



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

Finals 1 - Tossups

1. The way one of this author’s characters observes their boots “in a gentlemanly manner” was highlighted by John Matteson, who wrote about this author and their parents in *Eden’s Outcasts*. A 2022 *New York Times* article by Peyton Thomas notes that this author was referred to as a “son” by their father and argues that they were trans. This author described their family’s involvement with the utopian community Fruitlands in the book (*) *Transcendental Wild Oats*. After complaints that “Christmas won’t be Christmas without any presents,” the protagonists of one of this author’s novels make breakfast for the Hummel family at the behest of their mother Marmee. For 10 points, name this author who depicted Meg, Jo, Beth, and Amy March in *Little Women*.

ANSWER: Louisa May Alcott [or Lou Alcott; or Lu Alcott; or Louy Alcott]

<Joseph Krol, Literature - American - Long Fiction> ~25423~ <Editor: Chandler West>

2. An Orthodox icon named for this object depicts a black diamond over a red diamond and had early versions created at St. Catherine’s Monastery, which was built on this object’s location. This object and the Huguenot Cross symbolize France’s Reformed Church. Excerpts from the Midrash disagree whether Michael sprung from this object and whether its Hebrew name “seneh” refers to “Sinai.” Exodus 3 (“chapter 3”) describes this object and is the first written appearance of the (*) “land of milk and honey.” While tending Jethro’s flock, a man has his hand turned leprous after encountering this object and being told “I am that I am.” On Mount Horeb, God speaks through this object to command a man to lead the Israelites out of Egypt. For 10 points, Moses encounters what plant that is unharmed by fire?

ANSWER: the burning bush [accept the unburnt bush; accept seneh before mention; prompt on bush]

<Ganon Evans, RMP - Hebrew Bible> ~25871~<Editor: Ganon Evans>

3. Secretion of this substance is intentionally induced by dom·peri·done but is a common side effect of taking antipsychotics like ris·peri·done. Oligo·saccharides named for this substance encourage the colonization of the gut microbiome by bifido·bacteria. This substance is produced by alveolar cells found in lobules. IgA (“I-G-A”) is concentrated in a yellowish, slightly laxative form of this substance called (*) colostrum. The pituitary hormone that activates production of this substance competes with dopamine. Antibodies transferred through this substance greatly reduce the risk of RSV and SIDS (“sids”). An ejection reflex mediated by oxytocin releases this substance during suckling. For 10 points, name this substance secreted by the mammary glands during lactation.

ANSWER: breast milk [or human milk; accept colostrum until it is read]

<Adam Silverman, Science - Biology> ~25214~ <Editor: Adam Silverman>

4. The world's first livestreamed benefit concert was organized for this ethnic group by Milarepa. A 2020 book by Barbara Demick traces a spate of self-immolations amongst these people to protest restrictions on practicing their religion. Michael Eisner pledged to "undo the damage" from a Martin Scorsese film about a leader of these people titled *Kundun*. An NGO to "Free" these people launched a "Classroom" program to counter the (*) Confucius Institute. Brad Pitt was banned from one country for a film where his character spent "Seven Years" in these people's homeland. After a 1959 uprising, a leader of these people fled to Dharamshala, India, a city often called Little Lhasa. For 10 points, name these people whose spiritual leader is the Dalai Lama.

ANSWER: **Tibetan** people [or *bod pa*; or *bö pa*]

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~25159~ <Editor: Michael Bentley>

5. A cosmography originally written in this language contains an illustration of a globe studded with emerald mountains, which are supported by a gigantic bull, which itself stands on an even larger fish. In a doubtful story, a laudatory phrase in this language, literally meaning "exalted cranes," was applied to three traditional goddesses after a reformer was tricked by the (*) devil. In a story from this language, a fisherman runs into trouble after his net brings in a bottle whose cap is marked with the Seal of Solomon. This language's folklore is the origin for legends about spirits made of smokeless fire, which are exemplified by the *ghul* and *ifrit*. For 10 points, *djinn* originate from the folklore of what language of the Qur'an?

ANSWER: **Arabic** [or Classical **Arabic**; or Modern Standard **Arabic**]

<Matthew Bollinger, RMP - World Mythology> ~24173~ <Editor: Matthew Bollinger>

6. This painting was the centerpiece of nine artworks stolen in 1985 by the Yakuza from the Marmottan Collection, which was founded by the son of this painting's artist, Michel. Émile Cardon claimed he could create this painting by "[dirtying] three-quarters of a canvas with black and white" then "[dotting] it with red and blue blobs at random." During an 1874 Exhibition held at Nadar's workshop, this painting was mocked as being less finished than "wallpaper in its embryonic state." Blue (*) smokestacks appear in this painting's background. A Louis Leroy critique of black streaks in the foreground of this painting coined the name of an art movement. Boats float in the Le Havre harbor under the reflection of a bright orange dot in, for 10 points, what iconic Claude Monet painting?

ANSWER: **Impression, Sunrise** [or *Impression, soleil levant*; prompt on *Sunrise*]

<Ganon Evans, Fine Arts - Painting - Misc> ~25972~ <Editor: Chandler West>

7. Theodore Beza wrote a letter to Heinrich Bullinger arguing that this event was evidence of a "universal conspiracy." During this event, the son of Louise de Montmorency and leader of the Party of the Pastors was killed. Poet Philip Sidney took shelter with Ambassador Francis Walsingham during this event. This event shattered the Peace of Saint-Germain-en-Laye ("SAN-zhur-MAN-on-LYE"). This event began shortly after the personal physician of King (*) Charles IX was sent to treat a man injured at the wedding of Margaret of Valois to Henry of Navarre. The Duke of Guise ("gheez") threw Admiral Gaspard de Coligny ("gah-SPAR duh koh-LIN-yee") out of a window in this event. For 10 points, name this 1572 event ordered by Catherine de Medici during which Parisian Huguenots were massacred.

ANSWER: St. **Bartholomew's** Day Massacre [or Massacre de la Saint-**Barthélemy**; prompt on the attempted assassination of Admiral Gaspard de Coligny before mentioned by asking "What larger event was that part?"; prompt on the French **Wars of Religion**]

<Michael Bentley, History - European - 1500-1900> ~24805~ <Editor: Michael Bentley>

8. Hosts of one ritual dedicated to this person read a text beginning “Nice seeing your honest, chubby face” before serving a dish jokingly attributed to an animal with unequally long legs. This failed farmer abandoned a plan to emigrate to Jamaica after the success of the Kilmarnock Volume. People cross their arms while singing the last verse of a song on January 25th (*) “suppers” named for this person. A “great Chieftain of the Puddin’ race!” is the subject of this author’s poem “To a Haggis.” This author adapted a folk song into a poem that asks if “acquaintance should be forgot,” which is traditionally sung after the dropping of the ball in Times Square on New Years. For 10 points, name this Scots-language author of “Auld Lang Syne.”

ANSWER: Robert **Burns** [accept **Burns** suppers]

<Michael Bentley, Other - Other Academic and General Knowledge> ~25384~ <Editor: Ganon Evans>

9. Cyanuric acid reacts with this element to form troclosene (“TROH-cluh-seen”), which slowly bleeds it into solution. Radicals of this element are considered reactive but not selective because they mainly substitute at primary alkyl hydrogens. Sodium hydroxide is made by electrolysis in an industrial process named for this element. This nonmetal is the first element to have a stable plus-seven oxidation state even though its Pauling electronegativity is the same as oxygen, (*) 3.5 (“three point five”). This element has the highest electron affinity on the periodic table. This element is the oxidizing atom in bleach, and its radicals initiate the chain reaction that degrades ozone. For 10 points, name this element found with fluorine and carbon in freon, a halogen used to sterilize swimming pools.

ANSWER: **chlorine** [or **Cl**; reject “chloride”] (Cyanuric acid stabilizes chlorine in swimming pools.)

<Adam Silverman, Science - Chemistry> ~25619~ <Editor: Adam Silverman>

10. This author wrote about the “Organization for Modern Theft and Robbery” in a novel written on prison toilet paper. With a younger collaborator, this author of *Devil on the Cross* wrote a play in which one character loses a deed to a small plot of land to finance his wedding; that play’s performance led to this author’s imprisonment in 1977. In a novel by this author, General R. wrongly thinks that the killer of District Officer Robson was sold out by Karanja. This author of *I Will (*) Marry When I Want* wrote a novel set prior to Uhuru Day in which Mugo betrays the revolutionary Kihika in the Mau Mau (“mao mao”) Rebellion. The political novel *A Grain of Wheat* and many recent works in Gikuyu are by, for 10 points, what Kenyan author?

ANSWER: **Ngũgĩ** (“n-GOO-ghee”) wa Thiong’o [or James **Ngugi**; prompt on **Thiong’o**]

<Joseph Krol, Literature - World and Miscellaneous> ~23673~ <Editor: Joseph Krol>

11. In a piece with this nickname, the right hand crosses over to play the ascending notes “C, F, G, A-flat,” then crosses back over to play the same notes two octaves up. The finale of a piece with this nickname uses the composite theme (read slowly) “descending F-sharp, E, D, C-sharp, short B, up to C-sharp” played between the two violin sections. The cellos play a rising (read slowly) “F-sharp, G, triplet A—G—A” to open the second movement of a symphony with this nickname. A piece with this nickname dedicated to Karl von Lichnowsky opens with a slow theme marked (*) *Grave* (“GRAW-vay”). The second movement of a symphony with this nickname is a 5/4 (“five-four”) *Allegro con grazia* commonly called a “limping waltz.” For 10 points, give this nickname shared by Beethoven’s *Piano Sonata No. 8* and Tchaikovsky’s *Symphony No. 6*.

ANSWER: “**Pathétique**” [accept *Pathétique* *Symphony*; accept *Sonata Pathétique* or *Pathétique* *Sonata* or *Grande sonate pathétique*]

<Young Lee, Fine Arts - Music - Romantic> ~25752~ <Editor: Young Lee>

12. The SMPTE RP 187 standard gives these things absurdly specific dimension ratios, like 1,035 to 1,132. These things correspond to p-doped MOS capacitors in charge-coupled devices. External servers glean information from Internet users when their web browsers load invisible “tracking” instances of these things. Adding transparency to these things can eliminate jaggies as an (*) anti-aliasing measure for the products of rasterization, which typically consist of these things. An art style named for these things often requires artists to hand-dither to achieve an illusion of larger color palettes. Camera resolutions are often listed in units of “mega [these things].” For 10 points, name these squares that comprise digital images.

ANSWER: **pixels** [accept word forms like **pixelated**; accept tracking **pixels** or **pixel** art or megapixels; reject “voxels” or “bits”]

<Michael Bentley, Science - Engineering and Miscellaneous> ~22683~ <Editor: David Bass>

13. This thinker famously argued that the last murderer in prison should still be executed even if society was about to collapse. Rae Langton and Barbara Herman have interpreted this thinker’s claim that sex involves improperly treating a person as a thing. This thinker’s examples of perfect and imperfect duties to oneself and others are often illustrated in a four-square grid. This thinker used the formulas of humanity and (*) autonomy to present a principle he illustrated with the “kingdom of ends.” This thinker’s deontology centers on the idea that we should act according to maxims we would will to be universal law. This thinker’s *Groundwork* argues for the categorical imperative. For 10 points, name this German Enlightenment author of three “critiques.”

ANSWER: Immanuel **Kant**

<Jordan Brownstein, RMP - Philosophy> ~25042~ <Editor: Jordan Brownstein>

14. In 1961, this former host of the TV program *Prospects of Mankind* bragged to Murray Kempton of unseating Tammany Hall boss Carmine DeSapio. At secret clubs named for this person, Black domestic workers were rumored to be planning to overthrow Jim Crow. This delegate received the only unanimous standing ovation at the UN following the adoption of the Universal Declaration of Human Rights. This author wrote the newspaper column (*) “My Day” while serving in an office where she visited members of the Bonus Army. While vacationing at Campobello Island in 1921, she nursed her husband back to health following a diagnosis of polio. For 10 points, name this First Lady from 1933 to 1945.

ANSWER: **Eleanor Roosevelt** [accept **ER**; or Anna Eleanor **Roosevelt**; prompt on **Roosevelt**]

<Michael Bentley, History - American - 1945+> ~25010~ <Editor: Michael Bentley>

15. *SPA!* magazine featured a cover story on “girls” inspired by this action who worship a “god of the lower classes.” An apology for an aggressive donation campaign that may have led to this action was given by Chung Hwan Kwak. After this action, a political party severed all ties with CARP and other fronts for a group known for its Blessing ceremonies. Three months after this action, the first state (*) funeral of its type in 55 years hurt the approval ratings of the Liberal Democratic Party leader. This action took place during a campaign speech in Nara City and was motivated by one man’s support for the Unification Church. Tetsuya Yamagami used a handmade gun to carry out this action. For 10 points, name this 2022 action that ended the life of a former Japanese Prime Minister.

ANSWER: **assassination** of Shinzo **Abe** [or **assassination** of **Abe** Shinzo; accept synonyms for assassination such as **killing** or **shooting** Shinzo **Abe**; reject “Japanese Prime Minister” in place of Abe]

<Michael Bentley, Current Events - World> ~24975~ <Editor: Ganon Evans>

16. Adolf Hitler banned a play titled for this character following the execution of Maurice Bavaud (“bah-VOH”). A history by Aegidius Tschudi (“ay-GID-ee-uss T’SHOO-dee”) inspired a play that opens with this character ferrying a fugitive across a lake during a storm. The Baron of Attinghausen (“AH-ting-how-zen”) disapproves of a guardsman arresting this character near a new prison. This character refuses to (*) salute the cap of a governor whom he later assassinates in a ravine, inspiring a peasant uprising. In an 1804 play, Walter tells this character “I promise to stand still” during an ordeal ordered by the tyrant Gessler. For 10 points, a Friedrich Schiller (“FREE-drick SHILL-ur”) play is titled for what Swiss hero, who is made to shoot an apple off his son’s head?

ANSWER: William Tell [or William Tell; or Wilhelm Tell]

<Joseph Krol, Literature - European - Drama> ~25012~ <Editor: Joseph Krol>

17. In a track by this musician, a Clavinet plays a two-bar bass line alternating in Dorian between B-flat-7 and E-flat-7 arpeggios. This musician made an album whose cover features its title band sitting behind this musician, who is wearing an Ivorian *kple kple* (“play play”) mask. “Dolphin Dance” is the last track on this musician’s album *Maiden Voyage*. Percussionist Bill Summers imitated a hindewhu (“HIN-doo-hoo”) on a song by this musician by blowing into a (*) beer bottle. This musician played in a sextet including saxophonist Bennie Maupin on his albums *Mwandishi* and *Sextant*. This musician’s debut album *Takin’ Off* included one of his songs which he later covered for the album *Head Hunters*. For 10 points, name this jazz pianist who wrote “Chameleon” and “Watermelon Man.”

ANSWER: Herbie Hancock [or Herbert Jeffrey Hancock]

<Ethan Ashbrook, Fine Arts - Jazz> ~25439~ <Editor: Young Lee>

18. These “mopping and mowing” characters are seen as *ids* (“eeds”) that offer art and sensual pleasure to women writers in *The Madwoman in the Attic*. These characters accost a woman who “stood, / Like a lily in a flood” and “would not open lip from lip” before tossing her a coin. After giving the “gold upon [her] head” to these characters, a woman stops hearing them in the “mossy glen” after saying “We must not (*) look at” these characters. These characters, who have a “rat’s pace” and a “cat’s face” and lead to the death of Jeanie, cry “morning and evening” in the poem in which they offer “apples and quinces, lemons and oranges.” These characters clamor “Come buy, come buy” to entice the sisters Laura and Lizzie. For 10 points, name these characters who run a “Market” in a Christina Rossetti poem.

ANSWER: goblins [accept goblin men; accept “Goblin Market”]

<Yingzhi Nyang, Literature - British - Poetry> ~25576~ <Editor: Jaimie Carlson>

19. High-ranking priests in this culture wore textiles decorated with an eight-pointed star motif and made weather forecasts based on the abundance of spondylus shells on the coast. Centuries before the modern synthesis of titanium dioxide, this culture used it to decorate wooden cups called *kero*. This culture used irregularly shaped rocks like the “twelve-angled stone” to build mortarless, earthquake-resistant walls. Soldiers from this culture subsisted on *chicha* (*) corn beer and freeze-dried potatoes called *chuno* (“chu-nyoh”). Peasants ruled by this culture were tasked with rebuilding *chaka*, the grass-rope bridges of their extensive mountain road system. This culture used knotted strings called *quipu* for record-keeping. For 10 points, name this Andean culture that built Machu Picchu.

ANSWER: Incan empire [or Tawantinsuyu; prompt on translations like the Realm of the Four Parts]

<Michael Bentley, History - World - Latin American> ~23943~ <Editor: Jordan Brownstein>

20. This quantity and big G are set equal to one in geometrized units. “One-way” measurements of this quantity are assumed to agree with “two-way” ones according to a common synchronization convention. The Fizeau experiment measured a dragging coefficient of one minus one over n on this quantity. This quantity does not depend on a similar quantity of a Kennedy–Thorndike apparatus. The (*) isotropy of this quantity was shown in an experiment involving eleven-meter perpendicular arms with mirrors at each end. Special relativity requires that this quantity is the same in all inertial frames, implying that there is no luminiferous ether. For 10 points, the Michelson-Morley experiment showed that what quantity, symbolized c , is constant?

ANSWER: **speed of light** [accept **velocity of light**; accept c until it is read; prompt on speed or velocity or v ; reject “light”]

<Adam Silverman, Science - Physics> ~25432~ <Editor: David Bass>

21. In a section of this novel, a man gets to know the fleas in the collar of an official who tells him, “I am taking this only so that you do not think you have failed to do anything.” In that part of this novel, a dying man is told that a place was “assigned only to you. I’m going now to close it” after he spends his whole life being denied access by the “lowliest gatekeeper.” After his Italian client fails to show up, this novel’s protagonist meets a priest who tells him a (*) parable called “Before the Law.” Soon after, this novel’s protagonist is taken to a quarry the day before his 31st birthday, where he is executed after crying “like a dog!” Josef K. is arrested for an unknown crime in, for 10 points, what Franz Kafka novel?

ANSWER: *The **Trial*** [or *Der **Prozess***]

<Joseph Krol, Literature - European - Long Fiction> ~24740~ <Editor: Joseph Krol>

NSC 2023 - Finals 1 - Bonuses

1. Barbers in this city were subject to one of the earliest anti-Chinese laws in the Americas. For 10 points each:
[10e] Name this capital city whose Chinatown neighborhood, like the rest of the historic center of this city, is built on top of the former city of Tenochtitlan.

ANSWER: **Mexico** City [or Ciudad de **México**; or **CDMX**; or **DF**; or **Distrito Federal de México**]

[10m] *Description acceptable.* A later anti-Asian policy in Cuba imprisoned people of Japanese descent following this 1931 military campaign. This campaign was justified by the false flag Mukden Incident.

ANSWER: Japanese **invasion** of **Manchuria** [accept answers like the **establishment** of the state of **Manchukuo**; prompt on Japanese **invasion of China**]

[10h] Conversely, migration of people from Japan and China was *encouraged* as part of one Latin American country's campaign against people of this ethnicity. Tens of thousands of these people were killed in the 1937 Parsley Massacre.

ANSWER: Afro-**Haitians** [or **Haitianos** or **Haitiens**; prompt on **Black** people or people of **African descent** or **Afro-Dominicans**; reject "Dominicans"]

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~20254~ <Editor: Michael Bentley>

2. The first licensed female architect in the world was Marion Mahony Griffin, an original member of this school who completed the Adolph Mueller House. For 10 points each:

[10m] Name this school of architecture exemplified by the Robie House. This school emphasized horizontal lines and hipped roofs to blend in with nature.

ANSWER: **Prairie** School [accept **Prairie** House]

[10e] Mahony Griffin studied under this Prairie School pioneer who created the Robie House and Fallingwater.

ANSWER: Frank Lloyd **Wright**

[10h] Mahony Griffin created over half of the renderings for Wright's *Wasmuth Portfolio*, including the K. C. DeRhodes House in this state. It's not Ohio, but J. Erwin Miller sparked a mid-century modern architecture boom in this state's town of Columbus.

ANSWER: **Indiana** [or **IN**]

<Ganon Evans, Fine Arts - Architecture> ~20508~ <Editor: Young Lee>

3. The Laplace–Runge–Lenz vector is conserved for motion along these paths. For 10 points each:

[10e] Name these paths described by Kepler's laws, which planets trace out around the Sun.

ANSWER: planetary **orbits** [accept **ellipses**]

[10m] For Keplerian orbits, the LRL vector is proportional to a vector form of this dimensionless non-negative quantity. This quantity is less than one for bound orbits and is greater than or equal to one for escape orbits.

ANSWER: orbital **eccentricity** [accept **eccentricity** vector; prompt on **e**]

[10h] *Description acceptable.* The conservation of the LRL vector results from this property of ideal Keplerian orbits, deviations from which lead to apsidal precession. Bertrand's theorem characterizes the bound orbits of simple harmonic oscillators and systems with this property.

ANSWER: **inverse-square** central force [accept answers describing that the magnitude of the central force, which is gravity, obeys an **inverse-square** law or that the central force is proportional to the **negative second power** of **distance**; accept answers describing that the **potential** energy is proportional to **inverse distance** or **potential** energy is proportional to the **reciprocal** of **distance** or **potential** energy is proportional to the **negative first power** of **distance**; accept **radius** or **r** or **d** in place of "distance"; prompt on **gravity** or **gravitational** force or **gravitational** potential with "What feature of the gravitational force?"]

<Joseph Krol, Science - Physics> ~18161~ <Editor: David Bass>

4. Answer the following about authors who depicted journeys to the moon, for 10 points each.

[10e] This French author included *From the Earth to the Moon* in his series of “Extraordinary Voyages,” which also included his novel *Journey to the Center of the Earth*.

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

[10m] The title shoes cause a watchman to accidentally be transported to the Moon in this author’s story “The Galoshes of Fortune.” His other stories about footwear include “The Red Shoes.”

ANSWER: Hans Christian **Andersen**

[10h] This Greek-language author of the second century CE depicted several travelers being taken to the Moon, and thereafter being swallowed by a massive whale, in his satire *A True Story*.

ANSWER: **Lucian** (“LOO-see-uhn”) of Samosata

<Joseph Krol, Literature - European - Short Fiction> ~20168~ <Editor: Joseph Krol>

5. This type of coal produced less smoke than softer bituminous alternatives, making it more suitable for indoor use. For 10 points each:

[10m] Name this type of hard coal widely supplied from northeastern Pennsylvania mines in the 19th century.

ANSWER: **anthracite** coal [prompt on **black** coal]

[10e] In an 1864 essay, this author argued that coal-fired stoves hurt family unity compared to gathering around an open hearth. Abe Lincoln supposedly called this author of *Uncle Tom’s Cabin* “the little woman who made this great war.”

ANSWER: Harriet Beecher **Stowe**

[10h] A coal company of this name used a mule train to haul anthracite coal from Pisgah Mountain to Philadelphia. Iron production was an important industry in a valley of this name whose most populous city is Allentown.

ANSWER: **Lehigh** [accept **Lehigh** Valley]

<Michael Bentley, History - American - Pre-1865> ~20260~ <Editor: Michael Bentley>

6. *Description acceptable.* This woman was the first to accept eight conditions in order to achieve ordination, including to never abuse, revile, or admonish her male counterparts. For 10 points each:

[10h] Name this sister of Maya who was the first bhikkhuni.

ANSWER: Mahapajapati **Gotami** [or **Pajapati**; accept descriptions like the **Buddha’s foster-mother** or the **Buddha’s step-mother** or the **Buddha’s aunt**; prompt on the **Buddha’s mother**; accept answers mentioning **Siddhartha** or **Gautama** instead of the **Buddha**]

[10e] The Buddha was convinced to ordain women thanks to his belief that they could attain this state of release from the cycle of rebirth.

ANSWER: **nirvana** [or **nibbana** or **moksha**; prompt on **enlightenment**]

[10m] A collection of poems written by nuns was preserved in a canon written in this sacred language of Theravāda Buddhism.

ANSWER: **Pāli** [accept **Pāli** Canon]

<Yingzhi Nyang, RMP - Buddhism> ~20362~ <Edited: Athena Kern>

7. Eldridge Cleaver admired this character for having “no trace... of the Martin Luther King–type self-effacing love for his oppressors.” For 10 points each:

[10m] Name this character, who was attacked for being “designed to shock the whites out of their apathy” in a James Baldwin essay. This character is represented by the Communist lawyer Boris Max.

ANSWER: **Bigger** Thomas [or Bigger **Thomas**]

[10e] Bigger Thomas kills Mary Dalton and Bessie Mears in this 1940 novel by Richard Wright.

ANSWER: **Native Son**

[10h] This other author stated, “Bigger Thomas... is afraid, terribly afraid. But afraid of what? Of himself.”

This thinker analyzed Mayotte Capécia’s novel *I Am a Martinican Woman* in a book whose first chapter is titled “The Negro and Language.”

ANSWER: Frantz **Fanon** [or Frantz Omar **Fanon**; or Ibrahim Frantz **Fanon**] (The unnamed book is *Black Skin, White Masks*.)

<Michael Bentley, Literature - American - Long Fiction> ~20499~ <Editor: Chandler West>

8. James Tobin proposed a tax on these values to discourage short-term speculation. For 10 points each:

[10e] Name these values used to convert between international currencies. Many countries peg these values to the US dollar.

ANSWER: foreign **exchange rates** [accept **forex** rates]

[10m] A system developed at this international conference encouraged countries to peg their exchange rates to the price of gold. The IMF was created following this monetary conference named for a New Hampshire town.

ANSWER: **Bretton Woods** Conference [or **United Nations Monetary and Financial Conference**; accept the **Bretton Woods** system]

[10h] This theory predicts that the real exchange rate between any two currencies trends towards a constant in the long run. This alliterative theory is based on the idea that a consumer should have the same ability to buy a basket of goods anywhere in the world.

ANSWER: **purchasing power parity** theory [or **PPP** theory]

<Ethan Ashbrook, Social Science - Economics> ~20816~ <Editor: Athena Kern>

9. A Millennium Prize problem asks whether there always exists a smooth solution to these equations in 3D. For 10 points each:

[10e] Name this doubly eponymous set of partial differential equations whose description of the motion of viscous fluids is fundamental to fluid mechanics.

ANSWER: **Navier–Stokes** equations

[10h] This condition is modeled as a Dirichlet (“**DIH-rish-lay**”) boundary condition in the Navier–Stokes equations. Under this condition, a fluid has zero relative velocity along its boundary.

ANSWER: **no-slip** condition [accept answers such as **no-slipping**]

[10m] This phenomenon can be accurately described at the boundary of a fluid flow by the k-omega model. This phenomenon arises in a fluid flow when inertial forces dominate viscous forces.

ANSWER: **turbulence** [or **turbulent** flow; accept k-omega **turbulence** model]

<Benjamin Chapman, Science - Physics> ~20859~ <Editor: David Bass>

10. The mathematician Ibn al-Haytham worked for this ruler. For 10 points each:

[10h] Name this erratic ruler of the Fatimid Caliphate who destroyed the Church of the Holy Sepulchre and ordered all dogs in Egypt to be slaughtered. This “Mad Caliph” is venerated in the Druze religion.

ANSWER: al-**Hakim** bi-Amr Allah

[10e] To escape al-Hakim’s wrath, al-Haytham feigned madness after his plan to build one of these structures went awry. Al-Haytham’s project would have been located at Aswan, where one of these structures was built in the 1960s.

ANSWER: **dams** [accept more specific answers like embankment **dams**]

[10m] Al-Haytham’s treatise *Kitab al-Manazir* is a major medieval text in this scientific discipline. Isaac Newton’s book titled for this discipline presents a “corpuscular” theory of its central phenomenon.

ANSWER: **optics** [prompt on **physics**; prompt on the study of **light** or **sight**]

<Michael Bentley, History - World - Middle Eastern> ~19027~ <Editor: Jordan Brownstein>

11. A blunted knife blade is run through the teeth of old tools in these islands' genre of ripsaw music. For 10 points each:

[10h] Name these islands off whose coast John Glenn crash landed in *Friendship 7*. This British Overseas Territory north of Hispaniola comprises the Lucayan Archipelago with the Bahamas.

ANSWER: **Turks and Caicos** Islands [prompt on **TCI**]

[10e] The "Turks" in Turks and Caicos comes from a native cactus species whose cephalium resembles these hats. A Moroccan city names these red, cylindrical hats with a black tassel.

ANSWER: **fez** [accept **tarboosh**]

[10m] Salt Cay and Grand Turk are prime spots to watch these marine animals as they undertake the longest annual migration on Earth. These animals, which create elaborate "songs" in breeding season, are named for their curve while diving or small dorsal fins.

ANSWER: **humpback whales** [or **Megaptera novaeangliae**; prompt on **whales**; prompt on **baleen** whales]

<Ganon Evans, Geography - World> ~21152~ <Editor: Ganon Evans>

12. Answer the following about the collaborative poetic form of *renga*, for 10 points each.

[10e] The opening parts of *renga* developed into this other Japanese poetic form, whose three lines consist of five, seven, and five *morae* ("MORE-ay") respectively.

ANSWER: **haiku** [accept **hokku**]

[10h] The opening parts of *renga* were required to incorporate a type of word called a *kigo* that represented one of these things. "Kawazu," or "frog," is a word representing one of these things in a Bashō *haiku*.

ANSWER: **seasons** [or **kisetsu**; accept **season** word or **seasonal** word]

[10m] A verse form that combined features of the *tanka* and *renga*, called *tanrenga*, was popular during this period, whose flowering literary output included *The Tale of Genji*.

ANSWER: **Heian** ("HEY-an") period

<Joseph Krol, Literature - World and Miscellaneous> ~20251~ <Editor: Joseph Krol>

13. This condition caused a composer to get a long-haired dog the same color as his own hair to appease the women who would collect his cigarette butts. For 10 points each:

[10m] Name this condition Heinrich Heine defined as "veritable insanity" towards a Hungarian composer during an 1844 tour.

ANSWER: **Lisztomania** ("LIST-oh-mania") [or **Liszt Fever**]

[10h] In 1838, a young Clara Wieck ("VEEK") described how Liszt broke 3 brass strings while performing this composer's *Konzertstück in F minor*. This German composer's other pieces include the first concert waltz, his *Invitation to the Dance*.

ANSWER: Carl Maria von **Weber**

[10e] After his tumultuous tour, Liszt composed his *Liebesträume* ("LEE-biss-TROY-muh"), whose third song is one of these pieces in A-flat major. These pieces are inspired by the night.

ANSWER: **nocturnes** [or **Nocturne No. 3 in A flat Major**]

<Ganon Evans, Fine Arts - Music - Romantic> ~20901~ <Editor: Young Lee>

14. Richard Swinburne addressed paradoxes about this property by saying it extends to logical impossibilities.

For 10 points each:

[10e] Name this property of being all-powerful, which God is said to possess along with omniscience and omnipresence.

ANSWER: **omnipotence** [or word forms like **omnipotent**]

[10h] The standard omnipotence paradox is the “paradox of the stone,” which asks whether God can create a stone with this specific property.

ANSWER: being too **heavy** for **God** to **lift** [accept synonyms for any of the underlined portions; accept him or other personal pronouns in place of God; prompt on partial answers like being **heavy** or **unliftable**]

[10m] This thinker argued that God cannot bring about predicates incompatible with their subjects, such as a man being a donkey. The “argument from motion” is one of this thinker’s “five ways.”

ANSWER: Thomas **Aquinas** [or Tomasso d’**Aquino**; prompt on Saint **Thomas** or Doctor **Angelicus**]

<Jordan Brownstein, RMP - Philosophy> ~20128~ <Editor: Jordan Brownstein>

15. R’s “lm” function is used to perform this task via the ordinary least squares method. For 10 points each:

[10e] Name this task of fitting a statistical model that describes a response variable as a linear combination of explanatory variables and an intercept.

ANSWER: linear **regression** [or ordinary least squares **regression** or OLS **regression**; accept **regression analysis**]

[10m] Checking the fit of a regression model involves examining these values for Wald tests. To reject a null hypothesis, this quantity must be below the significance level, denoted alpha.

ANSWER: **p-values** [or **p-vals**; prompt on **p**]

[10h] This phenomenon can be checked for by plotting a scatterplot matrix of the explanatory variables and calculating variance inflation factors. This violation of the assumptions of linear regression arises when explanatory variables are correlated.

ANSWER: multicollinearity

<David Bass, Science - Math> ~21122~ <Editor: David Bass>

16. Answer the following about Lord Northcliffe, Britain’s press baron during World War I, for 10 points each.

[10e] Northcliffe’s *Daily Mail* popularized this derogatory term to refer to the Germans. Northcliffe cited a 1900 speech from Kaiser Wilhelm II comparing Germany to Attila, a leader of these people.

ANSWER: **Huns** [or **Hunni**; or **Ounnoi**]

[10h] *The Daily Mail* also popularized this marching song after a correspondent heard the Connaught (“KOH-nawt”) Rangers singing it. This song’s chorus declares, “Goodbye, Piccadilly, Farewell, Leicester (“LES-ter”) Square!”

ANSWER: “**It’s a Long Way to Tipperary**” [or “**It’s a Long, Long Way to Tipperary**”]

[10m] In 1915, Northcliffe blamed this man for not providing enough shells for British troops. A 1914 recruitment poster depicts this Field Marshal and Second Boer War hero pointing at the viewer.

ANSWER: Lord **Kitchener** [or Horatio Herbert **Kitchener**, 1st Earl Kitchener]

<Michael Bentley, History - European - 1900+> ~20055~ <Editor: Michael Bentley>

17. The mRNA in COVID-19 vaccines is identical to the viral spike protein's mRNA, minus a few minor differences. For 10 points each:

[10e] To limit immunogenicity, Pfizer and Moderna replaced every instance of this pyrimidine, the only nucleotide unique to RNA, with its *pseudo* derivative.

ANSWER: **uracil** [or **uridine**; or **U**]

[10m] To permit translation, the vaccine's mRNA is modified with a five-prime cap and, at the three-prime end, with this RNA sequence comprising thirty-ish copies of a single nucleotide.

ANSWER: **poly(A)** ("poly A") tail [or **poly-adenine** tail or **poly-adenylated** tail; prompt on **tail**; prompt on **A** or **adenine**]

[10h] Two codons for this amino acid were added to stabilize the translated vaccine spike protein in its pre-fusion configuration. This amino acid makes proteins rigid because its side chain bridges the alpha carbon and the amino nitrogen.

ANSWER: **proline** [or **P**; or **Pro**]

<Adam Silverman, Science - Biology> ~20372~ <Editor: Adam Silverman>

18. Andrea della Robbia sculpted swaddled babies against a blue background in examples of these artworks at the Ospedale degli Innocenti. For 10 points each:

[10h] Name these artworks like Fra Angelico's *Adoration of the Magi* which are typically small, circular paintings or reliefs.

ANSWER: **tondos** [or **tondi**; or **roundel**; prompt on **rondo**]

[10m] Tondi derived from painted Florentine "birth trays" in this non-circular shape. A drum of this shape connected by chains allowed Brunelleschi's dome for the Florence Cathedral to not require buttresses.

ANSWER: **octagon** [or word forms such as **octagonal**; prompt on having **eight sides**]

[10e] This artist's many tondi of the Madonna holding a pomegranate include one of her writing the Magnificat. A love goddess arises from a seashell in this artist's *The Birth of Venus*.

ANSWER: Sandro **Botticelli** [or Alessandro di Mariano di Vanni **Filipepi**; prompt on **Sandro** alone]

<Ganon Evans, Fine Arts - Painting - European to 1600> ~20830~ <Editor: Chandler West>

19. Answer the following about Francis Barber, a Jamaican servant to Samuel Johnson who became the chief beneficiary of his will, for 10 points each.

[10e] Barber began living with Johnson as the author finished one of these works for the English language that humorously defines a lexicographer as "a harmless drudge," among other definitions.

ANSWER: **dictionary** [accept *A **Dictionary** of the English Language*]

[10m] Tobias Smollett helped release Barber from this organization. C. S. Forester's character Horatio Hornblower serves in this organization.

ANSWER: Royal **Navy** [or **RN**; accept the English or British **Navy**; accept the **Senior Service**]

[10h] Johnson refused to assign demeaning tasks to Barber, such as sending him to the market to buy this food for Johnson's spoiled cat Hodge. These food items form a line and follow the title characters of *The Walrus and the Carpenter* before being eaten.

ANSWER: **oysters** [prompt on **mollusks** or **bivalves**]

<Ganon Evans, Literature - British - Other> ~20821~ <Editor: Jaimie Carlson>

20. At the Compitalia festival, celebrated right after Saturnalia, pigs and honey-cakes were dedicated to some of these deities guarding Rome. For 10 points each:

[10h] Name these local guardian deities, including the Augusti and the Familiares. These gods were represented by small dancing male figures, and are often paired with the Penates (“peh-NAH-tayz”).

ANSWER: **Lares** (“LAH-res”)[be lenient on pronunciation; prompt on, but otherwise do not mention, household gods]

[10m] The Lares were guardians of this place, which for Romans, might include an *impluvium* and a *triclinium*. Brownies and domovoi are also guardians of this type of place.

ANSWER: **household** [or **home**; accept **domus**; accept obvious synonyms such as **domicile**; prompt on more specific rooms in the home like **hearth** or **kitchen** with “Can you be less specific?”]

[10e] This Roman goddess of the hearth and home corresponded to the Greek Hestia. The namesake “Virgins” dedicated to this goddess had to keep a flame constantly burning.

ANSWER: **Vesta** [accept **Vestal** Virgins; reject “Hestia”]

<Jaimie Carlson, RMP - Greco-Roman Mythology> ~20944~ <Editor: Jaimie Carlson>

21. The Mongols danced on a wooden platform above soldiers of these people and the Rus after the Battle of Kalka River. For 10 points each:

[10h] Name these Turkic nomads who wore masked helmets with mustaches and created a confederation with the Kipchaks. Bela IV’s invitation of these people to Hungary justified the Mongol invasion of Europe.

ANSWER: **Cumans** [accept **Polovtsy** or **Polovtsians**]

[10m] During this 1258 event, the Mongols supposedly used books from the House of Wisdom as a bridge over a blackened river and ordered al-Musta’sim to be rolled in a carpet and trampled by horses.

ANSWER: **sack** of **Baghdad** [or **siege** of **Baghdad**; accept answers indicating the **fall** of **Baghdad** to Hulagu Khan in 1258; prompt on Mongol **invasion** of **Abbasid** caliphate]

[10e] Many bloody Mongol punishments are detailed in one of these texts called the Yassa. Other texts of this type include a “Salic” one compiled by Clovis and a “civil” one compiled by Napoleon.

ANSWER: law **codes** [or **laws**; accept synonyms like **legal** systems or **statutes**; accept Salic **law** or civil **law**]

<Ganon Evans, History - World - Miscellaneous> ~21285~ <Editor: Jordan Brownstein>