompt on **position**; prompt on **r** before read]

<Physics>

2. A dance music style from this country is usually traced back to the songs “The Deceiver” and “Silver Star.” It’s not France, but a bandleader from this country topped the charts with the 1955 hit “Cherry Pink (and Apple Blossom White),” which exemplifies a style popularized by a dancer nicknamed “[this country] Pete.” Orquesta América, one of this country’s *charanga* bands, popularized a dance from here that involves two consecutive quick steps and is named for the shuffling sound made by dancers’ feet. Pérez Prado was from this country, whose “son” (“soan”) genre frequently uses two wooden sticks called claves (“clah-vays”). It’s not the US, but a dance from this country inspired a novelty dance whose participants advance in a long line. For 10 points, the cha-cha-cha, conga, and mambo originate in what country whose capital names the *habanera* dance?

ANSWER: **Cuba** [or Republic of **Cuba** or República de **Cuba**; accept “**Cuban** Pete”]

<Other Arts>

3. A 2012 Ricardo Reis paper developed a framework named after this person that replaced representative entities with heterogeneous ones. Robert Skidelsky’s biography of this person claims that a modern heterodox school bears the closest affinity with his work. A school of thought named for this person often uses Calvo contracts to solve DSGE models. The lack of microfoundations in an early paradigm named after this person motivated the Lucas Critique. The intersection of aggregate income and aggregate expenditure is this person’s namesake “cross.” Sticky prices are key to this economist’s policy prescription of countercyclical government spending. For 10 points, name this British economist who authored the *General Theory of Employment, Interest, and Money*.

ANSWER: John Maynard **Keynes** [accept New **Keynesian** economics or Post-**Keynesian** economics or Neo-**Keynesian** economics or **Keynesian** cross]

<Social Science>

4. A theory that attributes this author's works to three different authors with the same name has been justified using an early poem that portrays two lovers through six seasons. This author legendarily took up writing after a princess rejected him for being an unintelligent shepherd. The protagonist of a play by this author meets her husband near a sacred hermitage after he nearly shoots a deer. In an 111-stanza poem by this author, the exiled protagonist sends messages to his wife using the title object, which is addressed as a “watergiver.” This author, who is dated to the 4th or 5th century CE, wrote a play in which a ring found inside a fish is shown to Dushyanta, allowing him to identify his wife. For 10 points, name this Sanskrit author of *Cloud Messenger* and *The Recognition of Shakuntala*.

ANSWER: **Kālidāsa**

<World Literature>

5. Pointy long-toed shoes nicknamed for this city became a 15th-century fashion fad. It's not Nuremberg, but this city's 15th-century rulers rebuilt the Collegium Maius and hired Veit Stoss ("shtose") to sculpt the altar for Saint Mary's brick basilica. Jews like Moses Isserles settled an island district of this city named for the king who chartered its Wieliczka ("vee-eh-LEECH-kah") Salt Mine and built its Wawel ("vah-vell") Castle. Casimir III ruled from this city, which eclipsed early royal centers like Płock ("p'wotsk") and Gniezno ("g'nee-EZ-naw") after the pagan king Jogaila was baptized in its cathedral so he could marry the saint Queen Jadwiga ("yahd-VEE-gah"). This final Piast dynasty capital was the center of a "golden age" of print culture at Copernicus's first alma mater, Jagiellonian University. For 10 points, what city was the Renaissance-era capital of Poland, before Sigismund III Vasa moved to Warsaw?

ANSWER: **Kraków** [or **Cracow**; accept **Kazimierz** or **Casimiria** or **Kuzimyr** before "Casimir"; accept **crakows** or **crakowes**; prompt on **poulaines**]

<European History>

6. The products of one form of this process are "read" by YTH family proteins and created by RBM15 and METTL3. The occurrence of this process at the ICR region between H19 and IGF2 prevents the binding of CTCF and allows the downstream enhancer to make a larger loop. The products of this process are bound by the protein mutated in Rett syndrome. The mismatch repair pathway distinguishes template and daughter strands based on this process, which is studied using bisulfite conversion. This process occurs heavily at repetitive elements. This process most often occurs at the N6 position of adenine and C5 of cytosine. Its occurrence at CpG islands in promoters silences genes. For 10 points, name this chemical modification of nucleotides in which a CH<sub>3</sub> ("C-H-3") group is added.

ANSWER: DNA **methylation** [accept equivalents involving adding a **methyl** group; do not accept or prompt on "histone methylation"]

<Biology>

7. The two non-Kidarite figures hold these objects on a silver bowl from Gandhara. Herodotus wrote that Bardiya, but not Cambyses II, was able to use one of these objects from the King of Ethiopia. Nine rows of people held these objects behind the Achaemenid ("uh-KEE-muh-nid") Empire's sparabara. Hellenistic rulers typically hired Cretans to use these objects as toxotai. Egyptians called Nubia "Ta-Seti," or "Land of [these objects]," and personified their enemies as nine of them. Scythians used these objects with thumb rings, not the Mediterranean draw. "Laminated" types of these objects were usually "recurve." Retreating Arsacid cavalry deployed these weapons in their signature "Parthian shot." For 10 points, what weapon's "composite" form was mastered by the Eurasian steppe's mounted archers?

ANSWER: **bows** [accept **bow** and arrows; accept composite **bows** or recurve **bows**; accept Nine **Bows** or Land of the **Bow**; prompt on **arrows** or **projectiles** by asking "deployed from what weapons?"; prompt on objects for **archery** before read; do not accept or prompt on "crossbows"]

<Other History>

8. This character "feels about his spine small eft-things course" in the third-person opening stanza of a poem that describes this character sprawled "flat on his belly in the pit's much mire." In another work, this character laments "when I waked / I cried to dream again" after describing a location "full of noises, / Sounds, and sweet airs, that give delight and hurt not." This character is called a "Hag-Seed" by another character who only taught him language for cursing. This character's mother, who was banished from Algeria, teaches him to worship the god Setebos. This character plans a coup against a magic-wielding dictator and enlists the help of Stephano and Trinculo. For 10 points, name this character, the son of Sycorax and the slave of Prospero in William Shakespeare's play *The Tempest*.

ANSWER: **Caliban** [accept "**Caliban** Upon Setebos"]

<British Literature>

9. This book contains a vision of a “terrifying man” who wears a belt of “fine gold from Uphaz.” A man in this book shows Melzar that he doesn’t look weak after he only consumes vegetables and water for ten days. This book describes the chopping of a large tree whose top reaches heaven, which symbolizes that a man will “be made to eat grass like an ox.” In this book, a man dreams that he sees a statue made of gold, silver, and brass, although its feet are made of iron mixed with clay. In this book, a king sees what looks like a “son of God” with Shadrach, Meshach, and Abednego in a fiery furnace. This book’s title prophet interprets the writing on the wall at Belshazzar’s Feast. For 10 points, name this book of the Bible that is named for a prophet who is thrown into a lion’s den.

ANSWER: Book of **Daniel** [prompt on Hebrew Bible or Old Testament; prompt on Mikra or Tanakh or Ketuvim]  
<Religion>

10. A theme introduced by this instrument, which was first written down by its composer on a postcard, begins with a descending long E, D-C, long G. A chamber piece named for this instrument was written in memory of the composer’s mother Christiane and inspired a piece in homage by György (“jyorj”) Ligeti. This instrument solemnly plays the notes E, E, F, G-E to open the slow second movement of Johannes Brahms’s fourth symphony. This instrument plays a theme in the finale of Brahms’s first symphony that is named for a related long wooden instrument common in the Swiss Alps. Brahms preferred writing for the natural type of this instrument, which requires hand-stopping to play notes outside the harmonic series. For 10 points, name this coiled brass instrument.

ANSWER: French **horn** [or natural **horn**; prompt on alphorn; do not accept or prompt on “English horn”]  
<Classical Music>

11. A *de facto* leader of this country nicknamed “pineapple face” requested to be extradited from France to prove his innocence in a murder case. Puppet presidents of this country under that leader were termed the “Kleenex presidents.” A leader of this country who ordered the torture and killing of Hugo (“OO-go”) Spadafora laundered money through a bank in the Colón Free Trade Zone. That leader’s predecessor in this country was visibly drunk at the ratification ceremony for a series of treaties with Jimmy Carter. Rock music was blared to drive a leader of this country out of the Vatican Embassy. A drug-trafficking leader of this country who overthrew Omar Torrijos was deposed in Operation Just Cause. For 10 points, name this Central American country once led by Manuel Noriega.

ANSWER: **Panama** [or Republic of **Panama** or República de **Panamá**]  
<World History>

12. An enzyme that creates this functional group transforms linoleic (“lih-no-lay-ick”) acid to crepenynic (“creh-puh-nin-ick”) acid in daisies. This functional group selectively reacts with disiamylborane (“di-siamyl-borane”). Canopy catalysts can cause two molecules with this functional group to dimerize, then uncouple, a process also catalyzed by molybdenum hexacarbonyl and resorcinol. In IR spectroscopy, this functional group’s stretching mode appears as weak bands from 2100 to 2260 inverse centimeters. Stereochemically opposite products are generated when reacting this functional group with sodium metal in liquid ammonia versus with Lindlar’s catalyst. This functional group, which can be internal or terminal, contains a bond between two sp-hybridized atoms. For 10 points, name this functional group that consists of a carbon-carbon triple bond.

ANSWER: **alkyne** (“AL-kine”) [prompt on triple bond; do not accept or prompt on “alkene” or “alkane”]  
<Chemistry>

13. This activity may cause a “Patagonia picnic table effect” when it involves a “vagrant.” J. Drew Lanham discussed his passion for this activity in *The Home Place* and drew attention to a Haitian-born pioneer of it enslaving people in New Orleans. During an annual “count,” citizens can use the Merlin app to log this activity for John Fitzpatrick’s group at Cornell. Fans of this activity might use “digiscoping” and consult guides by David Sibley and Roger Tory Peterson to complete their “life lists.” In 2020, the white dog walker Amy Cooper accosted Christian Cooper while he did this activity in Central Park. During this activity, one might view trogons, buntings, swifts, plovers, and warblers. For 10 points, the Audubon Society supports what activity that involves observing calls, nesting, and plumage?

ANSWER: **bird**watching [or **bird**ing; or **bird** observation; accept any answers about **birds** or specific birds; accept citizen **ornithology**; accept Black **Birders** Week or Great Backyard **Bird** Count or e**Bird**; prompt on general answers like **nature** walks or **animal** illustration or going **outdoors**; prompt on citizen **science**; prompt on **twitching**]  
<CE/Geo/Other/Pop Culture>

14. While playfully wrestling with the woman he loves to get a letter she’s hiding, the narrator of this novel accidentally ejaculates and runs off in embarrassment. This novel’s narrator receives a letter from his old lover that asks him to return after he learns that she has died in a riding accident. The narrator of this novel is kept up at night by a magic lantern that projects on his bedroom wall and relies on his mother’s goodnight kiss to sleep. In this novel’s section *The Fugitive*, the narrator learns that his former lover Albertine was a lesbian. C. K. Scott Moncrieff died before he finished translating this novel, which uses a “little phrase” from Vinteuil’s (“vahn-TUH-ee’s”) violin sonata to represent Odette de Cr cy and Charles Swann. For 10 points, the taste of a tea-soaked madeleine sparks the narrator’s memories in what seven-volume novel by Marcel Proust?

ANSWER: ***In Search of Lost Time*** [or ***Remembrance of Things Past***; or ***  la recherche du temps perdu***; prompt on any of the following before read by asking “what larger novel is that volume a part of?”: ***In the Shadow of Young Girls in Flower*** or ***Within a Budding Grove*** or ***  l’ombre des jeunes filles en fleurs*** or ***Swann’s Way*** or or ***Du c t  de chez Swann*** or ***The Fugitive*** or ***The Sweet Cheat Gone*** or ***Albertine Gone*** or ***Albertine disparue*** or ***La Fugitive***]  
<European Literature>

15. In the mythology of this people, tribal groups are protected by fish- or reptile-like spirits called *taniwha*. One figure in this people’s mythology restores the sight of his cannibalistic thunder goddess grandmother, who shows him how to climb the vines to heaven. In this people’s mythology, the first woman was created from a pool of water that cast a reflection of the first man, Tiki. According to this people’s mythology, the explorer Kupe (“koo-PAY”) discovered a certain region located under a long, white cloud. They’re not Hawaiians, but the mountains in part of this people’s homeland were created when men cut into a giant fish that was caught with a jaw bone by the culture hero M ui. For 10 points, name this people who use the mythological name Aotearoa (“ow-TAY-ah-row-ah”) for their homeland, New Zealand.

ANSWER: **M ori** [prompt on **Polynesians** or **Pacific Islanders**; prompt on native or indigenous **New Zealanders**]  
<Mythology>

16. For powers of a prime  $p$ , the von Mangoldt function outputs this function of  $p$ . The first Chebyshev function is equal to the sum of this function applied to all the primes less than a given number. The limit of this function minus an expression that asymptotically approaches it was conjectured by Legendre (“luh-ZHOND-ruh”) to be slightly greater than one. The integral of one over this function is often offset using a lower bound of two and is denoted  $\text{Li}$  (“L-I”). According to the earliest form of the prime number theorem, [read slowly] “ $N$  over the prime counting function of  $N$ ” is asymptotic to this function. The difference between this function and the harmonic series approaches the Euler–Mascheroni constant. The derivative of this function is equal to one over  $x$ . For 10 points, name this inverse of the exponential function.

ANSWER: natural **logarithm** [or **ln**]  
<Other Science>

17. A portrait of a woman with this surname was commissioned after the success of its artist's painting *Miss Everything (Unsuppressed Deliverance)*, which used a similar blue background. A man with this surname thanked a portraitist for not making him look like Napoleon, referencing the artist's adaptations of *Napoleon Crossing the Alps*. A woman with this surname wears a Mondrian-like dress over gray skin in the best-known portrait by Amy Sherald. The background of a seated portrait of a man with this surname depicts chrysanthemums, jasmine flowers, and African lilies. Kehinde ("keh-HIN-day") Wiley painted an official portrait of a man with this surname who, in a Shepard Fairey work, is stylized with a blue and red face. For 10 points, the 2008 HOPE poster depicts a US president with what surname?

ANSWER: **Obama** [accept Barack **Obama** or Barack Hussein **Obama** II; accept Michelle **Obama** or Michelle **Robinson** Obama or Michelle LaVaughn Robinson **Obama**]  
<Painting/Sculpture>

18. David Marriott borrowed this thinker's idea of "sociogeny" to describe part of the process of body misrecognition in his book titled "Whither" this thinker. A book by this thinker outlines the idea of irrational repulsion caused by seeing certain objects or characteristics that are dubbed "phobogenic." In a 1961 book, this thinker argued that revolution is instigated by the "unorganized elements" of society, who make up a Marxian social class called the lumpenproletariat. Jean-Paul Sartre wrote the introduction to one of this thinker's books that supported the chapter "On Violence," which details the process of revolt by colonized peoples against oppressors. For 10 points, name this Martinican postcolonialist philosopher who wrote *Black Skin, White Masks* and *The Wretched of the Earth*.

ANSWER: Frantz **Fanon** [or Ibrahim Frantz **Fanon**; accept *Whither* **Fanon**]  
<Philosophy>

19. At one reading, this poet changed the final three words of a poem from "she would become" to "she will become" at the request of that poem's dedicatee. This author's poem "The Lesson For Today" is the source of his tombstone epitaph, which reads "I had a lover's quarrel with the world." Another of this author's poems imagines a land "unstoried, artless, unenhanced" and remarks that we "found salvation in surrender." That poem by this author begins, "The land was ours before we were the land's." This poet was unable to read his poem "Dedication" due to the sun's glare and instead recited "The Gift Outright" at John F. Kennedy's inauguration. For 10 points, name this poet who described how "Two roads diverged in a yellow wood" in "The Road Not Taken."

ANSWER: Robert **Frost** [or Robert Lee **Frost**]  
<American Literature>

20. Large facilities for this occupation were owned by the Swan Land Company and the boatman Richard King. Most Basque-Americans adopted this occupation, which was menaced by masked "Javelinas" and "Blue Devils." In 1886, the winter "Big Die-Up" decimated this occupation, which was held by both families in the Pleasant Valley War, John Tunstall in the Lincoln County War, and "Kate" Watson in the Johnson County War. Charles Goodnight invented this occupation's chuckwagon. The fence cutting wars began after this job's land was enclosed with Osage orange and barbed wire. This job sent "wranglers" from the Red River to Abilene on Chisholm Trail "drives." For 10 points, maverick-stealing rustlers raided what occupation that fought farmers in range wars for grazing rights?

ANSWER: **ranching** [accept **shepherding**; accept **steer** or **cattle** ranchers or **sheep** ranchers or **livestock** or similar; accept **cow**boys or **herders** or **wranglers** or **buckaroos** or **cow** punchers or **stockmen** or **rustlers** or similar; accept **Cattle** Kate or King **Ranch**; prompt on **lamb** or **beef** or **meat** or similar; prompt on **agriculture** or **farming**]  
<American History>

21. This director titles a 2021 Mia Hansen-Løve film set on an island where this director shot several films. In Woody Allen's film *Manhattan*, Mary upsets Isaac by placing this director in her "Academy of the Overrated." A film by this director includes a dream sequence in which a man sees his own body in a coffin after it falls off a hearse; that film stars the director of *The Phantom Carriage* as an elderly professor. In 2021, HBO remade the miniseries *Scenes from a Marriage* by this director, who also directed the miniseries *Fanny and Alexander*. In a film by this director set amid the plague, Max von Sydow ("SEE-dow") plays a knight returning from the Crusades named Antonius Block, who loses a game of chess to Death. For 10 points, *Wild Strawberries* and *The Seventh Seal* are films by what Swedish director?

ANSWER: Ingmar **Bergman** [or Ernst Ingmar **Bergman**] (Mia Hansen-Løve's film *Bergman Island* is titled in reference to Fårö, where Bergman lived and worked for many years.)

<Other Arts>

## Bonuses

1. In a book by this author, he describes a recurring dream in which he spent centuries living with a “cursed crocodile” who gave him “cancerous kisses.” For 10 points each:

[10m] Name this author who described the “pleasures” and “pains” of the title substance in his 1821 autobiography, *Confessions of an English Opium Eater*.

ANSWER: Thomas **De Quincey** [or Thomas Penson **De Quincey**]

[10h] A grandfather's striking resemblance to a crocodile is described in this other De Quincey essay. A section of this essay details De Quincey's near collision after he ingested opium while riding the title vehicle.

ANSWER: “The **English Mail-Coach**”

[10e] In this author's story “The Man with the Twisted Lip,” a man becomes addicted to opium after reading *Confessions of an English Opium Eater*. That story was part of this author's *The Adventures of Sherlock Holmes*.

ANSWER: Arthur Conan **Doyle** [or Sir Arthur Ignatius Conan **Doyle**]

<British Literature>

2. Nagasaki was an early center of the Christian community in Japan. For 10 points each:

[10e] During the rule of Toyotomi Hideyoshi, 26 missionaries and converts were executed in this fashion in Nagasaki. This form of execution was also used to kill Jesus Christ.

ANSWER: **crucifixion** [or word forms like **crucify**; accept death on the **cross** or equivalents]

[10h] Under the Tokugawa shogunate, Nagasaki Christians were often required to step on these depictions of Jesus or the Virgin Mary, at the risk of torture. These objects were usually made from bronze or painted stone.

ANSWER: **fumi-e** [or **e-ita** or **ita-e** or **e-fumi**; prompt on **icons** or **pictures**]

[10m] Nagasaki houses an original letter written by this missionary, who brought Christianity to Japan after trips to Goa and China. This Jesuit companion of Ignatius Loyola names a religious university in Ohio.

ANSWER: St. Francis **Xavier** [or San Francisco **Xavier** or San Francisco **Javier** or Francisco de **Jasso y Azpilicueta**; prompt on Saint **Francis** or San **Francisco**]

<Religion>

3. Jeannette A. Bastian's *Owning Memory* argues that this colony “lost its archives” but compensated with oral histories about heroes like the 1878 “Fireburn” leader Queen Mary Thomas. For 10 points each:

[10h] Name this colony where the Akwamu Akan led a 1733 revolt. This colony sold sugar and rum from Cinnamon Bay Estate, Estate Catherineberg near its capital, and Estate Little Princess near Christiansted.

ANSWER: **Virgin Islands** [accept U.S. **Virgin Islands** or United States **Virgin Islands**; accept Danish **Virgin Islands** or **Danish Antilles** or **Danish West Indies** or **Dansk Vestindien**; accept **Saint Thomas** or **Sankt Thomas**; accept **Saint Croix** or **Sankt Croix**; accept **Saint John** or **Sankt Jan**; prompt on **West Indies** or **Vestindien**; prompt on Lesser **Antilles** or Små **Antiller**; prompt on **Leeward Islands**; do not accept or prompt on “British Virgin Islands”]

[10m] David M. Robertson wrote about the “buried story” of this man, who was named for his likely birthplace on St. Thomas, Virgin Islands. Before his execution, this man planned an 1822 rising of Charleston's enslaved people.

ANSWER: Denmark **Vesey** [or **Telemaque**; accept *Denmark Vesey: The Buried Story of America's Largest Slave Rebellion and the Man Who Led It*]

[10e] A mayor of Charleston with this surname led the militia that arrested Denmark Vesey. Biographies by James T. Flexner and Ron Chernow explore the St. Croix youth of the first Treasury Secretary, who also had this surname.

ANSWER: **Hamilton** [accept Alexander **Hamilton**; accept James **Hamilton** Jr.; accept *The Young Hamilton: A Biography*]

<American History>

4. Isis caused Iphis to undergo this general process, allowing Iphis to marry Ianthe. For 10 points each:

[10m] Name this general process. Tiresias underwent this process twice in seven years, both times after stumbling upon a pair of mating snakes.

ANSWER: **sex change** [or **changing sexes**; accept specific examples such as going from **male-to-female** or **female-to-male**; accept **changing gender**; accept **transitioning** or being **transgender**; prompt on **shapeshifting**]

[10e] After Poseidon gave her the ability to change shape, the woman Caenis became the man Caeneus and fought with the Lapiths against these creatures. Chiron was one of these creatures with a human's torso and a horse's body.

ANSWER: **centaurs** [or **hippocentaurs**; or **kentauros** or **kentauroi**]

[10h] This naiad pursued Hermaphroditus and fused with him, creating the first intersex person. This naiad lends her name to a fountain in Turkey that supposedly caused men who drank from it to become effeminate.

ANSWER: **Salmacis** [or **Salmakis**]

<Mythology>

5. The outcome of this process yields one eigenvalue of the corresponding Hermitian operator. For 10 points each:

[10m] Identify this process in quantum mechanics that forces a quantum state to become an eigenstate. This process leads to wavefunction collapse.

ANSWER: **measurement** [or word forms such as **measuring** the state of a system; accept **observation** or word forms]

[10h] Hermitian operators correspond to observables because they have real eigenvalues according to this theorem. This theorem guarantees that a Hermitian operator can be diagonalized with an orthonormal basis.

ANSWER: **spectral** theorem

[10e] The Hamiltonian is a Hermitian operator that determines the possible values of this quantity for a system. The Hamiltonian is the sum of operators corresponding to this quantity's potential and kinetic types.

ANSWER: **energy** [accept more specific answers such as total **energy** or potential **energy** or kinetic **energy**]

<Physics>

6. In this opera, the young Tyrolean Tonio sings eight high C's in an aria nicknamed the "Mount Everest" for tenors titled "Ah! Mes amis, quel jour de fête" ("AH, mayz ah-MEE, kell ZHOOR de FETT"). For 10 points each:

[10h] Name this 1840 French-language opera whose title character is a *vivandière* ("vee-vahn-dee-air"), or canteen girl, named Marie.

ANSWER: *La **fil**le du **ré**giment* ("lah FEE du ray-zhee-MON") [or *The **Da**ughter of the **Re**giment*]

[10m] The composer of *La fille du régiment*, Gaetano Donizetti, is also well-known for this opera, which includes the famous tenor aria "Una furtiva lagrima." In this opera, Dr. Dulcamara sells cheap wine instead of the title potion.

ANSWER: *L'**elis**ir d'**am**ore* [or *The **E**lixir of **L**ove*]

[10e] The title character of Donizetti's *Roberto Devereux* is a favorite of this historical queen. Donizetti invented a confrontation between this monarch and her cousin in *Maria Stuarda* and depicted her mother in *Anna Bolena*.

ANSWER: Queen **Elizabeth** I [or **Elisabetta**; prompt on **Gloriana** or Good Queen **Bess** or the **Virgin Queen**]

<Other Arts>



7. Tom Regan argues that these beings are “subjects-of-a-life” and should never be treated as means to an end. For 10 points each:

[10e] Name these beings. In a book titled for their “Liberation,” Peter Singer advocated expanding utilitarian rules to these beings and argued that vegetarianism is the best way to prevent their killing.

ANSWER: **animals** [accept *Animal Liberation*]

[10m] Most animal rights philosophers like Singer follow this ethical theory that judges morality based on the outcome of actions. This ethical theory is often contrasted with deontological ethics.

ANSWER: **consequentialism** [accept **consequentialist**]

[10h] This book compares “utilitarianism for animals, Kantianism for people” to Orwell’s quip that some animals “are more equal than others.” This book critiques utilitarianism by imagining a person who gains much more utility from each unit than anyone else.

ANSWER: ***Anarchy, State, and Utopia*** (by Robert Nozick)

<Philosophy>

8. Throughout the interwar period, this country and the Tuvan People’s Republic to its north were only recognized by the USSR and each other. For 10 points each:

[10m] Name this Soviet satellite whose 1921 revolution expelled both the White Guards and Běiyáng (“bay-yahng”) Army. The Stalinist Marshal Choibalsan led this majority-Buddhist country, where the USSR fought Japan at Khalkhin Gol.

ANSWER: **Mongolia** [or **Mongğol** ulus; accept **Mongolian** People’s Republic or Bügede Nairamdaqa **Mongol** Arad Ulus or Bügd Nairamdakh **Mongol** Ard Uls or **BNMAU**; accept **Mongolian** Revolution of 1921]

[10e] The “Mad Baron” Roman von Ungern-Sternberg fought against China’s occupation of Mongolia’s Bogd Khanate during this broader 1917–1923 conflict, which the diffuse White forces lost to the Bolshevik Red Army.

ANSWER: **Russian Civil War** [or **Grazhdanskaya voyna v Rossii**; prompt on **Russian Revolution** or **Velikaya russkaya revolyutsiya**]

[10h] During the Russian Civil War, the 26 Commissars founded a commune in this city, which replaced Ganja as capital of a brief republic. Dashnaks fought the Müsavat Party in the March and September Days in this oil-rich city.

ANSWER: **Baku** [or **Bakı**; accept Battle of **Baku**; accept 26 **Baku** Commissars]

<European History>

9. In 2021, researchers used a field effect transistor constructed using a hydrogenated diamond to observe the formation of these interfaces in lithium-ion batteries. For 10 points each:

[10h] Name these interfaces in which the ions adsorbed onto an object’s surface attract ions from the surrounding fluid. The potential at the slipping plane of these structures is called the zeta potential.

ANSWER: **double layers** [or **DLs**; or interfacial **double layer**s or electrical **double layers** or **EDLs**]

[10e] The screening mechanism between the charges in a double layer can be explained by this law of electrostatics, which gives an inverse-square relationship between distance and electrical force.

ANSWER: **Coulomb**’s law [or **Coulomb**’s inverse-square law; accept **Coulomb** force]

[10m] This scientist found that double layers act as dielectrics while observing electrodes in electrolyte solutions. He also names a thermodynamic quantity representing how much useful work can be extracted from a closed system.

ANSWER: Hermann von **Helmholtz** [or Hermann Ludwig Ferdinand von **Helmholtz**; accept **Helmholtz** free energy]

<Chemistry>

10. A poet from this country wrote the poem “I Am Going to Sleep” before killing herself. For 10 points each:  
[10h] Name this home country of the poet Alfonsina Storni. Alejandra burns down her house to commit suicide in a novel from this country, Ernesto Sabato’s *On Heroes and Tombs*.

ANSWER: **Argentina** [or **Argentine** Republic; or República **Argentina**]

[10e] The Argentine poet Alejandra Pizarnik wrote a suicide note poem that ends “oh life / oh language / oh Isadore,” referencing the poet Isadore Ducasse, who wrote in this language also used by Charles Baudelaire.

ANSWER: **French** [or **français**]

[10m] This Latin American poet described “the cold niche where men have placed you” in a sequence inspired by the suicide of her lover Romelio Ureta, the *Sonnets of Death*.

ANSWER: Gabriela **Mistral** [or Lucida Godoy **Alcayaga**]

<World Literature>

11. The subject of the sculpture *The Blessed Ludovica Albertoni* appears to be undergoing this kind of experience, which Mary Magdalene undergoes in an influential Caravaggio painting. For 10 points each:

[10m] Name this type of experience. A work usually titled for this experience includes rays of light represented by stucco and is located in the Cornaro Chapel.

ANSWER: **ecstasy** [or **estasi**; accept *Mary Magdalene in Ecstasy* or *Ecstasy of Saint Teresa*]

[10e] This Baroque sculptor’s depictions of ecstatic nuns include *The Blessed Ludovica Albertoni* and *The Ecstasy of Saint Teresa*.

ANSWER: Gian Lorenzo **Bernini**

[10h] Bernini also sculpted a memorial to Maria Raggi, a nun from this island. An 1824 painting of suffering people on this island borrows from Antoine-Jean Gros’s *Plague at Jaffa* and arranges the figures in two human pyramids.

ANSWER: **Chios** [accept *The Massacre at Chios* or *Scène des massacres de Scio*]

<Painting/Sculpture>

12. When this character disappears after she fakes exhaustion and a leg injury for attention, the narrator remarks how she will be “forgotten along with all her brethren.” For 10 points each:

[10h] Name this character who refuses to do her work because of her captivating ability to whistle in the short story in which she appears.

ANSWER: **Josephine** the Singer [or **Josephine** the Songstress; accept “**Josephine** the Singer, or the Mouse Folk” or “**Josefine**, die Sangerin oder Das Volk der Mause”]

[10m] The mouse Josephine titles a story by this author. In a different story by this author, the ape Red Peter presents a report on how he achieved human-level intelligence.

ANSWER: Franz **Kafka** (The other story is “A Report to an Academy.”)

[10e] Kafka used another non-human protagonist for this novella in which Gregor Samsa wakes up one day to find himself transformed into a giant vermin or insect.

ANSWER: *The **Metamorphosis*** [or *Die **Verwandlung***]

<European Literature>

13. In an iconic photo, this Prime Minister pours sand into the palm of the Gurindji activist Vincent Lingiari after the Wave Hill walk-off, presaging the 1976 *Aboriginal Land Rights Act*. For 10 points each:

[10h] Name this Australian leader who visited Zhōu Ēnlái's China before Nixon to renew wheat contracts. This leader backed Suharto's invasion of East Timor and passed the *Racial Discrimination Act* before his 1975 dismissal.

ANSWER: Gough **Whitlam** ("goff WIT-lum") [or Edward Gough **Whitlam**]

[10e] In 1975, Whitlam granted independence to this territory soon after Bougainville seceded as the Republic of the North Solomons. In 1962, Indonesia took over Irian Jaya, the western half of this Melanesian country's main island.

ANSWER: **Papua New Guinea** [or **PNG**; or Independent State of **Papua New Guinea** or Independen Stet bilong **Papua Niugini** or Independen Stet bilong **Papua Niu Gini**; accept Territory of **Papua** and **New Guinea**; prompt on Territory of **New Guinea** or Territory of **Papua**]

[10m] In 1978, Australia and Papua New Guinea signed a border-defining treaty named for this strait between the two countries. Indigenous Australians include both Aboriginal peoples and the Islanders of this strait.

ANSWER: **Torres** Strait [accept **Torres** Strait Treaty; accept **Torres** Strait Islanders or **TSI**]

<Other History>

14. South of this plateau, basswood and black walnut grow in a small stretch of Carolinian woodlands. For 10 points each:

[10h] Name this Nearctic plateau covered in boreal and mixed forests like the North Woods. Nickel and copper are mined from the Sudbury Basin on this plateau of Precambrian rock, which names a craton that included Greenland.

ANSWER: **Canadian Shield** [or **Laurentian** Plateau; accept **Laurentia** craton; prompt on the **North American** craton]

[10e] Laurentian forests grow in these climates with variable temperatures in Group D of the Köppen system. Subarctic regions experience these climates, which are named for landmasses that "drift" due to plate tectonics.

ANSWER: **continental** climates [accept **continents** or **continental** drift or **continental** shelf]

[10m] Mixed forests of needleleaf and deciduous trees grow in a subtype of continental climates named for this quantity. A sling psychrometer measures a form of this quantity from the dry-bulb and wet-bulb temperatures.

ANSWER: **humidity** [accept **humid** continental climates; accept relative **humidity** or absolute **humidity** or specific **humidity**; do not accept or prompt on "dew point"]

<Other Science>

15. French jeweller Jean Chardin wrote an account of his travels through this empire. For 10 points each:

[10m] Name this empire where the English Shirley brothers served as military advisors. After retaking Hormuz, a ruler of this empire founded the port city of Bandar-e 'Abbās ("BUN-dar-eh ah-BAHS").

ANSWER: **Safavid** Empire [or **Safavid** Iran or **Safavid** Persia, prompt on **Persian** Empire, prompt on **Iran**]

[10h] Safavid artisans made a variety of these things named for the city of Ardabil ("ar-duh-BEEL"). Two large Ardabil examples of these things with an inscription by Hafez are housed in London's Victoria and Albert Museum.

ANSWER: **rugs** [accept **carpets**]

[10e] Jean Chardin recorded how the Safavid Empire traded four types of this material used to make carpets, such as the "shirvani" variety. The process of using worms to produce this material reached Iran under the Sassanid Empire.

ANSWER: **silk** [or **rēšam** or **abrīšam**, accept **silk**worms; prompt on **cloth** or **clothing** or **textiles** or equivalents]

<World History>

16. The term “collective bovarysme” was coined for elites in this country, where a positivist anthropologist countered Arthur de Gobineau’s racism in “On the Equality of Human Races.” For 10 points each:

[10h] Name this homeland of the anthropologist who defined the “savage slot” and critiqued Western narratives in *Silencing the Past*. Restaveks are child slaves from this country, the home of *Fatal Assistance* director Raoul Peck.

ANSWER: **Haiti** [or **Haïti** or Republic of **Haiti** or République d'**Haïti** or Repiblik d **Ayiti**] (The unnamed thinkers are Jean Price-Mars, Anténor Firmin, and Michel-Rolph Trouillot.)

[10e] Gina A. Ulysse argued that Haiti needs “new narratives” after one of these events that was analyzed in *Fatal Assistance* and *There Is No More Haiti*. Mark Schuller examined the harm done by NGOs after that 2010 disaster.

ANSWER: **earthquakes** [or **tremors** or **temblors**; accept 2010 Haiti **earthquake**; accept *Why Haiti Needs New Narratives: A Post-quake Chronicle*] (Schuller’s books include *Humanitarian Aftershocks in Haiti*.)

[10m] After the 2010 Haiti earthquake, pregnant women ate “cookies” of this stuff to obtain calcium. Poor women in the American South engaged in a form of pica by consuming this stuff, which exposed children to hookworm.

ANSWER: **dirt** [or **soil** or **earth** or **clay** or **kaolin** or similar; accept **mud** or **mud** cookies; accept **geophagia**; accept **chalk**] (Hookworm is a soil-transmitted helminth.)

<Social Science>

17. In a March 2020 referendum, this president supported a controversial plan to reset term limits, allowing him to run for a third term. For 10 points each:

[10h] Name this president of Guinea. He was recently deposed in a military coup led by Mamady Doumbouya, who had previously attended a US army training session.

ANSWER: Alpha **Condé**

[10e] Condé formerly led this organization, which is now led by Félix Tshisekedi (“chee-say-kay-dee”). This successor to the OAU as a pan-continental organization is analogous to a similarly-named European body with 27 member states.

ANSWER: **African Union** [or **Union Africaine**; or **União Africana**; or **Unión Africana**; or **Umoja wa Afrika**; or **Alaitihad al'AFriqiu**; accept **AU** or **UA**]

[10m] Mamady Doumbouya, who led the coup against Condé, was a former member of this group. This military organization, whose members wear white képis, mostly consists of citizens of other nations who fight for France.

ANSWER: French **Foreign Legion** [or **Légion étrangère**; accept **FFL** or **L.É.**; prompt on **Legion**]

<CE/Geo/Other/Pop Culture>

18. Answer the following about classical music inspired by ancient Greece, for 10 points each.

[10m] This name is used for three pieces by Erik Satie that were inspired by dances performed at a Spartan festival. The first of those pieces begins with alternating G major seventh and D major seventh chords.

ANSWER: **gymnopédies** [accept *Trois **Gymnopédies***]

[10e] Richard Strauss wrote an opera titled for this mythical woman, whose deceased father is represented by the triadic “Agamemnon” motive. This woman dances herself to death after her brother Orestes kills Clytemnestra and Aegisthus.

ANSWER: **Elektra** [or **Electra**]

[10h] This composer’s *Anastenaria* triptych is based on an ancient Greek ritual that was later Christianized. The last piece in that triptych, *Metastaseis*, contains independent parts for 61 musicians and was inspired by Einstein’s view of time.

ANSWER: Iannis **Xenakis**

<Classical Music>

19. This disease causes a petechial (“pih-TEE-kee-ull”) rash that begins on the hands and feet and spreads inwards, and in pregnant women is unusually treated with chloramphenicol (“chlor-am-phen-i-col”). For 10 points each:

[10h] Name this disease caused by *Rickettsia rickettsii*.

ANSWER: **Rocky Mountain spotted fever** [accept **RMSF**]

[10e] RMSF is transmitted by *Dermacentor variabilis*, or the “dog” species of these blood-sucking arachnids. Their *Ixodes* genus transmits Lyme disease.

ANSWER: **ticks** [accept **ixodida** or **ixodoidea**; accept dog **ticks**]

[10m] The drug of choice to treat RMSF and Lyme disease is a member of this class of antibiotics, which work by binding to the 30S subunit of the bacterial ribosome. These broad-spectrum antibiotics have four characteristic rings.

ANSWER: **tetracycline**

<Biology>

20. In an essay about leaving this town, the author describes feeling like a “brown bag of miscellany” amongst other multicolored bags, each filled with jumbles of priceless and worthless things. For 10 points each:

[10h] Name this town, a childhood home described in “How it Feels to be Colored Me.” In a novel set in this town, a character is compared to Abraham Lincoln after he buys Matt Bonner's sad mule for five dollars.

ANSWER: **Eatonville**, Florida

[10e] Eatonville, Florida is the setting of this Zora Neale Hurston novel about the life of Janie Crawford.

ANSWER: ***Their Eyes Were Watching God***

[10m] At the end of *Their Eyes Were Watching God*, Janie feels at peace after she imagines this character, who wears “the sun for a shawl.” Janie is forced to shoot this character after he is bitten by a rabid dog during a hurricane.

ANSWER: **Tea Cake** [or **Vergible** Woods; or Vergible **Woods**]

<American Literature>

21. In a Kōbō Abe novella, an amateur entomologist with this day job gets trapped with the title *Woman in the Dunes*. For 10 points each:

[10m] Name this job that is also held by Mr. Sneaze in Natsume Sōseki's novel *I Am a Cat*. The protagonist gets fired from this job after he vomits while performing it in Kenzaburō Ōe's novel *The Silent Cry*.

ANSWER: **teacher** [or **educator** or **professor** or **lecturer** or equivalents]

[10h] The title math teacher feuds with “Redshirt” but allies with “Porcupine” in this Natsume Sōseki novel, which remains a standard assigned reading in Japanese schools.

ANSWER: ***Botchan***

[10e] The former teacher Gimpei Momoi asks the girl Hisako to treat his foot condition in *The Lake*, a novel by this Japanese Nobel Laureate who also wrote *Snow Country* and *A Thousand Cranes*.

ANSWER: Yasunari **Kawabata** [or **Kawabata** Yasunari]

<World Literature>