



**ACADEMIC
COMPETITION
FEDERATION**

2023 ACF NATIONALS

Prelims 1

Packet By

Duke A, Ohio State A, WUSTL A

Editors

Taylor Harvey, Sameer Apte, Ganon Evans, William Golden,
Hasna Karim, Michael Kearney, Caroline Mao, Will Nediger,
Grant Peet, Jonathen Settle, Adam Silverman

Writers

Duke A: Jacob Egol, Simon Gorbaty, Jerry Lin, Ashish Subramanian
Ohio State A: Shourjo Ganguli, Chris Ray, Pranav Sivaram, Clark Smith
WUSTL A: Charles Hang, Paul Lee, Matthew Lehmann, Annabelle Yang

TOSSUPS

1. People of this sort often signed their names with elaborately stylized monograms containing the letters *v*, *c*, and *f*, which stood for *vivat, crescat, floreat* (“VEE-vaht, CRESS-cot, FLO-ray-aht”). These people could be identified by a *Zirkel* (“TSURK-ull”) or a system of uniform called the *couleur*. These people viewed *Schmisse* (“SHMISS-uh”) as a mark of honor. Groups of these people used *Schläger* (“SHLAY-gur”) while engaging in the traditional practice of *Mensur* (“men-ZOOR”). These people promoted an ideal of Grossdeutschland (“GROSS-doitch-lahnt”) while leading a convention known as the Wartburg (“VART-burg”) Festival. One of these people called a dramatist a “traitor to the nation” before confronting him inside his house in Mannheim. That one of these people, Karl Sand (“zahnt”), murdered August von Kotzebue, prompting Klemens von Metternich to issue the Karlsbad Decrees that banned these people’s *Burschenschaften* (“BOOR-shin-shahft-in”). For 10 points, what sort of people participated in duels while attending institutions in Göttingen and Heidelberg?

ANSWER: German university **students** [or German college **students**; or Universitäts**studenten**; accept members of German **student** associations or German **fraternities** or German **fraternal** associations or equivalents; accept **Burschenschaften** until read; prompt on academic **fencers** or **duelists** by asking “what sort of people participated in this particular tradition of fencing duels?”; prompt on **Germans** or **Deutscher**; prompt on **youth** or equivalents; prompt on **scholars** or equivalents]

<European History>

2. In the softened version of the singular isothermal sphere model, the dimensionless potential named for this phenomenon is modified to equal the square root of the expression “position squared plus core radius squared,” thereby avoiding a singularity. The foundation for the modern theory of this phenomenon rests on a pair of 1964 papers by Sjur (“shoor”) Refsdal. The Jacobian matrix that describes the change of coordinates induced by this phenomenon can be decomposed into a convergence term and a shear term. This phenomenon perturbs the line element of the Schwarzschild (“shwartz-shilled”) metric by a factor of “two times the Newtonian potential over *c*-squared.” Observing the weak form of this phenomenon requires analyzing many slightly distorted images, while its strong form creates easily visible distortions, such as an Einstein ring. For 10 points, name this phenomenon in which matter bends light.

ANSWER: gravitational **lensing** [accept any form of gravitational lensing, such as strong **lensing** or weak **lensing** or micro**lensing**]

<Physics>

3. A work by this artist was first exhibited at a site that David Allee (“AH-lee”) spent the prior year extensively photographing. A piece by this artist exhibited on the island of Hydra had its thumb tucked between two other fingers in the rude “fig” gesture. A piece by this artist, whose central figure was inspired by a memorial once proposed by Congressman Charles Manly Stedman, was visited in the “We Are Here” gathering of people of color. The title of an installation by this artist refers to *entremets* (“on-truh-MAY”) eaten “between servings” and features 15 “attendants” based on “blackamoor” figurines found on Amazon.com. A 2014 installation by this artist used 80 tons of sugar to cover a sphinx-like “Mammy” caricature displayed in a former Domino Sugar factory. For 10 points, name this artist who created *A Subtlety* and parodied stereotypical Antebellum images of Black Americans in many cut paper silhouettes.

ANSWER: Kara **Walker** [or Kara Elizabeth **Walker**]

<Painting & Sculpture>

4. Gene Hackman's portrayal of this person inspired Paul Magid to write a three-volume biography about him. John Gregory Bourke published firsthand experiences "on the border" with this person, who led a starvation march named for its subsistence on horse meat. This person agreed to travel into enemy territory for a meeting at the "Canyon of the Funnels" captured in a photograph by C. S. Fly. This general was the defendant of a landmark 1879 case brought by a Ponca chief, which afforded basic constitutional rights to Native Americans. Custer's Last Stand was compounded by the actions of Buffalo Calf Road Woman to rally against this general's offensive at the Battle of the Rosebud. This general was the nominal defendant of the Standing Bear case. For 10 points, disagreement over what general's empathetic tactics in the Apache Wars caused his demotion in favor of rival Nelson A. Miles?

ANSWER: George **Crook** [accept *Standing Bear v. Crook*]

<American History>

5. This process is the first title concept of a 1979 book that defines the notion of "mutual contextual beliefs" and was written by Bach and Harnish. Canale ("kuh-NAH-lay") and Swain's position paper on a pedagogical approach named for this process cites the work of Michael Halliday as a theoretical inspiration. Schematic models of this process include Schulz von Thun's ("shooltz fawn TOON's") four-sides model and Lasswell's five-part model. A type of "competence" named after this process was theorized by Dell Hymes as a rebuke to another scholar's competence/performance distinction. In later work, Hymes renamed the "ethnography of speaking" approach after this general process, which is the subject of Stuart Hall's encoding/decoding model. For 10 points, Noam Chomsky has argued against the functionalist idea that language should be primarily defined in terms of what process of information transfer?

ANSWER: **communication** [or **communicating**; accept verbal **communication**; accept ethnography of **communication**; accept **communicative** competence; accept **communicative** approach; accept **communicative** language teaching; accept *Linguistic Communication and Speech Acts*]

<Social Science>

6. According to Pliny the Elder, exposure to things with this quality could kill the hairy Astomi of India. A possible version of Saturn, the agriculture-related Sterquilinus ("stir-quill-LINE-us"), was a minor Roman god of things with this quality, as was the possibly satirical Crepitus. In a satire by Horace, the witches Canidia and Sagana flee a graveyard when this quality is produced by a statue of Priapus. It's not being poisonous, but in one version of a story, Melampus caused the Anigrus River to gain this quality after disposing of a potion, while in another, it gained this quality as a result of the Hydra's venom. This quality of Philoctetes's wound led him to be abandoned on Lemnos, whose women were cursed to have a strong form of this quality for not properly worshiping Aphrodite. For 10 points, Heracles redirected two rivers to purge the Augean stables of what sensory quality caused by the excretions of the horses?

ANSWER: having a strong **scent** [accept being **scented**, **smelly**, **stinky**, **smelling bad**, **foul**, **reeking**, **fetid** or **rotten**; accept smelling of or being full of **farts**, **poop**, **manure**, **shit**, or equivalents of any; accept **flatulent**]

<Mythology>

7. A poet from this country described a “choleric light birthed from my insomnia” in a poem that ends “All night I ask you why. All night I tell you [emphasize] *no*.” In another poem by an author from this country, Judah León (“lay-OWN”) creates a “spacey offspring” with “eyes less human than doglike.” The speaker of a poem from this country requests a nurse to “set a lamp at my headboard; a constellation; whatever you like” before saying “if he telephones again tell him not to keep trying for I have left.” This country was the birthplace of the poet of the collection *Extracting the Stone of Madness* and the adopted home of a Swiss-born poet who tells a lover “pretend I’m white as snow” and “pretend I’m chaste” in her poem “You Want Me White.” Alejandra Pizarnik (“ah-leh-HAHN-drah pee-SAR-neek”) and Alfonsina Storni wrote in this country, whose *payada* (“pah-YAH-dah”) ballads influenced an epic poem by José Hernández. For 10 points, name this country whose national epic is *Martin Fierro* (“mar-TEEN fee-air-oh”).

ANSWER: **Argentina** [or **Argentine** Republic or República **Argentina**] (The first sentence refers to “[All night I hear the noise of water sobbing.]” by Alejandra Pizarnik. The second sentence refers to “The Golem” by Jorge Luis Borges. The third sentence refers to “I Am Going to Sleep” by Alfonsina Storni.)

<World Literature>

8. *Two answers required.* A narrow peak at an FT-IR vibration mode between these two elements indicates that metal soaps have crystallized on an oil painting. Two symmetric normal modes in a bond between these two elements combine and split in the most-studied Fermi resonance. A bond between these two elements bends at 15 microns at the low-energy endpoint of the infrared window. Nearby Lewis basic ligands or metals donate to the antibonding orbital between these two elements, reducing their bond frequency, in the textbook example of pi backbonding. Bonds between these two elements that stretch at 1700 inverse-centimeters are usually the strongest peaks in an infrared spectrum. A double bond between these two elements re-absorbs a large fraction of the infrared radiation reflected by the Earth in the greenhouse effect. For 10 points, name these two elements that are double-bonded in a ketone.

ANSWER: **carbon** AND **oxygen** [accept answers in either order; accept **C** in place of “carbon”; accept **O** in place of “oxygen”]

<Chemistry>

9. An 18-year-old member of this religious group allegedly encountered a caravan of the “Masters of the Heart.” After viewing a set of facsimiles (“fack-SIM-ih-lees”) of a manuscript chained to the wall near the Bodleian (“BOD-lee-in”) Library’s entrance, Abraham Hyacinthe Anquetil (“yah-SANT onk-TEEL”) visited these people in the midst of a controversy over an intercalary month in the Kadmi calendar. A leader of these people legendarily dissolved sugar in a glass of milk to demonstrate to a ruler how these people would enrich his land. A “science of ecstasy” practiced by the Ilm-e-Khshnoom school of these people originated in the city of Surat. This ethnoreligious group’s members historically made use of Doongerwadis (“DOON-gur-WAH-dees”), such as one on Malabar Hill in Gujarat (“GOO-juh-rot”), in a practice that has largely declined due to a national vulture crisis. For 10 points, name this ethnoreligious group who place their dead on Towers of Silence throughout India, per the tradition of Zoroastrianism.

ANSWER: **Parsis** (“PAR-sees”) [or **Parsees**; prompt on Indian **Zoroastrians** or Pakistani **Zoroastrians** until “Zoroastrianism” is read; prompt on **Persians** or **Iranians** or **Iranis**]

<Religion>

10. One character in this play imagines a person who loses at a rhyming game by thinking “cream tart” rhymes with “*corbillon*” (“cor-bee-yon”). A play titled for an acting troupe’s “impromptu” performance was written in defense of this other play as part of a literary “quarrel.” A character in this play is briefly believed to be dead after two servants cudgel him off of a ladder. Lycidas claims that this play sins “against all the rules of Art” while debating Dorante and Uranie in a rebuttal to critics who considered it obscene. The identity of Enrique’s daughter is revealed at the end of this play, in which that daughter reads a set of 11 maxims forbidding activities such as picnics and using makeup. Horace is tricked by a character in this play who adopts the pseudonym Monsieur de la Souche (“soosh”). For 10 points, Arnolphe attempts to marry his ward, Agnès (“on-YES”), in what Molière (“mole-YAIR”) play that followed one named for “husbands”?

ANSWER: *The School for Wives* [or *L’école des femmes* (“lay-COAL day fahm”)]

<European Literature>

11. Three sisters from Aquileia named Agape (“uh-GAH-pay”), Chionia, and Irene were martyred in this city after not eating sacrificial offerings. This city took its patron saint from Sirmium and built the Church of Saint Demetrius to honor him. An edict issued in this city is often called *Cunctos populos*. This city’s populace lynched an administrator named Butheric after he arrested a popular charioteer. The dialects spoken in this city’s countryside formed the basis for the Glagolitic script created by two natives of this city, the missionaries Cyril and Methodius. In 380, Theodosius I issued an edict in this city that made Nicene Christianity the Roman Empire’s state religion. A massacre of 7,000 people in this city led Milan’s bishop, Ambrose, to force Theodosius I to commit public penance. For 10 points, name this Byzantine “second city” found in the Greek region of Macedonia.

ANSWER: **Thessalonica** [or **Thessaloniki**; or **Saloniki**; or **Salonica**; accept Massacre of **Thessalonica**; accept Edict of **Thessalonica**]

<Other History>

12. In a likely reference to Mozart, a *fortissimo* interjection from the chorus precedes this character saying “No, all is still.” While in a dressing gown, this character describes “a lot of poplar trees / Courted by the fickle breeze” in a ballad that begins “Sighing softly by the river.” A lengthy joke revolving around this character’s misunderstanding of the word “often” is kept by Joseph Papp, but shortened in D’Oyly Carte’s (“doy-lee cart’s”) productions. An archaic term for a horse is included in the phrase “sat a gee (“jee”),” which this character devises as a rhyme for “strategy.” This character, who was based on Garnet Wolseley, lies about being an orphan to stop the abduction of his daughters. In the most iconic “patter song,” this father of Mabel claims he can “whistle all the airs from that infernal nonsense *Pinafore*.” For 10 points, “information animal, vegetable, and mineral” is possessed by what “modern” Gilbert and Sullivan character?

ANSWER: the **Major-General** [or Major-General **Stanley**; accept “I am the Very Model of a Modern **Major-General**”] (He appears in *The Pirates of Penzance*.)

<Other Fine Arts>

13. A journalist from this country was imprisoned for publishing an op-ed titled “The Lipstick of Dictatorship” in which he criticized widespread corruption. A breach of contract regarding dealings in this country led the Russian-Israeli businessman Arkady Gaydamak (“guy-dah-mack”) to sue Lev Leviev; Gaydamak and Pierre Falcone (“fal-CUN”) were convicted of dealing arms to this country by a French court in 2009. Generals nicknamed “Dino” (“DEE-no”) and “Kopelipa” (“koh-pay-LEE-pah”) form part of a “presidential triumvirate” in this country with Manuel Vicente (“vee-SHEN-tay”). This country operates the state-owned Endiama diamond company and has been locked into a protracted independence conflict with FLEC (“fleck”). In 2019, this country’s government froze the assets of the then-richest woman in Africa, Isabel dos Santos. A civil war in this country ended after the death of Jonas Savimbi. For 10 points, the MPLA and UNITA (“yoo-nee-tah”) fought a civil war in what former Portuguese colony?

ANSWER: **Angola** [or Republic of **Angola** or República de **Angola**; accept **Angolagate**] (Rafael Marques wrote the anti-José Eduardo dos Santos op-ed.)

<World History>

14. This philosopher’s description of the Moon wandering around the Earth with “borrowed light” is the earliest known Greek expression of the idea that the Moon reflects the Sun’s light. The Diels–Kranz reading of a key sentence by this philosopher is the basis for G. E. L. Owen’s translation of it as “What can be spoken and thought of must exist, for it [emphasize] *can* exist, whereas nothing cannot.” Guthrie interpreted this philosopher as a strict monist who attacked the Milesian (“my-LESION”) idea that “the world had not always existed in its present cosmic state.” This philosopher described a chariot ride to the home of an unnamed goddess in the proem to a fragmentary poem that uses the words *aletheia* (“ah-leh-TAY-ah”) and *doxa* (“DOCK-suh”) to refer to the “Way of Truth” and the “Way of Opinion.” For 10 points, name this founder of the Eleatic School, who appears with Zeno in his namesake Socratic dialogue.

ANSWER: **Parmenides** (“par-MEN-uh-deez”) of Elea [accept the **Parmenides**]

<Philosophy>

15. In a play by this author, two characters sing, “I’ve had all your whiskey and downed all your wine / Just sitting here lonesome and passing the time.” A scene by this author denotes an elongated rest, or “spell,” by repeating characters’ names directly after one another in the script without any dialogue. The enslaved man Hero changes his name to Ulysses at the end of this author’s trilogy *Father Comes Home From the Wars*. In a play by this author, characters state “one good pick will get you in, 2 good picks and you gone win” as part of a monologue for their street hustle. A 500-dollar inheritance is kept in a nylon stocking in a play by this author in which a man shoots his brother during a disagreement over a game of Three-Card Monte (“monty”). For 10 points, name this contemporary playwright who wrote about an Abraham Lincoln impersonator and his brother Booth in her play *Topdog/Underdog*.

ANSWER: Suzan-Lori **Parks**

<American Literature>

16. The coda to this symphony’s finale begins with an harmonium entrance on a massive C major climax, which is usually played on organ. The *lento lugubre* first movement of this symphony opens with a bass clarinet and two bassoons playing the brooding unison *fortissimo* theme [read slowly] long E, B C D, A B C. The composer of this symphony indicated that a bell should be placed in an adjacent room for its third movement *pastorale*, which begins with a *siciliana* and is punctuated by a three-note hunter’s call. Both Berlioz and Balakirev declined to write this symphony when they were sent its program, which Vladimir Stasov wrote after he watched a performance of *Harold in Italy*. The final movement of this symphony depicts an infernal orgy and contains a D-flat major theme depicting Astarte (“uh-star-tee”). For 10 points, name this “symphony in four scenes” based on a Lord Byron poem, composed by Pyotr Tchaikovsky.

ANSWER: **Manfred** Symphony [or Pyotr **Tchaikovsky**’s **Op. 58**; accept Pyotr Ilyich **Tchaikovsky** in place of “Pyotr Tchaikovsky”]

<Classical Music>

17. A form of this disease is difficult to distinguish pathologically from a drug reaction called AGEP. A severe form of this disease can be treated using spesolimab, an IL-36 inhibitor. Tissue affected by this disease may be surrounded by pale rings named for Woronoff and shows Munro microabscesses and elongated thin rete (“ree-tee”) ridges. A high risk of this disease is conferred by the HLA-C*06:02 (“H-L-A-C-oh-six-oh-two”) polymorphism. Streptococcal infections can trigger flares of this disease’s “guttate” form. Telescoping fingers and sausage digits can occur in an arthritis associated with this disease, which also causes oil spots and nail pitting. This disease is treated with vitamin D derivatives like calcipotriene. This disease, which has plaque and pustular subtypes, preferentially affects the extensor surfaces of the elbows and knees, unlike eczema (“EX-uh-muh”). For 10 points, name this skin disease that causes itchy red plaques with silvery scale.

ANSWER: **psoriasis** (“so-RYE-uh-siss”) [or **psoriasis** vulgaris; accept specific types of psoriasis, such as plaque **psoriasis** or pustular **psoriasis** or guttate **psoriasis**; accept **psoriatic** arthritis; prompt on **arthritis** until read; reject “rheumatoid arthritis” or “osteoarthritis” or “RA”]

<Biology>

18. The narrator dismisses this character to a “sleepless couch” and “a pillow strewn with thorns and wet with tears” after this character learns that a man had lied about a group “driving up the Lansdown Road.” This character’s description of a book as “nice” is playfully ridiculed by a man who says “And this is a very nice day, and we are taking a very nice walk, and you are two very nice young ladies.” The protagonist of *The Female Quixote* likely inspired this character, who is disappointed to find that a manuscript she discovers in a drawer is a mere inventory of household laundry. This character, who suspects that the father of a love interest has murdered his wife, bonds with Isabella Thorpe over their shared love of Gothic novels, including *The Mysteries of Udolpho*. For 10 points, name this protagonist of *Northanger Abbey*.

ANSWER: **Catherine** Morland [prompt on **Morland**] (Jane Austen wrote *Northanger Abbey*.)

<British Literature>

19. In the 2010s, the government of this island initiated two heavily criticized cullings of tens of thousands of its namesake flying foxes. Flowers endemic to a southwestern peninsula on this island where dozens of maroons jumped to their death include the mandrinette and this island’s national flower, the boucle d’oreille (“BOO-kluh dor-RAY”). An “underwater waterfall” illusion occurs near that spot on this island, Le Morne Brabant (“luh morn brah-bawn”). The oldest botanical garden in the Southern Hemisphere is named for this island’s district of Pamplemousses (“pomp-luh-moose”). Bernardin de Saint Pierre’s time on this island was the basis of his novel *Paul et Virginie*, in which it is referred to as Île de France (“eel duh frawnce”). This island, which names the largest plurality-Hindu African country, was home to an animal eaten to extinction by Dutch sailors. For 10 points, name this Mascarene island whose largest city is Port Louis (“loo-ee”) and which was once home to the dodo bird.

ANSWER: **Mauritius** (“muh-RISH-us”) [or **Maurice**; or **Moris**; accept **Île de France** or **Isle de France** until read; accept **Mauritian** flying fox or **Mauritius** fruit bat]

<Geography>

2023 ACF Nationals | Prelims 1. Duke A, Ohio State A, WUSTL A

Editors: Harvey, Apte, Evans, Golden, Karim, Kearney, Mao, Nediger, Peet, Settle, Silverman

20. Dana Scott proved that the existence of a certain kind of these things implies that the von Neumann (“NOY-mahn”) universe does not equal the minimal inner model of ZFC. Projective determinacy is implied by the existence of infinitely many of a type of these things introduced by Hugh Woodin (“wood-in”). The inaccessible type of these things are so called because they cannot be reached from below by performing arithmetic on these things. The Cantor–Schröder–Bernstein theorem states that if one of these things is both less than and greater than another of these things, then they are the same. This value for any countably infinite set is the same as this value for the natural numbers. There are none of these things between aleph-naught and “two to the aleph-naught” by the continuum hypothesis. For 10 points, name these values that measure a set’s size.

ANSWER: **cardinal** numbers [or **cardinality** or **cardinalities**; accept specific types of cardinal, such as large **cardinals**; prompt on sizes of sets until “size” is read]

<Other Science>

BONUSES

1. This short poem, which is part of an epic poem, repeats the command “Fill high the bowl with Samian wine!” For 10 points each:

[10h] Name this short poem that agitates for the independence of a nation “where grew the arts of war and peace.”

ANSWER: “The **Isles of Greece**”

[10e] “The Isles of Greece” appears in the digressive third canto of this epic poem by Lord Byron that portrays a legendary womanizer as a man who is easily seduced by women.

ANSWER: **Don Juan** (“JOO-in”)

[10m] At the end of the canto, Byron mocks “that complete perfection which ensures an epic from” this poet “every spring.” *Don Juan* is sarcastically dedicated to this author of *Thalaba the Destroyer*.

ANSWER: Robert **Southey** [or Bob **Southey**]

<British Literature>

2. This book argues that Galileo’s use of the telescope helped exalt the ideal of the *homo faber* (“HO-mo FAY-ber”) over the contemplative life. For 10 points each:

[10m] Name this book whose chapters on “labor,” “work,” and “action” explore the changing impact of the public, private, and social realms on the title concept.

ANSWER: *The **Human Condition***

[10e] This author of *The Origins of Totalitarianism* wrote *The Human Condition*.

ANSWER: Hannah **Arendt** [or Johanna **Arendt**]

[10h] Arendt’s struggles with reconciling the Jewish/German dichotomy in her identity are considered to be epitomized by her biography of this German woman. This woman hosted one of the most prominent salons in 19th-century Berlin and promoted the thought of Mendelssohn, Friedrich Schlegel (“SHLAY-gull”), and Schelling.

ANSWER: Rahel **Varnhagen** [or Rahel Antonie Friederike **Varnhagen**; or Rahel Antonie Friederike **Levin**; or Rahel Antonie Friederike **Robert**; accept *Rahel **Varnhagen**: The Life of a Jewess*]

<Philosophy>

3. This event took place soon after a minister of Hayam Wuruk demanded that the Sunda princess Pitaloka be a Majapahit concubine rather than a queen. For 10 points each:

[10h] Name this battle fought in a square in the north of the Majapahit capital of Trowulan. It resulted in the slaughter of most of the Sundanese royal family.

ANSWER: Battle of **Bubat** [or Tragedy of **Bubat**; or Pasunda-**Bubat**]

[10e] The battle strained relations between the Sundanese, who were based in the western part of this island, and the Majapahit, who were based in its east.

ANSWER: **Java** [or **Jawa**]

[10m] Hayam Wuruk had this so-called “prime minister” exiled after learning of the event. This Majapahit minister vowed not to eat any food seasoned with spices until he unified all of Nusantara.

ANSWER: **Gajah Mada** [prompt on **Elephant General**]

<World History>

4. The protagonist of a short story realizes she “cannot tell [this animal’s] secret and give its life away” after they had “watched the sea and the morning together.” For 10 points each:

[10m] Name this animal that is spotted from an oak tree by Sylvia, who at the end of that story decides not to reveal its location to a hunter who had offered 10 dollars.

ANSWER: the **white heron** [accept “A **White Heron**”; prompt on **heron**; prompt on **bird** or **avian**]

[10e] Sarah Orne Jewett’s story “A White Heron” was influenced by this author’s depiction of Maine in *The Pearl of Orr’s Island*. This author also wrote the novel *Uncle Tom’s Cabin*.

ANSWER: Harriet Beecher **Stowe** [or Harriet Elisabeth **Beecher**]

[10h] This contemporary of Jewett referenced “A White Heron” with the character of Sylvia Crane in her novel *Pembroke*. This author of “The Revolt of Mother” wrote about Louisa ending her engagement in the story “A New England Nun.”

ANSWER: Mary Wilkins **Freeman** [or Mary Eleanor Wilkins **Freeman**]

<American Literature>

5. The obscure journal of this man’s namesake “studies” released a controversial issue in response to Philip Ewell’s essay about this music theorist’s racism. For 10 points each:

[10m] Name this theorist whose method analyzes tonal music as generated from a “fundamental structure,” or *Ursatz* (“OOR-zotts”).

ANSWER: Heinrich **Schenker** [accept **Schenkerian** analysis; accept *Journal of **Schenkerian** Studies*]

[10h] This composer recently stepped down from the University of Michigan’s faculty after showing Laurence Olivier’s blackface *Otello* in a lecture. This composer based his *Lacerations* on memories of the Cultural Revolution.

ANSWER: Bright **Sheng** (“shung”) [or **Shèng** Zōngliàng]

[10e] This prestigious annual American music prize was only first awarded to a Black composer in 1996, when George Walker won for *Lilacs*. In 2018, it was controversially awarded to Kendrick Lamar’s album *DAMN*.

ANSWER: **Pulitzer** Prize for Music

<Classical Music>

6. The expanding spheres method of calculating this quantity gives a divergent sum that begins “6, minus 12 over root 2, plus 8 over root 3.” For 10 points each:

[10m] Name this quantity that equals the sum over lattice sites j of “one over p -sub- i - j ,” where “ p -sub- i - j ” is the interatomic distance over nearest-neighbor distance.

ANSWER: **Madelung** (“MAD-uh-lung”) constant

[10h] Textbooks often introduce the Madelung constant by computing it for this crystal structure that has an *fcc* lattice. In this crystal structure, which is named for its paradigmatic compound, each ion has a coordination number of 6.

ANSWER: **NaCl** (“N-A-C-L”) structure [or **sodium chloride** structure or **rock salt** structure or **halite** structure; accept **table salt**; prompt on **salt**]

[10e] An *fcc* lattice is the basis of this material’s namesake crystal structure, which is the crystal structure of silicon and many binary semiconductors. It is the hardest naturally occurring material.

ANSWER: **diamond** [accept **diamond** cubic or **diamond** lattice]

<Physics>

7. According to its first line, this book “is a study of social and cultural change.” For 10 points each:

[10h] Name this book by the historian Peter Brown. This book describes how the title period of Mediterranean history between 200 CE and 700 CE differs from “classical” civilization, as it is traditionally defined.

ANSWER: *The **World of Late Antiquity***

[10e] In *The World of Late Antiquity*, Brown rejects the idea that the Late Antique world is a “melancholy tale of ‘Decline and Fall,’” referring back to this historian’s *History of the Decline and Fall of the Roman Empire*.

ANSWER: Edward **Gibbon**

[10m] *The World of Late Antiquity* emphasizes how quickly Rome’s “Crisis of the Third Century” emerged by stating that this author “lay down his pen in 229 with no sense of foreboding.” This author’s 80-book *History of Rome* was written in Greek.

ANSWER: Lucius **Cassius Dio** [or Lucius **Dio Cassius**; or **Dion Kassios**; prompt on **Dio** or **Cassius**]

<Other History>

8. Alice Parker’s invention of the heating furnace was a crucial step in the development of this technology. For 10 points each:

[10e] Name this technology that maintains the comfort of an indoor space by controlling temperature, humidity, and air quality. It is known by a four-letter acronym.

ANSWER: **HVAC** (“H-vack”) systems [or **heating, ventilation, and air conditioning** systems; or **HVACR** systems or **heating, ventilation, air conditioning**, and refrigeration systems or **HACR** systems or **heating, air conditioning**, and **refrigeration** systems; prompt on central **heating**, **ventilation**, **air conditioning**, **AC**, **environmental control** systems, or **climate control** systems by asking “what general technology with a four-letter acronym performs that function?”]

[10h] The radiant time series method for calculating this quantity during HVAC system design has replaced the older TETD (“T-E-T-D”) and CLTD methods. This quantity, which is commonly expressed in BTU per hour, is proportional to ventilation rate times the required change in temperature.

ANSWER: **load** [accept heating **load**, cooling **load**, sensible **load**, latent **load**, or air conditioning **load**; accept **duty**; prompt on **heat gain**, **heat loss**, **Q**, or **power**] (TETD is total equivalent temperature difference and CLTD is cooling load temperature difference.)

[10m] Sensible heat ratios and required air flow rates are determined with these charts that plot dry bulb temperature and humidity ratio. They are named for the discipline that studies the thermodynamics of moist air.

ANSWER: **psychrometric** charts [accept **psychrometrics**; reject “psychometrics”]

<Other Science>

9. In one scene, this character is framed against a green marble backsplash as she methodically washes herself. For 10 points each:

[10m] Name this character played by Delphine Seyrig in a feminist work of “slow cinema.” This character’s daily routine starts to unravel when she overcooks some potatoes.

ANSWER: **Jeanne** Dielman (“zhahn deel-MAHN”) [or Jeanne **Dielman**]

[10e] Chantal Akerman’s film *Jeanne Dielman* was named by the 2022 *Sight & Sound* critics’ poll as the greatest film of all time, replacing this Hitchcock thriller about a detective’s obsession with a woman who falls from a bell tower at its end.

ANSWER: **Vertigo**

[10h] An Akerman film whose title ends with this word consists of shots of New York while a narrator reads letters sent by Akerman’s mother. This is the second word in the title of Akerman’s final film, which documents the end of her mother’s life.

ANSWER: **home** [accept *News From **Home***; accept *No **Home** Movie*]

<Other Fine Arts>

10. Gilles Quispel (“KHILL-iss QUISS-pull”) convinced this man’s namesake institute to purchase Codex I (“one”) of the Nag Hammadi library, which is now named for him. For 10 points each:

[10e] Name this psychoanalyst and author of a Gnostic set of *Seven Sermons to the Dead*. He interpreted gnostic mythology with his psychological theory of archetypes.

ANSWER: Carl **Jung** (“yung”) [or Carl Gustav **Jung**; accept **Jung** Codex; accept C. G. **Jung** Institute]

[10m] The history of the Nag Hammadi codices is recounted in *The Gnostic Gospels*, a book by this Princeton religion scholar. She also wrote *The Origin of Satan* and *Why Religion?*

ANSWER: Elaine **Pagels** [or Elaine **Hiesey**]

[10h] This German-American political philosopher drew on Jonas’s reading of Gnosticism as rooted in alienation in his book *The New Science of Politics*. His critique of totalizing political ideology inspired William F. Buckley’s paraphrase “Don’t immanentize the eschaton!” (“ESS-kuh-tawn”).

ANSWER: Eric **Voegelin** [or Erich Hermann Wilhelm **Vögelin**]

<Religion>

11. Strips made by BTNX that show a red line in the presence of this drug are illegal in 42 states as of January 2023 because they are considered “drug paraphernalia.” For 10 points each:

[10e] Name this synthetic opioid responsible for the most annual overdose deaths in the United States since 2018.

ANSWER: **fentanyl** [accept **fentanyl** testing strips]

[10m] Studies from these facilities in Vancouver found that users were unlikely to use fentanyl strips because they believed most drugs were already fentanyl-contaminated. Needle exchange programs were pioneered by one of these facilities that offers “fix rooms” for monitored drug use.

ANSWER: **supervised injection sites** [or **SIS**; or **supervised injection facilities** or **SIF**; accept **safe injection sites** or **safe injection facilities**; accept **facility** in place of “facilities”; accept **overdose prevention centers** or **OPC**]

[10h] In March 2023, this city began to stock vending machines with fentanyl strips and Narcan. This city’s mayor John Norquist oversaw the destruction of its Park East Freeway.

ANSWER: **Milwaukee**

<Current Events>

12. The protagonist of this series becomes a journalist after he marries the Chinese activist Mei, who dies of malaria in the novel *Footsteps*. For 10 points each:

[10h] Name this series whose first novel describes the protagonist’s courtship of Annelies (“ah-nuh-LEESE”), and the subsequent invalidation of their marriage due to her illegitimacy as a concubine’s mixed-race daughter.

ANSWER: **Buru Quartet** [or **Buru Tetralogy** or **Tetralogi Buru**] (Pramoedya Ananta Toer wrote the series, whose first novel is *This Earth of Mankind*.)

[10m] The protagonist of the *Buru Quartet* is compared to this author for being a well-educated rebel. This author created the mestizo Crisóstomo Ibarra and his lover, María Clara.

ANSWER: José **Rizal** (“ree-S AHL”) [or José Protasio **Rizal** Mercado y Alonso Realonda]

[10e] Soldiers in the Indonesian National Revolution often recited Rizal’s “My Last Farewell,” a poem written before his execution in this manner. Colonel Buendía (“bwen-DEE-ah”) faces this manner of execution at the start of *One Hundred Years of Solitude*.

ANSWER: execution by **firing squad** [accept being **shot** or killed with **guns** or similar descriptions] (Gabriel García Márquez wrote *One Hundred Years of Solitude*.)

<World Literature>

13. This person's burial is depicted in a painting that features a shiny white horse with a crucified rider. For 10 points each:

[10h] Name this artist whose spurning by model Germaine Pichot ("pee-choh") and subsequent suicide at L'Hippodrome ("lee-poh-drome") Café inspired a friend to paint *The Old Guitarist*.

ANSWER: Carles **Casagemas** ("KAR-luss kuh-suh-ZHEM-us") [or Carles Antoni Cosme Damià **Casagemas** i Coll]

[10e] Upon learning of Casagemas's death, Pablo Picasso began a "period" named for this color, during which he painted *Femme aux Bras Croisés* ("fahm oh brah kwah-ZAY") and *The Old Guitarist*.

ANSWER: **blue** [accept **Blue** Period or Período **Azul**]

[10m] The right of this other Picasso Blue Period painting shows a man modeled on Casagemas pressed against a nude woman while he gestures toward a clothed woman with a baby.

ANSWER: *La Vie* [or *The Life*]

<Painting & Sculpture>

14. William H. Martin depicted giant chickens and other animals on some of these products inspired by American myth. For 10 points each:

[10m] Name these products collected in deltiology, which is similar to the field of philately. The album cover for *In the Aeroplane Over the Sea* was altered from one of these products.

ANSWER: **postcards** [accept **postals**; accept picture **postcard**s; prompt on photographs; prompt on pictures; prompt on mail]

[10e] Some tall-tale postcards reference the belief that sprinkling this substance on a bird's tail prevents it from flying away. While on a cyclone, Pecos Bill created a natural feature of the West named for this substance.

ANSWER: **salt** [or **sodium chloride** or **NaCl**; or rock **salt** or table **salt**; accept Great **Salt** Lake]

[10h] Tall-tale postcards also featured this creature, which arose after hair tonic spilled into the Arkansas River. Infection by cotton molds may have inspired accounts of this creature, which is known as *loðsilungur* ("LOATHE-see-loon-goor") in Iceland.

ANSWER: **fur-bearing trout** [or **fur-bearing fish** or **hairy trout** or **furry trout**; prompt on trout or fish or salmonids; reject "salmon"]

<Other Academic>

15. In an early design for nuclear batteries, illuminating one of these substances made of hafnium induces the discharge of a gamma ray. For 10 points each:

[10m] Name these metastable nuclei. Mössbauer spectroscopy detects an energy shift between two of these excited states, which are named in analogy to a concept in organic chemistry.

ANSWER: nuclear **isomers** [accept **isomer** shift; reject "isotopes"]

[10e] Since the rate of gamma emission is too low, nuclear batteries today instead rely on this mode of radioactive decay, by which a nucleus emits an electron or positron.

ANSWER: **beta** decay [or release of a **beta** particle; accept **beta**-minus decay; accept **beta**-plus decay]

[10h] If gamma emission were faster, isomer batteries could dramatically improve this key metric, the limiting factor in standard betavoltaic batteries. A Ragone plot shows that this intensive property of a battery always trades off with energy density.

ANSWER: **power density** [or **specific power**; prompt on power; prompt on discharge rate]

<Chemistry>

16. This activist recounts campaigning against the Briggs Initiative in the memoir *When We Rise*, which inspired a 2017 docuseries by Dustin Lance Black with the same name. For 10 points each:

[10h] Name this activist who devised the idea for the NAMES project, a quilt memorializing those who have died from AIDS that is often displayed on the National Mall.

ANSWER: Cleve **Jones**

[10m] *Two answers required.* Jones conceived the NAMES project after these two politicians were assassinated by Dan White in 1978.

ANSWER: Harvey **Milk** AND George **Moscone** (“muh-SKO-nee”) [accept answers in either order; accept Harvey Bernard **Milk** in place of “Harvey Milk”; accept George Richard **Moscone** in place of “George Moscone”]

[10e] Milk earlier encouraged Gilbert Baker to create this symbol to replace the pink triangle. Due to difficulty obtaining some fabric, this symbol did not include a pink section when it was first displayed at the Gay Freedom Day Parade in San Francisco.

ANSWER: **rainbow flag** [accept gay **pride flag** or LGBT **pride flag** or **LGBT flag**; prompt on **rainbow** or **flag**; reject “progress pride flag”]

<American History>

17. Jas’s (“yoss’s”) brother dies in an ice skating accident in a Marieke Lucas Rijneveld (“muh-REE-kuh loo-kuss RYNE-uh-felt”) novel titled for the “discomfort” of this time period. For 10 points each:

[10m] Name this time period that titles a Gerard Reve (“KHAY-rart RAY-vuh”) novel subtitled “A Winter’s Tale.” The beekeeper Rudy Panko introduces a collection titled for these time periods that contains the story “Sorochintsi Fair.”

ANSWER: **evenings** [accept *Evenings on a Farm Near Dikanka* or *Village Evenings Near Dikanka* or *Večerá na hůtore bliz Dikán’ki*; accept *The Evenings*, *De avond*, *The Evenings: A Winter’s Tale*, or *De avond: Een winterverhaal*; accept *The Discomfort of Evening* or *De avond is ongemak*]

[10e] Rijneveld and Reve both wrote in this language, which Anne Frank used to write her diary.

ANSWER: **Dutch** [or **Nederlands**]

[10h] In *The Discomfort of Evening*, Jas fears that her father will kill one of these animals that she keeps as a pet. Alberto illustrates the enormity of the universe with a metaphor about one of these animals in Jostein Gaarder’s (“YO-stain GORD-er’s”) novel *Sophie’s World*.

ANSWER: **rabbits** [or **bunny** rabbits or **bunnies**; accept **lagomorphs** or **leporids**; reject “hares”]

<European Literature>

18. The Institute of National Remembrance seized dossiers on this agent after the widow of its country’s former interior minister tried to sell them. For 10 points each:

[10h] Name this agent who informed on his colleagues at Gdańsk (“guh-DANSK”) Shipyard between 1970 and 1976. A controversial 2008 book alleges that this agent, an SB collaborator, was actually a future president of his country.

ANSWER: **Bolek** [prompt on Lech **Wałęsa** by asking “what was his purported codename as a Communist agent?”]

[10e] Lech Wałęsa (“LEKH vah-WEN-sah”), who was perhaps code-named *Bolek*, helped lead this Gdańsk-based trade union whose influence helped to end Poland’s Communist regime.

ANSWER: **Solidarity** [or **Solidarność** (“so-lee-DAR-nosh-ch”); or Independent Self-governing Trade Union “**Solidarity**”; or Niezależny Samorządny Związek Zawodowy „**Solidarność**”]

[10m] Before Wałęsa was elected, this Polish general briefly served as President of Poland after the office’s restoration. As Prime Minister, this man initiated the Round Table Talks that resulted in free Polish elections.

ANSWER: Wojciech **Jaruzelski** (“VOY-chekh yah-roo-ZELL-skee”) [or Wojciech Witold **Jaruzelski**]

<European History>

19. Needle-like crystals of either aragonite (“uh-RAG-uh-nite”) or calcium bound to this anion are called raphides (“RAFF-id-eez”) and are found in the idioblasts (“ID-ee-oh-blasts”) of plants like pineapples and calla lilies. For 10 points each:

[10m] Name this ion used by some plants as a sink to help regulate apoplastic calcium concentrations. High dietary intake of this ion is a risk factor for kidney stones.

ANSWER: **oxalate** (“OX-uh-late”) [or **C₂O₄²⁻** (“C-two-O-four-two-minus”)]

[10e] Calcium oxalate crystal formation in idioblasts would overload cells with calcium without an abundance of this membranous organelle to sequester it. This organelle has smooth and rough subtypes.

ANSWER: **endoplasmic reticulum** [or **ER**; accept **sarcoplasmic reticulum** or **SR**]

[10h] Oxalate crystal sequestration may also be involved in plant tolerance to this metal, whose toxic plus-three cation (“CAT-eye-on”) limits root growth in acidic soil.

ANSWER: **aluminum** [or **Al**; or **aluminium**]

<Biology>

20. Charles Goodsell made a polemical case for this system in a book that inspired the Blacksburg Manifesto. For 10 points each:

[10e] Name this system of public administration that Max Weber (“VAY-bur”) saw as necessary for the modern state, though he warned that it could impose an “iron cage” of rationalization on society.

ANSWER: **bureaucracy** [prompt on **civil service**]

[10h] This public choice theorist posited that rational bureaucrats will always attempt to maximize their budgets. An environmentalist libertarian think tank is named for him.

ANSWER: William **Niskanen** (“niss-CAN-in”) [or William Arthur **Niskanen**; accept **Niskanen Center**]

[10m] Faizul Latif Chowdhury argued that bureaucrats engage in this behavior, whose name was popularized by Anne Krueger. Regulatory capture can enable this behavior, whose low cost is the subject of Tullock’s paradox.

ANSWER: **rent-seeking** [or **rent-seekers**; reject “rent”]

<Social Science>