



**ACADEMIC
COMPETITION
FEDERATION**

2023 ACF NATIONALS

Playoffs Round 7

Packet By

The Editors (7)

Editors

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

Writers

**Henry Atkins, Mike Bentley, Austin Brownlow, Jordan Brownstein,
Zach Foster, Nick Jensen, Shan Kothari, Jonathan Magin,
Vivian Malouf, Eric Mukherjee, Kevin Thomas, Chandler West**

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

TOSSUPS

1. An 18th-century sculpture made of this material shows a god covered in 30 smaller, self-similar figures, six of which form his eyes, ears, nose, and mouth. This material is used to make sculptures showing nude young women with splayed legs and black triangles on their pubis typically hung above doorways. A sculpture made of this material with an ovoid head inspired Alberto Giacometti to sculpt the bronze *Hands Holding the Void*. Perforated designs make up prominent phalluses made of this material in *bisj* artworks made by the Asmat people. This material is used to make slit gongs and *malagan* funerary sculptures. This material is “bent” and seamed together by Gitxsan artists to make decorated storage containers. Bill Reid and other Haida artists make large artworks out of this material traditionally topped with a thunderbird. For 10 points, name this material carved to make totem poles.

ANSWER: **wood** [or **hardwood** [accept **cedar**wood or **cypress** wood; accept breadfruit **trees** or breadfruit **wood**; accept **bentwood** boxes] (The first sentence refers to the “Rurutu figure known as A’a.” The second sentence refers to dilukai sculptures. A Nukuoro carving inspired Giacometti.)

<Painting & Sculpture>

2. A fictional writer who lives in this city dresses up as Mephistopheles to attend a masked ball where he fails to seduce the banker Cohen’s wife Rachel. The classics teacher Herman falls asleep in Amsterdam and wakes up in this city in Cees Nooteboom’s (“sace NO-tuh-boam’s”) *The Following Story*. The grandfather of an aristocratic family from this capital city dies after learning that his two grandchildren are lovers. This city titles a novel in which a proofreader falls in love with his new supervisor after being reprimanded for adding the word “not” to a manuscript about a historical event. The hotel maid Lydia and the socialite Marcenda have affairs with a character in this city, who himself is a creation of an author from here who wrote a “factless autobiography” containing personas he called “heteronyms.” For 10 points, name this capital city where Ricardo Reis meets the ghost of Fernando Pessoa in a book by native son José Saramago.

ANSWER: **Lisbon** [or **Lisboa**; accept *The History of the Siege of **Lisbon*** or *História do Cerco de **Lisboa***] (The first and third sentences refer to *The Maias* by Eça de Queirós. The fourth sentence references *The History of the Siege of Lisbon* by José Saramago.)

<European Literature>

3. This compound’s oceanic metabolism is dominated by mesophilic *Thaumarchaeota* (“thaum-ar-kee-OH-tuh”) with extremely high enzymatic affinities for it. In 2015, Maartje (“MAR-juh”) van Kessel showed that a common two-step oxidation of this compound can be performed by a single bacterial species rather than requiring two species. It doesn’t contain sulfur, but benthic bacteria like *Beggiatoa* (“BEH-jee-uh-TOH-uh”) and *Thioploca* (“THIGH-oh-plo-kuh”) can form this compound through DNRA. Dense membranes of ladderanes are found in bacteria that perform anaerobic oxidation of this compound via the anammox pathway. Organic matter mineralization releases nitrogen in the form of this compound’s conjugate acid, which along with nitrate is the main plant-available form of nitrogen. For 10 points, name this strong-smelling, nitrogen-containing gas used as fertilizer feedstock.

ANSWER: **ammonia** [or **NH3** until read; accept **ammonium** or **NH4+**] (The second sentence is about the comammox process of nitrification. DNRA is dissimilatory nitrate reduction to ammonium.)

<Biology>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

4. To stigmatize victims of this conflict by calling them prostitutes, the letter “i” in a word was altered to the letter “a.” To aid refugees impacted by this conflict, a man sold his London apartment and founded the world’s largest NGO. Scholarly focus on the *insāniyat* of imprisoned women raped during this conflict has reduced societal ostracization, a cause tackled by deeming the victims as heroic *Birangonas*. Association with paramilitary groups during this conflict introduced a traitorous connotation to the word *razakar*. The storming of Zahurul Huq Hall during this conflict by forces under Tikka Khan is memorialized by Martyred Intellectuals Day. This conflict was sparked in the aftermath of Operation Searchlight by the imprisonment of Sheikh Mujib, who led the Awami League. For 10 points, name this 1971 war fought on the Indian subcontinent.

ANSWER: **Bangladesh Liberation War** [or **Muktijuddho**; accept **Bangladesh War of Independence**; accept **Bangladesh Genocide**; accept **Bangladeshi** in place of “Bangladesh”; prompt on **Pakistani Civil War**; prompt on the **Indo-Pakistani War of 1971** by asking “during what conflict did the Indo-Pakistani War break out?”; prompt on Operation **Searchlight** until read] (The alteration of *Birangona* to *barangona* changed the meaning from “heroine” to “penetrated” or “prostitute.” Fazle Hasan Abed founded BRAC, the world’s largest NGO. The word *insāniyat* is translated as “humaneness” or “humanity.”)

<World History>

5. This philosopher imagined playing a game about the philosophy of mind with his aunt and uncle on a rainy day in a paper subtitled “The Intelligent Auntie’s Vade-Mecum (“VAY-dee MEE-kum”).” This philosopher coined the term “vertical faculties” to describe the phrenologist Franz Joseph Gall’s account of mental structure. Despite accepting the “generality of physics,” this philosopher argued in a 1974 paper that, because of multiple realizability, the “special sciences” do not reduce to physics. This philosopher argued against a so-called “massive” extension of one of his main ideas in a book whose title is a rebuke to Steven Pinker, called *The Mind Doesn’t Work That Way*. A 1983 book by this philosopher argues that the mind includes domain-specific, innate “organs” such as the language faculty. For 10 points, what author of *The Modularity of Mind* put forth the language of thought hypothesis?

ANSWER: Jerry **Fodor** [or Jerry Alan **Fodor**]

<Philosophy>

6. A story by this author ends with the narrator imagining hairs strung on a fiddle crying out “Mother, mother, you have murdered me!” after she strangles the title character with his own hair and releases his caged birds. In another story by this author, a man gives the narrator a fire opal ring that had been in his family since an ancestor received it from Catherine de’ Medici. This author wrote about a feral girl taken in by nuns in the story “Wolf-Alice.” In a story by this author, a wealthy marquis gives the narrator a choker made of rubies, prefiguring his plan to decapitate her and place her body in a room with the corpses of his previous wives. “The Courtship of Mr. Lyon” and “The Company of Wolves” are among this author’s Gothic, feminist adaptations of fairy tales. For 10 points, name this author of *The Bloody Chamber*.

ANSWER: Angela **Carter** [or Angela Olive **Pearce**; or Angela Olive **Stalker**]

<British Literature>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

7. Value function methods and outranking methods for this process are compared in a book presenting an “integrated approach” to this process by Valerie Belton and Theodor J. Stewart. Nodes named after this process are drawn as rectangles on directed acyclic (“ay-SICK-lick”) graphs that also include oval uncertainty nodes and octagonal value nodes. Methods like MACBETH and the analytic hierarchy process are used in the “multi-criteria” approach to this process. A branch of probability theory named for this process often makes use of the expected utility hypothesis. Influence diagrams are used in a field named for the “analysis” of this process, which is often considered a branch of operations research and which is abbreviated DA (“D-A”). For 10 points, name this general process that is often aided by namesake “trees” that resemble flowcharts.

ANSWER: **decision**-making [or **deciding** or word forms of **decide**; accept making **choices** or **choosing** or word forms of **choose**; accept **decision** trees; accept **decision** analysis; accept **decision** theory; accept **decision** nodes; accept *Multiple Criteria Decision Analysis*]

<Social Science>

8. One of these beings depicted with all his gear on backward and reversing the dance motions of his peers is known as Left-Hand or Siyangephoya (“see-yong-EE-foy-ah”). The August Snake-Antelope festival begins a season during which these beings are absent, or “unmasked.” A group of six clown-like examples of these beings called Mudheads accompanies 12-foot-tall, cone-shaped birdmen during Shalako. A class of these beings known for engaging in foot races with men are depicted holding yucca branches and chili powder. People dress up as examples of these beings such as Aholi (“AH-hoe-LEE”) and Chief Eototo (“eh-oh-tow-tow”) during the winter Bean Planting Festival. These beings are recalled back from the peaks of the San Francisco Mountains during the Soyalangw

(“so-yah-LAH-ng’wa”) Ceremony, which is practiced in kivas by the Hopi. For 10 points, what spirits common to the Puebloan (“p’way-blow-an”) peoples of the American Southwest are artistically represented by colorful dolls?

ANSWER: **kachinas** [or **katsinam** or **katsina**; accept **Koyemshi**]

<Religion>

9. Disillusioned with a campaign led by a governor of this region, William Wells defected and became a spy. The first book printed in this region was William Maxwell’s namesake “code.” Regarding legislation about this region, William Grayson once noted that there were enough states “liberal enough to adopt such a measure.” The “College Lands” in this region were secured by Rufus Putnam and Manasseh Cutler, who also wrote legislation for the Dane Committee regarding slavery in it. This region, which was originally set aside for veterans under a plan drawn up by Timothy Pickering, was to be divided into “not less than three nor more than five States” and was governed by Arthur St. Clair. This region was opened up to settlement after “Mad” Anthony Wayne’s victory at the Battle of Fallen Timbers. For 10 points, name this territory that was the subject of a namesake 1787 “Ordinance.”

ANSWER: **Northwest** Territory [or Territory **Northwest** of the Ohio River; or Old **Northwest**; accept **Northwest** Ordinance of 1787; accept **Northwest** Indian War; prompt on Ohio, Indiana, Illinois, Michigan, Wisconsin, or Minnesota; prompt on Great Lakes or Midwest]

<American History>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

10. J. V. Vogel assumed multiphase flow occurs in these structures to derive an empirical equation used to construct their IPR curves. These structures are controlled by assemblies that are named for their loose resemblance to Christmas trees. Light interventions perform maintenance on these structures using slickline, braided wireline, or coiled tubing without interrupting operations. The line of spontaneous potential measurements from these structures deflects left or right based on the relative salinity of the mud filtrate and formation water. The practice of logging these structures developed out of the Schlumberger (“shlum-bair-ZHAY”) brothers’ attempts at finding iron ore using electrical resistivity measurements. The productivity index of these structures has units of bbl (“B-B-L”) per day per psi (“P-S-I”). When pressure safety systems fail in these structures, blowouts occur. For 10 points, name these structures drilled by rigs to extract hydrocarbons.

ANSWER: oil **wells** [or gas **wells** or **boreholes**; accept specific types of oil wells, such as exploratory **wells**; accept **drillhole** until “drilled” is read; reject “oil rigs” or “oil platforms”]

<Other Science>

11. A poet who served as a cultural ambassador during this war compared the title action to an “ice-block” that “froze your insides” in the poem “You Laughed and Laughed and Laughed.” In an extended concentration camp metaphor, a poem about this war notes how strange it is that “love, in other ways so particular, will pick a corner in that charnel-house” and “coil up there.” An author collected “Air Raid,” “Vultures,” and other poems about this war in a 2012 memoir titled *There Was a Country*. The aggressors in this war are referred to in all-caps as “ROBBERS” and “EAGLES” in a poem that opens with the line “(with drum accompaniment).” A poet who died during this war addressed the goddess “mother Idoto” in *Heavensgate* and wrote “Elegy for Alto.” For 10 points, name this war during which Gabriel Okara, Christopher Okigbo, and Chinua Achebe served a breakaway republic.

ANSWER: **Nigerian Civil War** [or **Biafran War**; or Nigerian–**Biafran War**]

<World Literature>

12. According to legend, a lawgiver in this region named Charondas accidentally violated his own law by entering an assembly while armed, so he stabbed himself with his sword. A ruler in this region commissioned a bronze statue of a charioteer to celebrate a victory in games at Delphi; that ruler in this region was Polyzalus. In a city in this region, enslaved natives called *killyrioi* (“kill-LURE-ee-oy”) tilled the soil for the foreign *gamoroi* (“guh-MORE-oy”) elite. A ruler in this region was supposedly burnt alive in the brazen bull that an Athenian had made for him. It’s not Cilicia (“sih-LICK-ee-uh”), but early Greek colonists founded this region’s cities of Selinus (“seh-LEE-nus”), Leontini (“lee-on-TEE-nee”), and Gela (“GEH-luh”). The tyrant Theron of Acragas (“a-KRUH-gas”) allied with Gelon to defeat an attack on this region at Himera. Trade prospered between this region and the neighboring mainland cities of Magna Graecia (“MAGH-nuh GRY-kee-uh”). For 10 points, name this island controlled in the archaic period by tyrants, including one at Syracuse.

ANSWER: **Sicily** [or **Sicilia**; accept Greek **Sicily**; accept **Catania** until “commissioned” is read; prompt on **Magna Graecia** until read; prompt on **Gela** until read; prompt on **Acragas** until read; prompt on **Syracuse** until read] (The enslaved *killyrioi* were found in Syracuse. Phalaris, tyrant of Acragas, was burned in the bull. Acragas was a forerunner of modern Agrigento.)

<Other History>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

13. John Greschner devised switchboards based on French Resistance codes for this organization before it splintered into factions under “the Hulk” and “the Baron.” Richard Butler’s newsletter “the Way” popularized the idea of a war called “Rahowa” amongst this organization, whose founders took Louis L’Amour’s idea of the “Brand” to denote this organization. A “controlled lockdown” after the murder of Merle Clutts by this organization’s leader Thomas Silverstein inspired “supermaxes” like ADX Florence. This organization used cyanide from mufflers to produce heroin while working as John Gotti’s enforcers in USP Marion. Derek joins this organization after killing two Crips in the film *American History X*. Initiates to this organization abide by the phrase “blood in, blood out” and are commonly tattooed with a shamrock under a swastika. For 10 points, name this largest US Neo-Nazi prison gang.
ANSWER: **Aryan Brotherhood** [prompt on the **AB**; prompt on the **Aryan Nations** by asking “what part?”; prompt on the **Brand** until read]

<Other Academic>

14. This artist scrawled a phrase meaning “ART equals CAPITAL” on a dollar bill and beat his student in a “Boxing Match for Direct Democracy.” This artist paired basalt markers with the seven thousand oak trees he planted in the city of Kassel. This fedora wearer used the phrase “everyone is an artist” to illustrate his theory of “social sculpture.” In a mythologized origin story, this artist claimed he was rescued by Tatars after his plane was shot down, an experience that influenced his “shamanistic” use of fat. For one piece, this artist used a walking stick and a felt blanket for protection before the latter was torn to shreds. In another piece, this artist covered his face in gold leaf and honey while whispering to the title creature. In his piece *I Like America and America Likes Me*, he lived in a room with a coyote. For 10 points, name this German performance artist, an affiliate of Fluxus behind *How to Explain Pictures to a Dead Hare*.

ANSWER: Joseph **Beuys** (“boys”) [or Joseph Heinrich **Beuys**]

<Other Fine Arts>

15. The behavior of reductions described by this word on quotient spaces determined by the momentum map is defined by the Marsden–Weinstein (“wine-stine”) theorem. This word describes the creed that “Everything is a Lagrangian (“luh-GRAHN-jee-an”) submanifold.” The Lie (“lee”) derivative of the top exterior power of mathematical objects described by this word is always zero. On R^{2n} (“R-two-N”), the canonical choice for a mathematical object described by this word is the sum over i of: “ dq -sub- i wedge dp -sub- i .” The cotangent bundle of a manifold always has the structure of this type of manifold. The Liouville–Arnold (“l’YOO-vill arnold”) Theorem gives the sufficient conditions for a manifold described by this word to have action–angle coordinates. The action of a differential 2-form described by this word defines the Poisson (“pwah-SAWN”) bracket. For 10 points, what word describes the branch of differential geometry that is the natural setting of Hamiltonian mechanics?

ANSWER: **symplectic** [accept **symplectic** geometry, **symplectic** manifolds, **symplectic** forms, **symplectic** creed, **symplectic** maps, or **symplectic** reductions; accept **symplectomorphisms**] (The sentence about Lie derivatives is a formulation of Liouville’s theorem.)

<Physics>

16. This text titles the first recording of music from the Eton Choirbook by Harry Christophers and the Sixteen, which collects settings of it by Richard Davy and John Browne. Four soloists perform against only a choir in the second section of a modal Karol Szymanowski (“KAR-ol shih-mah-NOFF-skee”) setting of the “Analecta” version of this text in Polish. The Order of Friars Minor commissioned Alessandro Scarlatti’s two voice, two violin, and continuo setting of this 20-stanza text, which was likely written by a Franciscan in the 13th century. Shortly before dying of tuberculosis at age 26, an Italian composer set a highly ornamented version of this hymn in C minor scored for soprano, alto, two violins, viola, and organ continuo; that setting of this hymn was completed after its composer’s opera *La serva padrona*. For 10 points, Giovanni Pergolesi composed an Italian setting of what hymn about Mary watching the Crucifixion?

ANSWER: **Stabat Mater** [or **Stabat Mater** dolorosa]

<Classical Music>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

17. In a play by this author, a woman tells her son-in-law “I guess most of us make up things we want, don’t get them, and get too old, or too lazy to make up new ones.” In another play by this author, General Griggs laments that he’s “frittered [himself] away” in a monologue on the futility of waiting for “that big hour of decision.” Sophie blackmails Nina for five thousand dollars after Nina’s drunk husband Nick Denery passes out in her bed in a play by this author that is set in Constance Tuckerman’s summer home. During the 1950s, this author wrote the original libretto for Leonard Bernstein’s *Candide*. This author’s aunts Jenny and Hannah inspired the characters Anna and Carrie, who unexpectedly reject money offered by their returning brother Julian. For 10 points, name this American writer who collaborated with her partner Dashiell Hammett on *The Autumn Garden* and wrote *Toys in the Attic*.

ANSWER: Lillian **Hellman** [or Lillian Florence **Hellman**]

<American Literature>

18. In the 19th century, wealthy bourgeoisie in this city built tall but skinny single-family homes known as “master’s houses.” The artist Carey Young secretly filmed lawyers working in a large building in this city that cost 10 times architect Joseph Poelaert’s original budget. The protagonist of W. G. Sebald’s novel *Austerlitz* searches for masonic symbols in this city’s Palais de Justice (“pah-LAY duh zhoo-STEECE”). This city lends its name to a verb describing the wanton destruction of historic buildings. This city claims to be home to the world’s first Art Nouveau building, the Hôtel Tassel, which was designed by Victor Horta. Words such as “Gymnich” and “trilogues” are characteristic of a unique form of English spoken by non-native Eurocrats in this city’s Berlaymont Building. For 10 points, name this city whose European Quarter contains the administrative center of the EU.

ANSWER: **Brussels** [or Ville de **Bruxelles**; or Stad **Brussel**; accept **Brusselization**]

<Geography>

19. This ruler was defeated at the Battle of Kressenbrunn along with his son, to whom he lost a civil war four years later. A defeat suffered by this ruler was criticized in the eyewitness history *Carmen miserabile* (“mih-seh-RAH-bih-leh”), written by Roger of Apulia. This ruler consolidated his western territories despite losing the Battle of the Leitha River. This ruler’s cavalry was lured into a swamp at a battle where enemy forces pushed him back with a rolling catapult barrage and outflanked him by building a pontoon bridge. This ruler expelled the Cumans from his kingdom after initially offering them refuge. This ruler’s capital of Esztergom (“ESS-tair-goam”) was sacked during a period known as the Tatarjárás (“TAH-tar-jah-rahsh”), or the “passing of the Tatars.” After this son of Andrew II lost a battle near the Sajó (“SHOH-yoh”) River to Subotai, he founded the city of Buda to resist further invasions. For 10 points, name this Hungarian king whom the Mongols crushed at Mohi.

ANSWER: **Béla IV** of Hungary [or **Béla IV** Árpád; prompt on **Béla** or **Árpád**]

<European History>

20. Trace levels of this element are detected using particle-induced gamma ray emission or an electrode that uses a “total ionic strength adjustment buffer.” Telomer (“TEE-lo-mer”) alcohols containing this element oligomerize to form a short-chain propylene oxide dimer acid called GenX. The last digit of a molecule’s R-number indicates its number of atoms of this element, in line with empirical nomenclature. In March 2023, the EPA set a four-parts-per-trillion concentration limit on a carcinogenic octanesulfonic acid substituted with this element that is still used in firefighting foam. Aluminum smelting is the main source of water pollution by this nonmetal found in cryolite. Because this element forms the strongest single bond with carbon, inert alkyl surfactants containing it are colloquially called “forever chemicals.” For 10 points, name this element found with carbon and chlorine in freons and other ozone-destroying molecules.

ANSWER: **fluorine** [or **F**; reject “fluoride”] (“Forever chemicals” include PFAS, or perfluoroalkyl and polyfluoroalkyl substances. The ozone-destroying molecules are CFCs, or chlorofluorocarbons.)

<Chemistry>

BONUSES

1. This splinter state formed over Caliph Idrīs al-Māmūn’s decision to remove the name of a Mahdi from the *khutba*, a Friday sermon, and to execute high-ranking Hintāta officials. For 10 points each:

[10h] Name this dynasty founded by Abū Zakariyyā. The Zayyānids were loyal to this dynasty until the Siege of Tlemcen.

ANSWER: **Hafsid** dynasty [or **Hafsid**s; or al-**Hafsiyūn**]

[10m] Abū Zakariyyā broke from this Caliphate in 1229 when he formed the Ḥafṣid state and reaffirmed allegiance to this earlier state’s founder, ibn Tūmart. The Zayyānids and Marīnids assumed control of this Caliphate’s western possessions in the mid-13th century.

ANSWER: **Almohad** Caliphate [or **Almohad** Empire; or **Almohad**s; or al-**Muwahhidūn**]

[10e] This Tunis-born historian dedicated his wide-ranging *Kitāb al-Ibar* to the Ḥafṣid ruler Abū al-Abbās. This philosopher posited a cyclical theory of history in the *Muqaddimah*.

ANSWER: **ibn Khaldūn** [or Abū Zayd Abd ar-Raḥmān ibn Muḥammad **ibn Khaldūn** al-Ḥaḍramī]

<World History>

2. The patricians Annio and Sesto from this composer’s opera *La Clemenza di Tito* are trouser roles, which are male characters performed by women. For 10 points each:

[10e] Name this composer who created the maid Despina, who crossdresses as a male doctor as part of a plan to test the fidelity of two men’s fiancées in *Così fan tutte*.

ANSWER: Wolfgang Amadeus **Mozart** [or Johannes Chrystostomus Wolfgangus Theophilus **Mozart**]

[10m] A mezzo-soprano usually plays Idamante, the son of the title king of Crete, in this Mozart opera.

ANSWER: **Idomeneo** [or **Idomeneo**, *re di Creta*; or **Idomeneo**, *King of Crete*; or **Idomeneo**, *re di Creta ossia Ilia e Idamante*]

[10h] Likely the most famous of Mozart’s trouser roles is the page Cherubino from *The Marriage of Figaro*, who sings this aria that describes his feelings of love for the Countess while Susanna accompanies him on guitar.

ANSWER: “**Voi che sapete**” [or “**Voi che sapete** che cosa è amor”]

<Other Fine Arts>

3. Answer the following about pamphleteering around the outbreak of the French Revolution, for 10 points each.

[10e] Just before the Revolution, the clergyman Abbé Sieyès (“ah-BAY say-YES”) published a pamphlet asking “What is” this group? This group comprised France’s common people, as opposed to the clergy and nobility.

ANSWER: **Third Estate** [accept “What is the **Third Estate**?” or “Qu’est-ce que le **Tiers-État**?”]

[10m] Jean-Paul Marat (“muh-RAH”) agitated against Louis XVI (“the sixteenth”) in this radical newspaper, which was originally called *Le Publiciste parisien* (“LUH poo-bluh-SEEST puh-rih-zee-EHN”). Marat was correcting a proof of this newspaper when Charlotte Corday murdered him.

ANSWER: **L’Ami du peuple** [or *The **Friend of the People***]

[10h] In 1793, Napoleon Bonaparte wrote a pro-Jacobin pamphlet titled for “The Supper at” this town that impressed Augustin Robespierre. The pamphlet dramatizes a conversation between Napoleon and four merchants at this town after retaking Avignon (“ah-vee-NYOHN”).

ANSWER: **Beaucaire** [accept *The Supper at **Beaucaire*** or *The Dinner at **Beaucaire*** or *Le souper de **Beaucaire***]

<European History>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

4. A 2019 paper about these areas by Alcott et al. presents an 11-billion-dollar “healthy food subsidy” to eliminate nutritional inequality. For 10 points each:

[10e] Give this two-word term for typically rural or low-income areas with limited access to affordable, healthy food.

ANSWER: **food deserts** [accept urban **food deserts**]

[10m] Foot Print Farms donates organic food to this US city with the highest food hardship rate in the country. In August 2022, the shutdown of this city’s O. B. Curtis Water Treatment Plant caused a drinking water crisis.

ANSWER: **Jackson**, Mississippi

[10h] Baltimore’s Black Yield Institute promotes local food production as outlined in this organization’s Declaration of Nyéléni. This Zimbabwe-based farmer’s organization coined the term “food sovereignty.”

ANSWER: La **Via Campesina**

<Current Events>

5. Though the climactic event of this play is typically interpreted as an air raid, the text only describes the sound of explosions and does not mention their source. For 10 points each:

[10m] Name this play in which Mrs. Hushabye compares the explosions rocking Captain Shotover’s house to the music of Beethoven.

ANSWER: **Heartbreak House** [or **Heartbreak House: A Fantasia in the Russian Manner on English Themes**]

[10h] George Bernard Shaw’s *Heartbreak House* ends with the sound of one of these objects. The final stage direction notes that “Randall at last succeeds in keeping the home fires burning” with one of these objects.

ANSWER: **flutes** [prompt on musical **instruments** or **woodwind** instruments]

[10e] The distant sounds in *Heartbreak House* are often compared to the mysterious sound of a string breaking that is heard twice in this play, including just before the sound of axes cutting down the title trees at the end.

ANSWER: *The **Cherry Orchard*** [or ***Vishnyovy sad***] (by Anton Chekhov)

<British Literature>

6. The failure of theories of this force based on the spontaneous symmetry breaking of SU(2) (“S-U-two”) motivated the development of the Glashow–Weinberg–Salam (“sah-LAHM”) model. For 10 points each:

[10e] What force that is unified with the electromagnetic force at high energies is mediated by the W and Z bosons?

ANSWER: **weak** force [or **weak** nuclear force; **weak** interaction; accept electrow**weak** interaction]

[10h] These electroweak interactions are responsible for the decay of a strange B meson into a muon (“MEW-on”) pair. The suppression of these interactions means the decay of a neutral kaon (“KAY-on”) into a muon pair is much rarer than the decay of a neutral kaon into a muon and neutrino.

ANSWER: **flavor-changing neutral currents** [or **FCNCs**; prompt on **neutral currents**; prompt on descriptions of the **exchange** of a **Z0 boson**; prompt on descriptions of **interactions** mediated by a **Z0 boson**]

[10m] The group “SU(2) (“S-U-two”) cross this group, as generated by weak hypercharge,” is the symmetry group of the electroweak interaction. This group is the symmetry group of quantum electrodynamics.

ANSWER: **U(1)** (“U-one”) [accept **U(1)** sub Y]

<Physics>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

7. An arrow-like one of these objects was pointed at the ocean by Rāma, after which Vāruṇa offered to help him and his army get to Lanka. For 10 points each:

[10m] Name this class of super-weapons capable of creating massive destruction in the Hindu epics. Hanumān managed to survive being attacked by one of these weapons because of a boon granted to him by Brahmā.

ANSWER: **astras** [or **asthras**; accept Brahmashirshā **astra**; accept Brahmā**stra**]

[10e] During the Kurukshetra War, this third-born of the Pandavas used an astra before calling it back at Vyāsa's insistence. Kṛishṇa served as this prince's charioteer.

ANSWER: **Arjuna** [accept **Pārtha**, **Dhanañjaya**, **Gudākesha**, **Savyasāchī**, **Kirītī**, or **Gāndīvadhārī**]

[10h] Earlier in the war, this man used the Nārāyaṇāstra, which caused millions of arrows to appear in the sky and swarm around Bhima. Bhima later used a ruse involving the name of an elephant to trick this man's father into thinking he had perished.

ANSWER: **Ashvathāmā** [or **Ashvatthāmā**; or **Drauni**; reject "Drona"]

<Mythology>

8. At this event, guests are served a three-tiered cake topped with lakes of jam, nutshell boats, and Cupid on a chocolate swing. For 10 points each:

[10h] Name this event whose host, Monsieur Rouault ("roo-OH"), is mocked by some guests despite its extravagance. Later in the novel, a dried-up item from this event is discovered in a drawer and burned.

ANSWER: Madame **Bovary's wedding** [or equivalents such as Madame **Bovary** getting **married**; accept **marriage**, **matrimony**, or **nuptials** in place of "wedding"; accept **Emma Bovary** or **Charles Bovary** or the **Bovarys** in place of "Madame Bovary"; prompt the **feast** or **banquet** in *Madame Bovary* by saying "which comes after what event?"]

[10m] In a different novel, this character serves cakes to the ambitious law student Rastignac ("ra-stin-YOCK") and a retired pasta maker. This power-hungry former convict disguises himself as Abbé Herrera in the novel *Lost Illusions*.

ANSWER: **Vautrin** ("vo-TRAN") [or Jacques **Collin**; or **Jacques Collin**]

[10e] The narrator describes the "architectural splendor" of a chocolate cake served by Gilberte ("zheel-BAIRT") at this family's residence. Charles ("sharl"), a member of this family, titles the first book in Marcel Proust's *Remembrance of Things Past*.

ANSWER: **Swann** family [accept **Swann's Way**; accept Charles **Swann**]

<European Literature>

9. Because this technique requires periodic boundary conditions, its microcanonical ensemble also conserves linear momentum and the generator of Galilean boosts. For 10 points each:

[10m] Name this general technique that estimates chemical properties by numerically integrating the equations of motion for atoms subjected to a force field inside a box.

ANSWER: **molecular dynamics** [or **MD**]

[10e] The MD microcanonical ensemble assumes that volume, particle number, and this quantity are constant. This quantity is the sum of heat and work by the First Law of Thermodynamics.

ANSWER: **internal energy** [or **U**; or **total energy** or **E**; prompt on **energy**]

[10h] For most applications, MD simulations ought to be run in this ensemble, which better reflects the conditions in which most chemical reactions happen. This ensemble's potential is the Gibbs free energy.

ANSWER: **isothermal-isobaric** ensemble [or **isobaric-isothermal** ensemble; or **NPT** ensemble; or **constant pressure and temperature** ensemble; or **constant temperature and pressure** ensemble; reject "isothermal ensemble," "constant temperature ensemble," "isobaric ensemble," or "constant pressure ensemble"]

<Chemistry>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

10. This book claims that, as productivity increases, the ratio of constant capital to variable capital must increase. For 10 points each:

[10h] Name this 1913 book which posits that enlarged reproduction is only possible if there are non-capitalist areas into which capitalism can penetrate. It shares its name with a Joan Robinson book.

ANSWER: *The **Accumulation of Capital*** [or *Die **Akkumulation des Kapitals***; or *The **Accumulation of Capital: A Contribution to an Economic Explanation of Imperialism***; or *Die **Akkumulation des Kapitals: Ein Beitrag zur ökonomischen Erklärung des Imperialismus***]

[10m] This author of *The Accumulation of Capital* also co-published the communist newspaper *The Red Flag*.

ANSWER: Rosa **Luxemburg** [or Rozalia **Luksenburg**; or Róza **Luksemburg**]

[10e] Some of the arguments in Luxemburg's *Junius Pamphlet* were criticized by this Russian revolutionary and Marxist theorist, who asserted that revolutionaries should form a vanguard party in his pamphlet *What Is to Be Done?*

ANSWER: Vladimir **Lenin** [or Vladimir Ilyich **Lenin**; or Vladimir Ilyich **Ulyanov**; or N. **Lenin**]

<Social Science>

11. These structures' +4 ("plus-4") cells act as a reserve for replenishing the +1 ("plus-1") to +3 ("plus-3") base stem cells when necessary. For 10 points each:

[10h] Name these structures often used to model the stem cell niche. These structures' lumens are isolated from digestive fluid by diffusion-limiting openings, regular CFTR-mediated flushing, and MUC2 secretion.

ANSWER: intestinal **crypts** [or colonic **crypts**; prompt on **intestinal glands**]

[10m] The stem cells at the bottom of intestinal crypts are maintained by these cells' secretion of WNT ligands, Notch stimuli, and alpha-defensins. These cells rely heavily on glycolysis to generate lactate for stem cells' use.

ANSWER: **Paneth** ("pah-neth") cells [prompt on **PCs**; prompt on **enterocytes**]

[10e] Paneth cells' position relative to intestinal stem cells influences the outcome of this general process, which occurs as stem cells migrate up the walls of a crypt. This process involves any stem cells becoming specialized.

ANSWER: **differentiation** [or word forms]

<Biology>

12. Answer the following about freelance orchestras, for 10 points each.

[10h] The bassist Chi-chi Nwanoku founded this all-Black and minority freelance orchestra based in London, which has recently faced controversy for refusing to program "God Save the King" at the Proms.

ANSWER: **Chineke!** ("chin-eh-kay") [or **Chineke!** Orchestra]

[10m] After facing sanctions due to his ties to Gazprom, the Russian conductor Teodor Currentzis founded Utopia, a freelance orchestra based in this city. This city's main orchestra plays its concerts at the Musikverein.

ANSWER: **Vienna** [or **Wien**; accept **Vienna** Philharmonic or **Wiener** Philharmoniker]

[10e] Phoenix and A Far Cry are freelance orchestras based in this American city, where they often perform at Jordan Hall at this city's New England Conservatory.

ANSWER: **Boston**

<Classical Music>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

13. Answer the following about the Huáng–Lǎo (“hwong lau”) school of philosophy from the Hàn dynasty, for 10 points each.

[10e] The second half of the Huáng–Lǎo school’s name references the author of this text, whose 81 chapters discuss topics like *wú wéi* (“woo way”).

ANSWER: **Tao Te Ching** [or **Dàodé Jīng**]

[10h] The influence of legalism on the Huáng–Lǎo school was clarified by the 1973 discovery of this set of silk texts, which included two nearly complete copies of the *Tao Te Ching* and an early copy of the *I Ching* (“ee ching”).

ANSWER: **Mǎwángduī** (“mah-wong-dway”) Silk Texts [or **Mǎwángduī** Bóshū]

[10m] A text by this legalist philosopher that urges rulers to practice *wú wéi* is sometimes considered part of the Huáng–Lǎo tradition. This 3rd-century BCE thinker advised rulers to use the “two handles” of reward and punishment.

ANSWER: **Hán Fēi** [or **Hán Fēizi**]

<Philosophy>

14. Lengthy stone walls that prehistoric desert-dwellers used to trap gazelles are named for their resemblance to these objects. For 10 points each:

[10e] Name these objects that the Egyptians used to lift obelisks according to an eccentric theory. In actual history, the “box” type of these flying objects were made from silk in ancient China.

ANSWER: **kites** [accept box **kites**; or **fēngzhēng**; prompt on aircraft; prompt on toys]

[10m] Stick figures drive gazelles into desert kites in carvings from this country’s *harra* biome. The plaster ‘Ain Ghazal statues are from this country, where a culture built Al-Khazneh as a mausoleum.

ANSWER: **Jordan** [or Hashemite Kingdom of **Jordan**; or al-’**Urdunn**; or Al-Mamlakah Al-’**Urdunniyyah** Al-Hāshimiyyah] (Al-Khazneh is sometimes called “The Treasury” and was built by the Nabateans of Petra.)

[10h] Hunting gazelles was a major pursuit of this culture, which buried gazelle horns, tortoise shells, and a human foot in a 12,000-year-old grave of a “shamaness.” Dorothy Garrod discovered this culture in the Judaeen Hills.

ANSWER: **Natufian** culture

<Other History>

15. Benjamin West repaired the leg of a figure draped in cloth in this artist’s colorful *The Raising of Lazarus*. For 10 points each:

[10h] Name this Venetian Renaissance artist of a posthumous portrait of Christopher Columbus. Ludovico Ariosto nicknamed this artist after his position as Keeper of the Seals in the Vatican.

ANSWER: **Sebastiano** del Piombo [or Sebastiano del **Piombo**; or Sebastiano **Luciani**; accept Fra **Sebastiano**]

[10m] Michelangelo promoted a contest between Sebastiano’s *Raising of Lazarus* and this artist’s final painting for the Narbonne Cathedral, in which Moses and Elijah appear floating above a mountain with an epileptic boy in the foreground.

ANSWER: **Raphael** [or **Raffaello**; or Raffaello **Sanzio** da Urbino; or Raphael **Santi**] (The painting is *The Transfiguration*.)

[10e] Sebastiano advised Michelangelo to paint this artwork in oil before he was forced to rework it as a fresco. The flayed skin of Saint Bartholomew is a self-portrait within this fresco on the altar wall of the Sistine Chapel.

ANSWER: *The* **Last Judgment** [or *Il* **Giudizio Universale**]

<Painting & Sculpture>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

16. Jeorling finds this character's body at the magnetically charged Ice Sphinx in *An Antarctic Mystery*, which is a response to a novel titled for this character. For 10 points each:

[10m] Name this character who journeys to the South Pole with Dirk Peters after natives kill the rest of the crew of the *Jane Guy*.

ANSWER: Arthur Gordon **Pym** [or **Arthur** Gordon Pym; accept *The Narrative of Arthur Gordon Pym of Nantucket*]

[10h] The native islanders in *The Narrative of Arthur Gordon Pym* cry out this mysterious phrase whenever they encounter the color white, which is alien to them. Pym analogizes the screams of gigantic white birds to this sound during his encounter with a cataract of fog.

ANSWER: "**Tekeli-li**"

[10e] This author responded to *The Narrative of Arthur Gordon Pym* with *An Antarctic Mystery*. One of Poe's hoaxes also inspired *The Mysterious Island*, a novel by this author of *Twenty Thousand Leagues Under the Sea*.

ANSWER: Jules **Verne** [or Jules Gabriel **Verne**]

<American Literature>

17. While working for the National Consumers League, this advocate witnessed the Triangle Shirtwaist Fire, noting a "stricken conscience of public guilt." For 10 points each:

[10m] Name this reformer whom Governor Al Smith tapped to chair New York's Industrial Commission.

ANSWER: Frances **Perkins** [or Fannie Coralie **Perkins**]

[10e] Perkins served as Secretary of Labor under this president. In a biography, Kirstin Downey called Perkins "The Woman Behind" a series of public works projects pushed by this president that created the CCC and the WPA.

ANSWER: **Franklin Delano Roosevelt** [or **FDR**; prompt on **Roosevelt**]

[10h] With Perkins's support, this politician authored a bill to preserve provisions of Section 7(a) from an earlier legislation gutted by the Supreme Court. Perkins had earlier served with Smith and this politician on a commission to investigate the Triangle Shirtwaist Fire.

ANSWER: Robert F. **Wagner** [or Robert Ferdinand **Wagner**]

<American History>

18. Shah Rukh Khan drew ire from Hindu nationalists for performing this action at Lata Mangeshkar's funeral. For 10 points each:

[10h] Name this action that Ā'isha narrated that Muhammad performed after reciting Surahs al-Ikhlās, al-Falaq, and an-Nās. When Muhammad was too ill to do this action himself, Ā'isha did it for him and then wiped over his body.

ANSWER: **blowing** air [accept more specific answers like **blowing** on one's hands or **blowing** to the front, left, right, or behind; prompt on **spitting** or equivalents by asking "spitting as they perform what other action?"]

[10e] Blowing air over one's hands and wiping them over the body commonly follow recitation of this "greatest" verse of the Qur'an from Surah al-Baqarah. Muslims often recite this verse before travel or sleep.

ANSWER: **Throne** verse [or *Ayat al-Kursi*; prompt on *Qur'an 2:225* or *ayat 225*]

[10m] Unlike blowing after reciting Qur'an, "blowing in knots" is a malicious kind of this practice, which Surah al-Falaq requests protection against. This practice was introduced to humans by the fallen angels Harut and Marut.

ANSWER: **magic** [or *'ilm al-sihr*; accept equivalents like **socery**, **witchcraft**, **cursing**, **divination**, or **soothsaying**; prompt on *ulūm al-ghayb* or *'ilm al-ghayb*]

<Religion>

2023 ACF Nationals | Playoffs Round 7. Editors 7

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

19. These models are memory efficient because the Lagrange multipliers in their objective function are zero for most of the points in the training set. For 10 points each:

[10m] Name these supervised learning models that solve an optimization problem to find the maximum-margin hyperplane that divides a linearly separable dataset.

ANSWER: **support vector machines** [or **SVMs**; reject “(vector) machines” or “support vector”]

[10e] The support vector machine, or SVM, “kernel trick” can be used because the dual problem’s objective function is written in terms of this operation between two vectors. This operation generalizes the dot product.

ANSWER: **inner** product

[10h] The misclassification penalty and the spread of the kernel function for an SVM can be tuned using this method. This hyperparameter tuning method uses a cross-validation score to select the best combination of explicitly enumerated values.

ANSWER: **grid search** [accept **GridSearchCV**]

<Other Science>

20. While in one of these places, the narrator is captivated by a substance he compares to the “diabolical face” of the actress Simone Signoret in the short story “Manganese Dioxide Dreams.” For 10 points each:

[10m] Name these places described as “the perfect place to listen to the chirping of insects or the song of the birds” and “a place of spiritual repose” in the essay “In Praise of Shadows.”

ANSWER: **toilets** [accept **bathrooms**, **restrooms**, **washrooms**, or **outhouses**]

[10e] This Japanese author of “Manganese Dioxide Dreams” contrasted Western and Asian aesthetics in the essay “In Praise of Shadows.”

ANSWER: Jun’ichirō **Tanizaki**

[10h] “Sticky fecal matter” flows out of one of 30 of these objects created by an obsessive fan of the actress Yurako in Tanizaki’s story “Mr. Bluemound.” In *The Makioka Sisters*, Itakura photographs these objects created by Taeko.

ANSWER: **dolls** [accept **puppets**; accept **ningyō**, **hina**, **mebina**, or **obina**; prompt on **toys** or **playthings**; reject “statues”]

<World Literature>