

2025 ACF Regionals

Packet P by Editors

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Tossups

1. An angry spirit of this phenomenon crushed the crystal hearts of a group of monsters led by Unktehi and scattered their bones after losing worshippers to them. A spirit of this phenomenon saved a girl traveling down a waterfall, and resurrected Gunnodoyak after he was swallowed by a serpent. Members of a tribe who have visions of beings of this phenomenon can take on the role of a sacred clown called a Heyoka. Creatures embodying this phenomenon are opposed by horned serpents and underwater panthers. Those creatures of this phenomenon fight with whales and are depicted with an X-shape on top of totem poles in the Pacific Northwest. For 10 points, name this weather phenomenon summoned by a namesake bird along with lightning.

ANSWER: **thunder** [or **Wakinyan**; accept **thunderstorms** or **thunderbolts**; accept **lightning** until read; accept **Thunderbird**; accept **Wakinyan** Tanka; prompt on **weather** until read] (The first line refers to a Lakota story about the creation of the Badlands; the Lakota water monster Unktehi is sometimes known as Unhcegila or Unk Cekula. The second line refers to the Iroquois spirit Hé-no.)

<MS, Mythology>

2. When this politician told an ailing president he prayed for him, the president responded, “Which way, Senator?” This politician defended Jesse Wayne Brazel, who admitted to shooting Pat Garrett. Albert Jennings Fountain disappeared after leaving this politician’s Three Rivers Ranch, leading him to defend Oliver Lee. An event centered on this cabinet member led to *McGrain v. Daugherty*, allowing Congress to compel testimony. John B. Kendrick led an investigation into an event centered on this politician before an inquiry by Thomas Walsh. Harry Sinclair and Edward Doheny bribed this New Mexico politician, making him the first cabinet member to be imprisoned. For 10 points, name this Interior Secretary who leased Elk Hills oil fields to private companies in the Teapot Dome Scandal.

ANSWER: Albert **Fall** [or Albert Bacon **Fall**]

<NS, American History>

3. One of these characters, who is the only named character in his novel, has his name changed in a dream in which the protagonist talks to The Chauffeur. In a story within a novel, a train-hopping young man hides from these characters in a bell tower while in a town filled with them. In another novel, a freezer full of the heads of these characters, which are being used to create a magic flute, inspires a man to kill the murderous Johnnie Walker. In that novel, an illiterate man uses his ability to talk to these characters for his job of finding them. While searching for one of these characters at his wife’s behest, the protagonist discovers a dried-up well in “The Thieving Magpie,” the opening section of *The Wind-Up Bird Chronicle*. For 10 points, name these recurring pets in the novels of Haruki Murakami.

ANSWER: **cats** [or **felines**; accept **kittens** or **kitty** or **kitties**; prompt on **pets** or **animals**] (The first three sentences are from, respectively, *A Wild Sheep Chase*, *1Q84*, and *Kafka on the Shore*.)

<TM, World Literature>

4. Performers of this activity steal money from a girl's fishbowl before she loses it in a storm grate in Jafar Panahi's film *The White Balloon*. Gabal learns this activity from his father-in-law and uses it to strike a deal with the gangsters in *The Children of Gebelawi*. This activity provides an alternate title for a Sol Bloom song often called "The Poor Little Country Maid." A woman modeled on the artist's lover Jadwiga watches a man do this activity in *The Dream* by Henri Rousseau, who titled a 1907 painting for a performer of it. This activity often involves an item called a pungi ("POON-ghee"). The cover of Edward Said's *Orientalism* shows Jean-Léon Gérôme's painting of this activity, which does not actually induce hypnosis. For 10 points, what activity involves playing an instrument to draw a reptile out of a basket?

ANSWER: **snake charming** [accept **snake charmers**; accept **serpent charming**; prompt on **charming** by asking "of what?"; prompt on answers like playing **music** or playing a **flute** by asking "for what purpose?"] (The Sol Bloom song is also often called "The Streets of Cairo.")

<TM, Other Academic>

5. The one-electron term of the Breit–Pauli Hamiltonian multiplies this quantity to a spin–orbit interaction term over a double summation. Using the "self-consistent field" method, this quantity equals the ratio of the expectation for the radius of a hydrogen orbital to that of a hydrogen-like orbital. This quantity multiplies radius in the exponential term of a Slater-type orbital. Factors of 0.30 and 0.35 for various orbitals are used to calculate this quantity by Slater's rules. This quantity is divided by the square of covalent radius to obtain the Allred–Rochow electronegativity. Shielding from inner-shell electrons decreases this quantity below the atomic number. For 10 points, name this quantity that roughly describes the electric force experienced by an electron in an atom, denoted "Z-sub-e-f-f."

ANSWER: **effective nuclear charge** [accept **Z-sub-eff** until read; reject "nuclear charge" or "atomic number"]

<MY, Chemistry>

6. One politician with this name patronized the philosopher Athenodoros Cordylion, who lived with him in Rome in his old age. Another leader with this name may have been killed by Gaius Marius the Younger while fighting Marsic forces at Fucine Lake. While serving under Glabrio in fighting the Seleucids at Thermopylae, a general with this name led a decisive surprise attack on the Aetolians. A man with this name praised the utility of cabbages in his *De Agri Cultura*. After the Battle of Thapsus, a man with this name committed suicide in Utica to avoid Julius Caesar's clemency. Greek influence on Roman culture was opposed by a 184 BCE censor with this name known as "the Elder." For 10 points, a man of what name repeatedly ended speeches with "Carthage must be destroyed"?

ANSWER: **Cato** [accept Marcus Porcius **Cato** or Lucius Porcius **Cato** or **Cato** the Younger or **Cato** the Elder; prompt on **Porcius** by asking "what cognomen do those men share?"] (The first and fifth lines refer to Cato the Younger. The second line refers to Lucius Porcius Cato, grandson of Cato the Elder.)

<AR, Other History>

7. This organism contains the novel photoreceptor protein LITE-1, which is extremely efficient at processing blue and ultraviolet light. The transmembrane proteins SID-1 and SID-2 provide input molecules for one process in this organism controlled by lin-4, a heterochronic regulator that accumulates at this organism's L2 stage of development. This organism was the first to have its full nervous system mapped. A team led by John Sulston determined that this organism's hermaphroditic form has exactly 959 somatic cells. Andrew Fire and Craig Mello won the 2006 Nobel Prize in Medicine for discovering RNA interference in this organism, whose use as a model was popularized by Sydney Brenner. For 10 points, the first multicellular organism to have its full genome sequenced is what species of nematode worm?

ANSWER: **C. elegans** [or *Caenorhabditis elegans*; prompt on *Caenorhabditis*] (SID-1 and SID-2 are responsible for environmental RNA uptake; lin-4 is the first discovered microRNA.)

<MS, Biology>

8. During an interview to promote one of these works, a creator of one called *Take a Left* repeats “mutter, mutter, mutter, mutter” to mock the so-called “corporation” next to him. While making one of these works, a man talks to his “daily self-loathing” and a white “Inwood Daddy,” two of his personified “Thoughts.” A man starts out making these works, has an affair with Gussie, and feuds with Charley Kringas in reverse chronology scenes about the life of that man, Franklin Shepard. A queer Black usher develops one of these works in Michael R. Jackson’s *A Strange Loop*, which itself is one of them. One of these works billed as a “gay romp with Adolf and Eva,” the intentionally bad *Springtime for Hitler*, appears in *The Producers*. For 10 points, what works include *Merrily We Roll Along*, created by Stephen Sondheim?

ANSWER: musicals [or stage musicals; or musical theatre; accept musicals-within-a-musical; accept stage revues; prompt on plays or theatre or stage works; prompt on songs by asking “for what larger works?”] (The song in the first sentence is “Franklin Shepard, Inc.” from *Merrily We Roll Along*.)

<TM, Other Fine Arts>

9. This author described modernity as a series of “terminal paradoxes” in a book chapter examining “The Depreciated Legacy of Cervantes.” This author discussed the “playful transcription” of his Diderot-inspired play *Jacques and his Master* in a book titled for Max Brod’s betrayal of Kafka, *Testaments Betrayed*. Borrowing a concept from Mikhail Bakhtin, this author championed the “polyphony” in the Hermann Broch novel *The Sleepwalkers*. In his book *The Art of the Novel*, this author called for structuring novels in seven parts, which he did for a novel in which Ludvik writes on a postcard, “Optimism is the opium of the people!” Another novel by this author begins by discussing Nietzsche’s concept of eternal return. For 10 points, name this author of *The Joke* and *The Unbearable Lightness of Being*.

ANSWER: Milan Kundera

<HG, European Literature>

10. This faculty was studied in an experiment in which a Charlie Chaplin mask was rotated; that experiment into this faculty was conducted by Richard Gregory. At William Wundt’s lab, George Stratton pioneered experiments using devices studying this faculty, one of which he combined with a harness. David Marr created a three-stage computational model for measuring this faculty’s processing. LogMAR and a chart named for Herman Snellen measure this faculty. An experiment named for this faculty, in which infants are placed on a platform while their parent calls for them behind transparent plexiglass, was developed by Eleanor Gibson. This faculty, which names a “cliff,” is used to perceive the phi phenomenon and other illusions. For 10 points, the occipital lobe processes what faculty that perceives color?

ANSWER: vision [or visual perception or visual acuity; or sight or eyessight; accept color vision; accept depth perception; prompt on perception]

<NS, Social Science>

11. Shao Yong developed a method for this practice that relies on natural observation and is named after the plum blossom. This practice was performed by assessing the “five elements” based on the *Shénxiāng Quánbiān* (“SHUN-sh’yong ch’WEN-bien”). A method for this practice connects the twelve Earthly Branches, representing time, to the *bāzì* (“BA-dzuh”). A method for this practice was largely replaced by the three-coin method. The King Wen sequence for this practice arranges broken and unbroken lines. A text concerning this practice was accompanied by a set of commentaries called the Ten Wings. Yarrow stalks were used for this practice to generate hexagrams. The *I Ching* primarily concerns this practice, for which the Shang Dynasty used ox or turtle bones. For 10 points, name this practice commonly used in ancient China to predict the future.

ANSWER: **divination** [accept synonyms like **telling the future** or **fortune-telling** until “predict” is read; accept *I Ching* **divination**; accept **scapulimancy**; accept **cleromancy**; accept **suan ming**; accept **mei hua yi shu**; prompt on astrology]

<AK, Religion>

12. In a novel by this author, a man who collects junk uses a broken umbrella to explain his desire to create a new language. In that novel by this author, an academic reveals that Humpty Dumpty and Columbus’s egg inspired his pseudonym Henry Dark. At the end of a novel by this author, the narrator receives a red notebook, implying that a man who walked in patterns spelling “THE TOWER OF BABEL” was the writer Fanshawe (“FAN-shaw”). This author, who died in 2024, was married to novelist Siri Hustvedt. Blue spends over a year alone in an apartment watching Black in this author’s novella *Ghosts*, which follows a novel in which this author’s identity is assumed by the mystery writer Daniel Quinn. For 10 points, name this author of *City of Glass*, which is part of his postmodern detective series *The New York Trilogy*.

ANSWER: Paul **Auster** [or Paul Benjamin **Auster**]

<HG, American Literature>

13. Kemeny and Oppenheim’s “indirect” view of this process was one of many classified by Kenneth Schaffner. Explanation and this process conflict with empiricism according to a paper that coined the term “incommensurable” by Paul Feyerabend. Ernest Nagel’s model of this process uses “bridge laws” to link scientific theories. An “ism” named for this process is divided into “good” and “greedy” versions in *Darwin’s Dangerous Idea* and follows the analytic-synthetic distinction as the second of Quine’s “Two Dogmas of Empiricism.” This word denotes the process of explaining a complex phenomenon via a more fundamental one, which is often used in a negative sense to imply oversimplification. For 10 points, a logical fallacy is named for doing what process “to absurdity,” or *ad absurdum*?

ANSWER: **reduction** [or word forms such as **reducing** or **reductive**; accept scientific **reduction**; accept greedy **reductionism**; accept **reductio ad absurdum**] (Feyerabend’s paper is “Explanation, Reduction, and Empiricism.”)

<TM, Philosophy>

14. An artist with this first name painted a possible political allegory in which an approaching dog in the lower-left corner is repelled by a large white swan. This is the first name of an artist whose careers as a brewer and innkeeper influenced paintings like *Beware of Luxury* and *The Dancing Couple*. That artist with this first name painted rowdy genre scenes like *The Feast of Saint Nicholas* and inspired two “interiors” in a series by Joan Miró. Many of the 34 paintings attributed to an artist with this first name are set in a room of his home with checkered floors and a shining window on the left. Those paintings include one in which a foot warmer sits on the floor behind a domestic worker as she pours the title liquid. For 10 points, give this first name of the Dutch Golden Age painter of *The Milkmaid*.

ANSWER: **Jan** (“yahn”) [or **Johannes**; accept **Jan** Asselijn or **Jan** Steen or **Jan** Vermeer or **Johannes** Vermeer]

(The first painting is *The Threatened Swan* by Jan Asselijn. Miró’s series is *Dutch Interiors*.)

<TM, Painting and Sculpture>

15. In a cubic lattice, a BEC can undergo a phase transition between a superfluid and these materials when the ratio of U to J exceeds 36. Symmetry classes denoted “A” correspond to a type of these materials in a so-called “periodic table” containing ten classes. These materials satisfy a criterion of “effective Bohr radius times the cube root of electron density” being less than about 0.2 to 0.4. Other materials may unexpectedly become these materials due to the Peierls distortion. The Hubbard model correctly predicts the behavior of nickel oxides acting as these materials, as first proposed by Nevill Mott. These materials lose their behavior and begin to produce a current beyond the breakdown voltage. For 10 points, name these materials with a high band gap, thus making them poor conductors of electricity.

ANSWER: **insulators** [accept Mott **insulators** or Chern **insulators** or Peierls **insulators** or topological **insulators**]
<MY, Physics>

16. The late stages of this colony saw the leadership of the so-called “reactionary lawyers” challenged by a party composed of “verandah boys.” The Watson Commission investigated riots in this colony, during which protesting veterans were killed in the Christiansborg Crossroads shooting incident. Five of the “Big Six” were included in the Coussey Committee to write a new constitution for this colony, leading the excluded member to launch the “Positive Action” campaign. Charles Arden-Clarke appointed a future prime minister as “Leader of Government Business” in this colony after that leader’s release from Fort James. That proponent of Pan-Africanism founded the Convention People’s Party in this colony. For 10 points, what British colony gained independence under Kwame Nkrumah?

ANSWER: **Gold Coast** [accept **British Ghana**; prompt on **Ghana**]
<AK, World History>

17. Two sets named for this term are equal if second-order logic is unaffected by the transitive closure operation on relations. In a proof about the permanent of a matrix, Leslie Valiant formulated a set named for this term prepended with a sharp sign. Inductively constructing sets denoted “capital pi-sub-i” and “capital sigma-sub-i” using oracles produces a “hierarchy” named for this term. This term appears twice in the name of a class identified with the set of Turing machines “with advice” that has a slash in its name. Reductions with runtime described by this term identify “complete” problems such as SAT (“sat”). Whether a class named for this term is equal to its non-deterministic counterpart is the subject of a Millennium Prize problem. For 10 points, give this term that names the complexity class P.

ANSWER: **polynomial** [accept **P** until it is read; accept **polynomial** time or **polynomial** space or **polynomial** hierarchy; accept **NP** or **PH** or **P/poly** or **PSPACE** or **#P** (“sharp-P”) until “P” is read]
<MY, Other Science>

18. Finger taps, tongue clicks, and heel stomps are interspersed throughout a piece in this genre included in the collection *The Garden of Eden*. A “Bible” of this genre by Rudi Blesh inspired a revival that included the composer of three “ghost” entries in this genre, William Bolcom. The first instrumental piece to sell more than a million printed copies was a work in this genre; that work’s composer created an opera company named for this genre to tour his opera *A Guest of Honor*. Gunther Schuller founded an ensemble for playing music in this genre such as “The Cascades” and “Easy Winners” by a composer who was grouped into this genre’s “Big Three” along with Joseph Lamb and James Scott. For 10 points, a club in Sedalia, Missouri may have inspired a piece in what genre by Scott Joplin?

ANSWER: **ragtime** [or **rag**]
<JC, Classical Music>

19. In this novel, a lacemaker burns his wood carving of the Creation after his wife angers him by suggesting a cathedral sculptor added a woman's face to a male saint. In this novel, a Polish grandmother realizes her husband drowned when she discovers his riding whip in the flood water. In this novel, a teacher is horrified to learn that she had caned a troublemaking child with a heart condition. After her lover Anton leaves for the Boer War, a girl in this novel engages in a sapphic romance with the schoolteacher Winnifred, who later marries the girl's coal baron uncle. This novel follows three generations of a Nottingham family from the patriarch Tom to Ursula Brangwen, who also appears in its sequel *Women in Love*. For 10 points, name this D. H. Lawrence novel titled for a multicolored symbol.

ANSWER: *The **Rainbow***

<TH, British Literature>

20. The first ruler of this dynasty took power after being publicly denounced at an Easter ceremony as the leader of the eastern generals. This dynasty allied with Conrad III through a marriage to Bertha of Sulzbach to unite against a king empowered by the Treaty of Mignano ("meen-YAH-no"). This dynasty began the system of land grants called *pronoia* to fund a new army replacing the *tagmata*. This dynasty attempted to mend relations with the West under Manuel I by allying with Pope Adrian IV. Battles like Dyrrachium between the Normans and a ruler of this dynasty are described in a history written by his daughter Anna. An appeal for aid from that ruler of this dynasty led Pope Urban II to call for the First Crusade. For 10 points, name this dynasty that fostered its namesake "Restoration" of the Byzantine Empire under Alexios I.

ANSWER: **Komnenos** [or **Comnenus**; or **Komnennoi** or **Komnenian** dynasty; accept Grand **Komnenoi** and Megalon **Komnenoi**]

<EC, European History>

Bonuses

1. Sharp pieces of this material were put on either side of a wooden club called a *macuahuitl* (“ma-kwa-WEE-tull”) that left a fierce impression in Spanish chronicles. For 10 points each:

[10e] Name this form of glass sourced from volcanic sites and used in Aztec weapons.

ANSWER: **obsidian** [or **itztli**]

[10m] The two classes of elite Aztec warriors that used the *macuahuitl* and recruited from all social classes were named after eagles and these animals.

ANSWER: **jaguars** [or **ocēlōtl**; accept **jaguar** warriors; accept **jaguar** knights; prompt on **cats**]

[10h] Jaguar and eagle warriors also used a weapon named for this Nahuatl word, a device often adorned with snake decorations that were used in conjunction with *tlacochtli*.

ANSWER: **atlātli** (“aht-LAH-tull”)

<EC, World History>

2. In Joris-Karl Huysmans’s (“WEESE-mons’s”) novel *À rebours* (“ah ruh-BOOR”), the protagonist Des Esseintes (“day zay-SANT”) considers this author to be “one of the most terrible pedants ever produced by antiquity.” For 10 points each:

[10e] Des Esseintes describes the protagonist as a “weak-willed, irresolute person who walks with wooden gestures” in what author’s *Aeneid*?

ANSWER: **Virgil** [or Publius **Vergilius** Maro]

[10m] Des Esseintes was willing to excuse Virgil’s “impudent borrowings” from Homer, Lucretius, Ennius, and this author. Virgil’s *Eclogues* were modeled on the bucolic *Idylls* of this poet, who is mentioned in the first of the *Sonnets from the Portuguese*.

ANSWER: **Theocritus**

[10h] Des Esseintes could *not* excuse Virgil’s “plain theft” of Pisander, as revealed by this author. This 5th-century author wrote the lore book *Saturnalia* and a commentary on Cicero’s *Dream of Scipio*.

ANSWER: **Macrobius** [or **Macrobius** Ambrosius Theodosius]

<AR, European Literature>

3. A 1986 visit to Alaska inspired this artist to create a piece in which a steel pipeline weaves through the installation room and leaks a puddle of oil onto a white floor. For 10 points each:

[10h] Name this land artist who created the piece *Sun Tunnels* in Utah, where she rallied to preserve *Spiral Jetty* by her late husband Robert Smithson.

ANSWER: Nancy **Holt**

[10e] After Smithson’s death, Holt completed his piece *Amarillo Ramp* in this US state, whose town of Marfa contains Donald Judd’s land art piece *15 Untitled Works in Concrete*. This state is also home to the Rothko Chapel.

ANSWER: **Texas** [or **TX**]

[10m] On live TV in 1974, this artist videotaped Holt listening to herself with a one-second delay for their collaboration *Boomerang*. This artist became embroiled in a free speech trial about his steel sculpture *Tilted Arc*.

ANSWER: Richard **Serra**

<AP, Painting and Sculpture>

4. Answer the following about difficulties that arise when adding two random variables, for 10 points each.

[10m] If they are independent and each has a density, the density of their sum equals this operation of their densities. For functions f and g , this operation is denoted “ f star g ” and defined via an integral of their shifted product.

ANSWER: **convolution** [or word forms like **convolve**]

[10e] Conveniently, this quantity is linear under any dependence between the random variables. This quantity, which is a distribution’s first moment, is typically denoted “ μ ” or “ \bar{X} .”

ANSWER: **expected value** [or **EV**; accept **expectation** value; accept arithmetic **mean** or **average**]

[10h] To the bane of many intro probability students, variance is not linear in general. For arbitrary random variables X and Y , the variance of “ X plus Y ” equals the variance of X , plus the variance of Y , plus what expression?

ANSWER: **two** times the **covariance** of X and Y [accept equivalents like **twice** the **covariance**; reject “covariance” or other answers that omit the factor of two]

<TM, Other Science>

5. In November 1917, *Pravda* and *Izvestia* published an agreement signed by these two diplomats that was reprinted by the Manchester Guardian. For 10 points each:

[10m] Name these two diplomats who signed a secret treaty in 1916 that informed negotiations at San Remo. The Balfour Declaration was made regarding territory assigned to Britain under that treaty signed by these diplomats.

ANSWER: Mark **Sykes** AND François Georges-**Picot** [accept **Sykes–Picot** Agreement; accept Sir Tatton Benvenuto Mark **Sykes** in place of “Mark Sykes”; accept François Marie Denis Georges-**Picot** in place of “François Georges-Picot”]

[10e] The Sykes–Picot agreement was viewed as a betrayal by this British officer, who aided Faisal’s Arab Revolt against Ottoman rule and wrote the autobiography *Seven Pillars of Wisdom*.

ANSWER: T. E. **Lawrence** [or **Lawrence** of Arabia; or Thomas Edward **Lawrence**]

[10h] This diplomat resigned his post in protest after the publishing of the Sykes–Picot agreement. This diplomat had indicated the UK’s intention to recognize Arab independence in a series of letters sent to Hussein bin Ali.

ANSWER: Henry **McMahon** (“mick-MAN”) [or Sir Vincent Arthur Henry **McMahon**]

<EC, European History>

6. Taiye Selasi popularized this term in the essay “Bye-Bye Babar,” which describes figures from her home continent identifiable from their “London fashion, New York Jargon, and academic successes.” For 10 points each:

[10h] Name this term that Achille Mbembe (“ah-SHEEL em-BEM-bay”) applied to highly mobile writers like Chimamanda Ngozi Adichie (“ah-DEECH-yay”). This portmanteau term blends two elements: a prefix from a “pessimism” theorized by Frank B. Wilderson and the [emphasize] *second* part of an ideology promoted in a 2006 book by Kwame Anthony Appiah (“APP-ee-uh”).

ANSWER: **Afropolitan** [or **Afropolitanism**]

[10m] *We Need New Names*, a novel from this country, is often called Afropolitan. The authors Dambudzo Marechera and Tsitsi Dangarembga were born in this country.

ANSWER: **Zimbabwe** [or Republic of **Zimbabwe**] (*We Need New Names* is by NoViolet Bulawayo.)

[10e] An essay by M. Rocío Cobo-Piñero classifies Noo Saro-Wiwa’s *Looking for Transwonderland* as an Afropolitan work in this genre. The writings of Ibn Battuta and Marco Polo are often read as pre-modern works in this genre.

ANSWER: **travel** writing [or **travelogues** or **travels**; prompt on **memoirs** or **autobiographies**]

<TH, World Literature>

7. Answer the following about American women who succeeded in voting in the 18th century, for 10 points each.

[10e] Lydia Taft, who lived in this state's town of Uxbridge, was the first woman to vote in the US officially.

Margaret Fuller was an early feminist from this state's city of Cambridge.

ANSWER: **Massachusetts** [or **MA**]

[10m] This state's 1776 constitution referred to voters as "he or she," specifying only a certain property limit. In this state, Mary Hays, who inspired Molly Pitcher, was a water carrier at a battle where Charles Lee ordered a retreat.

ANSWER: **New Jersey** [or **NJ**]

[10h] In this county, "two old widows" were granted the right to vote, according to a 1733 article. Edward Hart wrote a Remonstrance named for a town in this county that denounced a ban on Quaker worship.

ANSWER: **Queens** County

<NS, American History>

8. *Description acceptable.* Hoogsteen ("HOHG-stain") base pairing allows B-form DNA to take on this characteristic by forming an alternative adenine–thymine bond. For 10 points each:

[10m] Name or describe this characteristic sometimes observed in satellite DNA that may cause genetic instability by interfering with transcription. A disproven theory posited by Linus Pauling claimed that DNA has this structural characteristic.

ANSWER: **triple helix** [accept **triple-stranded** DNA or RNA; accept **H-DNA** or **Triplex-DNA**]

[10e] Karst Hoogsteen reported his namesake base pairing by observing an alternative one of these interactions between adenine and thymine. These intermolecular interactions are named for the lightest element.

ANSWER: **hydrogen bonds** [or **H-bonds**]

[10h] Hoogsteen base pairs also allow for the formation of G-quadruplex secondary structures, which are useful in the design of these artificial oligomers that target a specific ligand. These molecules are produced in a technique called SELEX.

ANSWER: **aptamers**

<MS, Biology>

9. Alfred Schnittke's third string quartet opens with three explicitly-labeled quotations of Orlando di Lasso, Beethoven, and this motif. For 10 points each:

[10m] Name this motif that ends every movement of another composer's sixth string quartet, and begins a quartet by that composer dedicated "to the victims of fascism and war."

ANSWER: **DSCH** [or **D, E-flat, C, B** natural; prompt on Dmitri Shostakovich's initials or signature]

[10h] In his third string quartet, Nikolai Myaskovsky encoded a jab at Antony Lyadov, a member of this circle of composers named for a publisher and philanthropist. A quartet written collectively by this group is titled for the cryptogram B-flat, A, F.

ANSWER: **Belyayev** circle

[10e] The Belyayev circle influenced traditionalists like Myaskovsky, who is known as the father of this country's symphony. This country's regime censured modernists like Schnittke and Shostakovich.

ANSWER: **USSR** [or **Soviet** Union; or Union of **Soviet** Socialist Republics; or **CCCP**; or **SSSR**; or Soyuz **Sovetskikh** Sotsialisticheskikh Respublik; prompt on Russia, Rossiya, Russian Federation, or Rossiyskaya Federatsiya]

<JC, Classical Music>

10. The Renaissance philosopher Francesco Patrizi emphasized the importance of virtue in an Aristotelian treatise titled for a “happy” one of these places. For 10 points each:

[10m] What sort of place partly titles a 1405 book inspired by Boccaccio’s *On Famous Women*? That book about an allegorical one of these places responds to the misogyny of Jean de Meun’s (“mun’s”) *Roman de la Rose*.

ANSWER: cities [or city; accept city-state; accept *La città felice*; accept City of Ladies or Cité des Dames]

[10h] A Grandmaster of the Knights Hospitaller and a Genoese sea captain discuss the ideal egalitarian society in *The City of the Sun*, a work by this Italian philosopher of the late Renaissance.

ANSWER: Tommaso Campanella [or Giovanni Domenico Campanella]

[10e] The most enduring Renaissance work on the ideal city is likely this book by Thomas More, in which 54 cities on an island form the title perfect commonwealth.

ANSWER: Utopia

<TM, Philosophy>

11. This author was fictionalized as Tobias Oates in a book that imagines him taking the story for one of his novels from a convict-turned-wealthy brickmaker. For 10 points each:

[10e] Name this author whose work inspired Peter Carey’s novel *Jack Maggs*. The opening line of *The Catcher in the Rye* refers to “all that David Copperfield kind of crap,” referencing a novel by this author.

ANSWER: Charles Dickens [or Charles John Huffam Dickens]

[10m] A Pulitzer-winning 2022 novel by this author retells *David Copperfield* in impoverished Appalachia. The Price family travels to the Congo on a mission trip in another novel by this author.

ANSWER: Barbara Kingsolver [or Barbara Ellen Kingsolver] (The novels are *Demon Copperhead* and *The Poisonwood Bible*.)

[10h] A writing club updates *Great Expectations* to the more realistic *Measured Expectations* in this 2015 novel. In this novel, Bonbon tries to reintroduce slavery and segregation to the disincorporated town of Dickens.

ANSWER: *The Sellout* (by Paul Beatty)

<HG, American Literature>

12. The binding between these two kinds of compounds is the basis for artificial molecular machines such as molecular tweezers. For 10 points each:

[10m] Name these two kinds of compounds whose non-covalent interactions are studied in a branch of supramolecular chemistry, exemplified by the binding of metal cations to crown ethers.

ANSWER: hosts AND guests [accept host–guest chemistry]

[10e] Host–guest chemistry is analogous to the binding of substrates to these catalytic proteins.

ANSWER: enzymes

[10h] Among the many applications for host–guest chemistry is a room-temperature form of this phenomenon, which occurs when electrons are locked into a slower triplet state.

ANSWER: phosphorescence [prompt on luminescence; reject “fluorescence”]

<MY, Chemistry>

13. Answer the following about authors who wrote mystery novels involving trees, for 10 points each.

[10e] This prolific author began including courtroom elements in her mystery novel *Sad Cypress*, one of the dozens of books she wrote featuring Hercule Poirot (“air-KYOOOL pwa-ROH”).

ANSWER: Agatha **Christie** [or Dame Agatha Mary Clarissa **Christie**, Lady Mallowan; or Agatha Mary Clarissa **Miller**]

[10m] Squire Vane disappears among a grove of possibly eldritch “peacock trees” in this author’s mystery novella *The Trees of Pride*. This Catholic author also wrote *The Napoleon of Notting Hill* and created the priest-detective Father Brown.

ANSWER: G. K. **Chesterton** [or Gilbert Keith **Chesterton**]

[10h] Toby suffers from PTSD in this author’s 2018 mystery thriller *The Witch Elm*. Adam is found crawling out of the woods with slashes on his back in this American-Irish author’s novel *In the Woods*, which is part of her Dublin Murder Squad series.

ANSWER: Tana **French**

<TH, British Literature>

14. A bad time working for a director with this first name on the film *Navajo Joe* led Burt Reynolds to dub that director “the wrong” one with this first name. For 10 points each:

[10e] Ennio Morricone composed the scores for *The Big Gundown*, *Django*, and *The Good, the Bad and the Ugly*, which were all Spaghetti westerns directed by Italians who share what first name?

ANSWER: **Sergio** [or **Sergio** Sollima; or **Sergio** Corbucci; or **Sergio** Leone]

[10m] A bleak 1968 “snow western” by Sergio Corbucci follows an outlaw named for this concept. In a Martin Scorsese film titled for this concept, a Portuguese priest sees an apparition of El Greco’s portrait of Christ.

ANSWER: **silence** [or **silenzio**; accept *The Great Silence* or *Il grande silenzio*]

[10h] Corbucci’s assistant on *Django*, Ruggero Deodato, was arrested on obscenity charges for directing this film associated with the *mondo* genre. Real animals were slaughtered for this gory 1980 film about the search for a documentary crew in the Amazon.

ANSWER: **Cannibal Holocaust**

<AP, Other Fine Arts>

15. Due to its similarity to the word for “rainbow,” some Jewish children play with bows and arrows on a minor holiday known as the “Lag” (“log”), or 33rd day, of this period. For 10 points each:

[10m] What seven-week period is named for the “counting of” a unit of volume often used to measure wheat?

ANSWER: **omer** (“OH-mair”) [or Counting of the **Omer**; or Sefirat Ha**Omer**; accept Lag Ba**Omer** or Lag B’**Omer**]

[10e] The omer offering occurs on the second day of this holiday, when the Counting of the Omer begins. Stories from the Book of Exodus are read from the Haggadah at the beginning of this holiday.

ANSWER: **Passover** [or **Pesach**; accept **Passover** Seder]

[10h] Pilgrims often travel to the tomb of this figure to light bonfires on Lag BaOmer (“log buh-OH-mair”), the 33rd day of the Counting of the Omer. Three-year-old Hasidic Jews are encouraged to receive their *upsherin* (“up-SHAIR-in”), or first haircut, at this figure’s tomb on Mount Meron.

ANSWER: **Shimon** bar Yochai (“shee-MOAN bar yo-high”) [or Shimon **bar Yochai**; or Shimon **ben Yochai**; or **Simeon** bar Yochai; or **Rashbi**; accept Kever **Rashbi**; prompt on **Yochai**]

<AK, Religion>

16. This quantity is minimized when particle speeds follow a chi-square distribution with parameter k equals three. For 10 points each:

[10h] Name this quantity whose dynamics cannot necessarily obey time-reversal symmetry, according to Loschmidt's paradox. A result named for this quantity assumes the *Stosszahlansatz* ("SHTOHSS-zahl-AHN-zotts") in its derivation.

ANSWER: Boltzmann's H [or Boltzmann's **eta**; accept **H**-theorem or **eta**-theorem; reject "enthalpy"]

[10e] Because a decrease in the quantity H corresponds to an increase in a system's entropy, the H -theorem can be used to prove this statement which asserts that the entropy of a closed system increases over time.

ANSWER: **second law** of **thermodynamics** [prompt on **second law**]

[10m] Boltzmann's H may slightly increase in finite systems due to these phenomena, the deviation of a quantity from its average value. A theorem in statistical physics corresponds these phenomena to dissipations.

ANSWER: thermal **fluctuations** [accept **fluctuation**–dissipation theorem]

<MY, Physics>

17. Margaret Lock and Nancy Scheper-Hughes created a doctoral program in a field of this discipline at UC Berkeley and developed it in papers including "The Mindful Body." For 10 points each:

[10e] Name this field whose "medical" subfield studies how people understand and experience various elements of health and illness. This field's practitioners included Clifford Geertz ("gurts").

ANSWER: **anthropology** [or critical medical **anthropology**]

[10h] This 2003 biographical work by Tracy Kidder centers on a medical anthropologist who wrote *AIDS and Accusation* and distributed antibiotics to countries like Haiti and Peru.

ANSWER: ***Mountains Beyond Mountains*** [or ***Mountains Beyond Mountains: The Quest of Dr. Paul Farmer, A Man Who Would Cure the World***]

[10m] Medical anthropologists use this term to describe folk illnesses only found within specific settings, such as *koro* in Southeast Asian communities or *dhat* ("dawt") syndrome in India.

ANSWER: **culture-bound** syndrome [or **culture-bound** disorder; or **culture-specific** syndrome]

<NS, Social Science>

18. Early monuments from this period at Wadi Maghareh in the Sinai Peninsula include rock tables from Djoser and Sneferu, and a relief showing Sahure dispatching a fleet to the Red Sea. For 10 points each:

[10e] Name this third-millennium BCE period of ancient Egyptian history that was followed by the First Intermediate Period and a subsequent "Middle" counterpart.

ANSWER: **Old Kingdom** [accept **Age of the Pyramids** or **Age of the Pyramid-Builders**; prompt on **Third**, **Fourth** or **Fifth** Dynasties by asking "what broader period were those part of?"]

[10h] The Sinai peninsula was referred to as the "Mining Country" and the "Ladders of" this material due to its prevalence there. A temple to Hathor was built in support of mining this material by Senusret I.

ANSWER: **turquoise** [or **mefkat** or **mafkat** or **mfk't**]

[10m] The rock-cut chamber at Serabit el-Khadim, where turquoise was mined, was later expanded by this pharaoh. This stepson of Hatshepsut won the Battle of Megiddo.

ANSWER: **Thutmose III** [or **Thutmose the Great**; accept "Thutmosis" or "Thothmes" in place of "Thutmose"; prompt on **Thutmose** or **Tuthmosis** or **Thothmes**]

<MS, Other History>

19. This author popularized the pejorative term “nutritionism” for the view in dietary science that a food’s nutrient composition is all that matters. For 10 points each:

[10m] Name this journalist and popular science writer who consumed various psychedelics for his book *How to Change Your Mind*. This author hunted, gathered, and grew an entire meal for his book *The Omnivore’s Dilemma*.

ANSWER: Michael **Pollan** (“PAW-lun”) [or Michael Kevin **Pollan**]

[10h] Pollan’s books *In Defense of Food* and *Food Rules* both present a pithy seven-word summary of his dietary advice, which begins “Eat food. Not too much.” and ends with these two words.

ANSWER: “**mostly plants**” [accept “Eat food. Not too much. **Mostly plants.**”]

[10e] Jonathan Safran Foer critiqued Pollan’s view that veganism violates a type of culinary “fellowship” named for these objects. Chez Panisse (“shay pa-NEESE”) launched a locavore movement named for bringing food from “farm-to” these objects.

ANSWER: **tables** [accept kitchen **tables** or dinner **tables**]

<TM, Other Academic>

20. During a race, one of these two characters slips in the blood of a sacrificed bull and trips another runner to allow the other to win. For 10 points each:

[10h] Name these two lovers who are killed while leading a night raid in Book IX of the Aeneid.

ANSWER: **Nisus** AND **Euryalus** (“yur-RYE-uh-luss”)

[10e] Euryalus attracts the attention of Turnus’s men during the raid after looting one of these objects. Hades was the original owner of one of these objects that granted invisibility and was given to Perseus.

ANSWER: **helmets** [or **helms**; accept **caps** or **hats**]

[10m] During the raid, Nisus beheads a leader with this name. A man with this name lost an augury contest when he counted six fewer birds than his opponent.

ANSWER: **Remus**

<MS, Mythology>