



**ACADEMIC
COMPETITION
FEDERATION**

ACF NATIONALS 2022

PACKET 19

Packet by

The Editors (10)

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TOSSUPS

1. This author's most recent book is structured as three sections titled "Alto," "Medio," and "Bajo," offering "living narratives" of Colombians along the title river. This author remarked that Donald Trump's quote "One day, it's like a miracle, it will disappear" could refer to the American Dream, or to a virus, to conclude a *Rolling Stone* article on COVID-19 as the "End of the American Era." This author of *Magdalena* linked the endurance of climbers on George Mallory's Everest expedition to their suffering in World War I in his book *Into the Silence*. Another book by this anthropologist describes the hallucinogenic effects of tetrodo-toxin extracted from pufferfish, and was adapted into a horror film by Wes Craven. That book by him presents the case of Clairvius Narcisse ("nar-SEESS"), who said a *bokor* turned him into a zombie. For 10 points, what anthropologist wrote *The Serpent and the Rainbow*?

ANSWER: Wade Davis

<Other Academic>

2. In a print by this artist, an alchemist in his study looks up from his work at the startling apparition of a glowing disc inscribed with mystical letters. Etchings by this artist of *Faust* were compiled by Edme-François Gersaint ("zher-SAN") in one of the earliest *catalogues raisonnés* ("reh-zo-NAY"). Parallel diagonals suggest rain in the top left of this artist's largest landscape print, which shows the three title trees on a hill. This artist referenced Matthew 19:24 ("nineteen-twenty-four") in another print by showing a camel in the shadows to the right, and a rich man in the brightly lit crowd that watches Christ as he heals the sick. A cone of light floods down on Christ and the two thieves in this man's drypoint *The Three Crosses*. A print by this artist is named for the sum that a buyer allegedly paid for it. For 10 points, name this Dutch artist of the *Hundred Guilder Print*, who also painted *The Jewish Bride*.

ANSWER: Rembrandt [or Rembrandt Harmenszoon van Rijn]

<Painting/Sculpture>

3. As a boy, one of this author's protagonists memorizes every knot and crack in the wood floor and ceiling around him as he lies in a sick bed for two years, until he is cured by what he believes to be an elf. This author adopted the moniker of an Irish saint during a five-year stint in a Benedictine monastery, which inspired a similar monastic sojourn by Steinn, the protagonist of his third novel. This author's home country got J. Edgar Hoover to halt U.S. releases of his novels, such as *The Great Weaver from Kashmir* and *World Light*, for decades due to his Marxism. The sorcerer Kolumkilli allegedly cursed the land in one of his novels, in which a man rides a wild buck into a frozen river as his wife dies giving birth at the barren farm Summerhouses, where Bjartur ("b'YAR-turr") insists his family will raise sheep self-sufficiently. For 10 points, name this Nobel laureate who set *Independent People* in his native Iceland.

ANSWER: Halldór Kiljan Laxness [or Halldór Guðjónsson]

<European Literature>

4. This compound is the main target of plasma catalytic synthesis, since until 2021, electrochemical routes to making it nearly always required lithium deposition. Chemical plants that produce this compound re-compress and recycle the feedstock in an oxygen-free "synthesis loop" to avoid catalyst poisoning. Catalysts that synthesize this compound stabilize the N* ("N-star") intermediate and are doubly or triply promoted by alkali metal oxides. The surface mechanism of a six-electron reduction that forms this compound was deduced by Gerhard Ertl ("ER-tull"). To shift its unfavorable equilibrium, this compound is condensed out of a reactor operating above 100 bars and 500 degrees Celsius, using an iron oxide catalyst to break an unreactive triple bond. For 10 points, more than 1% of the world's energy consumption goes into synthesizing what chemical in the Haber-Bosch process?

ANSWER: ammonia [or NH₃]

<Chemistry>

5. This leader expanded his country's ten kilometers of paved road into a network of over 20,000 kilometers, including the Batinah Expressway. This leader guaranteed religious freedom with a constitution called the Basic Statute and endowed a UNESCO prize for environmental conservation. This leader, who was not part of the PLO, met with Yitzhak Rabin ("yeets-HACK ruh-BEEN") in 1994 to discuss water management, which his ministry improved by building canals to supplement traditional *falaj* irrigation. He abolished slavery after staging a bloodless coup, backed by MI6 ("M-I-six") agents John Graham and Hugh Oldman, at a palace in Salalah ("suh-LAH-luh"). This Ibadi Muslim gained control of the exclave of Musandam ("moo-SAN-dam") and defeated the Dhofar Rebellion early in his fifty-year reign. He was succeeded by Haitham ("HYE-thum") bin Tariq after dying in 2020. For 10 points, name this reformist sultan of Oman.

ANSWER: Sultan **Qaboos** ("caboose" or "KAH-booss") bin Said [prompt on **bin Said**; reject "Said"]
<World History>

6. Building off Hegel ("HAY-gull"), this book attacks Leibniz's ("LYBE-nits's") attempts to build a *characteristica universalis* modeled on Chinese, calling it a failed attempt to remove a certain discipline from history. In this book, the author analyzes an episode from *another author's* memoirs, in which a tribal chief pretends to read aloud a list during a gift exchange, even though he doesn't know how to read. Arguing against Aristotle's *On Interpretation*, this book claims that every signifier, not just some of them, is a "signifier of the signifier." This book claims that meaning is possible only because terms retain an aspect of "the other in the same," called the "trace." This book analyzes Rousseau's treatment of writing as a "supplement" to speech as part of the history of "logocentrism" in Western thought. For 10 points, name this foundational text of deconstruction by Jacques Derrida.

ANSWER: **Of Grammatology** [or **De la Grammatologie**]
<Philosophy>

7. A well-preserved late Imperial *domus* in this city contains a mosaic depicting peacocks and pheasants amidst flowers and fruits, hence its name "Villa of the Aviary." A young catechumen ("CAT-uh-KOO-men") noblewoman from this city kept a diary of the torture she and her slave endured before being martyred. Symptoms of a plague which began during the reign of Decius ("DECK-ee-uss") were recorded by a bishop of this city named Cyprian. Perpetua and Felicity were martyred in this city, whose great baths were named after Antoninus Pius. A theologian from this city was the first to describe the Father, Son, and Holy Ghost as a "trinity." Tertullian ("ter-TULL-ian") was from this city, which was re-founded as *Colonia Junonia*, then re-founded again by Julius Caesar. During the Roman empire the largest city in the province of Africa was, for 10 points, what city that Cato the Elder said "must be destroyed?"

ANSWER: **Carthage** [or **Carthago** or **Qart-Hadasht**; accept Cyprian of **Carthage**; prompt on **Tunis**]
<Ancient History>

8. The use of this natural region's unique terrain in the Bronze Age is investigated at sites called Must Farm and Flag. This natural region was said to be home to pixies called Tiddy Mun. The so-called "Burnt" part of this region, so-named because of the use of paring and burning to manage it, is surrounded by the Great and Little Ouse ("ooze") rivers. Legendarily, this region was roamed by Hereward the Wake after he was driven from the Isle of Ely ("EE-lee"). This natural region, which includes much of Peterborough district, was described as the "sink of...thirteen counties" by Daniel Defoe. Most of its former area is covered by farmland thanks to a wind-and-steam-powered drainage effort completed in the 1820s. Ecologically, this region is a silted-up bay of the North Sea. For 10 points, name this region of England's Eastern Midlands named for its marshlands.

ANSWER: The **Fens** [or The **Fenlands**; accept **Fen** Drayton Lakes, or Burnt **Fen**, or Cambridgeshire **Fens**, or Flag **Fen**; prompt on **Peterborough** before "Peterborough"; prompt on **Eastern Midlands** or **East Anglia** or **Cambridgeshire**; prompt on **moorlands** or **marshes**; reject "marches"]
<Geography>

9. One of these enzymes is fused to a histone methyltransferase in the human SETMAR (“set-mar”) gene. A modified one of these enzymes has an E54K mutation to enhance binding to OE sites. Cas12k (“cass-twelve-K”) guides one of these enzymes in the *Scytonema hofmanni* (“SYE-tuh-NEE-muh hoffman-eye”) CAST (“cast”) system. Several of these enzymes contain YREK (“Y-R-E-K”) and DDE motifs. It’s not a nuclease (“NEW-kee-ace”), but accessibility to one of these enzymes maps chromatin (“CHROME-uh-tin”) openness in ATAC-seq (“attack-seek”). One of these enzymes is attached to a bead in a popular tagmentation kit; that enzyme is Tn5, and is used to make Illumina sequencing libraries. A modified one of these enzymes called SB100X (“S-B-one-hundred-X”) is used alongside the sleeping beauty system. These enzymes target inverted repeats flanking a target sequence, then catalyze a “cut-and-paste” reaction. For 10 points, name these enzymes that allow certain sequences to move from one place to another in the genome.

ANSWER: **transposase** (“transpose-ace”) [reject “transposon”]

<Biology>

10. In one poem, an author’s relationship to this person is bizarrely compared to that of a “father to his sons and sons-in-law.” That author compared this person’s words to those “written on the wind and on running water” in another poem. A poem detailing the effects of seeing this person ends with the line “leisure has previously destroyed both kings and blessed cities.” A poet promises to make his dinner host “all nose” when the host smells a perfume provided by this person. This person is told to “value the rumors of strict old men at just one penny” before being asked to “give a thousand kisses, then a hundred.” A poet cried “I am tortured” because “I hate and I love” in an elegiac couplet likely about this person, who faced the death of a pet sparrow. For 10 points, name this mistress of Catullus (“kuh-TULLH-luss”), a woman whose pseudonym refers to the island of Sappho’s birth.

ANSWER: **Lesbia** [accept **Clodia** Metelli; accept **Claudia**; prompt on **Quadrantaria**]

<World Literature>

11. The predictive value of surveys measuring this trait was assessed among Harvard students using an experiment with envelopes by Eduard Glaeser et al. This trait develops rapidly in work teams and other “temporary groups” before it is validated, according to Debra Meyerson’s theory of its “swift” form. This trait facilitates the reduction of “social complexity” according to Niklas Luhmann, whose analysis of it and “Power” titles a 1979 book. In surveys, the “Rosenberg question” measures the “generalized” form of this trait, which has declined in recent decades in the U.S. as noted by Robert Putnam in *Bowling Alone*. Its “basic” form was posited by Erik Erikson, who saw a conflict of it versus its opposite as the first of eight stages of psychosocial development. For 10 points, blockchains supposedly remove the need for what belief that others are honest and reliable?

ANSWER: social **trust** [or **trustworthiness**; accept **distrust**; accept **Faith in People** Scale; accept **Trust and Power**; prompt on social **cohesion**; prompt on **social capital** by asking “What component of social capital?”]

<Social Science>

12. E. O. Schulz-DuBois and H. E. D. Scovil applied a law named for this person to three-level masers (“MAY-zers”), showing that it holds at negative temperature and in the limit of zero gain. The power-maximizing Curzon–Ahlborn modification to a law named for this person encloses one term in a square root, obtaining that law’s endo-reversible form. The universality of a class of devices named for this person motivates the thermodynamic definition of temperature. He names a theorem whose proof by contradiction involves paired reversible and irreversible devices that violate the Clausius statement of the second law. A theorem named for this man sets a limit for eta equal to “one minus T_{sub-C} over T_{sub-H} ,” which he derived by considering a cycle of two iso-thermal and two isentropic (“ICE-en-TROH-pick”) steps. For 10 points, name this French physicist who imagined a maximally efficient heat engine.

ANSWER: Sadi **Carnot** (“kar-NOH”) [or Nicolas Léonard Sadi **Carnot**; accept **Carnot**’s theorem or law or principle; accept **Carnot** engine or **Carnot** cycle]

<Physics>

13. In a story titled for a man who has this action done to him, the protagonist mistakes a seductive woman in a scarlet petticoat for the title character's housekeeper. In a story whose title refers to this action, a bizarre dinner is interrupted by cries of "Cock-a-doodle-doo!" from Madame Joyeuse ("jwah-YOOZ"), who thinks she is a rooster. After seeing two characters punished in this way, the narrator of a novel says that he "couldn't ever feel any hardness against them any more in the world" and that "Human beings can be awful cruel to one another." In a story about this punishment, the protagonist is asked "Robin, are you dreaming?" after seeing a man whose face is painted half-red and half-black lead all of Boston in doing this to his cousin, Major Molineux ("molly-NEW"). For 10 points, name this punishment suffered by the Duke and the Dauphin ("doh-FAN") in their final appearance in *The Adventures of Huckleberry Finn*.

ANSWER: being **tarred** and **feathered** [or **tarring** and **feathering** someone; prompt on riding a rail or run out of town on a rail by asking "What was done to them before they were put on the rail?"; prompt on torture or public humiliation]

<American Literature>

14. A piece by this composer begins with a vibraphone playing "A-C" minor-third dyads ("DYE-adds") on beats one, two, and four, followed by "A-B" major-second dyads at the same rhythm. A frequently excerpted movement by this composer begins with strings playing the triads [read slowly] B-flat minor, first-inversion F minor, first-inversion D-flat major, and G-flat major. A narrator recites Virginia Woolf's suicide note in a ballet by this composer in which each act is based on a different Woolf novel. Tilda Swinton reads passages from Kafka on his album *The Blue Notebooks*, which he excerpted in his soundtracks for *The Leftovers* and *Waltz with Bashir*. A 2012 album by him featured Daniel Hope as the soloist and begins with a track titled "Spring 0." For 10 points, name this German-born proto-minimalist composer of "On the Nature of Daylight" and an album that "recomposed" Vivaldi's *The Four Seasons*.

ANSWER: Max **Richter**

<Classical Music>

15. A two-line Latin couplet inscribed on a meeting place of this organization is attributed to Thomas More, who sought to protect this organization during the "Evil May Day" riots. This organization agreed to pay for defenses around Bishopsgate as part of a resolution mediated by Charles the Bold. During Wat Tyler's rebellion, mobs determined whether victims represented this organization based on how they said "bread and cheese." The name of sterling silver comes from the custom of calling representatives of this organization "Easterlings." It kept warehouses in Boston and King's Lynn due to the Treaty of Utrecht ("yoo-TREKT") it signed with Edward IV ("the-fourth"). Elizabeth I ("the-first") expelled this organization from its base in London, the Steelyard, which was one of its many outposts called *kontors* ("kon-TORZ"). Novgorod and Tallinn were also part of, for 10 points, what alliance of North European trading cities?

ANSWER: **Hanseatic** ("HAN-zee-attic") League [or **Hansa** or **Hanse**; prompt on any answer referring to merchants from Germany or the Baltic]

<European History>

16. Vasubhandu (“vuh-soo-BUN-doo”) described a six-stage method beginning with a form of this action called *ganana*. The technique of *bhastrikā* (“BUSS-tree-KAH”) is intended to improve the quality of this action, such as a variety of it named for making the “skull shine” called *kapālabhāti* (“kuh-PAH-luh-BAH-tee”). The Buddha describes a disciple mindfully performing this practice to create “bodily fabrications” in the *Ānāpānasati* (“AH-nah-pah-NUH-suh-tee”) *Sutta*. *Qigong* (“chee-gong”) practitioners may do a “reverse” form of it. Methods of controlling this action include the Zen practices of *hara*, *tanden*, and *susoku-kan* (“SOO-soak-kahn”), the last of which involves counting each time one does it. *Prāṇāyāma* (“PRAH-nuh-YAH-muh”) controls this bodily action to help focus during meditation. For 10 points, name this bodily action which yoga practitioners may do the “abdominal” form of by controlling their diaphragms.

ANSWER: **breathing** [or **breaths**, or **respiration**; accept **anapanasati** before “anapanasati”; accept **prana** or **pranayama** before “pranayama”; accept **breath** counting or bellows **breath** or abdominal **breathing**; prompt on **meditation** or **contemplation** before “meditation”; prompt on **focusing** or **yoga** by asking “What physical action?”; prompt on **counting** by ask “Counting what?”]

<Religion>

17. While in a hospital for a double hernia, the protagonist of one of this author’s plays meets an Irish nurse who thinks *A Tale of Two Cities* is about Sodom and Gomorrah. That play by this author features a granddaughter who breaks up with her fiancé when he objects to her attending an anti-war rally in Trafalgar Square, and a grandfather who likes to sing “Rock of Ages.” In that play by this author, the protagonist’s son, a soldier named Mick, is killed and shipped home. In another play by this man, roughhousing between the protagonist and his Welsh flatmate overturns an ironing board, burning a woman’s arm. A play by him is punctuated by songs like “Why should I care?” sung by the aging Music Hall singer Archie Rice. For 10 points, name this British playwright of *The Entertainer* who wrote about the rage-filled Jimmy Porter in *Look Back in Anger*.

ANSWER: John (James) **Osborne**

<British Literature>

18. A “continuous” one of these functions is “admissible” if the integral of its square divided by the norm of its argument is finite. Christopher Torrence and Gilbert Compo’s “Practical Guide” to these functions uses their Morlet (“mor-LAY”) type to track changes in the period of El Niño (“NEEN-yo”) events. These functions have a maximal number of vanishing moments under criteria proposed by Ingrid Daubechies (“doh-buh-SHEE”) in 1988. A method based on these functions replaced the discrete cosine transform in the JPEG (“J-peg”) 2000 compression standard. These functions are defined by dilating and scaling a “mother” to produce orthogonal “daughters” that, like bump functions, are continuous with compact support. These standard basis functions of multi-resolution analysis are localized in both frequency and time. For 10 points, identify these functions whose name suggests that they are short pulses of an oscillation.

ANSWER: **wavelets** [accept Morlet **wavelets** or Daubechies **wavelets**]

<Misc. Science>

19. A singer from this country sang leading tenor roles opposite Elizabeth Schwarzkopf in her studio recordings of *The Merry Widow* and *Die Fledermaus* (“dee FLAY-der-mouse”). In the spring of 2021, Lawrence Renes (“reh-NAY”) was succeeded by Alan Gilbert as music director of this country’s main opera company. In an opera, a duke calls this country’s king a traitor while singing to a portrait of him in the aria “Eri tu che macchiavi (“airy too kay mac-k’YAH-vee”). A soprano from this country sang the role of Brünnhilde (“BROON-hill-duh”) in the Solti (“SHOLL-tee”) recording of Wagner’s *Ring Cycle*. Before it was changed to colonial Boston, this was the original setting of Verdi’s *Un ballo in maschera* (“oon BAH-loh in mass-KEH-rah”). A soprano who toured the U.S. with P.T. Barnum was from this country, as were Nicolai Gedda and Birgit Nilsson. For 10 points, Jenny Lind was billed as the “Nightingale” of what country, the setting of multiple operas about the assassination of Gustav III (“the-third”)?

ANSWER: Kingdom of **Sweden**

<Other Fine Arts>

20. Pioneering American manufacturers of these objects include John Christian Oerter (“UR-ter”), and a Mennonite who settled in Lancaster County named Martin Meylin. In the 1860s, a few thousand men used bounties given to them by the government to buy one of these objects patented by Benjamin Tyler Henry. A song which celebrates a group of men carrying these objects, called “alligator horses,” describes how Packenham “made his brags” to “have their girls and cotton bags.” 18th-century German immigrants to Pennsylvania made examples of these objects that were similar to those used by Jaegers (“YAY-gurz”) in Europe and were called their “long” or “Kentucky” variety. The Minié (“meen-YAY”) ball gave these objects a significant advantage over similar length smoothbore muskets. For 10 points, name these guns whose barrels have grooves to improve accuracy.

ANSWER: **rifles** [accept **rifling**; accept **rifled** muskets or long **rifle** or Pennsylvania **rifle** or Kentucky **rifle** or Henry **rifle** or Hawken **rifle** or repeating **rifle** or breech-loading **rifle**; prompt on **muskets** ONLY after “Minié” and before “muskets”; prompt on **guns** before “guns”; reject “pistols” or “revolvers”] (The song is “The Hunters of Kentucky.”)

<American History>

BONUSES

1. The CONSORT scoring system encourages best practices in “gold-standard” clinical trials that randomly assign participants either to a treatment group or to this group. For 10 points each:

[10e] Name this portion of a study population that does not receive the treatment being tested. It may receive a placebo instead.

ANSWER: **control** group [accept randomized **control** trial]

[10m] Sequentially enrolling participants in a randomized control trial runs the risk of this bias, in which a sample does not properly reflect the study population. Sampling and volunteer bias are types of this more general bias.

ANSWER: **selection** bias [accept **selection** effect]

[10h] Trial randomization can be preserved by this kind of analysis, which counts dropouts rather than excluding them. This method contrasts with a per-protocol approach, in which only subjects that complete a trial are analyzed.

ANSWER: **intention-to-treat** analysis [or **ITT**; accept modified **intention-to-treat** analysis or **mITT**]

<Misc. Science>

2. Many American groups have styled themselves the Knights of the Golden Something-or-Other. For 10 points each:

[10e] The pro-slavery Knights of the Golden Circle sought to annex this island, a proposal also floated in the Ostend Manifesto. The Rough Riders later fought on this island.

ANSWER: **Cuba**

[10m] The Knights of the Golden Eagle were a Christian group founded in this city. Though it's in a Union state, the pro-Confederate Pratt Street riots erupted here weeks after Abraham Lincoln traveled through it to his inauguration.

ANSWER: **Baltimore**, Maryland

[10h] This royal governor of colonial Virginia sent the Knights of the Golden Horseshoe, a 1716 expedition to the Blue Ridge Mountains. He also set up the mining settlement Germanna for, you guessed it, German immigrants.

ANSWER: Alexander **Spotswood**

<American History>

3. This program is summarized in fourteen points, some of which build on the earlier “Scientific Outlook on Development” policy by setting a goal of coexisting “well with nature.” For 10 points each:

[10m] Name this set of principles which includes upholding the “one country, two systems” policy. It was introduced and constitutionally enshrined at the 19th National Congress, held in 2017.

ANSWER: **Xi Jinping Thought** [or **Xí Jīnpíng sīxiǎng**; DO NOT reveal these answers otherwise, but accept **Xi Jinping Thought** on Socialism with Chinese Characteristics for a New Era or **Xí jīnpíng xīn shídài Zhōngguó tèshè shèhuìzhūyì sīxiǎng**; prompt on answers referring to **Xi Jinping**; prompt on, but DO NOT REVEAL otherwise, **socialism with Chinese characteristics**; reject “Communism” or “Marxism-Leninism” or “Socialism”]

[10e] The full name of Xi Jinping Thought refers to China’s economy as this system “with Chinese characteristics,” a phrase first used by Deng Xiaoping (“DUNG shao-ping”) to describe economic reforms.

ANSWER: **socialism** [or **shèhuìzhūyì**; accept **socialism** with Chinese characteristics or **Zhōngguó tèshè shèhuìzhūyì**; reject “capitalism” or “communism”]

[10h] The last of the fourteen points of Xi Jinping Thought emphasizes the need for improving this quality. China’s highest anti-corruption body is the CCP’s Commission for “inspecting” this quality.

ANSWER: party **discipline** [or **jìlǜ**; accept Central Commission for **Discipline** Inspection or **Zhōngguó Gòngchǎndǎng Zhōngyāng Jìlǜ Jiǎnchá Wěiyuánhùi**]

<Current Events>

4. Name the following authors who made cattle pivotal to their plots, for 10 points each.

[10m] The Das family is troubled by memories of a cow that fell down the garden well in this author's novel *Clear Light of Day*. Her novel *Fasting, Feasting* was a Booker Prize finalist.

ANSWER: Anita Desai [prompt on Desai]

[10e] The title character's inattention to a calf sets off a chain of events leading to his father drowning in *A House for Mr. Biswas* ("BISH-wush"), by this Trinidadian author.

ANSWER: V(idiadhar) S(urajprasad) Naipaul [or Vidia Naipaul]

[10h] Hori Mahato's ambition to own a cow is a driving force in this author's novel *Godaan*, one of the seminal works of modern Hindi literature.

ANSWER: Munshi Premchand [or Dhanpat Rai Srivastava; or Nawab Rai]

<World Literature>

5. Sahih al-Bukhari ("SAH-hee al-boo-KAH-ree") relates that this ruler initiated one of his projects after Muslims from Iraq and Syria disagreed over how to properly recite communal prayers. For 10 points each:

[10e] Name this ruler who ordered the compilation of the first official Qur'an. He was the third of the four Rashidun ("RAH-shee-DOON") caliphs, succeeding Omar and preceding Ali.

ANSWER: Uthman ibn Affan [or Osman; accept Uthmanic codex]

[10m] While compiling the Qur'an, Uthman relied heavily on the testimony of this group, which consists of people who were [emphasize] *not* in Muhammad's household. In English, they are often called "companions."

ANSWER: sahaba [or *as-sahāba*; prompt on friends; reject "Muhammad's family" or "Ahl al-Bayt"]

[10h] Uthman ordered all non-official Qur'ans to be burned; however, this document discovered in 1972 preserves a different version of the Qur'an on its lower text, over which the Uthmanic Qur'an was written.

ANSWER: The San'a' ("sah-NAH") manuscript [or San'a' version of the Qur'an, or San'a' palimpsest, or San'a' document]

<Religion>

6. For 10 points each, answer the following about vocal works that have been proposed as the hidden theme of Elgar's *Enigma Variations*.

[10e] Robert W. Padgett used Elgar's Mendelssohn quotation in the "***" ("triple asterisk") movement to support the idea that the solution is a Lutheran chorale whose title states that God is a "mighty" one of these structures.

ANSWER: "A Mighty Fortress Is Our God" [or "*Ein feste Burg ist unser Gott*"; reject any synonyms for "fortress"]

[10m] In a YouTube comment, Padgett insulted Ed Newton-Rex's claim that the solution lies in this Italian composer's 1736 *Stabat Mater* ("STAH-baht MAH-ter"). A *buffa* intermezzo by this composer launched the War of the Buffoons.

ANSWER: Giovanni Battista Pergolesi ("pair-go-LAY-zee")

[10h] Marcel Berlins has suggested that the theme is actually the *Benedictus* from the Requiem of this Irish contemporary of Elgar's. He included "The Blue Bird" in his Opus 119 part songs, and composed the most popular setting of the motet "Beati ("BAY-ah-tee") quorum via."

ANSWER: Charles Villiers Stanford

<Classical Music>

7. This magazine published Truman Capote's ("kuh-PO-tee's") breakthrough short story "Miriam" and Joyce Carol Oates's first published short story "In the Old World." For 10 points each:

[10h] Name this magazine which hired all-female guest editors every summer from 1939 to 1970; those guest editors included Joan Didion and Diane Johnson.

ANSWER: Mademoiselle

[10e] Sylvia Plath fictionalized her time as a guest editor for *Mademoiselle* in this novel, in which Esther Greenwood has a mental breakdown.

ANSWER: *The Bell Jar*

[10m] *Mademoiselle* also published this American author's short story "City of the Living." This author is better known for a novel in which the wheelchair-using historian Lyman Ward narrates the history of his grandparents' life in the American West.

ANSWER: Wallace (Earle) Stegner

<American Literature>

8. One type of this process volatilizes analytes ("ANNA-lytes") so they are compatible with gas chromatography. For 10 points each:

[10h] Name this general process of chemically modifying the products of a reaction so they are easier to detect by spectroscopy or separate by chromatography. It also may involve resolving a racemic ("ruh-SEE-mick") mixture into diastereomers.

ANSWER: derivatization [or derivatizing; or forming derivatives or derivates]

[10m] Chiral ("KYE-rull") derivatization before chromatography isn't necessary if the stationary phase is chiral; for example, if it's one of these molecules. These hydrophilic macro-cycles consist of sugars linked by glycosidic bonds in a ring.

ANSWER: cyclo-dextrins [or CDs; prompt on dextrins; reject "dextran"]

[10e] Alcohols are derivatized for GC-MS ("G-C-M-S") by protecting them with ethers ("EE-therz") of this element. A gel containing this element's oxide often supports cyclo-dextrins, since it's easy to purify from sand.

ANSWER: silicon [or Si ("S-I"); reject "silica"]

<Chemistry>

9. A sculpture group made mostly from this material was influenced by *Black Elk Speaks* and uses black, red, blue, and yellow to depict figures like Catwoman and the donkey-headed Bottom. For 10 points each:

[10m] Name this sculptural medium used by George Segal, who applied bandages of it to make *The Costume Party*. This material comprises the sculptural figures at the top of several of Jasper Johns' target paintings.

ANSWER: plaster [accept plaster bandages; accept painted plaster]

[10h] This plaster sculpture group by George Segal commemorates the Stonewall riots. It depicts a female couple on a park bench touching hands, while a male couple stands next to them.

ANSWER: Gay Liberation [accept Gay Liberation Monument]

[10e] In another sculpture by George Segal, art dealer Sidney Janis views this painter's *Composition*. This proponent of neoplasticism split with Theo van Doesburg ("TAY-oh fon DOOZ-burk") over the use of diagonal lines.

ANSWER: Piet Mondrian [or Pieter Cornelis Mondriaan]

<Painting/Sculpture>

10. Akkadian cuneiform contracts call these workers *mušēniqtu* (“moo-shay-NEEK-too”), while Sumerian texts refer to them as *gaga*. For 10 points each:

[10h] Name these workers typically employed for two or three years whose role in Mesopotamia was analogous to the deity Nisaba. In 1996, archaeologists found the tomb of Maia, one of these workers for King Tut.

ANSWER: **wet nurses** [accept any answer indicating someone who **breastfeeds** and/or **suckles** a baby; prompt on **nurses**; prompt on **babysitters** or **nannies**; reject “surrogates” or “midwives”]

[10e] This 18th-century BCE text states that a wet nurse who swaps out one baby for another, or who lets a baby die in her care, shall have her breasts cut off. Its namesake Babylonian had it inscribed on a black basalt stele.

ANSWER: **Code of Hammurabi** [accept any answer indicating the law **code** set out by **Hammurabi**]

[10m] In Ancient Rome, wet nurses could be hired at the Columna Lactaria, near a temple named for this Roman virtue. This Latin word denoted devotion and duty, as exemplified by Aeneas.

ANSWER: **pietas** [or **pius**; accept Temple of **Pietas**; prompt on **piety**]

<Ancient History>

11. Answer the following about the notion of “benevolence” in early modern British ethical thought, for 10 points each.

[10m] This leading figure in the Scottish Enlightenment wrote that “calm, impassionate benevolence” inspires moral behavior in his *An Inquiry into the Original of Our Ideas of Beauty and Virtue*.

ANSWER: Francis **Hutcheson**

[10e] For Hutcheson, benevolence “excludes” this motive with a hyphenated name, which ethical egoists believe to be the basis of rational action. Adam Smith wrote that this venal motive inspires “the butcher, the brewer, or the baker” to sell goods.

ANSWER: **self-interest**

[10h] Hutcheson’s phrase “universal benevolence” came from this Anglican bishop, who laid out his ethics in fifteen sermons preached at Rolls Chapel. This man attacked deism in his *The Analogy of Religion*.

ANSWER: Bishop Joseph **Butler**

<Philosophy>

12. This literary undertaking produced the lines “Love is a golden bubble, full of dreams, / That waking breaks, and fills us with extremes.” For 10 points each:

[10h] Name this task that added four sestiams (“SESS-tee-ads”) to the existing two. It began after lines describing how Night “o’ercome with anguish, shame, and rage, / Dang’d down to hell her loathsome carriage” and ends with the protagonists being turned into Acanthides (“uh-KAAN-thuh-deez”).

ANSWER: **completing *Hero and Leander*** [accept any reasonable synonym for “completing”]

[10m] The aforementioned completion of *Hero and Leander* was by this author of two tragedies about *Bussy D’Ambois* (“dam-BWAH”). A celebrated 17th-century English translation by this author begins “Achilles’s bane full wrath resound, O Goddess.”

ANSWER: George **Chapman**

[10e] The first two sestiams of *Hero and Leander* were by this Elizabethan poet, who opened his poem “The Passionate Shepherd to His Love” with the line “Come live with me and be my love.”

ANSWER: Christopher **Marlowe** [or Kit **Marlowe**]

<British Literature>

13. In his home city of Augsburg, this man funded a still-used public housing project that charged residents only one florin per year. For 10 points each:

[10e] Name this financier whose support helped elect Charles V as Holy Roman Emperor. Greg Steinmetz's book *The Richest Man in the World* estimates he held about 2 percent of Europe's wealth.

ANSWER: Jakob **Fugger** the Rich [or Jakob **Fugger** the Younger or Jakob **Fugger** II]

[10m] With the Hungarian Thurzó ("TOOR-zoh") family, Fugger co-established a company that produced this good in what's now Slovakia. At the same time, Sweden produced a massive amount of this good in the town of Falun.

ANSWER: **copper** [or **cuprium**, or **Kupfer**, or **Cu**; prompt on **metal**]

[10h] Fugger got a competitive edge early on by learning double-entry bookkeeping a few years before this Franciscan friar wrote his *Summa de arithmetica*, which was the first European textbook to explain the practice.

ANSWER: Luca **Pacioli** ("pah-CHOH-lee")

<European History>

14. A treatable version of this disease that presents with erythema nodosum ("airy-THEE-muh noh-DOH-sum"), bilateral hilar lymph-adenopathy ("LIM-fadden-AH-puh-thee"), and arthritis is called Lofgren's syndrome. For 10 points each:

[10h] Name this disease in which giant cells called granulomas invade many organs, most often the lungs.

ANSWER: **sarcoid** or **sarcoidosis** ("SAR-koy-DOH-siss")

[10e] The Langhans ("LAHNG-hans") giant cells found in sarcoid have many copies of this organelle around the periphery. This organelle stores DNA.

ANSWER: **nucleus** [or **nuclei**]

[10m] A test for diagnosing sarcoid is measuring levels of this enzyme, which is inhibited by a class of anti-hypertensive medications like lisinopril ("lye-SIN-oh-prill"). This enzyme cleaves a vaso-constrictor to its active form.

ANSWER: **ACE** [or **angiotensin-converting enzyme**]

<Biology>

15. In a shot in this film, the camera starts from an extremely wide view of coal fields before slowly zooming in to track the title character's tiny figure as she walks through the black landscape. For 10 points each:

[10h] Name this film, in which a woman becomes an accomplice to a bank robber after losing her job and custody of her children. This is the only film directed by Barbara Loden.

ANSWER: **Wanda**

[10e] Loden considered *Wanda* to be an "anti" version of this 1967 Arthur Penn film, in which bank robbers played by Warren Beatty and Faye Dunaway are gunned down by police in a violent ambush.

ANSWER: **Bonnie and Clyde**

[10m] Loden played Beatty's sister in *Splendor in the Grass*, a film by this director, her husband. In his best-known film, the protagonist asks Edie Doyle out for drinks while showing her his rooftop pigeon coop.

ANSWER: Elia **Kazan** [or Elia **Kazantzoglou**] (That film is *On the Waterfront*.)

<Other Fine Arts>

16. In 1938, Theodore von Kármán and Leslie Howarth showed that in fluids undergoing isotropic turbulence, the two-point correlation tensor for this quantity can be written in terms of just two scalar functions. For 10 points each:

[10e] Name this vector quantity that describes a fluid's rate of flow. It goes to zero at a no-slip boundary.

ANSWER: flow **velocity** [accept **velocity** correlation tensor]

[10m] If the fluid has this property, its velocity fluctuations can be written in terms of just *one* scalar. An equation named for this property states: the partial time derivative of density, plus the divergence of flux, equals zero.

ANSWER: **continuity** [or **continuous**; accept **continuity** equation]

[10h] Kármán and Howarth were motivated by this physicist's work on turbulent decay. He is the alphabetically-second namesake of an exact, rotating, exponentially decaying solution to the Navier ("nahv-YAY")–Stokes equations.

ANSWER: Geoffrey Ingram **Taylor** [or G. I. **Taylor**] (The second sentence describes the Taylor–Green vortex.)

<Physics>

17. This scholar described ethnography as "evocation" in her book *Partial Connections* and questioned how new technologies like in vitro fertilization might impact kinship in *Reproducing the Future*. For 10 points each:

[10h] Name this anthropologist. Four of her lectures examining kinship in her native Britain are compiled in the book *After Nature*.

ANSWER: Marilyn **Strathern** [or Dame Ann Marilyn **Strathern**, DBE]

[10e] Strathern studied the Mount Hagen people of this bi-national island, where Margaret Mead and two of her husbands compared *Sex and Temperament* across three societies. The Trobriand ("TROH-bree-and") Islands are due east of it.

ANSWER: **New Guinea** [accept Papua **New Guinea**]

[10m] Strathern edited a volume on the rise of "audit culture" in these places. Douglas Massey's *The Source of the River* describes poor newcomers to them, and Thorstein Veblen lambasted their focus on revenue in a 1918 book.

ANSWER: **universities** [or **colleges**; or **postsecondary** schools; or **graduate** schools; or institutions of **higher learning**; accept *The Higher Learning in America*; prompt on **schools**]

<Social Science>

18. Chiefs with the titles *zipa* ("SEE-pah"), *zaque* ("SAH-kay"), and *iraca* ruled the different branches of these people's confederacy. For 10 points each:

[10m] Name these indigenous people of Colombia whose customs of coating rafts and other artifacts in gold contributed to conquistador legends about El Dorado.

ANSWER: **Muisca** ("m'WEE-skah") [DO NOT reveal this answer otherwise, but prompt on **Chibchas** or **Chibchan** peoples]

[10e] In the early 19th century, this man estimated the value of Muisca gold at the bottom of Lake Guatavita at over 300 million dollars. This German explorer and naturalist wrote the treatise *Kosmos*.

ANSWER: Alexander von **Humboldt**

[10h] This is the name of the language of the Muiscas, as well as the broader ethno-linguistic group to which they belong, which includes many peoples from the Colombian and Panamanian coasts.

ANSWER: **Chibchas** [or **Chibchan** peoples]

<World History>

19. After returning to Ithaca, Odysseus falsely tells Athena that he killed this man's son Orsilochus for trying to rob him, and later claims to Penelope that he is this man's brother Aethon. For 10 points each:

[10m] Name this king of Crete who fought at Troy, where his chariot was driven by Meriones. Upon coming home, he learned that his throne had been usurped by Leucus through the schemes of Nauplius.

ANSWER: **Idomeneus**

[10h] This cousin of Idomeneus fled to Rhodes to avoid a prophecy that he would kill his father, Catreus. The prophecy came true when, many years later, he mistook Catreus for a pirate.

ANSWER: **Althaemenes**

[10e] Minos, the grandfather of Idomeneus and Althaemenes, hunted this man by challenging people in various cities to thread a string through a shell. This father of Icarus had earlier designed the Labyrinth.

ANSWER: **Daedalus**

<Mythology/Legends>

20. A woman makes the decision to destroy this man's work after comparing humanity's condition to that of the sterile flowers that decorate the room that she is in. For 10 points each:

[10h] Name this man whose manuscripts are burned in a fireplace by a woman who is egged on by her nurse, Nana.

ANSWER: Old **Rossum** [or **Rossumov**]

[10e] Rossum's manuscript is the key to making robots in the play *R.U.R.* by this author, who coined the word "robot."

ANSWER: Karel **Čapek** ("CHAH-peck")

[10m] In *R.U.R.*, this super-intelligent robot is sent by Helena to work in the library, so he can learn that humans and robots are equals. Instead, he concludes that robots are superior and leads the robot rebellion that destroys humanity.

ANSWER: **Radius**

<European Literature>