

2023 ACF Regionals

Packet M by Duke A, Duke B, Edinburgh, Houston, Toronto C

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Tossups

1. The lack of information about one of these places is investigated in a 2019 book by Stuart Kells on “the greatest mystery in literature.” In 2016, one of these places premiered the play *District Merchants* under its director Michael Witmore. 24 objects taken from one of these places title an abstract film adaptation by Peter Greenaway starring John Gielgud, which draws on a description of one of these places as a “dukedom large enough.” Before being marooned by Gonzalo in *The Tempest*, Prospero is given objects from one of these places that he cherishes. Amherst College endows one of these places named for a Standard Oil executive, which is located on Capitol Hill and holds 82 copies of the First Folio. For 10 points, name these institutions, such as the Folger, that may house works by Shakespeare.

ANSWER: **libraries** [or **library**; accept Folger **Library** or Folger Shakespeare **Library**; accept *Shakespeare’s Library*] (The Peter Greenaway film is *Prospero’s Books*, an adaptation of *The Tempest*.)

<British Literature>

2. The first piece that this composer self-orchestrated opens with a timpani pounding the notes “F, C, low F, C” and features a blaze of F major 6 figures near the end of its first movement. Two movements both marked *Allegro ben ritmato e deciso* bookend a set of piano pieces by this composer, which includes a central “Blue Lullaby” that was arranged for violin by Jascha Heifetz (“YAH-shah HIGH-fits”). This composer included the recurring rhythm “half note, two sets of eighth-note triplets, followed by syncopated series of four eighth notes” in a piece that is often analyzed as having “stride” and “shuffle” themes. This composer pared down his *Three Preludes* for solo piano due to thematic overlap with his *Concerto in F*. For 10 points, Ferde Grofé (“FER-dee gro-FAY”) orchestrated a piece by what composer that opens with an ascending clarinet glissando, his *Rhapsody in Blue*?

ANSWER: George **Gershwin** [or Jacob **Gershwine**]

<Classical Music>

3. A technique partly named for this quantity involves finding the eigenvectors of the matrix [read slowly] “Sigma-11 (“one-one”) inverse times Sigma-12 (“one-two”) times Sigma-22 (“two-two”) inverse times Sigma-21 (“two-one”)” to obtain “canonical variables.” For a stationary time series at lag h , this quantity equals the ratio “gamma of h ” over “gamma of zero.” Computing this quantity for residuals after regressing off controls yields its “partial” form. This quantity times “ s -sub- y over s -sub- x ” is the slope estimate in simple linear regression. Two popular rank-based alternatives to this quantity are named for Kendall and Spearman. This quantity equals the covariance divided by the product of standard deviations and is thus always between plus and minus one. For 10 points, name this measure of dependence that is often conflated with causation.

ANSWER: **correlation** [or **corr**; accept Pearson’s **correlation** coefficient; accept canonical **correlation** analysis; accept auto**correlation**; accept partial **correlation**; prompt on Pearson’s r ; prompt on **rho**]

<Other Science>

4. Two of these beings who are brothers kill each other with maces after being seduced by a dancer in red silk. Two of these beings who arise from earwax are split by a discus after a five-thousand-year battle. They're not dragons, but after another of these beings is beheaded, he splits into two "shadow planets" that cause eclipses. The name of these beings is a [emphasize] *cognate* of deities like Apam Napāt and Mithra. A statue near Malaysia's Batu Caves marks the defeat of one of these beings on Thaipusam at the hands of Murugan. These "antigods" created by Prajāpati, who reject the wine goddess Varuni, include the atypically devout Prahlāda, Raktabīja, and the daityas led by King Balī during the churning of the milk ocean. For 10 points, earthly rakshasas may be considered a type of what demons who oppose the devas?

ANSWER: **asuras** [accept **daityas** until read; accept **dāsas**, **daśyus**, **danavas**, or **panis**; prompt on **rakshasas** until read by asking "some sources consider them a type of what other beings from Hindu mythology?"; prompt on **ahuras** by asking "that is a cognate of the name of what beings with an opposite nature?"; prompt on **demons** or **antigods** until each is read] (The first five lines respectively refer to Tilottamā tricking Sunda and Upasunda, Madhu and Kaiṭabha, Svarbhānu's division into Rāhu and Ketu, Zoroastrian ahuras, and Śūrapadmā or Surapadman.)
<Mythology>

5. Accounts of a popular rebellion in this type of location were published 50 years after it occurred by Guy Peroncini. Costume designer Willy Clarkson created papier-mâché pieces for this type of location that H. Hesketh-Prichard used extensively as part of a training exercise. This type of location was synonymous with the *poilu* ("pwa-LOO"), so-named for their appearance. Firsthand experience in this type of location informed the "indirect approach" of B. H. Liddell Hart. The Alberich Maneuver involved widespread construction of this type of location, where workers created pillboxes. This type of location gained importance after the "Race to the Sea." In this type of location, "live and let live" behavior was exemplified by the Christmas Truce. For 10 points, name these defensive fortifications used during World War I.

ANSWER: **trenches** [accept **trench** warfare; prompt on the **front** lines or the **frontier** or **warfront**; prompt on World War I **battlefields** or **battlegrounds** by asking "what specific locations on those battlefields?"; prompt on **fortifications**; prompt on **ditches** or **tunnels** or other descriptions of channels dug through the ground] (Pedroncini published suppressed documents on the French Army mutinies in 1917.)
<European History>

6. These systems are simulated by software developed by Masaru Tomita, which is based on K-12's networks from EcoCyc. Aviv Regev ("ah-VEEV REG-ev") developed the Seurat package for multimodal analysis of these systems, which are studied individually in a parallel technique named for droplets. The Broad ("brode") Institute launched an "atlas" of these systems, which name a scientific field whose central technique is fine-needle aspiration. Doublets of these systems are excluded in a technique that uses their forward and side scatter to "gate" them. Fractionation of the components of these systems yields extracts that are "free" of them for *in vitro* synthesis. These systems, which are on the order of 1 to 100 micrometers, are sorted by flow cytometry. For 10 points, tissues are organized from what units that contain specialized organelles?

ANSWER: **cells** [accept specific cells like immune **cells**; accept **cell** sorting, **cell** fractionation, **cell**-free systems, single-**cell** RNA-seq, Human **Cell** Atlas, or E-**Cell**; accept flow **cytometry** or **cytology** or **cytopathology** until "cytometry" is read; prompt on **biological** systems; prompt on **pathology** or **diseases** by asking "at the level of what systems?"; prompt on **bacteria**, **bacterium**, **microbes**, or **microorganisms** by asking "as a model of what general type of system?"] (The second line refers to Drop-seq.)
<Biology>

7. The art collective Concept 21 sang folk songs at this site while dressed as ghosts for the piece *Screaming Against the Sky*. The tenth entry in the *Projects for Extraterrestrials* series mimicked this site using gunpowder lit at dusk. A pile of dirt was dumped on large stone rubbings made at this site for an installation depicting “Ghosts Pounding” it. The 1988 performance *The Lovers* consisted of a walk along this site, ending with the breakup of Marina Abramović and Ulay. Part of this structure collapses when a lady weeps for her dead husband in an oft-illustrated story from a country’s Four Great Folktales. Rammed earth was later replaced by brick to build this crenelated structure lined with watchtowers. For 10 points, what “ten-thousand mile” long structure cannot actually be seen from space?

ANSWER: **Great Wall** of China [or Wǎnlǐ **Chángchéng**; prompt on *Ghosts Pounding the Wall*] (The works in the second and third lines are by Cài Guó-Qiáng and Xú Bīng. The story is about Lady Mèng Jiāng.)

<Painting/Sculpture>

8. In a novel, the narrator laments “millions of [this character], piled on top of one another” in “our grotesque capital city.” That narrator describes this character “banging on like a self-indulgent parrot” and gives the etymology of his name as “dies a fool” in a frame narrative told in a bar. In a novel titled for this character, the narrator kills Joseph Larquais (“lar-KAY”). In that novel, Harun’s mother encourages him to seek vengeance after this character kills Musa. In an earlier novel, Thomas Pérez testifies at the trial of this character, who frequents Céleste’s café and helps a pimp abuse his girlfriend. A Kamel Daoud novel is titled for the “investigation” into this character’s murder of an originally unnamed Arab. For 10 points, name this protagonist of Albert Camus’s *The Stranger*.

ANSWER: **Meursault** [accept *The Meursault Investigation* or **Meursault**, *contre-enquête*; prompt on the **Stranger** or l’**Étranger** or the **Outsider** until “*The Stranger*” is read]

<World Literature>

9. *Specific term required.* David Hackett Fischer’s book on “African” versions of these people discusses Rhode Island and New Hampshire’s “Negro Election Days.” In *Fears of a Setting Sun*, Dennis C. Rasmussen unravels the “disillusionment” he detects in popular biographies of these people that H. W. Brands dismissed as their namesake “chic” (“sheek”). Woody Holton wrote that these title people were “forced” by the prospect of an alliance between the enslaved, debtors, and Natives after Pontiac’s Rebellion. These people, whose name was coined by Warren G. Harding, were called “brothers” in Joseph J. Ellis’s group biography about the “early republic.” This group’s female equivalent typically includes Betsy Ross and Abigail Adams. For 10 points, the “Spirit of ’76” was attributed to what group of revolutionaries that included Ben Franklin?

ANSWER: **founding** fathers [or the **founders**; accept **founding** mothers or **Revolutionary Mothers**; accept **Founding Brothers**; accept *Forced Founders*; accept “**founders** chic”; accept *Fears of a Setting Sun: The Disillusionment of America’s Founders*; accept *African Founders*; prompt on our **fathers** or **mothers**; prompt on **revolutionary** or **revolutionaries**; reject “framers”]

<American History>

10. A work titled for this field praises the “zoophyte condition” of ancient Greek states in which, unlike the present, an individual could be “the representative of his time.” A text compiled by Heinrich Gustav Hotho uses degrees of “inwardness” to study this field, whose name was coined by Alexander Gottlieb Baumgarten. A work titled for this field describes how competition between the “sense drive” and “form drive” is mediated by the “play drive.” It’s not history or religion, but Hegel’s lectures on this discipline influenced Arthur Danto’s theory of a subject’s “end.” Friedrich Schiller’s letters on the “Education of Man” in this field respond to a book in this philosophical subfield, Immanuel Kant’s *Critique of Judgment*. For 10 points, name this subfield of philosophy that studies beauty and art. ANSWER: **aesthetics** [accept fine **art** or philosophy of **art** or “The End of **Art**” until “art” is read; accept “On the **Aesthetic** Education of Man” or “Über die **ästhetische** Erziehung des Menschen”; accept *Lectures on **Aesthetics*** or *Vorlesungen über die **Ästhetik***; accept ***Aesthetica***; prompt on philosophy until read; prompt on education until read by asking “in what field?”]

<Philosophy>

11. Two authors with this surname wrote a play in which a tramp meets Iris and Felix, who are butterflies. An author with this surname wrote a novel that ends with a metafictional conversation between the Author and the Writer imagining a war against the Lemurians. That novel uses Mr. Povondra’s newspaper clippings in the central chapter, which is titled “Up the Ladder of Civilization.” Two authors with this surname collaborated on the play *From Insect Life*. A novel by an author with this surname discusses a species discovered on the island of Tana Masa by Captain Van Toch. An author with this surname wrote about Harry Domin and Helena Glory, who represents the League of Humanity, in a play that popularized a word coined by his brother Josef. For 10 points, an author with what surname wrote *War with the Newts* and the play *R.U.R.*?

ANSWER: **Čapek** (“CHAH-peck”) [accept Karel **Čapek**; accept Josef **Čapek**]

<European Literature>

12. Yáo Lìngxǐ compiled a six-volume encyclopedia of this practice, whose title likens it to picking radishes. Kāng Yǒuwéi (“yo-way”) founded a society to oppose this practice that inspired the fāngzú movement. Dorothy Ko wrote a 2005 revisionist history of this practice, which was never adopted by the Hakka, a fact that helped the Táipíng recruit followers. This practice correlated with strong domestic textile industries according to a Hill Gates book that analyzed it in Sichuan, where some victims possessed a “cucumber” appearance. This practice likely originated from the dancer Yǎo Niáng imitating a crescent moon and idealized the “golden lotus” three *cùn* (“tswun”), or Chinese inches, in length. For 10 points, name this destructive practice of disfiguring a certain body part in young women.

ANSWER: **foot binding** [or **footbinding** or **bound feet**; or **chánzú**; accept **foot wrapping**; accept **lotus feet** until read; prompt on body modification or mutilation or disfigurement until read; prompt on misogyny; prompt on binding] (Dorothy Ko’s book is titled *Cinderella’s Sisters*.)

<World History>

13. Guy MacLean Rogers's book on this site's "mysteries" traces its support by the prytaneis ("pry-ta-NAY-iss"). The priestess Aristarche brought a xoanon ("ZOH-uh-non") from this site to the Phocaeon ("FOH-see-in") colony of Massalia. Carla Ionescu argues that bee ova cover a cult image from this site rather than bull testes or the breasts suggested by the epithet "Multimamma." This site honored the "Potnia Theron" for nearly 600 years before Justinian built the nearby Basilica of Saint John. This site's Asiatic fertility deity was identified with the Arkteia's "Taurian" protector of prepubescent Athenian girls at Brauron and an "Arcadian" goddess of nymphs. Croesus funded this building, whose statues were made by silversmiths who expelled Saint Paul from their Ionian city. For 10 points, what ancient wonder at Ephesus was identified with a lunar goddess of the hunt?

ANSWER: **Temple of Artemis** [or **Artemision**; or **Temple of Diana**; or **Artemis Tapınağı**; accept **Artemis Ephesia** or *The Mysteries of Artemis of Ephesos* until "Ephesus" is read; prompt on **Ephesus**, **Éphesos**, **Efes**, **Apasa**, **Selçuk**, **Agios Theologos**, or **Ayasoluk** by asking "what building?"] (Ionescu's book is *She Who Hunts: Artemis: The Goddess Who Changed the World*. The story about Massalia is from Strabo.)

<Religion>

14. *Description acceptable*. In an opera, Barbarina orders her lover to perform this action to protect himself, but their plan is exposed by the gardener Antonio. In modern productions of the French version of Gluck's *Orfeo ed Euridice*, this action is done by Orpheus in the absence of an haute-contre ("oat-CON-truh"). In another opera, this action causes Marzelline to reject Jaquino's proposal and declare her love for another character in the quartet "Mir ist so wunderbar." That title character performs this action to infiltrate a prison and rescue her husband Florestan in Beethoven's only opera. In *The Marriage of Figaro*, Cherubino performs this action to avoid serving in the military, and this action is also done by the soprano playing Cherubino. For 10 points, name this action performed by Fidelio as well as by females in trouser roles, who replaced male castrati in opera.

ANSWER: **cross-dressing** [accept **trouser** role, **breeches** role, **pants** role, or **Hosenrolle** until "trouser roles" is read; accept descriptions of pretending to be the **opposite gender** or wearing clothes of the **opposite gender** or **opposite sex**; accept **travesti**; prompt on **disguise** or **costume** or **hiding**; prompt on **rescue** or infiltrating a **prison** until each is read by asking "with what means?"]

<Other Fine Arts>

15. Syvret et al. developed an alternative means of generating these species using the commercial reagent Selectfluor in room-temperature acetonitrile. The only reversible reaction in a class named for these species employs sulfur trioxide as one and uses a fuming sulfuric acid catalyst. These species are attacked by another reactant to form an arenium ion called a sigma complex in a type of reaction that is greatly accelerated by the presence of Lewis acids like aluminum chloride. Activating groups favor ortho and para positions in a class of reactions in which these species substitute aromatic rings, exemplified by Friedel-Crafts reactions. For 10 points, identify these species contrasted with nucleophiles and named for their tendency to accept electrons in reactions.

ANSWER: **electrophiles** [accept **electrophilic** aromatic substitution; prompt on Lewis **acids**]

<Chemistry>

16. This phenomenon can emerge from “iron laws” like “once in contact, always in contact” according to a 1986 experiment that asked subjects to choose between two glasses of orange juice. The “animal reminder” theory of the origin of this phenomenon has been promoted by Paul Rozin, who co-developed a 32-item scale to measure it. Jonathan Haidt has shown that conservatives are more sensitive to pictures displaying this emotion than liberals. Out of Paul Ekman’s six universal emotions, this one uniquely first appears between the ages of four and six and characteristically manifests with nose wrinkling and a “gape face.” It is thought that this emotion evolved as a mechanism for avoiding disease and tainted food. For 10 points, what emotion results from revulsion to unpleasant things?

ANSWER: **disgust** [prompt on distaste or repugnance; prompt on revulsion until read]
<Social Science>

17. The two-body generalization of this equation consists of four decoupled sectors and reduces to the Breit equation in the low-velocity limit. Taking mass to zero reduces this equation to the Weyl equation. This equation can be expanded in powers of one-over- c to calculate the fine structure of the hydrogen atom using perturbation theory. Particles described by this equation undergo high-frequency oscillation due to interference of its solutions, called Zitterbewegung (“TSIT-ur-buh-VAY-goong”). This equation can be written in terms of four gamma matrices, making it a natural description of a spin-one-half particle. This equation is named for a scientist who interpreted its negative energy solutions as antimatter. For 10 points, identify this relativistic wave equation named for a British physicist.

ANSWER: **Dirac** equation
<Physics>

18. A female UW-Madison scholar with this surname edited the *Norton Anthology of African-American Literature* with Henry Louis Gates Jr. and had the first name Nellie. While living in Morocco, a bisexual author with this surname wrote about the disabled West African sailor Lafala in *Romance in Marseille*, which Penguin posthumously published three years after his satire *Amiable with Big Teeth*. That “Black Bolshevik” with this surname wrote a sonnet whose speaker vows, “Like men we’ll face the murderous, cowardly pack / Pressed to the wall, dying, but fighting back!” and fictionalized Caribbean immigrants in *Banana Bottom* and *Home to Harlem*. For 10 points, give this surname of the Jamaican-born Harlem Renaissance author of “If We Must Die,” who went by the first name Claude.

ANSWER: **McKay** [accept Claude **McKay** or Festus Claudius **McKay**; accept Nellie Y. **McKay** or Nellie Yvonne **McKay**; prompt on Nellie Y. Reynolds]
<American Literature>

19. A 2015 *Science* paper claimed that a variant of this game was weakly solved with counterfactual regret minimization. The CMU researcher Tuomas Sandholm created this game’s bots Claudico and Libratus. David Sklansky introduced the “gap concept” to this game, whose Cereus network was targeted in 2011’s “Black Friday.” Books on this game’s strategy by Dan Harrington and *Super System* author Doyle Brunson explain how to make “the nuts.” This imperfect-information game titles a book by Michael Lewis that recounts Wall Street traders tracking dollar serial numbers in its “liar’s” variant. Flutter Entertainment operates this game’s online “Stars” room, which, in 2020, exited Macau. For 10 points, the main event of the World Series of what game in Paradise, Nevada, is played as no-limit Texas hold ’em?

ANSWER: **poker** [accept Texas **hold ’em** until read; accept **heads-up no limit** Texas hold ’em or **HUNL**; accept **Omaha** hold ’em or pot-limit **Omaha** or **PLO**; accept *Liar’s Poker*; accept **stud** poker; accept online **poker**; accept World Series of **Poker**; prompt on gambling or betting or wagering; prompt on card games or bluffing games or cash games; prompt on WSOP by asking “what does that stand for?”]
<Pop Culture>

20. To quell disbelief about cobble and flake tools found at a Pleistocene site in this country, Niède Guidon claimed that they were so deep in a cave, they must have been transported by humans. A 2022 article published in *The Holocene* countered that stone tools found in those sites in this country were used by small monkeys. The idea that human development in this country languished because of resource-poor environments was the subject of a debate between Betty Meggers and Anna C. Roosevelt. Indigenous peoples in the Javari Valley in this country are protected by FUNAI (“foo-NYE”). The Marajoara (“mah-rah-JWAH-rah”) culture built mounds in this country, where pottery shards infuse a fertile soil called *terra preta*. For 10 points, name this country partially inhabited by uncontacted peoples in the Amazon Basin.

ANSWER: **Brazil** [or **Brasil**; or Federative Republic of **Brazil** or República Federativa do **Brasil**] (Guidon studied the site of Pedra Furada.)

<Other History>

21. This thing names an order of “Chinese sisters” in Hong Kong and a missionary society founded by Gaspar del Bufalo. This “wonderful” thing titles a book by Caroline Walker Bynum that examines late medieval processions of its relics at sites like Weingarten (“VINE-gar-ten”) Abbey. The miraculous appearance of this thing in a church in Wilsnack (“VILL-snock”) is criticized in a 1406 tract by Jan Hus (“yahn hooce”), whose follower Jakoubek (“YAH-koo-beck”) of Střibro (“STREE-bro”) demanded that the laity experience this thing through an Utraquist rite “in both kinds.” This thing is symbolized by the ground’s color on the flag of the Salvation Army, which sang a hymn asking “are you washed in” it. Sanctification of the chalice brings forth this component of the Real Presence. For 10 points, a prayer like the anaphora transforms sacramental wine into what holy substance according to the doctrine of transubstantiation?

ANSWER: **blood** of **Christ** [or **blood** of **Jesus**, **holy blood**, most **precious blood**, or **Blut Christi**; accept **sacramental blood**; accept “Are You Washed in the **Blood** of the **Lamb**?”; accept *De Sanguine Christi* or *On the Blood of Christ*; prompt on **blood** or **sanguis** or **vials**; prompt on sacramental **wine** until read by asking “what holy substance is it identified with?”; reject “body of Christ,” “flesh of Christ,” “host,” “holy chalice,” or “holy grail”]

<Religion>

Bonuses

1. On the Eve of Saint Agnes, silently baking a dumb cake was said to bring dreams of these people, whose [emphasize] *nonexistence* was signified by finding a thimble in a pot of colcannon. For 10 points each:

[10m] Identify these people who may be predicted by onion cromniomancy or by twisting an apple stem and reciting the alphabet. The Jewish shidduch (“SHID-ukh”) system attempts to find these people, who are described by “biodatas” in South Asia.

ANSWER: romantic **partners** [accept **husbands**, **boyfriends**, **grooms**, **wives**, **girlfriends**, **brides**, **spouse**, **lovers**, **suitors**, people you **marry**, **dates**, prospective **mates**, or equivalents of each]

[10e] Scottish “kaling” to predict future husbands on the eve of this holiday inspired Massachusetts’s “Cabbage Night.” This holiday’s games, like apple bobbing, may stem from Celtic Samhain (“SAH-win”) love divination rituals.

ANSWER: **Halloween** [or **All Hallows’ Eve**, **Hallowe’en**, **Allhalloween**, or **All Saints’ Eve**; reject “All Saints’ Day,” “Hallowmass,” “Feast of All Hallows,” or “All Hallows’ Day”]

[10h] Halloween trick-or-treating may have roots in this English visiting custom similar to wassailing (“WAH-sull-ing”). It involved singing and begging for spiced cakes that worked somewhat like the popular view of indulgences.

ANSWER: **souling** [or **soulers**; accept **soul**-cakes or **soulmass**-cakes]

<Religion>

2. This author’s visit to the American Colony in Jerusalem inspired the novel *Jerusalem*. For 10 points each:

[10h] Name this author who set the novel *The Miracles of the Antichrist* in Sicily. This author’s debut novel depicts a defrocked priest who becomes one of a woman’s “Twelve Cavaliers” at her manor.

ANSWER: Selma **Lagerlöf** [or Selma Ottilia Lovisa **Lagerlöf**] (The novel is *Gösta Berling’s Saga*.)

[10e] Lagerlöf was an author from this country. In 1909, she became the first woman to receive the Nobel Prize in Literature, which is awarded by this country’s Academy.

ANSWER: **Sweden** [or **Sverige**; or Kingdom of **Sweden** or Konungariket **Sverige**; accept **Swedish** Academy or **Svenska** Akademien]

[10m] Another Swedish novel set in Italy is this novel by Pär Lagerkvist. This novel’s title character is a deeply Christian misanthrope who assassinates various enemies of the prince.

ANSWER: *The Dwarf* [or *Dvärgen*]

<European Literature>

3. Law and Justice endorsed a holiday to honor anti-Communist Home Army soldiers nicknamed for this adjective, who committed revenge killings against Belarusians during the Soviet occupation of Poland. For 10 points each:
[10h] Identify this epithet of Sviatopolk I of Kyiv. A podcast about Balkan culture is titled for “a coffee in” a high range of the Dinaric Alps with this nickname in Albania, Kosovo, and Montenegro.

ANSWER: **cursed** [or **accursed** or **damned** or **doomed**; accept Sviatopolk the **Accursed** or Svyatopolk **Okayanny**; accept “**cursed** soldiers” or “**doomed** soldiers” or “*żołnierze **wykleci**”*; accept **Accursed** Mountains, **Cursed** Mountains, **Prokletije**, Bjeshkët e **Nemuna**, or “A Coffee in the **Accursed** Mountains”]

[10m] *The Accursed Kings* is a series of historical novels in this language that heavily influenced *A Song of Ice and Fire*. A Decadent author used a word for “cursed” in this language to refer to outcast poets like the author of *Illuminations*.

ANSWER: **French** [or **français**] (Maurice Druon wrote *The Accursed Kings*. The poets were the *poètes maudits*.)

[10e] The French word for “cursed,” *maudit* (“mo-DEE”), is a cognate of the Italian word *maledetto*, which is the opposite of this name that means “blessed” and was taken by a pope who died in December 2022.

ANSWER: **Benedict** [or **Benedetto**; accept Pope **Benedict** XVI, **Benedetto** XVI, **Benedictus** XVI, or **Benedikt** XVI]

<Other Academic>

4. Native American activist Susette LaFlesche (“luh-flesh”), also known by her Omaha name Bright Eyes, interpreted for this man’s 1879 civil rights trial. For 10 points each:

[10h] Name this Ponca chief whom General George Crook encouraged to file a legal case despite earlier arresting him. This man was released after the Omaha district court ruled that “an Indian is a person within the law.”

ANSWER: **Standing Bear** [or **Ma-chú-nu-zhi** or **Mantcunanjin**; accept **Standing Bear** v. *Crook* or *Crook* v. **Standing Bear**]

[10m] This Helen Hunt Jackson book was inspired by a post-trial lecture given by Bright Eyes and Standing Bear. This book chronicled the mistreatment of Native Americans from a 1778 treaty with the Lenape (“leh-NAH-pee”) to an 1871 massacre of the Apache.

ANSWER: *A **Century of Dishonor***

[10e] Along with her husband Thomas Tibbles, Bright Eyes later reported on this 1890 event on the Pine Ridge Reservation. William Coleman’s influential work on this massacre of the Lakota only credited Tibbles as a reporter.

ANSWER: **Wounded Knee** Massacre

<American History>

5. In a discussion of arithmetic, Socrates analogizes a mistaken answer of 11 instead of 12 to grabbing the wrong thing when reaching into this object. For 10 points each:

[10h] Name this metaphorical object that is considered in the *Theaetetus* (“thee-uh-TEE-tuss”) immediately after the metaphor of the wax block. This object is meant to illustrate how “possessing” is not the same as “having.”

ANSWER: **aviary** [or **bird cage**; prompt on **cage**]

[10e] Socrates considers the metaphor of the mind as an aviary while discussing this concept, whose definition in the *Theaetetus* as “justified true belief” was critiqued by Edmund Gettier.

ANSWER: **knowledge** [or **knowing** or word forms]

[10m] After the aviary model, *Theaetetus* presents a final view of knowledge as “true belief” plus this Greek term, which is often translated in context as “account.” Heraclitus used this Greek term to denote his universal governing principle.

ANSWER: **logos**

<Philosophy>

6. *Oikos* blogger Jeremy Fox wrote that an article titled for this building “isn’t a good paper,” alleging that its title features and the fan vaulting of Cambridge’s King’s College Chapel are adaptive. For 10 points each:

[10h] Name this building whose spandrels are invoked in a paper co-written by Stephen Jay Gould as an analogy for epiphenomenal structures that are not direct results of natural selection.

ANSWER: **San Marco** [or **Saint Mark’s** Basilica or Basilica di **San Marco** or Baxélega de **San Marco**; or Patriarchal Cathedral Basilica of **Saint Mark** or Basilica Cattedrale Patriarcale di **San Marco**; accept “The spandrels of **San Marco**” or “The spandrels of **San Marco** and the Panglossian paradigm: a critique of the adaptationist programme”]

[10m] A 1972 paper by “Spandrels of San Marco” co-author Richard Lewontin shows how this phenomenon is far greater within “races” than between them. Heritability measures this phenomenon, which causes natural selection when it results in differential survival or reproduction.

ANSWER: genetic **variation** [or genetic **variance**; prompt on genetic **diversity**; prompt on **allele frequency** by asking “what phenomenon that depends on the frequency of alleles?”]

[10e] Evidence for HSP90 as an evolutionary “capacitor” that masks and preserves genetic variation comes from blind Mexican tetras in these habitats. Troglaphiles live in these habitats near Carlsbad, New Mexico.

ANSWER: **caves** [accept Carlsbad **Caverns** or Lechuguilla **Cave**; accept **underground** rivers; accept **speleology**; accept **cave**fish; prompt on **dark** habitats; prompt on Guadalupe **Mountains** or **Sierra** de Guadalupe by asking “what specific habitats within that mountain range?”]

<Biology>

7. In a poem, a woman’s silk stockings are soaked by the “pale dew” of a staircase before she observes this object. For 10 points each:

[10m] Name this object that “scatters restless gold” in a Dù Fǔ poem titled for it. This object is mentioned at the end of another author’s poem “Lament of the Jade Stairs.”

ANSWER: the **Moon** [or **yuè**; accept “Full **Moon**” or “**Yuèyuán**”]

[10e] The Moon features prominently in “Quiet Night Thought” and “Drinking Alone by Moonlight,” two poems by this Chinese poet from the Táng dynasty.

ANSWER: **Lǐ Bái** [or **Lǐ** Po or **Lǐ** Bo or **Tàibái**] (Lǐ Bái also wrote “Lament of the Jade Stairs.”)

[10h] This author wishes to “ride the wind to fly home” in his poem “The Moon Festival.” This prolific Sòng-dynasty poet and travel writer also wrote two poetic works about the Battle of Red Cliffs.

ANSWER: **Sū** Shì [or **Su Shih**; or Sū **Dōngpō** or **Dōngpō** Jūshì; or **Zǐzhān**]

<World Literature>

8. In aromatic compounds, ring currents produce a negative form of this effect, shifting peaks downfield. For 10 points each:

[10m] Name this effect in which electron density produces a magnetic field opposite to the external field, moving the location of spectroscopic peaks.

ANSWER: **shielding** [or **deshielding**; accept diamagnetic **shielding**; prompt on **chemical shift**]

[10e] Shielding due to the location of electrons alters the site of resonance peaks in this type of spectroscopy that measures precession frequencies in the presence of a strong magnetic field.

ANSWER: **nuclear magnetic resonance** spectroscopy [or **NMR** spectroscopy; prompt on **magnetic resonance** spectroscopy or **MRS**]

[10h] This type of NMR deliberately uses a magnetic field gradient to study diffusion, measuring loss of coherence after a spin echo due to molecules moving to regions of different magnetic field, shifting their resonant frequencies.

ANSWER: **DOSY** [or **diffusion-ordered spectroscopy**]

<Chemistry>

9. 18th-century English proponents of the picturesque ideal emulated the tones of this artist's landscapes using his namesake tinted pocket mirrors, or "glasses." For 10 points each:

[10m] Name this French Baroque painter of Classically inspired landscapes such as *The Embarkation of the Queen of Sheba*, which J. M. W. Turner requested the National Gallery display next to his *Dido Building Carthage*.

ANSWER: Claude **Lorrain** [or **Claude** Lorrain; or Claude **Gellée**; accept **Claude** glasses]

[10e] This English landscape artist, who praised Claude's "amenity and repose," borrowed the composition of his *Hagar and the Angel* for a painting of Dedham Vale. Willy Lott's cottage appears in his painting *The Hay Wain*.

ANSWER: John **Constable**

[10h] This Italian Baroque artist, whom Ruskin disparaged as "anti-Turner," earned the nickname "anti-Claude." He painted haunting, proto-Romantic landscapes that feature the bandits and hermits of the "wild" Naples countryside.

ANSWER: Salvator **Rosa** [or **Salvator** Rosa]

<Painting/Sculpture>

10. In his Ph.D. thesis, David Allan Hubbard noted how this script's translation of the Sabaeen word "mqtwyt" ("mict-wit") into the Amharic word "Makeda" offered hagiographic legitimacy in a national epic. For 10 points each:

[10m] Name this script that the Coptic *Kebra Nagast* was translated into via an Arabic intermediate. The Fetha Negest law code was translated into this script, which is still used by the Ethiopian Orthodox Tewahedo Church.

ANSWER: **Ge'ez** ("guh-EZ") script [accept **Ge'ez** language; accept Old **Ge'ez**; accept **fidäl** or **fidel**; prompt on **Tigre** or **Tigrinya**; prompt on **Sebat Bet**; prompt on **Guragie**; prompt on **Bilen**]

[10e] The *Kebra Nagast* identifies Makeda as the Queen of Sheba, a place based on the Sabaeans of this modern-day country where the Arabian frankincense and myrrh trade revolved around Sana'a ("sah-NAH").

ANSWER: **Yemen** [or al-**Yaman** or al-**Yamanīyah**; or Republic of **Yemen** or al-Jumhūrīyah al-**Yamanīyah**]

[10h] Long after the Sabaeans' decline, this Axumite ruler expanded Ethiopian influence into Yemen by conquering the Himyarite Kingdom under the pretense of ending Dhū Nuwās's Jewish persecution of Christians.

ANSWER: **Kaleb** of Axum [or Saint **Kaleb**; or Saint **Elesbaan**, **Eleshaah**, **Ellesboas**, **Ellesboam**, or **Hellestheaeus**]

<World History>

11. This type of noise is commonly used in random number generators, such as Random.org, as well as to mask tinnitus. For 10 points each:

[10e] Name this type of noise defined by a power spectrum in which all frequencies have equal intensity. It is named for light that contains all wavelengths in the visible spectrum.

ANSWER: **white** noise

[10m] This other type of colored noise is characterized by a power spectrum in which the intensity is inversely proportional to the frequency. Audio of this type of noise is described as sounding like a waterfall.

ANSWER: **pink** noise [or **one-over-f** noise; or **1/f** noise]

[10h] Random walk or Brownian noise is qualitatively similar to pink noise, but its power spectral density has this frequency scaling, which corresponds to a drop-off of 6 decibels per octave. Give your answer in terms of f .

ANSWER: **one over f-squared** [or **1/f²**; or **f to the negative two** power; or **inverse-square**; or equivalents]

<Physics>

12. A ruler of this county mediated the end of the War of Chioggia (“kee-OH-juh”) to check the influence of the Visconti family and aided his captured cousin John V Palaiologos by sieging the Bulgarian town of Varna. For 10 points each:

[10h] Name this county ruled by a “Green Count” named Amadeo VI and his similarly-nicknamed son, the “Red Count.”

ANSWER: County of **Savoy** [or Contea di **Savoia** or Comté de **Savoie** or Grafschaft **Savoyen**; accept **Savoyard** Crusade]

[10e] Amadeo VIII, the next Count of Savoy, took the name Felix as the last holder of this title. To oppose legitimate Church leaders in Rome, holders of this title began to emerge in Avignon after the Western Schism.

ANSWER: **antipope** [or **antipapa**]

[10m] Amadeo VIII’s son, Ludovico I, received this artifact from the widow of Geoffroi de Charny (“zhuh-fwah de shar-NEE”). This artifact supposedly belonged to Jesus Christ and was donated to an Italian Cathedral in 1578.

ANSWER: **Shroud of Turin** [or **Holy Shroud**; or **Sindone di Torino**; accept **Sacra Sindone** or **Santa Sindone**; prompt on **shroud** or **sindone**]

<European History>

13. The Bostonians Helen and Kate move to a seaside town in this author’s novel *Deephaven*, which anticipated her own “Boston marriage” to Annie Adams Fields. For 10 points each:

[10m] Name this local color writer of “A White Heron.” The narrator poignantly bids farewell to the herbalist Mrs. Todd and other residents of Dunnet Landing, Maine, at the end of her novel *The Country of the Pointed Firs*.

ANSWER: Sarah Orne **Jewett** [or Theodora Sarah Orne **Jewett**]

[10e] Lilian Faderman’s book *Surpassing the Love of Men* cites a letter Jewett sent to this author questioning her use of a male narrator in the story “On the Gulls’ Road.” This author dedicated her novel *O Pioneers!* to Jewett.

ANSWER: Willa **Cather** [or Willa Sibert **Cather**]

[10h] This writer’s study of Jewett was illustrated by his partner Russell Cheney during their time at a cottage in Maine. This critic surveyed 19th-century writers like Emerson and Whitman in the book *American Renaissance*.

ANSWER: F. O. **Matthiessen** [or Francis Otto **Matthiessen**]

<American Literature>

14. A batyr warrior with the name of this mountain range searches for the water of life and battles his corrupted brother Shulgen in a dualistic kubair epic. For 10 points each:

[10h] Name this mountain range whose fairy tales, like “The Mistress of the Copper Mountain,” were collected in *The Malachite Casket*. The miners’ folktale “The Stone Flower” from this range inspired a ballet and a 1946 color film.

ANSWER: **Ural** Mountains [or **Urals** or **Uralskiye gory**; accept **Ural-batyr**] (*Ural-batyr* is an oral epic of the Bashkirs. Pavel Bazhov wrote *The Malachite Casket*. Prokofiev composed the ballet *The Tale of the Stone Flower* and Aleksandr Ptushko directed the film.)

[10m] This Soviet man names a pass in the Urals near the “Dead Mountain” where his hiking group mysteriously died in an incident that has been blamed on a yeti attack rather than an avalanche.

ANSWER: Igor **Dyatlov** [accept **Dyatlov** Pass incident or Gibel’ turgruppy **Djatlova**]

[10e] The Dyatlov group found trees carved with symbols of the Mansi people, who herd these animals in the Urals. These animals, whose Sámi legends informed the book *The Sun, My Father*, include Comet, Cupid, Donner, and Blitzen.

ANSWER: **reindeer** [or **caribou** or **Rangifer** or **boazu**; accept Santa’s **reindeer**; prompt on **deer** or **cervids** or **artiodactyls**] (Nils-Aslak Valkeapää wrote *The Sun, My Father*.)

<Mythology>

15. This film’s title sequence shifts between three faces at a dizzying pace as white letters appear one by one on the screen, beginning with an accented “a” in the middle. For 10 points each:

[10h] Name this film that inspired the name of Quentin Tarantino’s production company. This film’s three main characters perform a routine in a crowded café that its actors called the “Madison Dance.”

ANSWER: **Bande à part** [or **Band of Outsiders**; accept A **Band Apart** Films]

[10m] This director collaborated with Anna Karina on *Bande à part*. Another film by this director ends with a car thief played by Jean-Paul Belmondo dying in a police shootout after calling his girlfriend Patricia “disgusting.”

ANSWER: Jean-Luc **Godard** (The unnamed film is *Breathless*.)

[10e] In *Bande à part*, the trio breaks a record for running through this location previously held by Jimmy Johnson of San Francisco. In a famous shot from *Funny Face*, Audrey Hepburn descends the steps of this museum next to the Venus de Milo.

ANSWER: **Louvre** [or **Louvre** Museum or Musée du **Louvre**]

<Other Fine Arts>

16. This novel’s protagonist is the child of a coal miner and is raised in a shoddy mining neighborhood called “The Bottoms.” For 10 points each:

[10m] Name this novel whose mother-obsessed protagonist, Paul Morel, is torn between his love for the farmer Miriam Leivers and the suffragette Clara Dawes.

ANSWER: **Sons and Lovers**

[10e] This author’s experience as the son of a coal miner informed his depiction of the profession in novels like *Women in Love* and *Sons and Lovers*.

ANSWER: D. H. **Lawrence** [or David Herbert **Lawrence**]

[10h] *Description acceptable*. In a comic scene from Lawrence’s novel *Lady Chatterley’s Lover*, Mr. Chatterley delivers an offensive screed about the “animals” who work at his coal mine immediately before getting into this situation, which Mellors fixes.

ANSWER: his wheelchair gets **stuck** on a hill [accept equivalents about him being **unable to move** or **unable to go uphill**; accept that his wheelchair **brake jams**; accept **motorized chair** or **motor-chair** in place of “wheelchair”]

<British Literature>

17. A ruler with this name and the epithet “the Generous” may name a kingdom whose deeds are recorded in the *Book of Llandaff*, although the kingdom may also be named after another ruler with this name who submitted to Æthelstan in the mid-10th century. For 10 points each:

[10h] Give this name of a kingdom formed by the merger of Gwent and Glywysing.

ANSWER: **Morgan** [accept **Morgan** the Generous or **Morgan** ap Athrwys; accept **Morgan** the Old or **Morgan** Hen ab Owain; accept Kingdom of **Morgannwg** or Teyrnas **Morgannwg** or Kingdom of **Glamorgan**]

[10m] A later Morgan, the first Mormaer of Mar, may have been a part of the Revolt of the Earls against this English ruler, who imprisoned his rebellious son Robert Curthose.

ANSWER: **William** the **Conqueror** [or **William I**; or **William** the **Bastard**; prompt on **William**]

[10e] The last king of Morgannwg was overthrown by Robert FitzHamon, a kinsman of William the Conqueror who likewise descended from this region before he crossed the English Channel after the Battle of Hastings.

ANSWER: **Normandy** [or **Normandie**; accept Duchy of **Normandy** or Duché de **Normandie**; prompt on **France**]

<Other History>

18. Answer the following about structural transformation, in which economies change the income share of different sectors over the course of economic growth, for 10 points each.

[10e] One of the most robust cross-country findings about structural transformation is the secular decline in the income share of this broad sector. After the 1960s, the Green Revolution increased the productivity of this sector.

ANSWER: **agriculture** [or **farming**; accept Third **Agricultural** Revolution]

[10m] This economist posited that structural transformation leads to a situation in which economic growth initially increases inequality and then decreases it, resulting in his namesake inverse-U-shaped curve.

ANSWER: Simon **Kuznets** [or Simon Smith **Kuznets**; accept **Kuznets** curve]

[10h] Patterns of structural transformation can be modeled with preferences that lack this property, in which people spend the same share of their income on a product regardless of their income level. Compared to Cobb–Douglas preferences, Stone–Geary preferences lack this property.

ANSWER: **homotheticity** [or **homothetic** preferences]

<Social Science>

19. These events correspond to warming phases in the recharge oscillator model. For 10 points each:

[10e] Name these irregular events caused by weakening Walker circulation, resulting in anomalously high sea surface temperatures in the Eastern Pacific, in contrast to the cool La Niña phase.

ANSWER: **El Niño** [accept **El Niño** Southern Oscillation or **ENSO**]

[10m] Easterly winds drive this process in the positive feedback loop between the ocean and the atmosphere that forms an El Niño system. In this process, cool, nutrient-dense water rises, resulting in increased primary production.

ANSWER: **upwelling**

[10h] A possible explanation for the negative feedback loop that stops the growth of mature El Niño systems is these nondispersive atmospheric waves, which form due to the balance between the Coriolis force and boundary effects.

ANSWER: **Kelvin** waves

<Other Science>

20. This chamber work features a xyloimba in several of its nine movements, including ones based on the poems *Furious Craftsmanship* and *Hangmen of Solitude*. For 10 points each:

[10h] Name this abstract chamber cantata for contralto and six instrumentalists. It is based on the poetry of René Char.

ANSWER: *Le **Marteau sans maître*** (“luh mar-TOH sahn MEH-truh”) [or *The **Hammer Without a Master***]

[10m] This Frenchman composed *Le Marteau sans maître* as well as two *Anthèmes*. This composer and conductor founded IRCAM, a Parisian institute that studies avant-garde music.

ANSWER: Pierre **Boulez** (“boo-LEZ”) [or Pierre Louis Joseph **Boulez**]

[10e] *Le Marteau sans maître* represented a relaxation of the severe style that Boulez (“boo-LEZ”) used in a previous work, titled for this term followed by “X” (“ex”). This general term refers to a musical texture that contains multiple independent voices, in contrast to monophony.

ANSWER: **polyphony** [or **polyphonic**; accept ***Polyphonie X***]

<Classical Music>

21. Stars in this region pulsate as expansion allows for recombination of doubly-ionized helium, which reduces opacity, resulting in cooling and expansion. For 10 points each:

[10m] Name this region of the Hertzsprung–Russell diagram that includes Cepheid variables.

ANSWER: **instability strip**

[10e] The instability strip intersects with this prominent band of stars on the HR diagram, which contains the majority of stars, including the Sun.

ANSWER: **main sequence** [accept **main-sequence** stars]

[10h] Other pulsating variable stars can be found in this cooler region of the HR diagram. Stars in this region have an inert carbon–oxygen core and have undergone a stellar dredge-up, resulting in slow neutron capture nucleosynthesis.

ANSWER: **asymptotic giant branch** [or **AGB**; accept long-period **asymptotic giant branch**]

<Other Science>