

2021 ACF Winter

Packet L by Haverford A, Texas A, UNC C, Virginia Tech 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. In this modern-day country, a Ming-era statue of a longevity god that was buried under a banyan tree is displayed at the Powerhouse Museum. Outside Africa and Oman, this country's Marchinbar hoard held the only known coins of the Kilwa Sultanate. This country's north contains X-ray style, Bradshaw, and Quinkan rock art. Keith Windschuttle belittled this country's precolonial past in the "history wars." Indonesia's Makassan trepangers sailed to this country to harvest sea cucumbers with the Pama-Nyungan-speaking Yolngu ("YULLN-guh") in Arnhem Land. This country's Wiradjuri and Noongar used firestick farming to manage the bush. Bruce Pascoe refuted views of this country as a pre-British terra nullius in *Dark Emu*. For 10 points, what country's Anangu people preserve a Dreamtime Track that crosses Uluru?

ANSWER: **Australia** [or Commonwealth of **Australia**]

<Other History>

2. A "civilized town" is the setting of this composer's satirical novel about musicians who play "very dull modern operas," *Evenings with the Orchestra*. David Cairns edited this composer's memoirs, which detail an incident when a conductor of his *Requiem* took a pinch of snuff during a difficult cue. This composer, who unusually played flute and guitar but not piano, promoted the use of timpani sticks with sponge heads in his 1844 *Treatise on Instrumentation*. A movement titled "Reveries, Passions" opens a programmatic symphony by this composer, whose *idée fixe* is interrupted by a beheading in its "March to the Scaffold;" that symphony concludes with a "Dream of a Witches' Sabbath." For 10 points, an infatuation with Harriet Smithson inspired what composer to write his *Symphonie fantastique*?

ANSWER: Hector **Berlioz** [or Louis-Hector **Berlioz**]

<Classical Music>

3. For stationary objects, the derivative of one form of this quantity with respect to another form of it is equal to the square root of the 00 ("zero zero") term of the metric tensor. Displacements named after this quantity lie above or below the light cone. The speed of light multiplies changes in this quantity in the definition of a quantity symbolized delta-s squared. The arc length of a world line gives a form of this quantity that is observer-independent. A phenomenon that affects this quantity causes the transverse Doppler effect. This quantity is plotted on the vertical axis of a Minkowski diagram. The twin paradox arises from an incorrect application of this quantity's "dilation." For 10 points, name this quantity that, in special relativity, is unified with space.

ANSWER: **time** [accept proper **time** or coordinate **time**; accept **time** dilation; accept **time**-like; prompt on **spacetime**; prompt on **t** or **ct**]

<Physics>

4. In a novel set during this conflict, the narrator is haunted by the memory of an assassinated character's "third eye" created by a bullet hole. At the end of that novel about this conflict, one of the narrator's childhood "blood brothers" is revealed to be the "faceless man" who tortures him during it. In another novel set during this conflict, Lieutenant Corson's squad is trapped underground while they search for the title soldier, a friend of Paul Berlin. This war, the setting of *The Sympathizer* and *Going After Cacciato*, is the backdrop of a story about Ted Lavender's death, which causes all of Martha's letters to be burned by Jimmy Cross. That story about this war is titled for soldiers' sentimental belongings. For 10 points, name this war, the setting of Tim O'Brien's *The Things They Carried*.

ANSWER: **Vietnam** War [or the **Second Indochina** War or Chiến tranh **Việt Nam**; prompt on **Indochina War**] (Viet Thanh Nguyen wrote *The Sympathizer*.)

<American Literature>

5. A member of this religious tradition supposedly cut off his arm and presented it to his teacher when he tried to pacify his own mind. That student of this tradition was named as his teacher's successor after he bowed, then sat down, when asked a question. A legendary founder of this religious tradition allegedly cut off his eyelids to prevent himself from falling asleep while he stared at a wall for nine years. A saying from this religious tradition describes the reply "mu" to a question about the nature of a dog. This religious tradition produced the *Blue Cliff Record* and *The Gateless Gate*. This religious tradition aims to achieve *satori*, or sudden enlightenment. For 10 points, Bodhidharma, a subject of koans ("COH-ans"), started what Sino-Japanese derivative of Mahāyāna Buddhism?

ANSWER: **Zen** Buddhism [accept **Chán** Buddhism or **Seon** ("sun") Buddhism; prompt on **Buddhism**; prompt on **Mahāyāna Buddhism**]

<Religion>

6. A diamond was painted this color in Diemut Strebe's work *The Redemption of Vanity*. This is the main color of the exterior of a pavilion centered on a "water room," which Asif Khan designed for the 2018 Winter Olympics. An artwork of this color, which injured a Portuguese tourist who fell two-and-a-half meters into it, is titled *Descent into Limbo*. A controversy about works of this color led Stuart Semple to produce a similar "pink" pigment. This color was used for a work dubbed the "zero point of painting." Carbon nanotubes form a pigment of this color which was exclusively licensed to Anish Kapoor, and which prefixes this color with "Vanta." In a Suprematist work, Kazimir Malevich used this color to paint a square. For 10 points, name this color that results from the absorption of almost all light.

ANSWER: **black** [or **chornyy** or variants; accept **Vantablack** or "the blackest **black**"; accept **Black Square**]

<Other Arts>

7. This non-American author was inspired by the murderer Salvador Agron to write a musical with Paul Simon titled *The Capeman*. In a play by this author, which opens with a sneezing frog saying "Aeschylus me!", Bolom challenges the title character to either better the Devil or be eaten by him. In a play by this author, a man who smashes up the Alcindor Cafe is imprisoned by Corporal Lestrade. This author of *Ti-Jean and his Brothers* wrote a play in which Felix Hobain imagines that he is Makak. A long poem by this author, which features the English expatriate Major Plunkett and the blind man Seven Seas, depicts the fishermen Achille ("ah-SHEEL") and Hector as they vie for the love of Helen and was inspired by the *Iliad* and *Odyssey*. For 10 points, *Dream on Monkey Mountain* and *Omeros* are both by what St. Lucian author?

ANSWER: Derek **Walcott** [or Sir Derek Alton **Walcott**]

<World Literature>

8. In this city in 1958, the Agrarian Union and Demarit formed a coalition, leading the USSR to withdraw an ambassador. Like Tokyo, this city built a stadium for the canceled 1940 Summer Olympics. The joint Apollo–Soyuz mission launched two weeks before this city hosted the first CSCE, where Albania broke with 35 signatories. The third “basket” of that summit in this city led namesake “groups” to monitor human rights in Lithuania and Moscow. Near this capital city, the USSR leased the Porkkala Naval Base prior to a neutrality doctrine issued by Presidents Paasikivi and Kekkonen. Like SALT I, this city’s namesake accords bolstered Leonid Brezhnev’s (“BRIZH-niff’s”) détente. The 1952 Summer Olympics were held in this city, whose bombing opened the Winter War. For 10 points, name this capital of Finland.

ANSWER: **Helsinki** [or **Helsingfors**; or **Helsingia**; accept **Helsinki** Olympics; accept **Helsinki** Accords or **Helsinki** Process or **Helsinki** Final Act or **Helsinki** Declaration; accept **Helsinki** Watch or Lithuanian **Helsinki** Group or similar; prompt on Moscow Helsinki Group]

<European History>

9. In chromatography, these molecules are stained by aniline hydrogen oxalate. One of these molecules called Ficoll (“FAI-cawl”) is used to separate the components of blood. In a form of affinity chromatography, these molecules bind to concanavalin A. A continuous gradient of one of these molecules is used to separate polyribosomes via centrifugation. A mixture of sodium citrate, anhydrous sodium carbonate, and copper sulfate makes up Benedict’s reagent, which reacts with these molecules when they have free aldehyde or ketone groups. Haworth projections are used to display the cyclic configurations of these molecules, whose monomers usually have carbon, hydrogen, and oxygen in a 1-to-2-to-1 ratio. For 10 points, name these macromolecules that include starch and glucose.

ANSWER: **sugars** [or **glycan**; or **carbohydrates**; or **saccharides**; or **monosaccharides**; or **disaccharides**; or **polysaccharides**; or **aldoses**; or **ketoses**; or **pentoses**; or **hexoses**; accept **glycoproteins**; accept specific sugars like **sucrose** or **cellulose** or **glucose**]

<Chemistry>

10. Roy Radner proved that, in a paradigm named for this adjective, equilibria possess a fully revealing price function except on a measure-zero set of economies. This adjective is suffixed with “-izable” to describe strategies that survive the iterated deletion of strictly dominated strategies. In economics, this adjective describes a preference relation that is transitive and complete. A 1970s-era “revolution” in macroeconomics resulted from the use of expectations described by this adjective, which are correct on average. Herbert Simon introduced a “bounded” form of a concept derived from this adjective, which contradicts the assumptions of *Homo economicus*. For 10 points, name this adjective, which describes someone who behaves in accordance with reason.

ANSWER: **rational** [accept **rational** expectations or **rationalizable**, accept **rationality**]

<Social Science>

11. In the *Gylfaginning* (“gill-vug-inning”), Just-as-High describes one of these locations where dead humans are fed on by so many snakes that “no tongue can count them.” The first swans reside at one of these locations that causes their skin to turn white from its holiness. A wise man, who was [emphasize] *not* Heimdall, used the Gjallarhorn at one of these locations to sharpen his wits. It’s not a hall, but one of these locations called Hvergelmir lies beneath the antlers of the stag Eikthyrnir (“ike-THEER-neer”). The fate-weaving Norns reside at Urðarbrunnr (“ur-dur-BROON-ner”), one of three of these locations found at the base of Yggdrasil (“IGG-drah-seel”). Odin sacrificed his eye to gain infinite wisdom at one of these locations associated with Mimir. For 10 points, Europeans tossed coins into what water sources that would grant them wishes?

ANSWER: **wells** [accept **springs**; accept wishing **wells**; accept Mimir’s **well** or the **well** of Urd; accept **brunnr** until “Urðarbrunnr” is read and prompt afterwards; prompt on trees by asking “what specific locations are adjacent to the tree?”; prompt on roots by asking “what specific locations are adjacent to the roots?”; prompt on Yggdrasil or the World Tree by asking “what specific locations associated with Yggdrasil?”]

<Mythology>

12. A book by John Livingston Lowes titled for a location in this poem argues that it was influenced by William Bartram's travelogues. This poet's author weeps "I am finished, finished" in a Stevie Smith poem that parodies its creation. This poem is partly set in a "savage place," which is "haunted / By woman wailing for her demon-lover!" In this poem, the image of "dancing rocks" in a "deep romantic chasm" is contrasted with "gardens bright with sinuous rills." This poem warns that "all should cry, Beware! Beware! / His flashing eyes, his floating hair!" This opium-induced poem remains unfinished due to an interruption by a "Person from Porlock." For 10 points, name this Samuel Taylor Coleridge poem about a "stately pleasure dome" in Xanadu built by the title conqueror.

ANSWER: "**Kubla Khan**" [or *Kubla Khan: or, A Vision in a Dream: A Fragment*] (Lowes's book is *The Road to Xanadu*.)

<British Literature>

13. This company hired mosaic artisans from King Hassan II of Morocco during a project that reused material from St. Louis's abandoned Riverfront Square for the agricultural pavilion The Land. This company's founder, who inspired Philip Glass's opera *The Perfect American*, led "El Grupo" on a 1941 trip to South America to promote the Good Neighbor Policy. Nathalia Holt profiled this company's "queens" Mary Blair and Ruthie Thompson, who worked with its Nine Old Men. Michael Graves designed this company's Swan and Dolphin hotels and worked on its model town, Celebration. This company, which produced *The Three Caballeros* and *Saludos Amigos*, has been led by the CEOs Michael Eisner and Bob Iger, who acquired Lucasfilm and Marvel. For 10 points, what company built Epcot at its Orlando "World?"

ANSWER: **Disney** [or The Walt **Disney** Company or Walt **Disney** Studios; accept **Disneyland** or **Disney** World or Walt **Disney** World Resort; accept **Epcot** before read]

<CE/Geo/Other/Pop Culture>

14. A section of this book holds that narcissists will form "a shell of delirious paranoia" around themselves in an endless quest for fame under the "tyranny of public opinion." This book quotes Maurice Merleau-Ponty's assertion that man is "a historical idea" to contend that the body "is a situation" in its section "The Data of Biology." This book asserts that two groups exist in a "primordial *Mitsein*" that propagates innate social orders. This book adopts Hegel's master-slave dialectic to categorize two groups as the "Subject" and "Other." This book points to the influential power of social rules and trends with its statement that "one is not born, but rather becomes, a woman." For 10 points, name this major book of feminist philosophy, written by Simone de Beauvoir.

ANSWER: *The **Second Sex*** [or *Le **Deuxième Sexe***]

<Philosophy>

15. This artist heavily influenced their brother's design of an ostrich-shaped stand intended to hold an ostrich egg. A small Meret Oppenheim sculpture is titled for this other artist's "Ear." A pet belonging to this artist's brother Diego inspired his sculptures of stalking cats. This artist used plaster to make a tree for the set of the 1961 restaging of *Waiting for Godot*. This artist placed four figures moving separately around the woman in the center in the work *City Square*. In 2015, a work by this artist of *Standing Woman* that shows a man "pointing" became the most expensive sculpture ever, succeeding another bronze sculpture by this artist that exemplifies his characteristic long, thin legs and torsos. For 10 points, name this Swiss sculptor of the *Walking Man* series.

ANSWER: Alberto **Giacometti** [accept ***Giacometti's Ear***]

<Painting/Sculpture>

16. These systems can be linked by interconnectors into synchronous areas. Time error corrections are calculated when the frequencies of these systems deviate, which load shedding aims to prevent. In the event of complete failure, components of these systems must be restored through a black start. Three-phase supplies are often used in these systems to minimize power loss. A failure to winterize equipment resulted in the near-total collapse of one of these systems operated by ERCOT (“er-cot”). Demand in these systems that cannot be matched by peaking plants can result in brownouts. Substations in these systems can step voltage up or down for efficient power transmission. For 10 points, name these networks of transmission lines that deliver electricity from power plants to consumers.

ANSWER: electrical **grids** [or power **grids**; or **mains**]

<Other Science>

17. Alaska Natives got this resource from Batza Tena near Gates of the Arctic. The Washoe traded salt and this resource for Miwok acorns on Carson Pass. Rind thickness underlies this material’s imprecise “hydration dating.” In North American trade networks, shells, turquoise, copper, mica, and pipestone were sent west for this material’s snowflake, rainbow, and fire forms. Bandelier’s Ancestral Puebloans got a green type of this rock from the faraway “Pachuca source.” This tektite-like rock, which forms “Apache tear” pebbles, was quarried from a namesake “cliff” in Yellowstone and the Mono–Inyo Craters. Chert, flint, and this felsic rock were often knapped for projectile points. Mesoamericans fashioned this rock into mirrors and prismatic blades due to its exceptional sharpness. For 10 points, name this black volcanic glass.

ANSWER: **obsidian** [accept **Obsidian** Cliff; accept **obsidian** hydration dating or **OHD**; accept fire **obsidian** or rainbow **obsidian** or snowflake **obsidian**; accept **obsidianite** or **perlite**; prompt on volcanic **glass** or **igneous** rocks or volcanic **rocks** or **stones** or similar before read; prompt on **rhyolite** or **rhyolitic** rock]

<American History>

18. A tombstone that details the Ān family’s practice of this religion was unearthed in Luòyáng (“l’wo-yahng”) in 2006. The exiled Sassanid prince Peroz may have converted to this religion while in China. A set of “sutras” named for the founder of this religion were found at the Mògāo Caves. Sinologist Martin Palmer claims that people of this religion worshipped in the Dàqín pagoda. The Xīān Stele describes Emperor Tàizōng’s meeting with Alopen, who spread this religion in China. Two holy men of this religion supposedly smuggled Chinese silkworms west. Emperor Wǔzōng ordered the persecution of Buddhism, Zoroastrianism, and this religion, whose “Nestorian” form was introduced to Táng dynasty China. For 10 points, name this religion brought to China by European missionaries like Matteo Ricci.

ANSWER: **Christianity** [or **Jīdūjiào**; or **Jīngjiào**; accept **Nestorianism**; or **Nestorian** Christianity before read; accept Roman **Catholicism** or **Tiānzhǔjiào**; accept **Church** of the East]

<World History>

19. A stand-in for the author narrates an assassination in this city in Laurent Binet’s novel *HHhH* (“H-H-H-H”). A woman from this city has dreams of her husband becoming a rabbit after getting shot on an airfield and of him forcing women to do calisthenics around a pool at gunpoint. Memories of growing up in this city return to the architectural historian Jacques as he traces his mother’s life in this city in W.G. Sebald’s novel *Austerlitz*. A woman from this city drags her husband to the countryside and cuts off his connection with his mistress, who is obsessed with bowler hats. A man becomes a window washer in this city after he refuses to retract an anti-communist article and later dies in a car crash with his wife Tereza. For 10 points, what city is the main setting of *The Unbearable Lightness of Being*?

ANSWER: **Prague** [or **Praha**]

<European Literature>

20. A version of this protein is encoded by a group II intron from *Geobacillus stearothermophilus* (“geo-bass-ill-us ste-aro-therm-ophil-us”). This protein’s p66 subunit binds to nevirapine, and its active site binds to abacavir. This protein initially moves along the U5 and R regions after it binds near the PBS. A recombinant form of this protein that is isolated from M-MLV is used in the first step of the RACE procedure and in a form of PCR that has largely replaced northern blotting. Most versions of this protein are able to cleave heteroduplexes with an RNase (“R-N-aze”) H domain. Integrase, late-stage protease, and this protein are encoded by the *pol* gene. This enzyme, which violates the first step of the central dogma, is inhibited by zidovudine, or AZT. For 10 points, name this enzyme used by retroviruses like HIV to synthesize DNA from RNA.

ANSWER: **reverse transcriptase** [accept more specific answers like HIV **reverse transcriptase**; prompt on **RT-PCR**]

<Biology>

21. After he saw this painting, Luca Giordano was so impressed that he painted an “Homage” showing its artist with its subjects. The setup of this painting is reenacted in an Eve Sussman film that lasts 89 seconds. It’s not *The Women of Algiers*, but hooks appear on the ceiling in some of the 58 variations on this painting created by a certain artist in 1957. This painting, which represents a new *episteme* according to the first chapter of *The Order of Things*, directly inspired the composition of *The Daughters of Edward Darley Boit*. This painting itself includes two Rubens canvases on the rear wall, behind the artist, who has a red cross on his chest and stares at the viewer from his easel. For 10 points, two servants and a dwarf attend to the Infanta Margarita Teresa in what Diego Velázquez painting?

ANSWER: *Las **Meninas*** [or *The **Maids of Honor***] (The variations are by Pablo Picasso.)

<Painting/Sculpture>

## Bonuses

1. The origin of this practice is traced to a time when one person was given 20 rupees in order to learn to trade but instead provided for some holy men. For 10 points each:

[10h] Name this practice that involves providing items such as *karah* to anyone who wants them. It is done in accordance with a religion's principle of *sewa*.

ANSWER: **langar**

[10m] One of the largest langars in the world is prepared and served at this temple, which is located in the city of Amritsar. Either the common English or Punjabi name is acceptable.

ANSWER: **Golden Temple** [accept **Harmandir Sahib** or **Darbar Sahib**]

[10e] Langar is run by members of this religious faith, which worships at the Golden Temple. This Indian faith was founded by Guru Nanak.

ANSWER: **Sikhism** [accept **Sikhi**]

<Religion>

2. In September 2021, this man was handed a 25-year sentence for terrorism after he was arrested on what he believed was a trip to Burundi. For 10 points each:

[10h] Name this former hotel manager and political activist. As the manager of the Hôtel des Mille Collines, he protected over 1,200 Hutus and Tutsis.

ANSWER: Paul **Rusesabagina** (“roo-say-suh-bah-GYEE-nah”)

[10e] Rusesabagina was charged with terrorism in this country, where he housed Hutu and Tutsi refugees during a 1994 genocide.

ANSWER: **Rwanda** [or Republic of **Rwanda**; or République du **Rwanda** or Jamhuri ya **Rwanda** or Repubulika y'u **Rwanda**]

[10m] This current president of Rwanda defended Rusesabagina's arrest. This authoritarian leader has also given Rwanda one of the strictest plastic bag bans in the world.

ANSWER: Paul **Kagame**

<CE/Geo/Other/Pop Culture>

3. *Halobates* insects unusually inhabit the province described by this adjective, which is applied to deep-sea sediments composed of mixed siliciclastic (“si-li-ci-clastic”) clay, calcareous (“cal-ca-reous”) ooze, volcanic ash, and meteoric dust. For 10 points each:

[10m] Give this adjective that describes life in the photic and aphotic zones of the water column, prefixed by “epi-,” “meso-,” “bathy-,” “abyss-,” and “hado.” This adjective refers to the open ocean, in contrast to the benthic seabed.

ANSWER: **pelagic** [accept **pelagic** province; accept **epipelagic** or **mesopelagic** or **bathypelagic** or **abyssopelagic** or **hadopelagic** or **hadalpelagic** zones; accept **hemipelagic** sediment or **pelagite**; prompt on **oceanic** zone or **neritic** zone]

[10h] An early subarctic ice retreat favors a pelagic food web and a high biomass of these cosmopolitan crustaceans. With salps and krill, they form the main components of zooplankton and largest animal biomass on Earth.

ANSWER: **copepods** [accept **Calanoida** or **Canuelloida** or **Cyclopoida** or **Harpacticoida** or **Misophrioida** or **Monstrilloida** or **Mormonilloida** or **Platycopioida** or **Siphonostomatoida**; prompt on **Hexanauplia**]

[10e] Thomas Kiørboe (“kee-uh-boh-eh”) argued that pelagic copepods are successful because they capture prey with both “feeding” and “scanning” types of these oceanic flows that include the Benguela, Agulhas, and Gulf Stream.

ANSWER: ocean **currents** [accept ocean **gyres**; accept Agulhas **Current** or Benguela **Current** or feeding **currents** or scanning **currents**]

<Other Science>

4. Canaanite inscriptions cover clay ostraca letters from this kingdom's city of Lachish, whose 701 BCE siege appears in reliefs from Sennacherib's palace in Nineveh. For 10 points each:

[10m] Name this kingdom that resisted Assyria under Hezekiah before Nebuchadnezzar II conquered it. King Josiah compiled Hebrew texts during the Deuteronomic reform after this state's split from Israel's Northern Kingdom.

ANSWER: **Judah** [or **Judea**; or Kingdom of **Judah**; or **Yehūdā** or **Ya'uda**; or Bēyt **Dāwīd**; prompt on **Southern Kingdom**]

[10h] After the 609 BCE Battle of Megiddo, this Saite pharaoh crowned Jehoiakim as Judah's new king. This father of Psamtik II possibly sent Phoenicians to circumnavigate Africa and began a canal from Bubastis to the Bitter Lakes.

ANSWER: **Necho II** [accept **Necos II** or **Nekau II** or **Nikuu II** or other variants; prompt on **Necho**]

[10e] Necho II's Egypt likely traded this food to the Philistine Pentapolis on the Levantine Via Maris. Omri Lerna found that ancient Judeans ate non-kosher, scaleless kinds of this food, which the Romans processed into salty garum.

ANSWER: **fish** [accept any specific fish such as **anchovy** or **sardines**; accept **seafood**; accept **fish** sauce]

<Other History>

5. A "Small Viennese Waltz" and "Waltz in the Branches" appear in the section of a poetry collection titled for a "Flight from" this city. For 10 points each:

[10h] Name this city, above which "Creatures of the moon sniff and prowls about their cabins" in a poem. A collection titled for this city was inspired by a trip its author took here in the 1920s with Fernando de los Rios.

ANSWER: **New York** City, New York [accept *Poet in **New York*** or "Flight from **New York**" or "Huída de **Nueva York**"; prompt on "**City that Does Not Sleep**" or "**City Without Sleep**" or "**Ciudad sin sueño**"] (The poem referenced is "City that Does Not Sleep.")

[10m] This author wrote *Poet in New York* while he was temporarily living in the city. The enigmatic line "Green, how I want you green" recurs throughout this author's poem "Romance Sonámbulo."

ANSWER: Federico García **Lorca** [or Federico del Sagrado Corazón de Jesús García **Lorca**]

[10e] The first section of *Poet in New York* is titled for "Poems of Solitude at" this university where Lorca took classes. This Ivy League university administers the Pulitzer Prize.

ANSWER: **Columbia** University [accept "Poems of Solitude at **Columbia** University"]

<European Literature>

6. The Coen brothers remade a film in this genre in which Mattie Ross asks the one-eyed Rooster Cogburn to help her find the man who killed her father. For 10 points each:

[10e] Name this film genre exemplified by *True Grit*, which is often criticized for its treatment of women and Native Americans. *The Good, The Bad and The Ugly* is in this genre's "spaghetti" subtype.

ANSWER: **Westerns** [accept Spaghetti **Westerns**; accept any answers about the Wild **West**]

[10m] In this 1952 Western by Fred Zinnemann, the feisty Helen Ramirez encourages Grace Kelly's character to support her husband, a marshal played by Gary Cooper, in a climactic showdown against criminal Frank Miller.

ANSWER: **High Noon**

[10h] Michelle Williams stars as Emily Tetherow in this director's feminist Western *Meek's Cutoff*. This director's deliberately-paced movies include *Wendy and Lucy*, *Certain Women*, and *First Cow*.

ANSWER: Kelly **Reichardt**

<Other Arts>

7. In a poem, one of these animals is credited for having “moved a poet to prophecies - / A pinch of unseen, unguarded dust.” For 10 points each:

[10h] Name this animal that, in one poem, “inspired a bard to win / Ecstatic heights in thought and rhyme.” That poem alludes to an earlier one in which this animal is compared to a “Poet hidden / In the light of thought.”

ANSWER: **skylark** [accept “To a **Skylark**”; accept “Shelley’s **Skylark**”; prompt on **lark** or **bird** or **avian**]

[10e] This poet of “Shelley’s Skylark” described a bird who knew of “some blessed Hope” in his poem “The Darkling Thrush.” This author also wrote the novel *Tess of the d’Urbervilles*.

ANSWER: Thomas **Hardy**

[10m] “A singing speck above the corn” is described in this Victorian author’s poem “The Skylark.” In another poem, this author wrote about Lizzie and Laura, who are told “Come buy, come buy” at the title location.

ANSWER: **Christina Rossetti** [or **Christina Georgina Rossetti**; prompt on **Rossetti**] (The second poem is “Goblin Market.”)

<British Literature>

8. Answer the following about horizontal genetic transmission in bacteria, for 10 points each.

[10e] Lederberg and Tatum discovered conjugation in this species of Gram-negative bacteria. Infection with the enterotoxigenic form of this bacteria can cause diarrhea and food poisoning.

ANSWER: **E. coli** [or **Escherichia coli**; prompt on **Escherichia**]

[10m] During conjugation, the donor bacterium connects to the recipient bacterium via this thin, hair-like structure that allows for the transfer of DNA.

ANSWER: sex **pilus** [or sex **pili**; or **fimbria** or **fimbriae**]

[10h] When the F plasmid integrates into the genome, it generates this kind of bacterial strain, which can form mating bridges to transfer its entire genome to another bacteria.

ANSWER: **Hfr** strains [or **Hfr** cells; or **high frequency recombination**]

<Biology>

9. A footnote in this essay responds to Saul Kripke’s view on the necessity of the mind–brain relation by distinguishing between “perceptual” and “sympathetic” imagination. For 10 points each:

[10h] Name this essay that attacks reductionist explanations of the mind–body problem. This essay argues people are incapable of objective perspective, since “our own mental activity is the only unquestionable fact of our experience.”

ANSWER: “**What Is It Like to Be a Bat?**”

[10e] Thomas Nagel’s essay “What Is It Like to Be a Bat?” opens by declaring that this concept is what makes the mind–body problem intractable. This concept refers to mental awareness of one’s own existence.

ANSWER: **consciousness** [or word forms like **conscious**; do not accept or prompt on “conscience”]

[10m] This thinker refuted Nagel by arguing that humans could achieve a bat’s mindset in some situations. This thinker posited a “multiple drafts” model of consciousness in the book *Consciousness Explained*.

ANSWER: Daniel **Dennett** [or Daniel Clement **Dennett** III]

<Philosophy>

10. 18th-century naturalists like George Turner and John Hunter incorrectly viewed these animals as carnivores; Penobscot tales of the deadly “stiff-legged bear” may arise from the same error. For 10 points each:

[10h] Name these extinct animals discovered by the Shawnee at Kentucky’s Big Bone Lick. C. W. Peale displayed the skeleton of one of these animals at his Independence Hall museum and painted its exhumation in Newburgh.

ANSWER: **mastodons** [or American **mastodon** or *Mammut americanum*; accept Peale’s **Mastodon**; accept *Exhumation of the Mastodon* or *Exhuming the First American Mastodon* or similar titles; prompt on **mammoths** or **elephants** or **Proboscideans** by asking “what species were the fossils actually from?”]

[10e] This fossil collector wrote that mastodons disproved the Comte de Buffon’s view that American animals were degenerate. This president hoped that his Lewis and Clark expedition would find a living mastodon.

ANSWER: Thomas **Jefferson**

[10m] Jefferson reported sloth fossils from this modern state’s Haynes Cave to the American Philosophical Society. “Vandalia” was a proposed colony in this modern-day state, which formed after the Wheeling Convention rejected secession.

ANSWER: **West Virginia** [or **WV**; do not accept or prompt on “Virginia”]

(The ground sloth received the binomial name *Megalonyx jeffersonii*.)

<American History>

11. In the frame story of one collection, this character tells stories like “Two Words,” in which Belisa Crepusculario sells people individual words from a dictionary. For 10 points each:

[10h] Name this character who narrates tales to her lover, a left-wing photojournalist, in a 1989 collection titled for her “Stories.” In a novel, this character is encouraged to write stories by her friend, the transgender actress Mimi.

ANSWER: **Eva** Luna [or Eva **Luna**; accept *The Stories of Eva Luna* or *Cuentos de Eva Luna* or equivalents]

[10e] Eva Luna narrates many stories by this Chilean author, who depicted the Trueba family in her novel *The House of the Spirits*.

ANSWER: Isabel **Allende** [or Isabel Angélica **Allende** Llona]

[10m] This other Chilean author created more politically unsavory storytellers in the book *Nazi Literature in the Americas*. Scholars hunt for the writer Benno von Arcimboldi in this author’s novel *2666*.

ANSWER: Roberto **Bolaño** [or Roberto **Bolaño** Ávalos]

<World Literature>

12. This material was used for a work in Rothenburg Cathedral that allegedly includes a capsule of Christ’s blood in the center of a metal cross. For 10 points each:

[10e] Name this material whose “lime” type was used for Tilman Riemenschneider’s *Holy Blood Altarpiece*. This material precedes the word “cut” in the name of a common method for making Renaissance prints.

ANSWER: **wood** [accept **woodcut**; accept **limewood** or other specific types of wood]

[10m] Christ’s blood flows in the crucifixion panel of this Matthias Grünewald altarpiece, which includes wooden sculptures by Nikolaus Hagenauer and was commissioned by a Monastery of Saint Anthony.

ANSWER: **Isenheim** Altarpiece

[10h] In Colmar, the *Isenheim Altarpiece* is displayed alongside the *Orlier Altarpiece* by this German artist, who was Riemenschneider’s main influence. Michelangelo copied this artist’s engraving of the *Temptation of Saint Anthony*.

ANSWER: Martin **Schongauer** [prompt on “**Martin** Schön” or “Hübsch **Martin**”]

<Painting/Sculpture>

13. Answer the following about Erich Hückel's ("HOO-kull's") contributions to chemistry, for 10 points each.

[10e] Hückel's rule determines whether a planar cyclic molecule is aromatic. This prototypical aromatic molecule, whose chemical formula is  $C_6H_6$  ("C-6-H-6"), is commonly drawn as a hexagon containing a circle.

ANSWER: **benzene** [or 1,3,5-cyclohexatriene]

[10m] The Debye-Hückel equation calculates this value, symbolized gamma, which accounts for deviations from ideal solutions. For non-ideal solutions, Henry's law and Raoult's law must be modified to include this parameter.

ANSWER: **activity coefficient** [do not accept or prompt on "activity"]

[10h] The square root of this parameter is proportional to the log activity coefficient in the Debye-Hückel limiting law. This parameter equals one-half times the sum over all charged species of "concentration times charge-squared."

ANSWER: **ionic strength** [prompt on I]

<Chemistry>

14. Puccini's *Tosca* climaxes in the aftermath of this 1800 battle, which inspired the name of Napoléon's grey Arabian war horse and a chicken stew made with crayfish and tomatoes. For 10 points each:

[10m] Name this War of the Second Coalition battle that preceded the occupation of Lombardy. At this climactic battle of the Italian campaigns, Napoléon's army overcame a surprise Austrian attack near Alessandria, Piedmont.

ANSWER: Battle of **Marengo** [or Bataille de **Marengo** or Battaglia di **Marengo**; accept chicken **Marengo** or poulet **Marengo** or pollo alla **Marengo**; do not accept or prompt on "Battle of Marignano"]

[10e] After the Battle of Marengo, Napoléon placated conservatives by signing the Concordat of 1801 with this institution. This office wielded temporal power over vast "states" that Napoléon occupied by imprisoning Pius VI.

ANSWER: **papacy** [or **pope**; or **Holy See** or **See of Rome** or **Apostolic See** or **bishop of Rome**; or **papa**; or Supreme **Pontiff** or **pontifex** maximus or sommo **pontefice**; accept the **Vatican** or il **Vaticano**; accept **Papal** States; prompt on **Catholic church** or State of the **Church** or Stato della **Chiesa** or Status **Ecclesiasticus**]

[10h] During il Risorgimento, Pope Pius IX fought the Kingdom of Italy with a batallion named for these Algerian Kabyle guerilla troops, who wore kepis and baggy pants. They inspired a unit "of death" in Poland's January Uprising.

ANSWER: **Zouaves** [accept Papal **Zouaves** or **Zuavi** pontifici; accept **Zouaves** of Death or **Zuawi** śmierci; accept **Zouaoua** or **Zwawa**; prompt on **Tirailleurs**; prompt on **Igawawen** or **Gawawa**]

<European History>

15. The pressure on the surfaces of these materials is equal to one-half epsilon-nought times the E-field squared. For 10 points each:

[10m] Name these materials whose interiors have constant electric potential. In electrostatics, field lines in the vicinity of these materials are always normal to their surface.

ANSWER: **conductors** [accept perfect **conductor**s or ideal **conductor**s; do not accept or prompt on "superconductors"]

[10h] Using differences in electrostatic energy, the electrostatic pressure on a conductor can be computed using a principle named for this quantity. This quantity is a change in energy that arises from a differential displacement.

ANSWER: **virtual work** [accept principle of **virtual work**; prompt on **work**]

[10e] The free motion of charges in conductors allows them to block electromagnetic radiation, such as in this physicist's namesake "cages." Lenz's law provides the minus sign in this physicist's law of induction.

ANSWER: Michael **Faraday** [accept **Faraday** cage; accept **Faraday**'s law of induction]

<Physics>

16. MLB star Roberto Clemente was killed in a plane crash while on a relief flight to the country ruled by this family. For 10 points each:

[10h] Name this political family that was rumored to have embezzled earthquake aid funds, including those from Clemente. Violeta Chamorro and her husband were exiled by this family, which was overthrown by the FSLN.

ANSWER: **Somoza** family [or familia **Somoza**]

[10m] Members of the FSLN, which overthrew the Somoza regime, became known by this name. The Contras opposed that socialist party with this name, which currently rules Nicaragua.

ANSWER: **Sandinistas** [or **Sandinista** National Liberation Front or Frente **Sandinista** de Liberación Nacional]

[10e] The Sandinistas were named after Augusto César Sandino, who led opposition to this country's occupation of Nicaragua. Anastasio Somoza Debayle attended West Point, a military academy in this country.

ANSWER: **United States** of America [or **America** or **US** or **USA** or **Estados Unidos**]

<World History>

17. In a procedure developed in the 1970s, these experimental subjects are put through two separation and reunion episodes. For 10 points each:

[10e] Name these people whose development was divided into four stages, including sensorimotor and preoperational, by Jean Piaget ("PEE-ah-zhay").

ANSWER: **children** [accept **kids** or **babies** or other rough equivalents]

[10h] That 1970s procedure, the "Strange situation," was developed by this psychologist, who subsequently classified children as "secure," "anxious-avoidant," and "anxious-ambivalent," to which her student Mary Main later added in the "disorganized" classification.

ANSWER: Mary **Ainsworth** [or Mary Dinsmore **Ainsworth**; or Mary Dinsmore **Salter**]

[10m] The Strange situation experiment helped support a theory developed by John Bowlby that describes this biological desire of a child to develop a relationship with a caretaker.

ANSWER: **attachment** [accept **attachment** theory]

<Social Science>

18. Upon its release, this creature causes seven years of famine and traps 300 men in a hole made by its breath. For 10 points each:

[10m] Name this creature unleashed on the world by Ishtar after a hero spurns her advances. That hero throws this creature's thigh at Ishtar after he slays it.

ANSWER: **Bull of Heaven** [or **Gugalanna**; prompt on **bull** or **bovine** or equivalents]

[10e] This ancient Mesopotamian hero slays the Bull of Heaven with his sidekick Enkidu. This king of Uruk goes on a quest to find a plant of immortality in his namesake epic.

ANSWER: **Gilgamesh** [or **Bilgamesh**; or **Pabilgames**; accept the *Epic of Gilgamesh*]

[10h] After he helps kill the Bull of Heaven, Enkidu is doomed to die, a fact which Gilgamesh refuses to acknowledge until a maggot falls from this body part of Enkidu. The Japanese *tengu* have prominent examples of this body part.

ANSWER: **nose** [prompt on **heads** or **faces**]

<Mythology>

19. A novel set in one of these places includes numerous cartoon drawings created by the protagonist, who has hydrocephalus and transfers to Reardan High School. For 10 points each:

[10m] Name this type of place where Junior grows up in a novel framed as an “absolutely true diary.” Abel’s return to one of these places is the subject of *House Made of Dawn* by F. Scott Momaday.

ANSWER: Native American **reservation** [or Indian **reservation**; accept **pueblo**; accept specific reservations such as the Spokane Indian **Reservation**, prompt on the **rez**]

[10h] This author wrote about the prevalence of sexual violence on reservations in the “Justice Trilogy.” June Kashpaw freezes to death on her way home in this author’s debut novel *Love Medicine*.

ANSWER: Louise **Erdrich** [or Karen Louise **Erdrich**]

[10e] The protagonists of both *House Made of Dawn* and Leslie Marmon Silko’s novel *Ceremony* return to their reservations after fighting in this war. Billy Pilgrim serves in this war in the novel *Slaughterhouse-Five*.

ANSWER: **World War II** [or **WW2**; or the **Second World War**]

<American Literature>

20. *Note to moderator: Read the answerline carefully.* This collection ends with a C minor piece that consists entirely of ascending and descending sixteenth note arpeggios, nicknamed “Ocean.” For 10 points each:

[10h] Name this collection, which also includes an A minor piece that begins with a *lento* monophonic theme before quickly transitioning into an *allegro con brio* section pitting the left hand melody against right hand sextuplets.

ANSWER: Frédéric **Chopin**’s **opus 25** [or Frédéric **Chopin**’s **op. 25**, prompt on **opus 25** or **op. 25**, prompt BUT DO NOT REVEAL on Chopin’s second book of **études**]

[10e] Chopin’s opus 25, along with his opus 10, is one of his two major sets of these technically challenging piano pieces. Beethoven’s pupil Carl Czerny (“CHAIR-nee”) is best-known for his hundreds of pieces in this genre.

ANSWER: **études** [prompt on **studies**]

[10m] This Chopin étude from opus 10 unusually ends with an imperfect cadence. This piece begins with a series of dominant seventh chords that are followed by rapidly descending sixteenth notes.

ANSWER: “**Revolutionary Étude**” [or Étude opus 10 **number 12**, accept “Étude **on the Bombardment of Warsaw**”]

<Classical Music>

21. A *London Review of Books* essay by Frank Kermode links Goethe’s desire to find the primordial “Urpflanze” to a contemporary author’s obsession with one of these objects. For 10 points each:

[10h] Name this type of object in which the title character sees a woman’s face in a dream from the novella *Heinrich von Ofterdingen*. A 1995 novel titled for one of these objects depicts the early life of that novella’s author, Novalis.

ANSWER: **blue flower** [or **blaue Blume**; prompt on **flower** or **Blume**; prompt on **plant** or **Pflanze**] (The 1995 novel is Penelope Fitzgerald’s *The Blue Flower*.)

[10e] Novalis’s blue flower became a recurring symbol in the German branch of this movement, which emphasized emotion and individualism. William Wordsworth and John Keats were English poets in this tradition.

ANSWER: **Romanticism** [or the **Romantic** era; or the **Romantics**; accept Jena **Romanticism**]

[10m] The speaker of Joseph von Eichendorff’s poem “Blue Flower” claims to be “long” doing this action, which precedes “lust” in a German-derived word for an urge to do this action. Wilhelm Meister reaches a stage named for this action after his apprenticeship.

ANSWER: **wander** [or **journey**; or **hike**; accept word forms or equivalents like **explore** or **travel**; accept **Wanderlust** or **Fernweh**; accept **journeyman**; accept *Wilhelm Meisters **Wanderjahre*** or *Wilhelm Meister’s **Journeyman** Years*]

<European Literature>