



2023 PACE NSC

Edited by David Bass, Jordan Brownstein, Jaimie Carlson, Ganon Evans, Athena Kern, Joseph Krol,
Young Lee, Adam Silverman, Chandler West
Head Editor Ganon Evans

Round 09 - Tossups

1. While debating literature with the farmer Kandinsky, this author proposed a “fourth and fifth dimension” of writing “without tricks or cheating.” This author advised writing “one true sentence” and frequently depicted restless men at night as part of his *nada* principle. This author popularized the term “moment of truth” in English from his study of (*) bullfighting called *Death in the Afternoon*. This author’s theory of omission is visualized by an iceberg. A six-word story attributed to this author reads “For sale: baby shoes, never worn.” Minimalist dialogue implies the discussion of abortion in this author’s story “Hills Like White Elephants.” For 10 points, name this author whose characteristically short, direct language appears in *The Sun Also Rises*.

ANSWER: Ernest Hemingway

<Ganon Evans, Literature - American - Misc> ~25903~ <Editor: Chandler West>

2. This capital’s social system divided status between *awilum* (“uh-WILL-um”), *mushkenum* (“mush-KEN-num”) and slave-like *war-dum*. An uprising against this city by Rim-Sin damaged the power of its leader Samsu-iluna. Much of what is known about one king of this city comes from letters the king wrote to Sin-iddinam found in Larsa. Prominent structures in this city included the E-sag-il-a temple. The Louvre Stele from this city records a series of “if/then” statements such as “if a man (*) commits a robbery and is caught, that man will be killed.” The Akitu House outside of this city was visited each New Year by Marduk and was opposite its magnificent Ishtar Gate. For 10 points, name this Mesopotamian city where a law code was issued by Hammurabi.

ANSWER: Babylon [or Bab-ilu; or Bab-ilim; or Bavel]

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~25728~ <Editor: Michael Bentley>

3. While performing this role, Maria Callas’s hair caught on fire. Leontyne Price played this role as the first Black singer in a televised opera. This character, based on a role in a Sardou play, sings about a cottage in “Non la sospiri, la nostra casetta.” A singer reappeared on stage three extra times while playing this role because stagehands had replaced a mattress with a trampoline. This character yells “this is [this character’s] kiss!” while (*) stabbing a man. This character’s lover sings “E lucevan le stelle” (“eh LOO-cheh-van leh STEH-lay”) as he writes a letter to this character while waiting for execution. This singer of “Vissi d’arte” (“VEE-see DAR-tay”) jumps off the Castel Sant’Angelo after a firing squad shoots her lover Cavaradossi. For 10 points, name this title soprano role of a Puccini opera.

ANSWER: Floria Tosca [accept either underlined]

<Jaimie Carlson, Fine Arts - Opera> ~26137~ <Editor: Young Lee>

4. In Rutherford spectroscopy, modeling this effect with a potential that decays as (read slowly) “one over r , times e to the minus r ” prevents the cross-section from diverging. Adding this effect to a helium atom’s Hamiltonian reduces the variational parameter from 2 to “27 over 16.” This effect is estimated by: adding multiples of 0.3, 0.35, 0.85, or 1 at quantum numbers n and n minus 1, then subtracting the sum from atomic number to give (*) “Z-effective,” when using Slater’s rules. This effect and orbital penetration explain why ionization energy decreases down a group. The lanthanide contraction occurs because 4f electrons do not participate in this effect. For 10 points, name this effect in which core electrons block the nucleus’s tug on valence electrons.

ANSWER: electron shielding [or electron screening; prompt on electronic repulsion]
<Adam Silverman, Science - Chemistry> ~25137~ <Editor: Adam Silverman>

5. A leader of these people who prohibited the use of the enemy’s tools led an anti-Christian campaign where a figure of Jesus was scalped at Senecu. Men over 25 who survived an attack on these people had their feet cut off, prompting activists hundreds of years later to saw off the leg of an equestrian statue. These people were forced to pay taxes in cotton to Juan de Oñate and traditionally entered their doorless homes through holes in the roof. Girls from the (*) Acoma branch of these people were sent to convents in Mexico City twelve years after a 1680 revolt led by Popé. Some of these people traditionally occupied Sky City on a 365-foot-tall mesa. For 10 points, name these people of the Southwestern US who are named for their adobe villages.

ANSWER: Pueblo peoples [or Puebloans; anti-prompt on Taos or Acoma or Hopi or Zuni or San Ildefonso; reject “Ancestral Puebloans”]
<Michael Bentley, History - American - Pre-1865> ~25695~ <Editor: Michael Bentley>

6. The case *Jacob & Youngs, Inc. v. Kent* established how the doctrine of substantial performance for these things can be used in place of the perfect tender doctrine. The mirror image rule concerns these things. The parol evidence rule governs which evidence is admissible into a dispute over one of these things, which traditionally came out of a “meeting of minds.” While some of these things will have a (*) “hell or high water” part, many have a *force majeure* part that allows one group to be released due to an “Act of God” without breach. Laws concerning torts and these things make up obligation law. For 10 points, the acceptance of an offer creates what legally binding agreements between two parties?

ANSWER: contracts [accept contract dispute or breach of contract; accept contract offer or contract formation; prompt on putative synonyms such as agreements; prompt on offer before mention with “Of what?”]
<Benjamin Chapman, Social Science - Other> ~25388~ <Editor: Athena Kern>

7. The logarithm of a ratio of two values for this quantity over the logarithm of a ratio of corresponding altitudes equals the Hellmann constant. Roughness length appears in an equation modeling the “log profile” of this quantity. This quantity deviates from ideal “geostrophic” values and increases logarithmically with altitude due to the planetary boundary layer. This quantity is calculated with pressure measurements from (*) Pitot (“PEE-toh”) tubes. Sea conditions can be used to infer this quantity with the Beaufort scale. A four-cup design is used to measure this quantity with an anemometer. Categories of tornadoes are distinguished in the Fujita scale by, for 10 points, what atmospheric quantity that can be measured in knots?

ANSWER: wind speed [or wind velocity; prompt on speed or velocity with “Of what phenomenon?”]
<Benjamin Chapman, Science - Earth> ~25926~ <Editor: David Bass>

8. One woman realizes that this character has dictated a letter because of its lack of spelling mistakes. Due to not realizing chili is spicy, this character is embarrassed when trying to impress a man who has just returned from India. This character declares “I could be a good woman if I had five thousand a year.” This character acts as Clytemnestra to impress the Marquis of Steyne, and shows a friend a letter revealing her dead husband was planning to cheat on her. This character throws a copy of (*) Johnson’s Dictionary out of a carriage and convinces her friend to marry William Dobbin. This woman schemes to marry Rawdon Crawley and helps her naive friend Amelia Sedley. For 10 points, name this protagonist of William Makepeace Thackeray’s *Vanity Fair*.

ANSWER: **Becky Sharp** [accept either underlined; or Rebecca **Sharp**; or **Rebecca** Crawley; or **Rebecca** Sedley; prompt on **Crawley** or **Sedley** with “What is their the first name?”]

<Jaimie Carlson, Literature - British - Long Fiction> ~25793~ <Editor: Jaimie Carlson>

9. The only medical use of lanthanum is to supplement this process, since it is otherwise ineffective at preventing hyper·phospha·temia. A polymer of glucose marketed as Extraneal provides turgor when this process is done inside the peritoneum (“pair-uh-toe-NEE-um”). This process should reduce the BUN (“B-U-N”) to below 50 milligrams per deciliter (“DESS-uh-liter”) and would be recommended for patients who have low GFRs and poor creatinine (“cree-AH-tuh-noon”) clearance. To maintain (*) iso·tonicity, this process must re-add salt to the liquid that does not pass through an ultra-fine membrane. U-shaped tubing used for this process defines the osmotic pressure. This medical procedure reduces urea levels after renal failure. For 10 points, name this process of artificially filtering blood in patients with kidney disease.

ANSWER: **dialysis** [or **hemodialysis**; or renal **dialysis**; or kidney **dialysis**; accept peritoneal **dialysis**; prompt on **filtration** or **filtering** of blood until it is read]

<Michael Bentley, Science - Biology> ~22948~ <Editor: Adam Silverman>

10. In one work, a man finds out where a god of this location is born by going to Mansion-of-the-Net and sending a man to the Joy-of-Life temple. “Brides” of this location were probably not actually sacrificed, or they were replaced by clay figures. A temple at Esna depicts a god of this location pouring a jug and crafting humans from a pottery wheel. An androgynous, large-stomached god of this location was depicted either surrounded by frogs or lotuses. (*) Khnum and Hapi were gods of this location. Seasonal changes of this location were explained by Isis’s tears for Osiris, who was cut into pieces and thrown into this place. For 10 points, name this location whose flooding inspired the myths of Egypt.

ANSWER: **Nile** River [or **Nile** River Valley; prompt on **river**; prompt on Upper or Lower **Egypt**; prompt on **Elephantine**]

<Ganon Evans, RMP - World Mythology> ~25395~ <Editor: Jaimie Carlson>

11. The “rather exaggerated” customs of a character in this story include his repetition of the personal motto of “strictness, strictness, and always strictness!” Co-workers of this story’s protagonist make a “trifling” collection for him after mocking him for supposedly dating his landlady. A character in this story develops a fever after being berated by an official referred to only as the Person of (*) Consequence. The protagonist of this story is a copyist who is mugged on his way back from a party, depriving him of an item that he paid Petrovich 150 rubles to make. For 10 points, Akaky Akakievich (“ah-KAH-kee ah-KAH-kee-vitch”) haunts St. Petersburg in search of the title lost article of clothing in what Nikolai Gogol story?

ANSWER: “The **Overcoat**” [or “The **Cloak**” or “The **Mantle**”; or “**Shinyél**”]

<Michael Bentley, Literature - European - Short Fiction> ~24811~ <Editor: Joseph Krol>

12. A concert hall in this city hired physicist Wallace Sabine to scientifically design its acoustics, leading to a unit of sound absorption called the Sabin. The record for most album sales of any orchestra in the world is held by an orchestra from this city led for many years by Arthur Fiedler. *Symphony of Psalms* was commissioned by Serge Koussevitzky during his directorship of this city's orchestra. Since 1974, an orchestra based in this city has used a (*) Howitzer in Independence Day performances of the *1812 Overture*. This city is home to the Berklee College of Music and an orchestra that frequently plays summer concerts at Tanglewood called its "Pops." For 10 points, name this city whose Big Five Symphony Orchestra often performs with the Harvard Glee Club.

ANSWER: **Boston** [accept **Cambridge**; accept **Boston** Pops; accept **Boston** Symphony Orchestra]
<Michael Bentley, Fine Arts - Music - Miscellaneous> ~24976~ <Editor: Young Lee>

13. British businesses producing this good in Port Talbot were nationalized by Harold Wilson in 1967. A Sheffield resident who revolutionized the production of this good lends his name to an Alabama town whose Amazon workers failed to unionize in 2021. Responding to a prize sponsored by Napoleon, Friedrich Krupp built a factory in 1811 named for manufacturing this material. The London headquarters of the Hanseatic League was named for a (*) "yard" of this material. It's not coal, but Robert Schuman helped organize a multinational economic community named for this good. Production of this good was made more efficient by an invention of Henry Bessemer. For 10 points, name this alloy essential to building skyscrapers.

ANSWER: **steel** [accept **steelyard**; accept European Coal and **Steel** Community; prompt on iron or pig iron or metals or alloys] (The town is Bessemer, AL, named after Henry.)
<Michael Bentley, History - European - 1900+> ~22450~ <Editor: Michael Bentley>

14. This quantity is measured using two strings in bifilar suspension experiments. Euler's equations for rigid body dynamics left-multiply vectors denoted "omega" and "omega-dot" with a matrix representation of this quantity. Instability regarding a certain "principal" construct corresponding to an intermediate value of this quantity is described by the (*) tennis racket theorem. This quantity equals an integral of r -squared with respect to mass. Mass times the square of distance equals the difference between this quantity about a given axis and about the center of mass according to the parallel axis theorem. For 10 points, name this quantity equal to angular momentum over angular velocity, the rotational analogue of mass.

ANSWER: **moment of inertia** [or **mass moment of inertia** or **angular mass** or **second moment of mass** or **rotational inertia**; prompt on I; reject "mass" and "moment"]
<Benjamin Chapman, Science - Physics> ~25731~ <Editor: David Bass>

15. This artist painted the most copied image of René Descartes, which hangs in the Louvre. The painting *The Carousing Couple* was misattributed to this artist thanks to an altered monogram, as was much of the work of Judith Leyster. Gustave Courbet ("KOOR-bay") made a version of this artist's depiction of a beer jug-holding woman with an owl on her shoulder titled (*) *Malle Babbe* ("mal-uh bab-uh"). The subject of a portrait by this artist wears elegantly-embroidered military garb including a white lace cuff and has a large, upturned mustache. This artist's group portraits include one of the officers of the St. George Militia Company, but is best known for a painting of a smiling man. For 10 points, name this Dutch painter of *The Laughing Cavalier*.

ANSWER: Frans **Hals**
<Yingzhi Nyang, Fine Arts - Painting - European 1600-1945> ~25108~ <Editor: Chandler West>

16. Although it's not a religion, this concept is symbolized as a hand with a wheel on the palm. The Yoga Sutras of Patañjali ("PUTH-unj-UH-lee") said that "all hostilities cease" in the presence of one practicing this concept. This concept is personified as a devoted wife in the Puranas ("poo-RAH-nuhs"). Monks must carefully look several feet forward in order to implement this concept in an orthodox manner. This concept is paired in (*) Jainism with non-acquisition and non-absolutism. This religious principle was adopted by one politician as a cornerstone to his movement of "truth force," or satyāgraha ("SUHTH-yuh-GRAH-huh"). For 10 points, name this principle of Buddhism and Hinduism espoused by Mahātmā Gandhi, whose Sanskrit name literally translates as "non-injury" or "harmlessness."

ANSWER: **ahimsa** [prompt on nonviolence or noninjury or peace with "What is the original language term?"]
<Sudheer Potru, RMP - Hinduism> ~25605~ <Editor: Athena Kern>

17. Some of this city's traffic lights have been privately funded by the Deeper Life Bible Church and contribute to traffic jams known locally as "go-slows." This city is the largest where pickpockets called *agberos* harass passengers of buses called *danfos*. This city's airport is named for military ruler Murtala Muhammed. An 8-meter-high seawall protects the newly dredged (*) Eko Atlantic Island in this city. Egun children attend a floating school in this city's slums of Makoko. While visiting this city, journalist Norimitsu Onishi coined the term Nollywood. In 1975, this city lost its status as state capital in favor of Ikeja and as national capital in favor of Abuja. For 10 points, name this most populous city in Nigeria.

ANSWER: **Lagos** [or **Lagos** City; accept **Eko** until mentioned]
<Michael Bentley, Geography - World> ~25164~ <Editor: Ganon Evans>

18. This thinker argued that Numa Pompilius was more important than Romulus because he used religion to establish social cohesion. This thinker imagined David refusing Saul's armor and going to fight Goliath with a knife in a parable advising against "auxiliaries." The "problem of dirty hands" is traced back to a passage in which this thinker describes the task of learning "not to be good." This author of a commentary on (*) *Ab urbe condita* called for his country to unify in the final chapter of a treatise that compares fortune to a raging river. Unlike his *Discourses on Livy*, this thinker's magnum opus advises studying the lion and the fox and notes that it's "safer to be feared than loved." For 10 points, name this Italian author of *The Prince*.

ANSWER: Niccolò **Machiavelli**
<Veer Bhatt, RMP - Philosophy> ~25044~ <Editor: Jordan Brownstein>

19. In a novel, a woman decides to go to this country following her parents' death in a car bombing, which leads Ada to reveal that she was the infamous "Baby Nicole." An epilogue set at a "Thirteenth Symposium" dedicated to this country includes a discussion of the *Ardua Hall Holograph*. After meeting Moira, a novel's protagonist discovers that lawbreakers in this country are either sent to clean (*) radioactive waste in the Colonies or to work in brothels called "Jezebel's." A woman who works at a Red Center in this country, Aunt Lydia, appears in both *The Testaments* and a novel in which the Commander plays Scrabble with Offred. For 10 points, name this Christian republic depicted in Margaret Atwood's novel *The Handmaid's Tale*.

ANSWER: Republic of **Gilead** ("GILL-ee-ad") [prompt on U.S.A. or United States of America]
<Joseph Krol, Literature - World and Miscellaneous> ~25265~ <Editor: Joseph Krol>

20. In this modern-day country, a native woman known as Juliana revolted against the regime imposed by Domingo Martinez de Irala. This country's 1936 Febrerista Revolt briefly deposed military hero José Félix Estigarribia ("hoh-SAY felix es-tee-garr-EE-bee-yah"). This country's "Los Yanquis" soccer club derives its nickname from Rutherford B. Hayes, who settled a land dispute in this country's favor in 1878. This country's forces lost the naval battle of (*) Riachuelo ("ree-ah-CHWY-loh") in a war where it lost much of the Mato Grosso province. An estimated 400 out of every 1,000 inhabitants of this country died in battle between 1864 and 1870 in a deadly war staged by Francisco Solano Lopez against the Triple Alliance. For 10 points, name this landlocked South American country whose capital is Asunción.

ANSWER: **Paraguay** [or Republic of **Paraguay**]

<Michael Bentley, History - World - Latin American> ~25505~ <Editor: Jordan Brownstein>

21. Description acceptable. A baby created as the outcome of this ability is sewn into a sack and thrown into the ocean, before being rescued and named "shining brow." Eidothea warns one hero that her father has this ability, and tells that hero to find him among seals. Gwion Bach enters a contest of this ability after Ceridwen steals the mead of poetry and is reincarnated as Taliesin. Menelaus has to (*) hold on to a man while he performs this activity. The "Old Man of the Sea," Proteus, notably possesses this ability, giving rise to the word "protean." Zeus frequently uses this ability to seduce maidens in the form of a swan or a cloud. For 10 points, name this ability, the primary subject of Ovid's *Metamorphoses*.

ANSWER: the ability to **transform** [accept word forms; accept equivalents such as **shapeshifting** or **turning** into an animal or **changing** into an animal; or any specific things like a salmon, a crow, or a grain of wheat; accept **metamorphosizing** before mention]

<Jaimie Carlson, RMP - Greco-Roman Mythology> ~25802~ <Editor: Jaimie Carlson>

NSC 2023 - Round 09 - Bonuses

1. Answer the following about literary mongooses, for 10 points each:

[10e] The mongoose Rikki-Tikki-Tavi saves a family living in India from two cobras in a story from this author's *The Jungle Book*.

ANSWER: Rudyard **Kipling** [or Joseph Rudyard **Kipling**]

[10m] Derek Walcott wrote that "The plots are forced, the prose sedate and silly" in the poem "The Mongoose," which he wrote as part of his vicious feud with this author of *A Bend in the River*.

ANSWER: V. S. **Naipaul** ("NYE-paul") [or Vidiadhar Surajprasad **Naipaul**]

[10h] In this 2007 novel, a mongoose helps protect a sci-fi obsessed teen from a fukú ("foo-KOO") curse when he falls in love with the prostitute Ybon ("ee-BON").

ANSWER: *The **Brief Wondrous Life of Oscar Wao*** (by Junot Díaz)

<Joseph Krol, Literature - World and Miscellaneous> ~20373~ <Editor: Joseph Krol>

2. Nero once had a prisoner executed by re-enacting this figure's death, which backfired when he fell next to his imperial couch. For 10 points each:

[10e] Name this son of Daedalus who fell to his death when the sun's heat melted the wax of his wings.

ANSWER: **Icarus**

[10m] Martial records that Laureolus suffered the fate of this Titan, except that a Caledonian bear was substituted for a vulture. This Titan gave a sacrifice of bones wrapped in fat.

ANSWER: **Prometheus**

[10h] Tertullian mentions an execution re-enacting the gruesome fate of Attis, the lover of this goddess. Depending on versions, Zeus, Artemis, or this goddess turn Atalanta and Hippomenes into lions.

ANSWER: **Cybele**

<Lalit Maharjan, RMP - Greco-Roman Mythology> ~20570~ <Editor: Jaimie Carlson>

3. This politician is overseeing 1.2 trillion dollars in spending from the Bipartisan Infrastructure Bill. For 10 points each:

[10e] Name this current Secretary of Transportation. This openly gay former mayor of South Bend, Indiana ran for President in 2020.

ANSWER: Pete **Buttigieg** ("BOOT-uh-JEJ")

[10h] Buttigieg called 225,000 dollars a "rounding error" for this rail company after a derailment dumped 100,000 gallons of hazardous waste in East Palestine ("pal-es-TEEN"), Ohio.

ANSWER: **Norfolk Southern** Railway [prompt on **NS**]

[10m] Norfolk Southern has been criticized for spending 10 billion dollars on this practice in 2022 instead of rail maintenance. In this practice, companies purchase from their own shareholders to concentrate ownership or avoid capital gains taxes.

ANSWER: **stock buybacks** [or **stock repurchases**; accept **share** in place of "stock"; accept descriptions such a company **buying its own stock**; prompt on **buybacks** with "Of what?"]

<Ganon Evans, Current Events - U.S.> ~20831~ <Editor: Ganon Evans>

4. The Adams Express Company unknowingly assisted this man in 1849. For 10 points each:

[10h] Name this man who re-enacted his 27-hour long trip to Philadelphia's Vigilance Committee in a panorama show where he emerged from a certain object.

ANSWER: Henry Box **Brown**

[10e] A metal replica of Henry Box Brown's shipping crate is located in this city's Canal Walk. This city's Monument Avenue once displayed a statue of Jefferson Davis, who governed from this longest-serving capital of the Confederacy.

ANSWER: **Richmond**, Virginia

[10m] Late in life, Brown and his family performed as Jubilee Singers. The Fisk Jubilee Singers raised funds for a college named for a commissioner of this Reconstruction agency headed by Oliver O. Howard.

ANSWER: **Freedmen's Bureau** [or **Bureau of Refugees, Freedmen, and Abandoned Lands**]

<Michael Bentley, History - American - Pre-1865> ~20385~ <Editor: Michael Bentley>

5. The work done by a non-isothermal one of these thermodynamic processes equals the change in the product of pressure and volume divided by one minus their namesake index, denoted n . For 10 points each:

[10h] Name these thermodynamic processes in which pressure times volume to the power of n is constant.

ANSWER: **polytropic** processes [accept **polytropic** index]

[10e] The polytropic index of an isobaric process has this value. By definition, the change in pressure during isobaric process equals this number.

ANSWER: **zero**

[10m] The polytropic index of an isentropic process equals the heat capacity ratio, which is also known as the "[this property] index." By definition, isentropic processes are reversible and have this property.

ANSWER: **adiabatic** [accept **adiabatic** index or **adiabatic** processes]

<Benjamin Chapman, Science - Physics> ~20879~ <Editor: David Bass>

6. In a novel in this language, the protagonist's family is killed after his neighbors move the body of a collaborator outside their house. For 10 points each:

[10h] Name this language used to discuss World War II in the novel *The Assault* by Harry Mulisch. An author who used this language wrote the oft-quoted line "It's a wonder I haven't abandoned all my ideals."

ANSWER: **Dutch** [or **Nederlands**]

[10e] Perhaps the most famous work about the Netherlands under Nazi rule is the *Diary of a Young Girl* written by this author while hiding in an Amsterdam annex.

ANSWER: Anne **Frank**

[10m] Anne Frank's diary entries are addressed to a figure of this name. This is the nickname usually given to a character in *Anna Karenina* who eventually marries Levin.

ANSWER: **Kitty** [accept **Ekaterina** Alexandrovna Shcherbatskaya]

<Joseph Krol, Literature - European - Other> ~18441~ <Editor: Joseph Krol>

7. In this country, Jeanne-Marie Ruth-Rolland became the first woman to run in an African presidential election. For 10 points each:

[10h] Name this country where Ruth-Rolland feuded with David Dacko, who inherited the mess of a self-proclaimed “emperor” who spent a third of this country’s budget on a coronation.

ANSWER: **Central African Republic** [or the **CAR**; accept the République **Centrafrique** or **RCA**; accept the **Central African Empire** or **CAE**]

[10e] Ruth-Rolland led a branch of this international humanitarian organization that hosted the first Geneva Convention and provides blood donations.

ANSWER: **Red Cross** [accept the **Red Crescent** or **Red Crystal**]

[10m] Ruth-Rolland exposed Valéry Giscard d’Estaing’s claims that he sold these goods to the Red Cross. The Kimberly System authenticates these goods to prevent their smuggling out of conflicts like the Sierra Leone Civil War.

ANSWER: **diamonds** [accept blood **diamonds**]

<Ganon Evans, History - World - African> ~20871~ <Editor: Jordan Brownstein>

8. Oscar Wilde scattered lilies in the path of this actress during a performance and wrote the play *Salomé* for her to star in. For 10 points each:

[10h] Name this French stage actress famous for her role as Marguerite Gautier in *La Dame aux Camélias*. Her “golden voice” was praised by Victor Hugo.

ANSWER: Sarah **Bernhardt** [or Henriette-Rosine **Bernard**]

[10e] Alphonse Mucha made a poster advertising Bernhardt’s role in a Paris production of a play named after this mythological figure, who kills her children after her husband, Jason, plans to marry another woman.

ANSWER: **Medea**

[10m] A critic writing for a newspaper in this city wrote that in Bernhardt’s roles, “enchantment is smothered in artifice.” The cofounder of this city’s “Art Theater” developed a namesake system that grew into method acting.

ANSWER: **Moscow** (The critic is Anton Chekhov. The cofounder is Konstantin Sergeevich Stanislavski.)

<Yingzhi Nyang, Fine Arts - Miscellaneous> ~20697~ <Editor: Young Lee>

9. The set of all cube moves generates the Rubik’s Cube group, which is a subgroup of one of these groups with degree 48. For 10 points each:

[10h] Name these groups that, when defined over sets of n symbols, consist of the n -factorial permutations of the n symbols.

ANSWER: **symmetric** groups [prompt on **S**-sub- n]

[10e] The Rubik’s Cube group has 81,120 equivalence classes of elements with this property. Another definition of this property holds for pairs of complex numbers with equal real parts and complex parts with opposite signs, like $a + bi$ and $a - bi$.

ANSWER: **conjugate** [accept **conjugacy** classes or **complex** conjugates]

[10m] The Rubik’s Cube group is non-abelian, meaning that its operation lacks this property. For a binary relation, symmetry is analogous to this property for binary operations.

ANSWER: **commutative** property [or **commutativity**]

<Steven Yuan, Science - Math> ~20271~ <Editor: David Bass>

10. Jane Hill described a “Mock” version of this language in “White spaces” whose “covert racist discourse” includes poorly translated bathroom signs. For 10 points each:

[10e] Name this language in which Hill analyzed “direct indexicality” through the example of the Terminator’s butchered phrases “hasta la vista” and “no problemo.”

ANSWER: **Spanish** [or **español**; or **castellano**; accept Mock **Spanish**]

[10m] Hill presented this word as an example of “semantic pejoration.” Omar Castañeda described Latin American culture characterized by this word as “self-aggrandizing male bravado that flirts with physical harm to be sexual.”

ANSWER: **macho** [or **machismo**; or **Caballerosidad**]

[10h] Hill claims Mock Spanish helps to “homogenize heterogeneity” in line with this thinker’s idea of transformist hegemony. This thinker viewed Marxism as a “philosophy of praxis.”

ANSWER: Antonio **Gramsci**

<Ganon Evans, Social Science - Anthropology> ~20825~ <Editor: Athena Kern>

11. In the Gospel of James, a woman’s hand decays after denying this idea. For 10 points each:

[10m] Name this idea recognized by the title of Aeiparthenos in Orthodox belief and promoted by the second of four dogmas from the Council of Ephesus. This idea means that Simon and Jude were not biological brothers of a certain figure.

ANSWER: **virginity** of **Mary** [accept descriptions of **Mary** being a **virgin**; accept the **Virgin Mary**; accept the **perpetual virginity**; accept **virgin birth** of Jesus; prompt on **virginity** with “Of who?”; reject the “Immaculate Conception”]

[10e] Scholars debate whether or not Jesus’s brothers were the children from a previous marriage of this carpenter and husband of Mary.

ANSWER: St. **Joseph** [reject “Joseph of Arimathea”]

[10h] This saint helped canonize the perpetual virginity by rejecting Jovinian’s ideas at the Synod of Milan in 390 CE. St. Augustine converted from Manichaeism after hearing this saint speak.

ANSWER: St. **Ambrose**

<Ganon Evans, RMP - New Testament> ~20214~ <Editor: Ganon Evans>

12. The enzyme that cleaves a 5-prime leader sequence off these molecules is very nearly conserved across all life. For 10 points each:

[10m] Name these nucleic acids. Upon cleavage of the leader sequence, they fold into a cloverleaf structure and expose their anticodon loop.

ANSWER: **tRNAs** [or **transfer RNAs**; or pre-**tRNAs** or precursor **tRNAs**; prompt on **RNAs** or **ribonucleic acids**]

[10e] In 2002, biologists found the first organism that lacks RNase P: an extremely genome-reduced species in this prokaryotic domain that comprises many extremophiles.

ANSWER: **Archaea** [or **archaeobacteria**; or **archaeon**]

[10h] *Nanoarchaeum equitans* instead synthesizes tRNAs from tRNA “halves” using the *trans* form of this process. Tom Cech (“**check**”) discovered ribozymes when he found *Tetrahymena* RNAs catalyze this process on themselves via a knotted-loop intermediate.

ANSWER: **splicing** [or **splice**; or self-**splicing**; or *cis*-**splicing** or *trans*-**splicing**; prompt on RNA **cleavage**]

<Adam Silverman, Science - Biology> ~20880~ <Editor: Adam Silverman>

13. Jesmyn Ward edited the 2021 edition of a yearly anthology of the *Best American* works in this literary form. For 10 points each:

[10e] Name this form of literary fiction whose length lends itself to being published by magazines such as *The New Yorker* and *The Atlantic*. Works longer than those in this form are generally considered novellas.

ANSWER: short **story** [or short **stories**]

[10h] This author's short story "Girl" was published in the *New Yorker* and takes the form of an extended to-do list from mother to daughter.

ANSWER: Jamaica **Kincaid**

[10m] This collection's first story about Shukumar and Shoba in a power outage first appeared in *The New Yorker*. This collection includes the stories "Sexy" and "The Third and Final Continent."

ANSWER: **Interpreter of Maladies** (By Jhumpa Lahiri.)

<Ganon Evans, Literature - American - Short Fiction> ~20902~ <Editor: Chandler West>

14. In al-Ghazali's book *The Deliverance from Error*, personifications of these things make the argument that even self-evident truths like 10 being greater than 3 cannot be trusted. For 10 points each:

[10e] Name this set of five faculties that empiricism holds to be the source of all knowledge.

ANSWER: five **senses**

[10h] This thought experiment from Islamic philosophy suggests that a being spontaneously generated without any senses and unaware of the existence of his body would still be able to affirm that he exists.

ANSWER: **floating man** [or **flying man**; or **suspended man**]

[10m] The "floating man" was imagined by this philosopher, who argued that besides the five senses, we have "internal senses" such as "estimation." Al-Ghazali critiqued this 11th-century polymath and doctor.

ANSWER: **Avicenna** [or **Ibn Sina**]

<Jordan Brownstein, RMP - Philosophy> ~20123~ <Editor: Jordan Brownstein>

15. Some Western officials speculated that defector Viktor Belenko must have been a double agent because they could not believe how primitive the computers in one of these planes were. For 10 points each:

[10m] Name this class of Soviet fighter planes whose "25" variant was flown by Belenko.

ANSWER: **MiG** [or **Mikoyan-Gurevich**; accept **MiG 25**]

[10e] The vacuum tubes in the MiG-25 were more resilient to pulses from these weapons than Western planes. One of these weapons called Little Boy was used on August 6, 1945.

ANSWER: **nuclear** bombs [or **atomic** bombs; or **hydrogen** bombs; or **A-bombs**; or **H-bombs**; or **nukes**; accept **fission** bombs; prompt on **bombs**]

[10h] The Soviet electronics industry was helped by Americans Joel Barr and Alfred Sarant, whose actions were tracked in this signals intelligence program. Declassified cables from this program proved Julius Rosenberg's guilt in the 1990s.

ANSWER: **Venona** project [accept **Venona** cables or **Venona** documents or **Venona** papers]

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~20414~ <Editor: Michael Bentley>

16. For 10 points each, answer the following about solvent effects on the reaction of (S)-2-chlorobutane with sodium iodide:

[10h] If DMSO is the solvent, the reaction occurs through this simple organic mechanism, and the stereocenter completely inverts to produce the (R)-enantiomer.

ANSWER: **SN2** [or **bimolecular nucleophilic substitution**; prompt on substitution; prompt on nucleophilic substitution; prompt on SN; reject “SN1”]

[10m] If ethanol is the solvent, the reaction forms an achiral carbocation as one of these species, so the product is racemic instead. In a multistep reaction, these stable chemical species occur at energy minima.

ANSWER: reaction **intermediates** [reject “intermediary”]

[10e] If strong base is present, the reaction yields butene, which is one of these compounds containing a carbon-carbon double bond.

ANSWER: **alkenes** [or **olefins**; reject “alkanes” or “alkynes”]

<Ethan Ashbrook, Science - Chemistry> ~20560~ <Editor: Adam Silverman>

17. Answer the following about literary figures from the texts they send in a comedic 2014 book by Daniel Mallory Ortberg, for 10 points each.

[10m] This love interest of a Charlotte Bronte novel constantly sends all-caps texts saying “DID YOU LEAVE BECAUSE OF MY ATTIC WIFE.” This guardian of Adele Varens disguises himself as a fortune-teller.

ANSWER: Mr. Edward **Rochester** (The book is *Texts from Jane Eyre*.)

[10e] This poet’s texts include “I just think it’s a little weird you don’t mind when a flea bites both of us but you won’t have sex with me.” This metaphysical poet of “The Flea” wrote “Death be not proud.”

ANSWER: John **Donne**

[10h] In a reference to this poem, a poet texts his friend “Bring me my Bow of burning gold; bring me my Arrows of desire” only to be told “you’re not allowed to have arrows.” This poem references “dark Satanic mills.”

ANSWER: “**Jerusalem**”

<Jaimie Carlson, Literature - British - Poetry> ~20942~ <Editor: Jaimie Carlson>

18. These artworks inspired Jasper Johns’s early-career work *Construction with Toy Piano*. For 10 points each:

[10h] Name these types of artworks in which found objects are incorporated into paintings, giving them sculptural elements. Robert Rauschenberg coined the term for these artworks and produced many of them such as *Bed* and *Monogram*.

ANSWER: **Combines**

[10e] Rauschenberg’s Combine *Canyon* contains a golden eagle in this art form. This art form involves preserving an animal’s body through mounting and stuffing and is popular among hunters.

ANSWER: **taxidermy** [or word forms such as **taxiderming**]

[10m] Reviews of Rauschenberg’s work have been critiqued for not linking them with his upbringing in this US state. This state’s largest city contains one of Barnett Newman’s *Broken Obelisks*, which sits in front of the Rothko Chapel.

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

<Steven Yuan, Fine Arts - Painting - 1945+> ~20270~ <Editor: Chandler West>

19. For 10 points each, answer the following about the Seven Sages of Ancient Greece.

[10h] Plato's *Protagoras* debates the claim that it is "hard to be a good man" by Pittacus, the ruler of this island's city of Mytilene ("mee-tee-LEE-nee"). Lyric poets from this island included Alcaeus.

ANSWER: **Lesbos** [or **Lesvos**]

[10m] Athens's sage was this democratic politician who reformed Draco's cruel laws by creating the Ekklesia.

ANSWER: **Solon**

[10e] The sage Periander hailed from this city and possibly built its Diolkos, a boat path across its namesake isthmus. The most elaborate Greek column style was named for this city.

ANSWER: **Corinth** [accept **Corinthian Style**]

<Ganon Evans, History - European - Classical> ~20855~ <Editor: Michael Bentley>

20. Sergei Prokofiev's 4th Piano Concerto was performed in this manner by Maurice Rapp at its premiere. For 10 points each:

[10m] Name this unusual performance method called for in a number of piano pieces commissioned by Paul Wittgenstein.

ANSWER: played with the **left hand** [accept **one handed** or played with **one hand**]

[10e] Wittgenstein premiered this French composer's two-movement Piano Concerto for the Left Hand. This composer's other works include the ballet *Daphnis et Chloe* and a popular *Boléro*.

ANSWER: Maurice **Ravel** [or Joseph Maurice **Ravel**]

[10h] This composer wrote a virtuosic Capriccio for Piano Left-Hand at the request of one-handed pianist Otakar Hollmann. A pipe organ solo makes up the lengthy "Postludium" section of a mass by this composer that uses Old Slavonic text.

ANSWER: Leoš **Janáček** [or Leo Eugen **Janáček**] (The other piece is the Glagolitic Mass.)

<Ethan Ashbrook, Fine Arts - Music - 1900 to 1970> ~20858~ <Editor: Young Lee>

21. Hollywood mogul Cecil B. De Mille pledged a private army of 75 men and a machine gun to defend Los Angeles in the panic after this document was revealed. For 10 points each:

[10m] Name this document revealed to the public on March 1, 1917 that promised one country certain "lost territory."

ANSWER: **Zimmermann** Telegram [or **Zimmermann** Note; or **Zimmerman** Cable]

[10e] The Zimmermann Telegram was used as justification by this president, a Democrat, to declare war on Germany.

ANSWER: Woodrow **Wilson** [or Thomas Woodrow **Wilson**]

[10h] Wilson considered sending American troops to occupy this city in the state of Tamaulipas, site of Mexico's first oil boom, in retaliation for the Zimmermann Telegram. 9 American sailors were detained in a 1914 "affair" in this state.

ANSWER: **Tampico** [accept **Tampico** Affair]

<Michael Bentley, History - American - 1865-1945> ~20804~ <Editor: Michael Bentley>