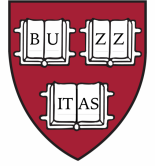


## Harvard Fall Tournament XIV

Edited by Jon Suh with assistance from Jordan Brownstein, Ricky Li, and Michael Yue

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Finals 2

Tossups

1. **This city may have been named after the leader of the “Family party” faction of the Pennsylvania Democratic Party, who opposed the “Amalgamators” led by James Buchanan. A plaza known as the “birthplace” of this city was the setting of a photograph featuring a so-called “umbrella man.” New Orleans district attorney Jim Garrison led (\*) investigations into an event in this city in which police officer J.D. Tippit died. Jack Ruby died in prison in this city while awaiting trial for killing a man who wounded governor John Connelly in a motorcade. For 10 points, name this city in Texas where President John F. Kennedy was assassinated.**  
ANSWER: **Dallas** (*Writer’s note:* The city may have been named after George M. Dallas.)

<Suh, American History; Finals>

2. **In one tradition, *sanchita*, *prarabdha*, and *kriyamana* are three types of this concept that produce two types of fruits called *paap* and *punya*. In another tradition, this concept is conceptualized as a microscopic physical particle whose accumulation causes coloration of the *jiva* [“JEE-vah”]. A type of yoga known by this word emphasizes selfless service. The (\*) lotus is often a symbol of this concept because it simultaneously carries seeds while it blooms. This concept affects when one can escape *samsara*, or the cycle of rebirth. For 10 points, name this concept commonly found in Indian religions, which holds that one’s thoughts and actions affect their future.**

ANSWER: **karma** [or **kamma**]

<Suh, Religion; Finals>

3. **This man won the longest postseason complete game in history, pitching 14 innings in a 2–1 victory. This most well-known member of the Murderers’ Row was likely the inspiration for the name of a confectionary, though this man did not receive any royalties because its producer claimed that they named it after a president’s daughter. In a game against the Chicago Cubs in the (\*) World Series, this man may have “called” a home run he hit. This man’s first team experienced a 86-year “Curse of the Bambino” after selling this man to their rivals in 1919. For 10 points, name this baseball superstar who played for the New York Yankees in the 1920s.**

ANSWER: Babe **Ruth** [or George Herman **Ruth**; or The **Bambino** until mention; accept Baby **Ruth**]

<Suh, Trash; Finals>

4. **A poem from this country depicts a “quiet roof, where dove-sails saunter by” the title location. The speaker describes the title structure as a “sepulchral sewer spewing mud and rubies” in a poem named for “The Tomb of” another author from this country, who called his mistress his “Black Venus” and wrote a poem whose title “prince of cloud and sky” has “giant wings [that] prevent him from walking.” That author from this country included “The (\*) Albatross” in a poetry collection whose opening section is “Spleen and Ideal,” *The Flowers of Evil*. For 10 points, name this country home to Stéphane Mallarmé and Charles Baudelaire.**

ANSWER: **France** [or **French** Republic; accept **French** Empire] (*Writer’s note:* The first poem is Paul Valéry’s “The Graveyard By The Sea.”)

<R. Li, European Literature; Finals>

5. An island whose English name contains this word celebrates a holiday dedicated to the Patagonian Toothfish. That island and the South Sandwich islands form the southernmost British Overseas Territory outside of Antarctica. It's not Portugal, but a country with this name roughly corresponds to the smaller of two regions historically called Iberia. That country claims sovereignty over the regions of Abkhazia ["abb-KAZZ-ia"] and South (\*) Ossetia. Stone Mountain is in a state with this name that also contains the world's busiest airport by passenger traffic. For 10 points, what name is shared by a country with capital Tbilisi and a state with capital Atlanta?

ANSWER: **Georgia** [accept South **Georgia**; prompt on South before "country"; prompt on Sakartvelo]  
<CGH, Geography; Finals>

6. According to Antoninus Liberalis, Apollo turned a king of Athens into one of these animals to help him avoid death. That man who turned into one of these animals is Periphas. The *Aetos Dios* is one of these animals. The *omphalos* was placed at the spot where two of these animals crossed paths and thus determined the location of (\*) Delphi. One of these birds was sent to kidnap Ganymede to become a water bearer for the gods. Chiron ["KYE-ron"] replaced a figure who was to be eternally tormented by one of these birds. For 10 points, name this bird that Zeus sent to eat the liver of Prometheus.

ANSWER: **eagle** [prompt on birds until mention]  
<Suh, Mythology; Finals>

7. *Description acceptable.* In these organisms, the ductus arteriosus develops into a ligament. That transformation allows blood to circulate through the lungs. They're not insects, but these organisms produce a type of feces which contains ingested lanugo. These organisms demonstrate a negative Babinski's sign. The health of these organisms is assessed with the (\*) APGAR ["AP-GAR"] scale. These organisms have fontanelles, which are soft spots in the skull. A structure removed from these organisms is a source of stem cells. That structure is the umbilical cord. For 10 points, what term refers to humans who have just been born?

ANSWER: **neonate** [accept **infant**, **baby**, or **newborn**; accept anything indicating a newly-born human less than one month old; prompt on children or humans or people; do NOT accept or prompt on terms like "toddler" which refer to humans older than a few months]  
<K. Li, Biology; Finals>

8. A 1952 smog in this city killed 4,000 people, prompting the passage of the Clean Air Act. In 1966, *Time* magazine described this city's hedonistic culture as "swinging." The ship *Empire Windrush* started a wave of West Indian immigration to this city. A "Dome" created in this city to celebrate the new millennium was a political failure. During an event known as 7/7 ["seven-seven"], four (\*) bombs disabled this city's transportation system, killing 56 people. This city's most popular attraction is a large ferris wheel called the Eye. For 10 points, name this capital city that hosted the 1948 Summer Olympics after surviving the Blitz.

ANSWER: **London**  
<Suh, British History; Finals>

9. A landscape by this artist inspired the grounds of Philip Johnson's Glass House and depicts two men carrying the shrouded body of an Athenian statesman. This artist was inspired by a depiction of two men looking at a blowfly, a mouse, and a skull by Guernico to create a painting of the same title. As Time strums a lyre, Poverty, Pleasure, Labor, and Wealth join hands to perform the title action in a painting by this artist of *Funeral of Phocion*, who also depicted a set of (\*) shepherds huddled around the inscription of an ancient tomb. For 10 points, name this French painter of *A Dance to the Music of Time* and *Et in Arcadia Ego*.

ANSWER: Nicolas **Poussin**  
<Gioia, Painting; Finals>

10. This work's protagonist is referred to as "St. Ottery" by a perennially filthy woman with a "Scots curl" in a Joyce Carol Oates story titled for the "accursed inhabitants" of this work's setting. A girl turns "common and almost ugly" before rejecting this work's protagonist. A boy in this work denies stealing letters at school, instead claiming to have "said things" to "those [he] liked." This work's protagonist sees a (\*) red-headed "gentleman" who is described as "much too free" by Mrs. Grose. At the end of this work, Miles deems Peter Quint a "devil" before dying in the governess's arms. For 10 points, name this supernatural novella by Henry James.

ANSWER: *The Turn of the Screw* (Writer's note: The first story is Joyce Carol Oates' "Accursed Inhabitants of the House of Bly.")

<R. Li, American Literature; Finals>

11. The harmonic components of these phenomena can be specified using a method devised by Doodson. Laplace formulated three differential equations to describe these phenomena. The largest influence on these phenomena is known as the M2 constituent. Locations where a constituent of these phenomena has zero amplitude are known as amphidromic points. The range of these phenomena varies on a (\*) semi-diurnal cycle. The maximum and minimum range of these phenomena are known as spring and neap. For 10 points, name these phenomena that result from gravitational influences of celestial bodies and cause ocean levels to rise and fall.

ANSWER: **tides**

<Duffy, Earth Science; Finals>

12. Some whalers of this ethnicity were massacred in Iceland in 1615 after coming into conflict with locals. These people committed Operation Ogre, which killed a politician dubbed his country's "first astronaut" for how high his car was blown up. The 1937 bombing of a town located in these people's "country" was depicted in (\*) Pablo Picasso's *Guernica*. These people's terrorist group, the ETA, was wrongly blamed for the 2004 Madrid train bombings. While moving through the Pyrenees, Charlemagne's rear guard was ambushed by members of this ethnicity at the Battle of Roncevaux ["**RON-suh-voe**"] Pass. For 10 points, name these people who live in northern Spain and southern France and speak a language isolate.

ANSWER: **Basques** [or *Vascos*; or *euskaldunak*]

<Suh, European History; Finals>

13. In one film, Bach's *St. Matthew Passion* plays as shots of buildings in this city being demolished are interspersed with slow-mo shots of elderly people. The "duck" and the "decorated shed" are juxtaposed in a Robert Venturi book on this city's architecture. Benoît Jutras used an *erhu* to score the aquatic production *O* in this city. A hotel in this city home to Siegfried & Roy's Secret Garden and the Beatles-inspired show LOVE is The (\*) Mirage. Colored light and curated music accompanies a musical fountain feature at this city's *Bellagio* resort. This city is the site of 7 *Cirque du Soleil* shows, and its namesake "strip" contains many casinos. For 10 points, name this "Sin City" in Nevada.

ANSWER: Las **Vegas** (Writer's note: The first and second clues are Martin Scorsese's *Casino* and Venturi, Scott Brown, and Izenour's *Learning from Las Vegas*.)

<R. Li, Other Arts; Finals>

14. A report that examined the economic impact of this issue assumed a discount rate of 1.4%, a decision that was criticized by Bill Nordhaus. The author of that report, Nicholas Stern, claimed that this phenomenon is the “greatest and widest-ranging market failure ever seen.” Proposed policies against this issue are generally divided into adaptation and mitigation approaches. A proposed economic policy to combat this issue is known as (\*) “cap and trade.” Estimating the impact of this phenomenon necessitates calculating the social cost of carbon. For 10 points, identify this issue of rising CO<sub>2</sub> levels that are causing polar ice caps to melt.

ANSWER: anthropogenic climate change [or global warming; prompt on carbon emissions until “carbon”; prompt on pollution]

<Suh, Economics; Finals>

15. A quantity denoted by this letter is given by B-field over magnetic permeability minus magnetization. That quantity replaces the B-field in one formulation of Ampère’s law. Loschmidt’s paradox critiqued Boltzmann’s theorem of this letter. In the Schrodinger equation, this letter denotes the energy operator. This letter denotes a quantity given by the sum of potential and kinetic energy and is contrasted with the (\*) Lagrangian. A quantity denoted by this letter is a state function by Hess’s law. That quantity minus temperature times entropy gives the Gibbs free energy. For 10 points, give this letter that denotes the Hamiltonian and enthalpy.

ANSWER: H [accept uppercase H; do NOT accept or prompt on “lowercase H” or equivalents]

<Yue, Physics; Finals>

16. An alleged Nazi plot against this leader involved smuggling guns into his country while he had anthrax. This leader’s gang, “the 42,” did drive-by shootings from their “car of death.” The Rebellion of the Pilots occurred after the assassination of this leader, who bombed Venezuelan president Romulo Betancourt. Three “Butterflies” were murdered by this leader’s secret police, the Johnny Abbes-led SIM [“sim”]. The (\*) Mirabal sisters opposed this leader, who massacred tens of thousands of Haitians based on their pronunciation of the Spanish word for “parsley.” For 10 points, name this Dominican dictator nicknamed “El Jefe.”

ANSWER: Rafael Trujillo [“troo-HEE-yo”] [accept “El Jefe” before mention]

<R. Li, World History; Finals>

17. A composer from this country wrote the piano suite *In the Mists* and the string quartet “Intimate Letters.” That composer wrote a work beginning with a brass “Sokol Fanfare” that recurs in its finale, “The Town Hall.” An “Intrada” ends the *Glagolitic Mass* of a composer from this country. Another composer used a high E to depict his (\*) deafness in his first string quartet. That composer included “Tábor” and “Blaník” in his set of six tone poems *Má vlast*, which includes “The Moldau.” For 10 points, name this home of Leoš Janáček [“LEH-osh YAN-a-check”], Bedřich Smetana, and the composer of the *New World Symphony*, Antonín Dvořák [“DVOR-jock”].

ANSWER: Czechoslovakia [accept the Czech Republic or Czechia]

<Yue, Music; Finals>

18. In a novel, this figure’s husband leaves her to travel down the Nile and dies from an iceberg in Antarctica. This figure is the “aged wife” in a poem which states, “I mete and dole / Unequal laws unto a savage race.” 12 maids form a chorus in a Margaret Atwood novel titled for this figure. A character based on this figure thinks about Boylan and her husband Leo in a final chapter titled after this figure that ends, (\*) “yes I said yes I will Yes.” Molly Bloom was based on this figure, who Antinous and Eurymachus want to marry in a Greek epic. This character and her son Telemachus wait 10 years for her husband to return to Ithaca. For 10 points, name this wife of Odysseus.

ANSWER: Penelope (Writer’s note: the works are, in order, Nikos Kazantzakis’s *The Odyssey: A Modern Sequel*, “Ulysses,” *The Penelopiad*, *Ulysses*, and *The Odyssey*.)

<Yue, World Literature; Finals>

19. **The stability of the plus-two oxidation state of lead can be explained by the fact that these specific entities have lower energy eigenvalues than they do in tin. That effect is the inert-pair effect. The poor shielding of these entities results in a decrease in ionic radius in the lanthanide contraction. The Lyman series is generated by electronic transitions which end in one of these entities. Diatomic helium does not exist because it would fill a (\*) sigma-star orbital formed by two of these entities. These entities have an azimuthal quantum number of zero and thus have no angular nodes.** For 10 points, name these atomic orbitals which are spherically symmetric.

ANSWER: s orbitals [prompt on orbitals; do NOT accept or prompt on other types of orbitals]

<K. Li, Chemistry; Finals>

20. **In a novel by this author, the protagonist's husband agrees to name their daughter Niki because "it had some vague echo of the East about it." The protagonist of another novel by this author compares a landlord's wife's voice to a "variation on the cock crow" in an unsuccessful attempt at "bantering." In a novel by this author, Miss Lucy is fired from Hailsham after revealing that her students are destined to be (\*) organ donors.** This author of *Never Let Me Go* also penned a novel in which the protagonist embarks on a road trip to visit Miss Kenton. For 10 points, name this British author who created the butler Stevens in *The Remains of the Day*.

ANSWER: Kazuo Ishiguro (*Writer's note*: The first novel is *A Pale View of Hills*.)

<R. Li, British Literature; Finals>

21. **After receiving news of her husband's death, a wife in this novel happily collects monthly payments and moves to Michigan. In this novel, Dreedle and Peckham's rivalry is mediated by Ex-P.F.C. Wintergreen, and Kid Sampsons' death motivates McWatt's suicide. A character resembling Henry Fonda is promoted to (\*) major in this novel, in which another character sells chocolate-covered cotton as candy. Milo Minderbinder and Major Major Major appear in this novel in which Colonel Cathcart's squadron flies more and more missions.** For 10 points, name this Joseph Heller novel about Yossarian whose title describes a bureaucratic paradox.

ANSWER: Catch-22

<Yue, American Literature; Finals>

## Bonuses

1. For 10 points each, answer the following about explorers who may or may not have discovered the New World.

[10m] This Icelandic explorer is the first known European to have set foot on continental North America. His visit to “Vinland” has been tentatively identified with the archaeological site of L’Anse aux [“LAN sow”] Meadows in Newfoundland.

ANSWER: Leif **Erikson**

[10h] In his book *1421*, pseudo-historian Gavin Menzies claimed that this Ming dynasty explorer was the first to visit the Americas. This man captured and executed the pirate Chen Zuyi during one of his “treasure voyages.”

ANSWER: **Zheng** He [or **Cheng** Ho; or **Ma** He]

[10e] Probably the most famous explorer of the New World is this Genoese navigator, who, in 1492, sailed the ocean blue.

ANSWER: Christopher **Columbus**

<Suh, World History; Finals>

2. One philosopher from this country names a hypothesis that “astoundingly mediocre” researchers contribute the most to scientific advancements, an assertion found in his *The Revolt of the Masses*. For 10 points each:

[10h] Name this country where another philosopher stated that “consciousness is a disease” and differentiated between naive faith and scientific reason in *The Tragic Sense of Life*.

ANSWER: **Spain**

[10m] This Spanish philosopher declared that “philosophy must begin *in medias res*” in *Skepticism and Animal Faith*. He notably asserted that “those who cannot remember the past are doomed to repeat it.”

ANSWER: George **Santayana**

[10e] This American thinker also discussed ideas of faith and reason in *The Varieties of Religious Experience*, though he is best known for developing the philosophy of pragmatism.

ANSWER: William **James**

<Yue, Philosophy; Finals>

3. For 10 points each, answer the following about the undoubtedly coolest hero, Finn McCool:

[10e] Stories about Finn McCool are collected in the Fenian Cycle from this European country, whose mythology also contains the legends of Cu Chulainn [“koo KUL-lin”] in the Ulster Cycle.

ANSWER: **Ireland** [or **Éire**]

[10m] Finn gained access to all of the world’s knowledge when he ate part of one of these specific animals that had been caught by the druid Finnegas.

ANSWER: **salmon** of knowledge [prompt on **fish**]

[10h] Before defeating the fire-breathing deity Aillen [“EYE-lin”], Finn used a hot spear to make sure that Aillen couldn’t force him to take this action.

ANSWER: fall **asleep**

<Duffy, Mythology; Finals>

4. This mathematician's namesake "points" are values for which the Riemann–Siegel theta function achieves nonnegative integer multiples of pi. For 10 points each:

[10h] Name this mathematician, whose namesake matrix's  $i$ - $j$ -th entry for a set of  $n$  vectors is the inner product of  $v_i$  with  $v_j$ . With Erhard Schmidt, this mathematician names a technique to generate orthonormal sets of vectors.

ANSWER: Jørgen Pedersen **Gram**

[10m] The Gram matrix for an orthonormal set of vectors takes this value for each diagonal entry. This is the dot product of the vector "one, zero" with itself.

ANSWER: **one**

[10e] Since it is equal to its transpose, the Gram matrix has this property. Objects with the rotational variety of this property look the same after they've been rotated.

ANSWER: **symmetry** [accept word forms]

<R. Li, Math; Finals>

5. In one of these kinds of works, a woman falls in love with a Nazi lieutenant and helps him capture rebels, while in another, a European man joins some South American guerillas that kidnap and kill his father. For 10 points each,

[10m] Name this general kind of work, many of which are described by Molina to Valentín in a prison in one novel.

ANSWER: **movies** [or **films**]

[10e] *The Kiss of the Spider Woman* is set in this country, the home of its author Manuel Puig as well as short story writer Jorge Luis Borges ["**boar-hess**"].

ANSWER: **Argentina**

[10h] Manuel Puig's first novel, which also describes many Hollywood films, was titled for this actress. In "*Master Harold*"...and the boys, Hally remembers being "hot and bothered" by a picture of this actress in a bathing suit.

ANSWER: Rita **Hayworth** [accept Margarita Carmen **Casino**]

<Yue, World Literature; Finals>

6. In an early verse, this artist declared "first things first, I'll eat your brains / Then I'ma start rocking gold teeth and fangs" before asking "So let me get this straight, wait, I'm the rookie?" For 10 points each:

[10m] Name this artist who rapped that verse on the track "Monster" before releasing the album *Pink Friday*, which contained singles like "Fly" and "Roman's Revenge."

ANSWER: **Nicki Minaj** [accept either underlined answer; or Onika Tanya **Maraj-Petty**]

[10e] The track "Monster" appeared on this rapper's album *My Beautiful Dark Twisted Fantasy*, which featured the singles "Power" and "Runaway." A Nicki Minaj voicemail ended this man's 2018 solo album *ye* ["**yay**"].

ANSWER: **Kanye West** [accept either underlined answer]

[10h] *ye* was released by West in a series of seven-track summer 2018 releases produced by West ending with the release of this singer's album *K.T.S.E.* This singer was also the featured dancer in the music video to West's "FADE."

ANSWER: Teyana **Taylor**

<Yue, Trash; Finals>

7. The prevalence of drug resistant fungal infections is on the rise with widespread use of common antifungal agents. For 10 points each:

[10h] Name this genus of fungi that contains species *albicans* and *auris*, and is the most common cause of fungal infections. When this genus of yeast causes oral infections, it is called thrush.

ANSWER: ***Candida*** [accept ***Candida albicans*** or ***Candida auris***]

[10e] Many species of *Candida* have become resistant to fluconazole [“flu-CON-azole”], which inhibits growth of this part of the cell. Fluconazole disrupts production of ergosterol, an analog of cholesterol found in this structure.

ANSWER: cell **membrane** [or plasma **membrane**]

[10m] ABC transporters, which are named for this molecule, are thought to contribute to antifungal resistance in *C. auris*. ABC transporters generate energy for active transport by hydrolyzing a phosphate from this molecule.

ANSWER: **ATP** [or **adenosine triphosphate**]

<K. Li, Biology; Finals>

8. A holder of this position gave a confusing answer about “known knowns” in a press conference. For 10 points each:

[10e] Name this cabinet position that Donald Rumsfeld held twice. During his second stint in this position, Rumsfeld oversaw the American involvement in the Iraq War.

ANSWER: **Secretary of Defense** [do NOT accept or prompt on “Secretary of War” or “Secretary of Navy”]

[10h] This first Secretary of Defense died after falling from a 16th-floor window of the hospital where he was being treated for depression.

ANSWER: James **Forrestal**

[10m] Charles Erwin Wilson, Secretary of Defense under Dwight D. Eisenhower, was misquoted as saying “What’s good for [this company] is good for the country.”

ANSWER: **General Motors** [or **GM**]

<Suh, American History; Finals>

9. After this character wakes, he notes that his sleeping position leaves him “vulnerable” to “an attack... by predatory birds” and ponders the “ill-formed” fragility of the human body. For 10 points each:

[10m] Name this character, who falls in love with a hunchbacked locksmith amid a military crackdown in Prague. In another story, this character cherishes a picture of a “lady dressed in copious fur.”

ANSWER: **Gregor Samsa** [accept either underlined name]

[10e] This author reimagined Franz Kafka’s *The Metamorphosis* in “Samsa in Love,” a story from his collection *Men Without Women*. A sculptor’s spirit manifests as the cat-killing Johnnie Walker in this author’s *Kafka on the Shore*.

ANSWER: Haruki **Murakami**

[10h] After Father’s business fails, he transforms into a large insect in a Bruno Schulz work titled for one of these locations “Under the Sign of the Hourglass.” At one of these locations, Elly Brand helps Dr. Krokowski conduct a seance.

ANSWER: **sanatorium** [accept **infirmery**, **hospice**, **hospital**, and other equivalents]

<R. Li, World Literature; Finals>



10. In an opera by this composer, the maid Pasqualita sings a traditional Tewa Indian song, and the protagonist sings the aria “Batter My Heart.” For 10 points each,

[10m] Name this composer who depicted the life of J. Robert Oppenheimer in his opera *Doctor Atomic*. Another of his operas opens with the airplane *Spirit of '76* touching down in the title country.

ANSWER: John Coolidge **Adams**

[10e] This other minimalist composer included the operas *Satyagraha* and *Akhmaten* in his *Portrait Trilogy*, and metaphorically depicted another prominent 20th-century scientist in his opera *Einstein on the Beach*.

ANSWER: Philip **Glass**

[10h] *Einstein on the Beach* contains five of these interludes, which often feature counting from the chorus. The last of these pieces, which ends the opera, tells a story of two lovers sitting on a park bench.

ANSWER: **knee plays**

<Yue, Opera; Finals>

11. This culture created the Stela C, which is the oldest known Mesoamerican Long Count calendar to date. For 10 points each:

[10m] Identify this oldest known Mesoamerican civilization, perhaps best known for producing “colossal heads.”

ANSWER: **Olmecs**

[10e] Olmecs also made face masks out of this semi-precious stone. This non-emerald material was also used in ancient China to create miniature dragons and other ornaments.

ANSWER: **jade**

[10h] Common motifs in Olmec art feature depictions of humans combined with these four-legged animals. Olmecs believed that in the past a race of creatures existed that were half-human and half these animals.

ANSWER: **jaguars** [accept were **jaguars**]

<Suh, Ancient History; Finals>

12. The 21-centimeter one of these things is observed in radio astronomy and corresponds to hyperfine transitions in hydrogen. For 10 points each:

[10m] Name these things that can be broadened due to pressure and thermal Doppler effects. Two of these known as D1 and D2 in the Fraunhofer series are also known as the sodium doublet.

ANSWER: **spectral lines**

[10e] The Stark effect splits spectral lines when there exists a non-zero value for this quantity. This quantity is crossed with the B-field in the Poynting vector, and it is multiplied by charge in the Lorentz force law.

ANSWER: **electric field** [or **E-field**; prompt on **E** alone]

[10h] The electric field can be written in terms of a choice of scalar and vector potentials after “fixing” one of these constructs, which include ones named for Coulomb and Lorenz. Particles named after these constructs are carrier particles for all fundamental forces except gravity.

ANSWER: **gauge** [prompt on **bosons**; accept **gauge** bosons]

<Yue, Physics; Finals>

13. Some of this religion's religious practices involving animal sacrifice were upheld in a 1993 Supreme Court case. For 10 points each:

[10h] Name this non-vooodoo religion, adherents of which practice animal sacrifice to spirits called *orishas*. Olodumare [“OH-loh-doo-MAH-ray”] is one of three manifestations of the Supreme God in this religion.

ANSWER: **Santería** [or **Regla de Ocha**, La **Regla de Ifá**, or **Lucumí**]

[10e] Initiates into Santería are required to wear clothing of this color for a full year to symbolize a process of complete purification.

ANSWER: **white**

[10m] Santería, along with Candomblé [“can-DOM-bláy”] is a syncretic religion combining elements of Christianity, indigenous Native American beliefs, and the original folk religion of this African ethnic group.

ANSWER: **Yoruba** people

<Suh, Religion; Finals>

14. This animal is described as having “a grunting weight, / battered and venerable / and homely,” with “brown skin hung in strips / like ancient wallpaper” in one poem. For 10 points each:

[10h] Name this animal, which titles a poem that climaxes with the description that “everything / was rainbow, rainbow, rainbow!”

ANSWER: the **Fish**

[10m] This American poet of “The Fish” also wrote the poems “In the Waiting Room” and “One Art,” collected in the collection *Geography III*.

ANSWER: Elizabeth **Bishop**

[10e] Bishop's poem “The Filling Station” ends with a statement that “Someone [performs this action to] us all.” In W. H. Auden's “September 1, 1939,” the speaker asserts that “We must [perform this action to] one another or die.”

ANSWER: **love** [accept word forms]

<Yue, American Literature; Finals>

15. The first chemical method for synthesizing indigo dye was the Baeyer–Drewson synthesis. For 10 points each:

[10h] The first step of that synthesis is this type of reaction. In this reaction, an enol [“EEN-ole”] reacts with an aldehyde to form the namesake product.

ANSWER: **aldol** reaction [or **aldol** condensation]

[10m] Most organic molecules appear colorless because they cannot absorb visible light. However, the indigo analog thioindigo [“THY-oh-indigo”] appears this color because it absorbs yellow light strongly.

ANSWER: **violet** [accept **purple**]

[10e] Indigo is being researched for use as an organic semiconductor in this renewable energy technology. The inorganic variety of this technology is composed of crystalline photovoltaic silicon panels.

ANSWER: **solar** energy [accept **solar** cells or **solar** panels or any answers that indicate energy derived from the **sun**]

<K. Li, Chemistry; Finals>

16. The CDC was effectively stymied from funding research on this issue by the 1996 Dickey Amendment. For 10 points each:

[10e] Identify this issue. Activists against this issue include Jaclyn Corin and Emma González, who are both survivors of the 2018 Marjory Stoneman Douglas High School shooting.

ANSWER: **gun** violence [accept descriptive equivalents]

[10m] At the United Nations, this activist forcefully condemned world leaders for having “stolen her dreams, and her childhood.” Her inspiring advocacy has been deemed her namesake “effect.”

ANSWER: Greta **Thunberg**

[10h] This conservative youth advocacy group has been dogged with allegations of racism and campaign finance violations. It was founded by Charlie Kirk.

ANSWER: **Turning Point USA**

<R. Li, Current Events; Finals>

17. Henri Rousseau painted multiple depictions of a struggle between a buffalo and one of these animals. For 10 points each:

[10h] Name these animals, one of which is primed to lunge at some “surprised” off-canvas prey “in a tropical storm” in another Rousseau work. Eugene Delacroix depicted one of these animals “playing with its mother.”

ANSWER: **tigers**

[10e] Rousseau’s *The Sleeping Gypsy* is housed at this New York contemporary art museum, which also holds Marc Chagall’s *I and the Village* and Andy Warhol’s *Campbell’s Soup Cans*.

ANSWER: the **Museum of Modern Art** [or **MoMA**]

[10m] In Rousseau’s *Self Portrait*, many of these objects are attached to a boat in the background. Soldiers carry two red examples of these objects in Chagall’s *White Crucifixion*, and Jasper Johns depicted three of them in a hot-wax painting.

ANSWER: **flags** [accept American **flags**]

<R. Li, Painting; Finals>

18. Terence’s *Eunuchus* partially inspired two notable plays written during this era. For 10 points each:

[10m] Identify this English era, whose bawdy comedies include Charles Sedley’s *Bellamira* and William Wycherley’s *The Country Wife*. King Charles II was a literary patron during this era.

ANSWER: the English **Restoration**

[10h] Lovers Millamant and Mirabell feature in this Restoration author’s *The Way of the World*. An oft-paraphrased quote from this author’s *The Mourning Bride* is “Nor hell a fury, like a woman scorned.”

ANSWER: William **Congreve**

[10e] Another notable quotation from *The Mourning Bride* asserts that this entity “has charms to soothe a savage breast.” Duke Orsino declares “if [this art form] be the food of love, play on” in the opening of *Twelfth Night*.

ANSWER: **music**

<R. Li, British Literature; Finals>

19. This woman's revolt occurred after the death of her husband Prasutagus and the rape of her two daughters. For 10 points each:

[10m] Name this Iceni queen who revolted against the Roman Empire. She either died from sickness or via suicide after the failure of the revolt.

ANSWER: **Boudica** [or **Boadicea**; or **Buddug**]

[10h] Boudica's downfall came at this battle named after an ancient Roman road. At this battle, Gaius Suetonius Paulinus defied heavy odds to secure a Roman victory.

ANSWER: Battle of **Watling Street**

[10e] Boudica's revolt made this Roman emperor consider removing all Roman troops from Britain. It is probably untrue that this man played the fiddle during the Great Fire of Rome.

ANSWER: **Nero**

<Suh, Ancient History; Finals>

20. The exact start and end of stylistic eras in Western classical music are often difficult to pin down. For 10 points each, name some historic events that music historians have used as benchmarks for those dates.

[10e] Beethoven started the transition from the Classical to the Romantic eras with the publication of this third symphony originally dedicated to Napoleon Bonaparte. This symphony's nickname also names his "middle period."

ANSWER: **Eroica** *Symphony* [prompt on *Heroic Symphony*]

[10m] 1750 is sometimes declared to be the beginning of the Classical era due to this event, which caused a work with a D-minor fugue subject and several increasingly complex "Contrapunctus" movements to be left unfinished.

ANSWER: the **death** of J. S. **Bach**

[10h] This event was supposedly attended by Camille Saint-Saëns, though a composer later denied Saint-Saëns's attendance. That composer had rehearsed his two-piano score with Debussy prior to this event at the Théâtre des Champs-Élysées ["TAY-ah-truh day shawmpe-elly-ZAY"].

ANSWER: the 1913 **premiere** of *The Rite of Spring* [accept equivalent descriptions]

<Yue, Music; Finals>

21. In 1077, Henry IV, Holy Roman Emperor journeyed to this town, where Matilda of Tuscany owned a castle. For 10 points each:

[10h] Name this town where that monarch was apparently refused entry for three days.

ANSWER: **Canossa**

[10m] Henry IV's humiliating Walk to Canossa was a low point for him during this struggle between him and the Church over who could appoint high-ranking religious officials.

ANSWER: **Investiture** Controversy [or **Investiture** Contest]

[10e] Henry IV appeared before the seventh pope of this name. The first pope of this name, known as the "Great," legendarily created his namesake "chants." The thirteenth pope of this name created a namesake calendar.

ANSWER: **Gregory** [accept **Gregory** VII, **Gregory** I, or **Gregory** the Great; accept **Gregorian** chants or **Gregorian** calendar]

<Suh, European History; Finals>