



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 02 - Tossups

1. This poet addressed the line “Nights of insult let you pass / Watched by every human love” to a lover who is told, “Rest your sleeping head, my love, / Human on my faithless arm.” In one work by this poet, a narrator “looking up at the stars” resolves, “If equal affection cannot be, / Let the more loving one be me.” This poet of “Lullaby” described people made “of Eros and of dust” who are “children afraid of the night.” In one work, this poet orders (*) “prevent the dog from barking with a juicy bone” and “stop all the clocks, cut off the telephone.” This poet proclaimed “We must love one another or die” in a poem set on the outbreak of World War II. For 10 points, name this poet of “Funeral Blues” and “September 1, 1939.”

ANSWER: W. H. Auden [or Wystan Hugh Auden]

<Yingzhi Nyang, Literature - British - Poetry> ~25766~ <Editor: Jaimie Carlson>

2. Eric Hebborn closely studied a 15th century handbook for people in this profession written by Cennino Cennini (“che-NEE-no che-NEE-nee”). The Sobey Foundation awards an annual prize to a young person in this profession. This profession was overseen and patronized by the Guild of Saint Luke in Early Modern Europe. A 2013 Penn and Teller documentary explored the Hockney–Falco hypothesis about how a Dutch person in this profession worked. In the early 14th century, (*) Italians working in this profession had largely switched from egg-based to linseed-based materials. The majority of *The Lives* contains biographies of these people collected by Giorgio Vasari. For 10 points, name this profession of people such as Johannes Vermeer and Leonardo da Vinci.

ANSWER: artist [accept painters or sculptors or illustrators; accept art forger until “Guild” is read]

<Michael Bentley, Fine Arts - Painting - Misc> ~25055~ <Editor: Chandler West>

3. Barry Sharpless popularized an effect named for this compound and the word “on,” in which chemical reactions happen faster at interfaces. This compound is emulsified with mineral oil to form microfluidic droplets. Partition coefficients are measured using a mixture of this compound and octanol. This compound has a large contact angle with surfaces that are coated in PTFE to make them (*) lipophilic (“LIE-poh-fill-ick”). This compound is excluded from the center of a micelle (“MY-sell”) and between the leaflets of a bi-layer since it prefers to interact with surfactants’ head groups. Long chains of hydrocarbons are said to “fear” this compound, as its hydrogen bond network only dissolves polar molecules. For 10 points, name this universal solvent that forms aqueous phases.

ANSWER: water [or H2O]

<Adam Silverman, Science - Chemistry> ~25161~ <Editor: Adam Silverman>

4. These events lend their name to a raisin-filled cake that people in Hartford, Connecticut prepared for them. In Britain, these events typically took place one day after the construction of a hustings, and their boozy nature is highlighted in some “Humors” by William Hogarth. Until 1984, Australia’s indigenous population was exempt from a law making participation in these events mandatory. The Chartists demanded that these events take place (*) annually. Australia pioneered the practice of using paper to conduct these events in secret. Greater participation in these events was secured through the three Reform Acts in the UK, the first of which eliminated Rotten Boroughs. For 10 points, name these events where people cast ballots.

ANSWER: elections [accept votes or voting or presidential elections or parliamentary elections or primaries or going to the polls; accept casting ballots before end; prompt on just polls]
<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~25100~ <Editor: Michael Bentley>

5. One section of a book titled for this place describes the impact of “King Sugar and Other Agricultural Monarchs.” A book by Antonio Pigafetta exemplifies the “outsize reality” of this place per the 1982 Nobel Prize for Literature lecture, which describes its isolation. Eduardo Galeano (“gah-lay-AH-no”) wrote a book about this place’s “Open Veins.” The start of a movement named for this place has been dated both to the publication of a novel with a “Table of Instructions” titled (*) *Hopscotch* and to the publication of *The Time of the Hero*. The name of that movement referenced an “explosion” in the reputation of authors from this transnational region like Julio Cortázar. For 10 points, a 1960s literary “Boom” is named after what large region home to many Spanish-speaking authors?

ANSWER: Latin America [or América Latina; accept Latin American Boom or Boom latinoamericano; accept *Open Veins of Latin America* or *Las venas abiertas de América Latina*; accept *The Solitude of Latin America*; prompt on the Americas]
<Joseph Krol, Literature - World and Miscellaneous> ~25911~ <Editor: Joseph Krol>

6. In her memoirs, a princess of this empire recounted her father pranking the court jester Asas by sending him an extremely heavy gold coin. A later ruler of this empire later asked that princess, Gulbadan, to tell her life to his court historian, Abul Faz’l. A likely bisexual ruler of this empire described falling in love with a boy at a market in memoirs translated from Chagatai Turkic into (*) Persian. Another ruler of this empire styled himself as “Conqueror of the World,” or *Alamgir*, and reinstated the *jizya*. After being driven out of his homeland in the Ferghana Valley, the first ruler of this empire defeated Ibrahim Lodi at the Battle of Panipat. For 10 points, the *Baburnama* is a history of what empire, whose other rulers included Akbar?

ANSWER: Mughal Empire [or Mogul Empire; or Gurkiniya; or Gurkani]
<Hari Parameswaran, History - World - Asian> ~24032~ <Editor: Jordan Brownstein>

7. A pop psychology book titled for these people argues that societal communication failures led to the death of Sandra Bland. That 2019 book by Malcolm Gladwell is titled “Talking to” these people. One of these people talks with a parent and then is left alone with an infant in a procedure used to study attachment. That procedure designed by Mary Ainsworth generates a (*) “situation” involving these people. When these people are repeatedly observed but not interacted with, they become “familiar,” according to Stanley Milgram. During a 1980s moral panic, a rhyming phrase about these people downplayed the higher risk of family members abusing children and played up their “danger.” For 10 points, name these people whose identity you do not know.

ANSWER: strangers [accept familiar strangers or stranger danger; accept *Talking to Strangers*; accept strange situation; prompt on descriptive answers like people you don’t know or non-parents or non-caregivers]
<Michael Bentley, Social Science - Psychology> ~23566~ <Editor: Athena Kern>

8. Women living along this river collect and sell green algae used to make *kaipen*. A region of this river called the “4,000 islands” is created by the widest waterfall in the world, Khone Falls. This river’s Xayaburi (“sigh-ya-BOO-ree”) dam will include “fish elevators” to help movement of a giant catfish named for it. The confluence of this river with the Ruak forms the drug-producing (*) Golden Triangle. This river meets the Nam Khan at the monastic city of Luang Prabang. This river flows past the Tonlé Sap lake and through Vientiane (“vee-en-chan”) and Phnom Penh (“puh-NAHM PEN”) before meeting the South China Sea near Ho Chi Minh City. The border between Laos and Thailand is established along, for 10 points, what major Southeast Asian river?

ANSWER: Mekong River [or Méigōng Hé or Láncāng Jiāng or Megaung Myit or Maenam Khong or Tônlé Mékôngk or Sông Mê Kông or Sông Cửu Long]

<Yingzhi Nyang, Geography - World> ~25575~ <Editor: Ganon Evans>

9. At the premiere of this opera, the audience chanted the name “Paisiello” (“pie-ee-SYEL-oh”) in support of another composer’s adaptation of the same play. The trio “Zitti, zitti, piano, piano” is sung in this opera by characters planning to escape a house using a ladder. A woman in this opera blames a gasp of recognition on a foot cramp after her love interest disguises himself as Don Alonso to give her a music lesson. A woman in this opera warns that she will be a “viper” against anyone who prevents her pursuit of the poor student (*) Lindoro in the aria “Una voce poco fa.” A baritone in this opera sings his name over and over again in the aria “Largo al factotum” to brag about his popularity. For 10 points, name this Rossini opera buffa in which Count Almaviva’s pursuit of Rosina is aided by Figaro.

ANSWER: *The Barber of Seville* [or *Il Barbiere di Siviglia*; accept *Almaviva*, or the *Futile Precaution* or *Almaviva*, or the *Useless Precaution* or *Almaviva, o sia L’inutile Precauzione*]

<Tora Husar, Fine Arts - Opera> ~25714~ <Editor: Young Lee>

10. This figure is frequently depicted in art alongside Brother Leo, who was present when this figure saw a seraph on the mountain of La Verna. After being told to “lie down with the pigs,” this figure secured a second audience with the pope while covered in swine feces. Many of the *Fioretti* or legends about this figure discuss how he saved the city of (*) Gubbio by talking to a wolf that was terrorizing it. After receiving a pardon at a chapel established by this figure in Porziuncola, one woman established the Order of Poor Clares. This figure received the stigmata in 1224 and established a religious order that required friars to beg for food. For 10 points, name this patron saint of Italy, a native of Assisi who inspired the name of the current Pope.

ANSWER: Saint Francis of Assisi [or Franciscus Asisensis; or Francesco; or Giovanni di Pietro di Bernardone; prompt on Giovanni]

<Michael Bentley, RMP - Christian Practice> ~25411~ <Editor: Athena Kern>

11. Three pairs of cardinal points are employed in an approach to optics named for this scientist that relies on the paraxial approximation. This scientist names light beams whose shapes are entirely determined by beam waist. This inventor of the magnetometer also names closed surfaces through which the (*) flux of a vector field is calculated. A law named for this scientist states that the divergence of the B-field equals zero, which implies that magnetic monopoles cannot exist. The electric flux through the boundary of a region of space equals the enclosed charge divided by epsilon-naught, according to this scientist’s namesake law. For 10 points, name this German polymath who names two of Maxwell’s equations.

ANSWER: Carl Friedrich Gauss [or Johann Carl Friedrich Gauss; accept Gaussian optics or Gaussian beams or Gaussian surfaces or Gauss’ Law of Magnetism]

<Lalit Maharjan, Science - Physics> ~24930~ <Editor: David Bass>

12. A sculpture named for one of these things is bound by turquoise serpents and represents one of these things with a glyph for “movement.” Four gods representing the cardinal directions created the first of these things after defeating a crocodile with mouths on its knees. The end of one of these things occurred after greedy humans were turned into monkeys and blown away in a hurricane. After one of these things is hit with a stone club, (*) jaguars eat humanity. In one story, Nanahuatzin (“nana-WHA-tzin”) becomes one of these things after Tecuciztecatl (“tec-coo-sis-tec-attle”) is too scared to jump into a bonfire. Human sacrifices were made to Huitzilopochtli (“WEET-see-luh-POACH-tee”) to prevent this thing from going black. For 10 points, the Aztecs believed they lived under the fifth cycle of what celestial object, which titles a Mexica "Stone"?
ANSWER: sun [or sun stone; prompt on star; prompt on celestial body or celestial objects until end]
<Lalit Maharjan, RMP - World Mythology> ~24931~ <Editor: Jaimie Carlson>

13. In *The Canterbury Tales*, the Wife of Bath reads the works of a legendary member of this profession either known as Trotula or Trota. In the early modern era, people in this profession without formal training were called “empirics.” In the Middle Ages, people in this profession often consulted a book that listed more than 600 plants by Dioscorides. A rival “chemical” branch of people in this profession followed Paracelsus and Andreas (*) Vesalius in rejecting the outdated teachings of Galen. Starting in the 14th century, members of this profession carried around dried flowers and herbs and wore a beak-shaped mask to ward off evil “miasmas.” For 10 points, give this profession whose members still follow an oath attributed to Hippocrates.
ANSWER: doctors [or surgeons; or healers; or anatomists; or medicine or medical practitioners; accept gynecologist; accept midwifery on the basis that the distinction between these fields was thin in the Middle Ages and Trotula is also recorded as a midwife; prompt on herbalists]
<Hari Parameswaran, History - European - Middle Ages> ~22500~ <Editor: Michael Bentley>

14. A poet who wrote in this language left many works as loose manuscripts in a trunk after his 1935 death, and was the subject of a 2021 biography by Richard Zenith. That poet who primarily used this language used the pseudonym Alexander Search and wrote *The Book of Disquiet* under another of his “heteronyms.” An epic written in this language describes a monstrous personification of a cape called (*) Adamastor, whom its protagonist meets on a voyage of exploration. One author used this language for a novel in which the Doctor’s Wife does not succumb to the title epidemic, as well as for a novel inspired by this language’s poet Fernando Pessoa. For 10 points, name this language used by Luís de Camões (“loo-EES day cam-OYSH”) and the author of *Blindness*, José Saramago.
ANSWER: Portuguese [or português or lingua portuguesa]
<Joseph Krol, Literature - European - Other> ~25032~ <Editor: Joseph Krol>

15. According to the *Records of Ancient Matters*, this activity was first performed by a god of thunder and a god of agriculture during a dispute over land ownership. A Hawaiian named Chad Rowan began an era of foreign dominance of this activity. A war fan is used by participants in this activity to call out offenses, which are called “forbidden hand.” Stablemasters bestow new names on people engaging in this activity such as (*) Hakuho, one of its many Mongolian champions. This activity is often preceded by rituals like stomping one leg on the ground multiple times or throwing salt into the *dohyo*, a ring on the ground that acts as a boundary. For 10 points, *yokozuna* are the highest-ranking athletes in what form of Japanese wrestling?
ANSWER: sumo wrestling [or ozumo; accept sumai; prompt on wrestling before end]
<Chauncey Lo, Other - Other Academic and General Knowledge> ~21087~ <Editor: Michael Bentley>

16. The durability of devices that reduce this quantity is rated by the L10 life. Reduction in this quantity due to a thin viscous fluid film with no pressure gradient in the z-direction is described by the Reynolds equation. A device that effectively reduces this quantity transmits a load to a series of spheres rotating between static and moving races. Molybdenum disulfide and (*) graphite are used as dry powders to reduce this quantity instead of fluorinated polymers like Teflon. Synovial fluid reduces this quantity in the body. Mechanical or fluid bearings reduce the rolling or sliding forms of this quantity to prevent energy being lost as heat when two solids rub against each other. For 10 points, lubricants reduce what “coefficient?”

ANSWER: coefficient of friction [accept coefficient of static friction or coefficient of kinetic friction or friction force; prompt on mu]

<Adam Silverman, Science - Engineering and Miscellaneous> ~25400~ <Editor: David Bass>

17. This person, the son of an antiwar Minnesota Congressman, earned one nickname during a 1926 snowstorm while working as a contract mail deliverer. John Knoll may have been the “Cemetery John” who received 50,000 dollars raised by this person. This person’s relief efforts in the 1931 China floods are recounted in *North to the Orient*, a book by his wife Anne Morrow. FDR quipped that a speech “could not have been better put if it had been written by (*) Goebbels himself” when delivered by this spokesman of the America First Committee. While this man was asleep in East Amwell, New Jersey on March 1st, 1932, Richard Hauptmann probably abducted his infant son. For 10 points, name this antisemite who crossed the Atlantic in the *Spirit of St. Louis*.

ANSWER: Charles Lindbergh [or Charles Augustus Lindbergh; prompt on Lucky Lindy]

<Michael Bentley, History - American - 1865-1945> ~24804~ <Editor: Michael Bentley>

18. This poem debates “how there can be a mean man or an infidel” in a section that asks “What blurt is this about virtue and about vice?” This long poem was first given a title in the “Deathbed” edition of the collection which contains it. In this poem, an “unseen hand... descended trembling” upon twenty eight male bathers. This poem’s “untranslatable” speaker sounds a “barbaric (*) yawp over the rooftops of the world.” Answers like “the handkerchief of the Lord” are provided to a child’s question in this poem of “What is the grass?” This poem’s speaker asks “Do I contradict myself?” and responds “I am large, and contain multitudes.” For 10 points, name this poem, the longest from *Leaves of Grass*, in which Walt Whitman “celebrates” himself.

ANSWER: “Song of Myself”

<Ganon Evans, Literature - American - Poetry> ~25742~ <Editor: Chandler West>

19. In a song by this composer, two trilling flutes represent a pair of larks rising into the sky before the soprano asks, “Is this perhaps death?” This composer wrote “IN MEMORIAM” in the score above the cellos and double basses quoting the funeral march from the *Eroica Symphony* near the end of a piece scored for 23 solo strings. In his 80s, this composer wrote “Im Abendrot,” the final piece in his *Four Last Songs*, as well as (*) *Metamorphosen*. A tone poem by this composer begins with a motif often called the “nature” or “world riddle” theme, which consists of the rising notes C G C. That tone poem by this composer was inspired by a book of the same title by Friedrich Nietzsche. For 10 points, name this German composer of *Also Sprach Zarathustra*.

ANSWER: Richard Strauss [or Richard Georg Strauss]

<Jonathan Magin, Fine Arts - Music - 1900 to 1970> ~23727~ <Editor: Michael Bentley>

20. The mammalian diving reflex causes this organ to contract more than 20 percent in volume. Macrophages in this organ phagocytose (“FAY-goh-SIGH-toes”) pneumo·cocci and other encapsulated bacteria. The majority of the body’s IgM (“I-G-M”) is made in this organ rather than at a germinal center. This organ is the body’s reservoir of iron before hematopoiesis (“huh-MAT-oh-poh-EE-sis”), which occurs both here and in the bone marrow. After 120 days of circulation, sickled or old (*) erythrocytes get stuck in this organ’s cords. Mononucleosis causes this organ to enlarge until it ruptures or is surgically removed. This organ’s marginal zone divides red and white blood cells into two colored pulps. For 10 points, name this large organ of the lymphatic system found in the upper left abdomen.

ANSWER: **spleen**

<Adam Silverman, Science - Biology> ~25339~ <Editor: Adam Silverman>

21. *Description acceptable.* During this conflict, junior officers staged a mutiny at the Cienfuegos Naval Base. During this conflict, foothills were scouted out by *escopeteros*, some of whom later joined the Escambray Rebellion. Several dozen fighters were transported to this conflict by a yacht called the *Granma*. A doctor from Argentina joined this conflict’s (*) 26th of July Movement as they were being trained by Albert Bayo, who earlier led Republican forces in a separate conflict. After a failed attack on the Moncada Barracks, a leader in this conflict declared, “history will absolve me.” During this conflict, Fulgencio Batista was deposed by a force that included Che Guevara. For 10 points, name this conflict that led to a regime change on an island country south of Florida.

ANSWER: **Cuban Revolution** [accept any answer describing Fidel **Castro overthrowing** Bautista or Fidel **Castro taking control** of Cuba]

<Lalit Maharjan, History - World - Latin American> ~25875~ <Editor: Jordan Brownstein>

NSC 2023 - Round 02 - Bonuses

1. The first movement of this piece opens with the violins playing a descending F-sharp minor arpeggio. For 10 points each:

[10m] Name this symphony whose final movement consists of a *Presto* section followed by a long *Adagio* coda in which the musicians snuff out candles as they drop out of the orchestra.

ANSWER: ***Farewell* Symphony** [accept, but DO NOT REVEAL, **Haydn**'s ***Symphony* No. 45**; prompt on partial answers]

[10e] This composer wrote the *Farewell Symphony* to convince his patron, Prince Esterházy, to allow his musicians to return home. Other symphonies by this composer include *London* and *Surprise*.

ANSWER: Joseph **Haydn** [or Franz Joseph **Haydn**]

[10h] After the first oboe and second horn, this instrument is the next to leave in the final movement of Haydn's *Farewell Symphony*. Thaddäus von Dürnitz may have been the dedicatee of Mozart's only surviving concerto for this instrument, which is in B-flat major.

ANSWER: **bassoon** [or **fagotto**]

<Steven Yuan, Fine Arts - Music - Classical> ~20681~ <Editor: Young Lee>

2. This author referenced the novel *The Hound of the Baskervilles* with the name of his protagonist William of Baskerville, who investigates the deaths of several monks. For 10 points each:

[10e] Name this Italian author of the murder mystery novel *The Name of the Rose*.

ANSWER: Umberto **Eco** ("um-BAIR-toh EH-koh")

[10h] This Eco novel pastiches locked-room detective stories with its depiction of the death of Frederick Barbarossa. This novel's title character is a peasant who travels through medieval Europe to the land of Prester John.

ANSWER: ***Baudolino*** ("BAO-doh-LEE-noh")

[10m] Baudolino's journeys themselves pastiche this literary genre, which consists of linked episodes in the life of a lovable rogue. The archetypal novel in this genre is *Lazarillo de Tormes* ("laz-ah-REE-oh day TOR-mez").

ANSWER: **picaresque** novel [or **picaresques**]

<Joseph Krol, Literature - European - Long Fiction> ~20120~ <Editor: Joseph Krol>

3. Answer the following about the Confederate brigadier general States Rights Gist, for 10 points each.

[10m] Gist was so named as a tribute to John C. Calhoun in the early days of this 1830s "Crisis," in which state officials attempted to render federal tariffs void within South Carolina.

ANSWER: **nullification** crisis

[10e] As South Carolina's state inspector general, Gist helped secure arms in the run-up to an 1861 attack on this Charleston fort, which began the Civil War.

ANSWER: Fort **Sumter**

[10h] After the Chattanooga campaign, Gist was assigned to keep an eye on this major general after he spent much of the campaign drunk. Alongside Joseph Lane, this man was nominated for one position by "bolters" led by William Yancey.

ANSWER: John C. **Breckinridge** [or John Cabell **Breckinridge**]

<Joseph Krol, History - American - Pre-1865> ~20529~ <Editor: Michael Bentley>

4. Answer the following about mechanisms by which immune cells kill pathogens, for 10 points each.

[10e] Macrophages digest bacteria in a phagosome (“**FAY-goh-soam**”) where this quantity is low enough to denature proteins. Most bacteria prefer this quantity to be slightly alkaline.

ANSWER: **pH** [or **power of hydrogen**; prompt on **acidity**]

[10m] Neutrophils kill phagocytosed bacteria by reacting this compound with oxygen to generate free radicals. Cells use this electron carrier for anabolic reactions like photosynthesis, but prefer a derivative with one fewer phosphate for catabolism.

ANSWER: **NADPH** [or **NADP+**; or **nicotinamide adenine dinucleotide phosphate**; reject “NAD” or “NADH” or “nicotinamide adenine dinucleotide”]

[10h] Cytotoxic T cells kill their targets by secreting this protein, which pokes holes in target cell membranes to let in pro-apoptotic proteases called granzymes.

ANSWER: **perforin**

<Adam Silverman, Science - Biology> ~20885~ <Editor: Adam Silverman>

5. This author assured the title addressees, “The whole world shares your tears / Some for two nights or one / And some for all their years” in his poem “All You Who Sleep Tonight.” For 10 points each:

[10m] Name this author, who wrote about Lata Mehra’s pressure to marry based on her mother’s wishes in his enormous novel *A Suitable Boy*.

ANSWER: Vikram **Seth** (“**sate**”)

[10e] The contents page of *A Suitable Boy* is written in these poetic stanzas, which consist of two lines.

ANSWER: **couplets**

[10h] Poetry is also incorporated into Seth’s debut novel *The Golden Gate*, whose male protagonist has this full name. In an earlier song, a historical figure with this full name “has gone to be a soldier in the army of the Lord.”

ANSWER: **John Brown** [prompt on partial answer]

<Tim Morrison, Literature - World and Miscellaneous> ~11887~ <Editor: Joseph Krol>

6. *Description acceptable.* After dying in this manner, a man is turned into a flower whose petals are inscribed with the lament “AI AI.” For 10 points each:

[10h] Name this specific cause of death of King Acrisius. The jealousy of Zephyrus causes Hyacinthus to die in this manner.

ANSWER: hit in the head with a **discus** [accept answers indicating that someone is hit with a **discus**; prompt on being **hit** or **struck** without specifically mentioning a discus]

[10e] When he hit Acrisius with a discus, this rescuer of Andromeda fulfills the prophecy that he would kill his grandfather, which caused his mother Danaë to be set adrift.

ANSWER: **Perseus**

[10m] After Hyacinthus is killed by a discus, Apollo gives him a chariot pulled by these animals. Zeus takes the form of one of these animals to rape a woman, leading to the birth of Castor and Pollux.

ANSWER: **swan** [prompt on **bird**] (The woman was Leda.)

<Jaimie Carlson, RMP - Greco-Roman Mythology> ~20946~ <Editor: Jaimie Carlson>

7. Glue, paper, and scissors ready. You make one of these surfaces by cutting out a strip of paper, giving it a half-twist, and gluing its ends together. For 10 points each:

[10e] Name these non-orientable one-sided surfaces, two of which can be theoretically “glued” together to make a Klein bottle.

ANSWER: **Möbius strip** [or **Möbius band** or **Möbius loop**]

[10m] You glue together two manifolds by their cobordism, a manifold for which this set is the disjoint union of the two manifolds. By definition, a closed set contains its corresponding set of this type.

ANSWER: **boundary set** [or **boundaries**; accept set of **boundary points**] (The root of “cobordism” is “bord,” the French word for “boundary.”)

[10h] Your cobordism has this property that the Heine–Borel theorem equates with closure and boundedness in R^n . Every open cover of a space with this property admits a finite subcover.

ANSWER: **compactness** [accept topological **compactness**]

<Steven Yuan, Science - Math> ~20455~ <Editor: David Bass>

8. In the book *The Mask of Benevolence*, Harlan Lane decried these devices as “symbolic objects” used to colonize bodies. For 10 points each:

[10e] Name these devices that amplify sound to make up for damaged hair cells in the ear. These devices perform a similar task to cochlear implants.

ANSWER: **hearing aids** [or or **deaf aids**; accept **PSAPs** or **personal sound amplification products**]

[10h] Deaf advocates criticize forced hearing aids in the modern application of this method of deaf education that stresses lip-reading and the adoption of auditory speech in place of manual signing. This method of education was supported by Horace Mann and Alexander Graham Bell.

ANSWER: **oralism**

[10m] One of the first Deaf psychologists, Roger Falberg, threw out his hearing aid while at this school. This manualist school in Washington, D.C. is the only university fully dedicated to deaf education.

ANSWER: **Gallaudet University**

<Ganon Evans, Social Science - Other> ~20824~ <Editor: Athena Kern>

9. During this period, more British people died in car accidents due to nighttime blackout policies than in combat. For 10 points each:

[10h] Name this eight-month period at the start of World War II when very few operations took place on the Western Front.

ANSWER: **Phony War** [or **Drôle de guerre** or **Drôle de guerre**; reject “The Blitz”]

[10e] This British Prime Minister’s government fell near the end of the Phony War. This Prime Minister is wrongly held to have secured “Peace for our time” with the Munich Agreement.

ANSWER: Neville **Chamberlain** [or Arthur Neville **Chamberlain**]

[10m] During the Phony War, France launched an offensive into the Saarland, a territory that was ruled as one of these polities starting in 1920. The French government also controlled one of these polities named for Syria and Lebanon.

ANSWER: League of Nations **mandate** [or **Mandat**; accept Class A **Mandate**]

<Michael Bentley, History - European - 1900+> ~19800~ <Editor: Michael Bentley>

10. Vermont's Bennington Museum contains the largest collection of paintings by this artist, who used glitter to illustrate snow in her many scenes of *Sugaring Off*. For 10 points each:

[10m] Name this American folk artist of rural landscapes who began painting at age 78.

ANSWER: Grandma **Moses** [or Anna Mary Robertson **Moses**]

[10h] Winter scenes by Grandma Moses and George Durrie were published by this company along with a mass-produced print of Central Park skating. This lithograph company named for its two founders published the racist *Darktown Comics*.

ANSWER: **Currier and Ives**

[10e] Grandma Moses created many winter scenes depicting children chasing these animals. A large cooked dish of this animal is lowered onto a table in Norman Rockwell's painting of a holiday meal, *Freedom from Want*.

ANSWER: **turkey** [accept *Catching the Turkey*]

<Ganon Evans, Fine Arts - Painting - U.S. to 1945> ~20470~ <Editor: Chandler West>

11. In 1982, IUPAC ("eye-you-pack") amended its definition of this state to use metric instead of imperial units. For 10 points each:

[10m] Name this reference state which is now defined to occur at 273.15 Kelvin and one bar. Consequently, a mole of ideal gas at this state now has a volume of 22.7 liters, not 22.4.

ANSWER: **standard temperature and pressure** [or **STP**; reject "thermodynamic standard state"]

[10e] On the Celsius scale, STP occurs at this temperature, the freezing point of water.

ANSWER: **zero** degrees Celsius [or **0** degrees centigrade]

[10h] The second of these quantities is a good estimate for the difference in molar volume between a real gas and an ideal gas at STP. These quantities are symbolized capital B and multiply powers of volume in a non-ideal gas law.

ANSWER: **virial coefficients** [or **coefficients** of the **virial** equation equation of state; prompt on **coefficients**; prompt on **virial** law or **virial** equation of state or **virial**]

<Adam Silverman, Science - Chemistry> ~20760~ <Editor: Adam Silverman>

12. Susan Sontag called this exhibition "the last sigh of the Whitmanesque erotic embrace of the nation" in her book-length essay *On Photography*. For 10 points each:

[10h] Name this large exhibition of world photography curated by Edward Steichen that opened at the MoMA in 1955. Its name comes from a line in a poem by Carl Sandburg.

ANSWER: *The **Family of Man***

[10m] In *On Photography*, Sontag compares *The Family of Man* to a retrospective of this photographer's works depicting "freaks." This artist's photograph of identical twin sisters in New Jersey inspired a scene in the film *The Shining*.

ANSWER: Diane **Arbus**

[10e] Sontag's list of "freaks" in Arbus's works includes a "Jewish giant" living with his parents in this city, which is also the setting of Arbus's photograph of a child with a toy hand grenade in Central Park.

ANSWER: **New York** City [or **NYC**]

<Steven Yuan, Fine Arts - Photography> ~20682~ <Editor: Young Lee>

13. The Tayba Foundation is an American nonprofit that offers da'wah programs and establishes ministries in these locations. For 10 points each:

[10m] Name these locations where 80% of religious conversions are to Islam. John Bembry introduced Malcolm X to the Nation of Islam in one of these locations.

ANSWER: **prisons** [or **jails**; or **penitentiaries**; accept **correctional** facilities; accept **penal** facilities; accept **detention** centers]

[10e] Between 2017 and 2019, 64 religious freedom cases filed by Muslims in prison concerned dietary needs, such as not having alternatives for this “unclean” and *haram* red meat.

ANSWER: **pork** [accept **pig** meat; accept **bacon**]

[10h] Converts to the Nation of Islam may learn about Elijah Muhammad’s vision of the “Mother Plane,” a UFO that is similar to this prophet’s description of the Throne of God. Merkabah studies this prophet.

ANSWER: **Ezekiel** [or **Ezechiel**]

<Ganon Evans, RMP - Islam> ~20237~ <Editor: Athena Kern>

14. Caroline B. Dow offered to pay for this author’s education at Vassar. For 10 points each:

[10m] Name this author who described how “All I could see from where I stood / Was three long mountains and a wood” in her poem “Renascence.”

ANSWER: Edna St. Vincent **Millay**

[10h] The speaker of “Renascence” describes how this concept “Came down and settled over me” after she screams. This concept is held “in the palm of your hand” in a William Blake poem.

ANSWER: **infinity** [or word forms like the **Infinite**]

[10e] While Millay described “three long mountains and a wood” in “Renascence,” this author began his poem “The Road Not Taken” by stating “Two roads diverged in a yellow wood.”

ANSWER: Robert **Frost**

<Yingzhi Nyang, Literature - American - Poetry> ~19862~ <Editor: Chandler West>

15. An item found at this site in the 1960s was originally thought to be a door pivot, but has more recently been linked to the native Dorset peoples. For 10 points each:

[10h] Name this North American archaeological site excavated by the Ingstads. One people established a trade relationship with the “Skraeling” at this UNESCO World Heritage site.

ANSWER: **L’Anse aux Meadows** (“LAN-see-meadows”) [prompt on **Newfoundland** or **Vinland**]

[10e] A cloak pin partly made of this material proved European settlement at L’Anse aux Meadows. The Moche used this alloy of copper and tin, which names an “age” beginning around 3000 BCE.

ANSWER: **bronze** [accept **Bronze** Age]

[10m] Another example of pre-Columbian contact is this South American crop, which spread to Polynesia before the arrival of Europeans. In New Zealand, this starchy crop could be cultivated in lands that taro could not.

ANSWER: **sweet potato** [or **Ipomoea batatas**; accept **yams** due to the interchangeability of that term; reject “potato”]

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~20594~ <Editor: Michael Bentley>

16. In 2022, a team led by Ashutosh Kotwal reported a mass for these particles with a seven-sigma discrepancy from the accepted value. For 10 points each:

[10m] Name these particles. The intermediate vector bosons comprise the Z boson and the “plus” and “minus” types of these particles.

ANSWER: **W** bosons [accept **W-plus** boson or **W-minus** boson]

[10e] As their name suggests, W bosons are gauge bosons of this short-range fundamental interaction that gives rise to beta decay.

ANSWER: **weak** interaction [or **weak** force or **weak** nuclear force]

[10h] The unexpected measurement of the W bosons’ mass was based on data measured over a decade earlier at this circular particle collider. This Fermilab collider was the world’s highest-energy collider prior to the construction of the LHC.

ANSWER: **Tevatron**

<Joseph Krol, Science - Physics> ~20507~ <Editor: David Bass>

17. This thinker’s name is humorously used as a verb meaning, “To deny resolutely the existence...of something real or significant.” For 10 points each:

[10h] Name this philosopher whose surname is also used in recreational computing thanks to Douglas Hofstadter, who defined it as a phrase in quotes followed by the phrase itself.

ANSWER: Willard Van Orman **Quine** [accept **quining**]

[10e] “Quining” is used to argue that a paradox named for this action doesn’t derive from direct self-reference. That paradox is created by claiming to be performing this act of false assertion.

ANSWER: **lying** [or **liar**’s paradox; accept word forms such as being a **liar**; accept synonyms such as **fibbing**]

[10m] In the first sense of “quining,” Quine “quined” this field in a paper titled for it “Naturalized.” Since 1963, much work in this field has focused on Gettier problems.

ANSWER: **epistemology** [accept “**Epistemology** Naturalized”]

<Jordan Brownstein, RMP - Philosophy> ~20124~ <Editor: Jordan Brownstein>

18. In 2021, this company transferred most of its liabilities to subsidiary LTL Management which then declared bankruptcy in a maneuver known as the “Texas two-step.” For 10 points each:

[10h] Name this company, which proposed a \$8.9 billion settlement in April 2023 as a result of one of its products causing ovarian cancer.

ANSWER: **Johnson & Johnson** [or **J&J**]

[10e] Talc powder from Johnson & Johnson was sometimes tainted with this mineral which was used to fireproof old buildings and has been linked to mesothelioma.

ANSWER: **asbestos**

[10m] In the 1970s, Johnson & Johnson manipulated health studies of its primary talc suppliers from this country. This country’s prime minister has advocated for a naval blockade of African migrants to Europe after being elected in 2022 as part of a right-wing party called “Brothers of [this country].”

ANSWER: **Italy** [or **Italia** or the **Italian** Republic; accept Brothers of **Italy** or Frattelli d’**Italia**]

<Benjamin Chapman, Current Events - U.S.> ~19830~ <Editor: Ganon Evans>

19. In the 1990s, this country signed a series of “Shiprider Agreements” with Caribbean nations allowing its officers to board and search foreign vessels suspected of illegal activity. For 10 points each:

[10e] Name this country that invaded Panama in 1989 as part of its “war on drugs.”

ANSWER: **United States** of America [or United States of **America**; accept **US** or **USA**]

[10h] CARICOM negotiated “Shiprider Agreements” for its members, with the exceptions of Jamaica and this country, who both negotiated individually. In 2021, Sandra Mason was elected as the first president of this country with support from Mia Mottley.

ANSWER: **Barbados**

[10m] This other American intervention in the Caribbean was codenamed Operation Urgent Fury. This 1983 military action overthrew the Marxist New Jewel Movement in under a week.

ANSWER: **invasion** of **Grenada** [accept synonyms in place of “invasion” such as **occupation**]

<Grant Peet, History - World - Latin American> ~20482~ <Editor: Jordan Brownstein>

20. The G.S. Street censorship office noted that this phrase was “merely funny” as a mockery of a woman’s idea of “the new small talk.” For 10 points each:

[10h] Give this three-word phrase. Mrs. Patrick Campbell risked her career at a play’s 1914 premiere by delivering this line after a Cockney girl is asked if she is going to walk across a park.

ANSWER: “**Not bloody likely!**”

[10e] Newspapers censored Eliza Doolittle’s line as “Not *Pygmalion* likely!” in reviews for this Irish playwright.

ANSWER: George Bernard **Shaw**

[10m] Shaw attacked censorship of one play by claiming this character’s “climb from a fried fish shop down by the Mint” exemplifies “high English social values.” This character’s daughter Vivie discovers her title questionable “Profession.”

ANSWER: Mrs. **Warren** [or **Kitty** Warren; accept *Mrs. Warren’s Profession*]

<Ganon Evans, Literature - British - Drama> ~20095~ <Editor: Jaimie Carlson>

21. The Earth’s rotation causes the Antarctic Circumpolar Current to flow in this cardinal direction. For 10 points each:

[10e] The Earth’s rotation causes the Sun to appear to rise in what cardinal direction?

ANSWER: **east**

[10h] Other eastward-propagating disturbances include this British scientist’s namesake equatorial waves. This scientist’s 1862 estimate of the Earth’s age as 100 million years was mocked by Thomas Huxley for being absurdly large.

ANSWER: Lord **Kelvin** [or William **Thomson** or 1st Baron **Kelvin**; accept equatorial **Kelvin** waves]

[10m] By contrast, Earth’s rotation makes these winds move westward. These winds meet near the equator at the intertropical convergence zone.

ANSWER: **trade** winds

<Joseph Krol, Science - Earth> ~21143~ <Editor: David Bass>