



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 17 - Tossups

1. A king of this modern-day country who feuded with its National Peasant Party in the 1930s sought to protect it with the so-called “Imaginot (“IMAGINE-oh”) Line.” Marie, this country’s “wartime queen,” secured generous terms at Versailles and restored its Bran Castle. Operation Tidal Wave carpet bombed this country’s oil center of Ploiești (“ploy-YESCHT”). The Nicadori was one of the death squads linked to this country’s fascist (*) Iron Guard. In 1969, a Communist leader of this country welcomed Richard Nixon but soon cracked down on the “bourgeois” in the July Theses. That ruler of this country oversaw the Securitate and was executed on Christmas Day in 1989. For 10 points, name this country whose longtime dictator Nicolae Ceaușescu (“chow-SHESH-koo”) was executed near Bucharest.

ANSWER: **Romania** (The monarch in the lead-in was King Carol II.)

<Michael Bentley, History - European - 1900+> ~24973~ <Editor: Michael Bentley>

2. The aphorism that one gram of one of these objects is equal to a shovelful of coal recurs in a Herta Müller novel titled in translation for a type of “Angel.” In another novel, a character takes one of these objects from Maubert Isabeau (“moh-BAIR IZ-uh-bo”) to give to the children of his widowed sister, which ultimately leads to him having to carry a yellow passport. The barber Ivan Yakovlevich discovers a body part inside one of these objects in the opening scene of Nikolai (*) Gogol’s story “The Nose.” Because of repeated escape attempts, a man who breaks a window to obtain one of these objects ends up spending 19 years in prison in the novel *Les Misérables* (“lay mis-ay-RAHB”). For 10 points, Jean Valjean (“zhahn val-zhahn”) initially goes to prison for stealing what food item?

ANSWER: loaves of **bread** [or **loaves** of bread or **loaf** of bread; accept anything indicating **bread**; prompt on **food**] (Müller’s novel is *The Hunger Angel*.)

<Joseph Krol, Literature - European - Other> ~25910~ <Editor: Joseph Krol>

3. The Nicholas Brothers incorporated leapfrogs into this dance style in the final performance in the revue *Stormy Weather*. Savion Glover used this dance style for the choreography of the musical *Bring in ‘Da Noise, Bring in ‘Da Funk*. Advanced moves in this dance style include the Maxi Ford. The song “I’ll Be Hard to Handle” in the film *Roberta* uses this dance style performed by (*) Fred Astaire and Ginger Rogers. The riff walk and paradiddle are steps in this style, which was popularized by Bill “Bojangles” Robinson. With a black umbrella, Gene Kelly performs a dance in this style while singing the title song in the film *Singin’ in the Rain*. For 10 points, name this style of dance that utilizes shoes with metal heels and toes to make its namesake sound.

ANSWER: **tap** dancing [accept word forms like **tapping**; accept jazz **tap** or Broadway **tap**; prompt on **jazz** dance]

<Ethan Ashbrook, Fine Arts - Ballet/Dance> ~26096~ <Editor: Young Lee>

4. A powdered microcrystalline form of this polymer is the most common binding excipient used in drug manufacturing. Carbon disulfide solubilizes this polymer and regenerates it into rayon. This polymer is purified by a pressure cooker full of white liquor in the kraft process. Acetate films are made from this polymer's acetate ester, and its nitrate ester dissolves proteins in Western blotting membranes. This polymer, its branched (*) "hemi-" derivative, and lignin are used to make ethanol biofuels. The beta-1,4-glycosidic bonds in this linear polymer give its fibers rigidity but make it difficult to hydrolyze, except by ruminants. For 10 points, paper pulp is made from what natural polymer of glucose found in plant cell walls?
ANSWER: cellulose [or microcrystalline cellulose; or cellulose acetate; or nitrocellulose; prompt on wood pulp or paper pulp until it is read; prompt on wood; prompt on lignocellulose; reject "hemicellulose"; reject "lignin"]

<Adam Silverman, Science - Chemistry> ~25247~ <Editor: Adam Silverman>

5. While using one of these things, a man is reproached for vanity by the Queen of the Ants; that object makes forty thousand men die in a windstorm. One of these things is bought with an ivory telescope and a healing apple, while another appears in "The City of Brass." According to legend, Shapur I kidnapped the emperor Valerian with one of these objects. Ivan carries the (*) Firebird on one of these things. Cleopatra supposedly seduced Caesar after emerging from one of these objects. A purple one of these is laid out for Agamemnon before his murder, and Hussain buys one of these things in India in *One Thousand and One Nights*. For 10 points, the original tale of Aladdin doesn't actually feature a flying example of what object?
ANSWER: magical carpet [or flying carpet; accept rugs or mats; prompt on tapestries]

<Jaimie Carlson, RMP - World Mythology> ~26104~ <Editor: Jaimie Carlson>

6. Elements of Skorokhod spaces have this property "on the right" and are càdlàg ("cod-log"). The Picard–Lindelöf theorem applies when the derivative of a solution to an O·D·E has this property in t and has a form of this property in y that is defined in terms of the Lipschitz constant. The Cantor staircase function has this property, but not its "uniform" type. The (*) epsilon–delta definition of this property is generally equivalent to its definition as a function being equal to its limit at every point. The Weierstrass ("VIE-er-strahs") function is a counterexample to the assertion that functions with this property are also differentiable. For 10 points, name this property that is roughly equivalent to being able to draw the graph of a function without lifting the pen.

ANSWER: continuity [or continuous; accept Lipschitz continuity or uniform continuity]

<Steven Yuan, Science - Math> ~25050~ <Editor: David Bass>

7. In a late letter, this man told his nephew's wife that it "beats old age, disease, or falling down the cellar stairs" to be "shot to rags" against a stone wall. This man, alongside William Benton, was the main inspiration for a character who is nicknamed the "Indiana General" after using his Colt .44 to shoot out the dead center of a silver coin. This man's mysterious 1913 (*) disappearance in Mexico, which Carlos Fuentes fictionalized in his novel *The Old Gringo*, occurred seven years after the publication of his work originally called *The Cynic's Word Book*. For 10 points, name this American author who included many satiric definitions in his *Devil's Dictionary*.

ANSWER: Ambrose Bierce [or Ambrose Gwinett Bierce; prompt on "The Old Gringo" or "Gringo Viejo" before "Gringo"]

<Joseph Krol, Literature - World and Miscellaneous> ~25914~ <Editor: Joseph Krol>

8. It's not cities, but a movement named for these places represented urban sprawl as magnets in diagrams created by Ebenezer Howard. Embroidery inspired enclosed examples of these locations called *parterre* ("parr-TARE"). Recessed walls called ha-ha's were frequently incorporated into these locations designed by Capability Brown. A design for these locations split into four squares was called the (*) *charbagh* ("ch-HARR-bah") and dominated Indo-Persian examples of them that are the root of the word "paradise." André Le Nôtre championed the French formal style of these locations that include bosquets. Geometric living sculptures in these locations are created through topiary. For 10 points, name these places that surround the Palace of Versailles and include water fixtures and shrubbery.

ANSWER: **gardens** [accept rose **gardens**; or landscape **gardens**; or French **gardens**; or English **gardens**; accept **garden** city movement; prompt on landscape **park**; prompt on **yards** or **landscapes**]

<Michael Bentley, Other - Other Academic and General Knowledge> ~25452~ <Editor: Ganon Evans>

9. One of these facilities in Cape Town is the origin of the terminology "master and slave" still widely used in computing. John Pond, who supervised one of these facilities, introduced the use of the time ball. Tables from John Flamsteed were used at a large one of these facilities in Jaipur built by Jai Singh. A Ming-era one of these facilities in Běijīng houses an armillary sphere. Louis XIV hired a Dane named Ole (*) Romer ("ROO-muh") to work in a new facility of this type. A homemade one of these facilities in Datchet employed Caroline Herschel and featured a 20-foot reflecting device. A brass strip marked the Prime Meridian at one of the facilities in Greenwich. For 10 points, name these facilities home to telescopes.

ANSWER: **observatory** [accept ground-based **observatory**; accept **telescope** house before the end; prompt on Platform of **Star-Watching** or natural **science** facility]

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~25726~ <Editor: Michael Bentley>

10. The eigenvector of a Leslie matrix is the stable distribution for this discrete variable in a population. Structured population models are classified either by stage or by this variable, which is required to specify a vital birth or death rate. Fisheries measure oto-liths to determine a population's distribution of this variable. Mortality rate increases with this quantity on a type I ("one") survivorship curve and decreases with it on a type III ("three") curve. Two (*) vertically stacked histograms—one each for males and females—are plotted base-to-base to show the distribution of this quantity on a demographic pyramid. Fecundity decreases as this quantity goes up due to senescence. For 10 points, what property of an organism is inferred by measuring the length of telomeres or the number of tree rings?

ANSWER: average population **age** [or organism **age**; prompt on **time**; prompt on **lifespan**]

<Adam Silverman, Science - Biology> ~25287~ <Editor: Adam Silverman>

11. *Composer and genre required.* One of these works begins with strings playing one bar each of (read slowly) "G, down to D, E-flat, down to F-sharp," with basses playing quarter notes on the beat and other strings playing off the beat. One of these works begins with violins playing the twice-repeated phrase of pickup eighth notes "E-flat—D," then downbeat D. Lothar Perger reattributed what was thought to be one of these works to Michael Haydn. The theme (read slowly) "C, D, F, E" is incorporated into the (*) five-voice fugato that ends the final one of these works. These works include ones nicknamed "Prague," "Haffner," "Little" G minor, and "Great" G minor. For 10 points, what large-scale orchestral works by an Austrian composer include the 41st and final one nicknamed "Jupiter?"

ANSWER: **symphonies** by Wolfgang Amadeus **Mozart** [prompt on partial answer]

<Benjamin Chapman, Fine Arts - Music - Classical> ~25830~ <Editor: Young Lee>

12. One character with this profession is told in the House of Busyrane to “be bold”, but “not too bold,” and gives new clothes to the victims of Radigund. Other characters with this job escape the House of Pride and the Bower of Bliss after being tempted by Acrasia and Duessa. In a bob-and-wheel poem, a character with this profession kisses his host in exchange for a deer, a boar, and a fox. A character with this profession is separated from (*) Una by the evil Archimago. The chaste woman Britomart has this job, as does a “Redcrosse” one of these people in *The Fairie Queene*. The Pearl Poet wrote about a man who waits a year and a day to be beheaded by a “green” character with this job. For 10 points, what job was held by Sir Gawain?

ANSWER: **knight** [accept the Redcrosse **Knight**; accept *Sir Gawain and the Green Knight*; prompt on soldier or warrior or equivalents]

<Yingzhi Nyang, Literature - British - Poetry> ~25767~ <Editor: Jaimie Carlson>

13. E.C. Booz’s distinctive whiskey bottles in support of this candidate are the source for the term “booze.” Supporters of this candidate pushing leather and tin spheres to campaign stops originated the phrase “keep the ball rolling.” A speech supporting this candidate argued that an opponent was shaping gardens like “an Amazon’s bosom” in the Gold Spoon Oration. A campaign song supporting this candidate referenced his victory over the (*) Shawnee during the War of 1812. This man beat an incumbent nicknamed “Van Ruin.” The slogan “Tippecanoe and Tyler Too” supported this Whig candidate, who gave the longest-ever Inaugural Address in pouring rain. For 10 points, name this victor of the 1840 Presidential Election who died after one month in office.

ANSWER: **William Henry Harrison** [accept **WHH**; prompt on Harrison; reject “Benjamin Harrison”]

<Ganon Evans, History - American - Pre-1865> ~24985~ <Editor: Michael Bentley>

14. An infinite hierarchy of quantities with this property arises from the Korteweg–de Vries (“COR-tuh-veg-duh-VREEZ”) equation because it is fully integrable. In most scenarios, the Poisson bracket of the Hamiltonian with quantities with this property equals zero. Quantities conjugate to “cyclic” or “ignorable” coordinates of a Lagrangian (“luh-GRONZH-ee-un”) have this property. The correspondence of quantities with this property to differentiable symmetries of the action is described by (*) Noether’s (“NUR-turz”) theorem. By definition, kinetic energy has this property in elastic collisions. In the absence of external forces, momentum has this property because its time derivative equals zero. For 10 points, name this property of quantities that do not change as a system evolves.

ANSWER: **constant** [or **conserved**; accept descriptions of quantities that are **time-invariant**, like quantities that do **not depend** on **time**; accept **constants** of motion or **conservation** laws]

<Joseph Krol, Science - Physics> ~25434~ <Editor: David Bass>

15. In this city, twelve hypocrites refused to pray at a building constructed where a donkey was hitched. This city’s constitution was signed by eight tribes called the Helpers. In this city, three coffins and an empty grave were surrounded by a pentagonal wall to discourage circumambulation. Praying at this city’s Quba Mosque yields a reward equivalent to one Umrah pilgrimage. The Green Dome marks a (*) burial site at this city’s Mosque of the Prophet. After its people welcomed persecuted visitors, this city was renamed from Yathrib to the Arabic word for “city.” A trip to this city marked the beginning of the Islamic calendar. During the Hijra, Muhammad fled *to* this city. For 10 points, name this second holiest city in Islam after Mecca.

ANSWER: **Medina** [or **Madinah**; accept **Yathrib** before mention]

<Ganon Evans, RMP - Islam> ~25153~ <Editor: Athena Kern>

16. Description acceptable. Billy Name covered the entirety of this place with aluminum foil and silver spray paint and found this location’s iconic red couch on the side of the street. An artwork was allegedly taken from this place and used as a dartboard by Bob Dylan. People in this location were told to not blink as they were filmed for three minute “Screen Tests.” Edie Sedgwick and Paul America were some of the (*) “superstars” who visited this place, which hosted events like *Exploding Plastic Inevitable*. The owner of this place was shot in it by Valerie Solanas. Artworks that were mass produced in this place include silkscreens of Elvis Presley and Mao Zedong. For 10 points, identify this place where the artist of *Campbell’s Soup Cans* worked.

ANSWER: the **Factory** [or Andy **Warhol’s studio**; or The Silver **Factory**; accept descriptive answers mentioning Andy **Warhol** and where he created **art**; prompt on Andy **Warhol’s apartment** by asking “what did he use it for?”; reject “Warhol’s house” or “Warhol’s home”]

<Yingzhi Nyang, Fine Arts - Painting - 1945+> ~25410~ <Editor: Chandler West>

17. It’s not North Carolina, but a legislator in this state accused a congressional leader of urinating in the seat of Thom Tillis’s brother. That legislator from this state was shoved by Bill Lafferty as Cameron Sexton tried to clear a chamber. In January 2023, five Black police officers in this state beat Tyre Nichols to death. After protesting in the public gallery of this state’s legislature with a bullhorn, Representatives (*) Justin Jones and Justin Pearson were expelled but later reappointed. After a ban passed on gender affirming healthcare and drag, a photo surfaced of this state’s governor Bill Lee in a cheerleader uniform. For 10 points, name this state where a shooter attacked the Covenant School in Nashville.

ANSWER: **Tennessee** [or **TN**]

<Ganon Evans, Current Events - U.S.> ~25921~ <Editor: Ganon Evans>

18. Geoffrey K. Pullum criticized this writer’s use of concepts created by Emil Post without sufficiently citing them. Daniel Everett challenged the theories of this thinker after researching the Pirahã for his PhD thesis. To disagree with B.F. Skinner, this thinker addressed what they called “Plato’s problem” to argue children are subject to a (*) “poverty of the stimulus” and can’t learn every aspect of language from experience. This thinker modeled category formation with X-bar theory. In the book *Syntactic Structures*, this thinker posed the well-formed but nonsensical sentence “Colorless green ideas sleep furiously.” For 10 points, the “universal grammar” theory was developed by what former MIT linguist?

ANSWER: Noam **Chomsky** [or Avram Noam **Chomsky**]

<Benjamin Chapman, Social Science - Linguistics> ~26027~ <Editor: Athena Kern>

19. Irving Finkel decoded the usage of wooden boards from this city that were decorated with 20 inlaid shell plaques. A pair of gilded statues uncovered in this city that depict a goat resting its hooves on a tree was nicknamed “ram in a thicket.” A wooden sled and lyres with bull’s heads on them were found in the tomb of this city’s Queen Puabi. This city conquered Elam under Shulgi, but the Elamites overthrew this city’s (*) Third Dynasty not long after. In 1922, Katherine and Leonard Woolley excavated this city’s Royal Cemetery. A rectangular mud brick temple in this city that was dedicated to this city’s patron deity, Nanna, was restored by Saddam Hussein in the 1980s. For 10 points, the Great Ziggurat is located in which Sumerian city?

ANSWER: **Ur** [accept **Urim** or **Uru**; accept Royal Game of **Ur**; reject “Uruk”]

<Hari Parameswaran, History - World - Middle Eastern> ~25822~ <Editor: Jordan Brownstein>

20. This character yells “I will not give up Berlin!” to punctuate his opposition to a future where scientists create “a civilization of” smooth and blonde men. A story is told about this character being sucker punched in front of his father-in-law. This character tells a story about a boy with a learner’s permit who swerved to avoid a (*) porcupine and crashed into a tree. In the final act, this history professor provokes his wife into admitting that their son is imaginary. Throughout the play, he proposes titles for games like “Humiliate the Host” and “Get the Guests” as he and his wife entertain the young couple Nick and Honey. For 10 points, name this character who battles his wife Martha in Edward Albee’s play *Who’s Afraid of Virginia Woolf*.

ANSWER: **George**

<Jonathan Magin, Literature - American - Drama> ~26107~ <Editor: Chandler West>

21. A humanist in this profession commissioned Francesco Griffo to make a new style of objects for use in it. One innovator in this profession received 800 guilders of finance capital from Johann Fust and may not have invented the punch-matrix system himself. Early innovations in this profession were developed in Venice by Aldus Manutius. The first Englishman in this profession learned it in Bruges and was named (*) William Caxton. In Europe, this profession was essentially invented by a goldsmith in the city of Mainz (“mines”) who now names an online “project” of public domain works. For 10 points, name this profession innovated by a man who produced a set of 42-line Bibles, Johannes Gutenberg.

ANSWER: **printer** [accept answers like **bookseller** or **publisher** or **book maker** or operator of a **printing press**; reject “author”]

<Michael Bentley, History - European - Misc> ~24265~ <Editor: Michael Bentley>

NSC 2023 - Round 17 - Bonuses

1. The subak irrigation system in Bali was used to produce this crop around water temples. For 10 points each:
[10e] Name this staple crop grown on paddies and hillside terraces throughout Asia.

ANSWER: **rice** [or Asian **rice**; accept **Oryza sativa**]

[10h] In this modern-day country, the Ifugao people channeled mountain streams into rice terraces at sites like Banaue (“ba-na-way”). During the Green Revolution, this country’s International Rice Research Institute developed the IR8 rice variety.

ANSWER: the **Philippines** [or Republic of the **Philippines**; or Republika ng **Pilipinas**]

[10m] In this other Southeast Asian country, land reform and attempts at self-sufficiency devastated rice output under dictator Ne Win, who headed a junta that was opposed by the 8-8-88 protests.

ANSWER: **Myanmar** [or the Republic of the Union of **Myanmar**; or **Burma**]

<Yingzhi Nyang, History - World - Asian> ~21104~ <Editor: Jordan Brownstein>

2. The protagonist of this novel answers his own question of “What do women want?” with the answer, “They eat green salad and drink human blood.” For 10 points each:

[10h] Name this novel whose protagonist composes letters to people such as Friedrich Nietzsche and Dwight Eisenhower after his divorce from his second wife, Mady, who left him for his friend Valentine Gersbach.

ANSWER: **Herzog**

[10m] Saul Bellow, who partly set *Herzog* in this city, opened his novel *The Adventures of Augie March* with the line, “I am an American, [this city] born.” Another author declared of this city, “They tell me you are wicked and I believe them.”

ANSWER: **Chicago**

[10e] This author called Chicago “Hog Butcher for the World” in his poem titled after the city.

ANSWER: Carl **Sandburg** [or Carl August **Sandburg**]

<Michael Bentley, Literature - American - Long Fiction> ~20475~ <Editor: Chandler West>

3. The Ives–Stilwell experiment initially used canal rays to measure this effect’s “transverse” form. For 10 points each:

[10e] Name this effect in which the perceived frequency of a wave changes based on its motion relative to a reference frame, a cause of redshift.

ANSWER: **Doppler** effect [or **Doppler shift**; accept transverse **Doppler** effect]

[10h] Champeney and Moon found that there was no Doppler shift between a source and receiver rotating on opposite sides of a rotor named for this effect. In this effect, resonant absorption and emission of gamma rays from bound nuclei is recoil-free.

ANSWER: **Mössbauer** effect [or **recoilless nuclear resonance fluorescence**; accept **Mössbauer** rotors]

[10m] Infinitely narrow emission peaks are nonexistent because Doppler broadening affects this probability distribution. This distribution models the velocity of distinguishable gaseous particles.

ANSWER: **Maxwell–Boltzmann** distribution [prompt on **Maxwell** speed distribution or **Boltzmann** speed distribution or **Maxwell** distribution or **Maxwellian** distribution]

<Ganon Evans, Science - Physics> ~21196~ <Editor: David Bass>

4. In a folk story, this man's spine became a mountain range, his eyes became the sun and moon, and his limbs became the four pillars of the sky. For 10 points each:

[10h] Name this hairy giant born into a cosmic egg, who pushed apart the earth and sky over the course of 18,000 years.

ANSWER: **Pángǔ**

[10e] *Two answers required.* Pángǔ separating the earth and sky represents these two opposing dualistic principles of light and dark. Tàijí is represented by these two principles as white and dark halves of a circle.

ANSWER: **yīn** AND **yáng** [or **yīn-yáng**]

[10m] Pángǔ is helped by the crane, the dragon, the phoenix, and this animal. Nǚwā used the legs of this animal to mend the pillars supporting Heaven after a flood.

ANSWER: **tortoise** [accept **turtle**; accept **guī** or **biē**]

<Jaimie Carlson, RMP - World Mythology> ~20956~ <Editor: Jaimie Carlson>

5. Answer the following about the West's obsession with Chinese porcelain. for 10 points each.

[10e] *Two answers required.* Giovanni Bellini's *Feast of the Gods* depicts several figures holding Míng porcelain of these two colors. Cobalt oxide pigments are applied to clay and glazed over to make porcelain with these two colors.

ANSWER: **blue** AND **white** [accept in either order; accept **qīng-huā**]

[10m] The first examples of European porcelain were soft-paste imitations named for this family. Michelozzo di Bartolomeo designed a palace for this family, and a pope from this family commissioned the Laurentian Library.

ANSWER: **Medici** family [or House of **Medici**]

[10h] During the 17th-century, this city originated a prized blue "ware." The artist of *The Goldfinch*, Carel Fabritius, was a member of a school of painting named for this city.

ANSWER: **Delft** [accept **Delftware**; accept **Delft School**]

<Michael Bentley, Fine Arts - Sculpture> ~15267~ <Editor: Michael Bentley>

6. A cartoon depicting this dictator as a crying baby brought Moomins creator Tove Jansson ("TOH-vuh YAN-son") to fame. For 10 points each:

[10e] Name this dictator who inspired the title of Karl Ove Knausgård's ("OH-vuh K'NOWZ-guards") series *My Struggle* with his own book *Mein Kampf*.

ANSWER: Adolf **Hitler**

[10h] This author controversially wrote a positive obituary for Hitler more than 50 years after he wrote the pioneering short modernist novel *Hunger*.

ANSWER: Knut **Hamsun** [or Knut **Pedersen**]

[10m] Around the time she railed against Hitler in her *War Diaries*, Astrid Lindgren wrote the first stories about this extremely strong character who lives in Villa Villekulla ("VILL-uh-KOO-luh").

ANSWER: **Pippi Longstocking** [accept either underlined; or Pippi **Långstrump**]

<Joseph Krol, Literature - European - Short Fiction> ~20121~ <Editor: Joseph Krol>

7. Political scientist Robert Dahl used the term “polyarchy” to describe a government run under this theory, which he illustrated using leaders in New Haven. For 10 points each:

[10h] Give this political theory named after the multiple interest groups that characterize it. In a government under this theory, non-government groups exert their influence to affect outcomes.

ANSWER: **pluralism** [or word forms like **pluralist**; accept, but DO NOT REVEAL, **pluralist** theory of democracy]

[10e] Pluralism distinguishes a polyarchy from this type of government, whose “representative” form has citizens elect officials to serve them.

ANSWER: **democracy** [accept representative **democracy**; reject “republic”]

[10m] Dahl called a group’s influence the “potential” form of this resource. Joseph Nye coined a term for the “soft” form of this resource defined as a group’s ability to shape people’s preferences non-violently.

ANSWER: **power** [accept potential **power**; accept soft **power**; reject synonyms]

<Ethan Ashbrook, Social Science - Other> ~21195~ <Editor: Ganon Evans>

8. After killing a tapir, these people among the Aweicoma spread chopped greens over its body to protect against the spirits of slain animals called bope (“boh-PAY”). For 10 points each:

[10e] Give this term for Indigenous religious leaders who may consume ayahuasca to have visions.

ANSWER: **shamans** [accept **shamaness** or **shamanists** or **shamanism**; accept **medicine man** or **medicine woman**; prompt on **spiritualists**; prompt on **holy men** or **holy women**; prompt on **wise men** or **wise women**]

[10h] Arawak shamans perform a dance with these objects to represent underwater ghosts called kamutsi. A humpbacked trickster deity that delivers children to the Hopi is depicted with one of these objects.

ANSWER: **flutes** [accept the **Flute Dance**] (The deity is Kokopelli.)

[10m] Mundurucú (“mon-doo-rook-kooah”) shamans spread this substance over skulls and then suck it away with a bamboo tube to heal spiritual wounds. The Lakota chanupa was used to consume this substance in religious ceremonies such as sealing peace.

ANSWER: **tobacco**

<Ganon Evans, RMP - Other Religion> ~21150~ <Editor: Ganon Evans>

9. An esoteric lossy algorithm has this time complexity because it simply “drops” each element of the input array that is less than its predecessor. For 10 points each:

[10m] Name this time complexity of an algorithm that accesses each element in an input array exactly once.

You can give your answer in big O notation.

ANSWER: big O of **n** [or **linear** time]

[10e] That esoteric algorithm performs this task of ordering the values in an array that is typically performed with time complexity “big O of $n \log n$.”

ANSWER: **sorting** [accept **dropsort**] (The esoteric algorithm is dropsort.)

[10h] This non-comparative sorting algorithm can run in near-linear time when sorting small integers. This algorithm iteratively puts elements into buckets based on a stable sort of their values in successive digits.

ANSWER: **radix** sort [prompt on **bucket** sort or **digital** sort]

<Michael Bentley, Science - Computer Science> ~21133~ <Editor: David Bass>

10. John Murray Gibbon imagined this country as a “cultural mosaic” in a 1938 book. For 10 points each:
[10m] Name this country that passed a 1988 Multiculturalism Act. A year prior, this country proposed the Meech Lake Accord to persuade a government within it to endorse constitutional amendments added in 1982.

ANSWER: **Canada**

[10e] The earlier Royal Commission on Bilingualism and Biculturalism was established to counter francophone nationalism in this province, whose premiers included Robert Bourassa.

ANSWER: **Québec**

[10h] Canadians of this ethnicity, once considered “enemy aliens,” pushed for the Multiculturalism Act under leaders like Paul Yuzyk. In the 2010s, Canada supported these people against the “little green men.”

ANSWER: **Ukrainian**-Canadian [prompt on **Slavic** people or **Slavs**]

<Lalit Maharjan, History - Cross, Historiography, and Miscellaneous> ~21092~ <Editor: Michael Bentley>

11. To fix an enzyme in this pathway, in 1999 Jesse Gelsinger (“GELL-singer”) enrolled in a gene therapy clinical trial which had tragic consequences. For 10 points each:

[10m] Name this metabolic cycle that detoxifies ammonia in the liver.

ANSWER: **urea** cycle

[10h] Gelsinger had a lethal adverse reaction to one of these viruses used to package the new gene. The common cold can be caused by this family of DNA viruses, which have since been used safely in the AstraZeneca and J & J COVID-19 vaccines.

ANSWER: **adeno**viruses [or **Adenoviridae**; reject “adeno-associated viruses” or “AAVs”]

[10e] The Gelsinger tragedy kiboshed gene therapy for two decades until a treatment for this cancer was finally approved in 2017. Like lymphoma, this cancer of the bone marrow overproduces white blood cells.

ANSWER: **leukemias** [or acute lymphoblastic **leukemias**]

<Sudheer Potru, Science - Biology> ~20727~ <Editor: Adam Silverman>

12. 20 years after inventing this technology, its company began distributing Shirley cards that calibrated colors for it, leading to notoriously poor results in photos of people with dark skin. For 10 points each:

[10h] Name this brand of color reversal film whose manufacture was discontinued in 2009.

ANSWER: **Kodachrome** [prompt on **Kodak** or Eastman **Kodak** Company]

[10e] Kodak’s 104 line of Instamatic cameras included cubes that produced this effect, providing better lighting for indoor photography but prone to causing red-eye.

ANSWER: **flash** [accept **flashcube**]

[10m] Steve McCurry’s Kodachrome photograph of Sharbat Gula called *Afghan Girl* was used on the cover of this publication. Luis Marden took photographs for this publication in the mid-1930s.

ANSWER: **National Geographic** [or **National Geographic Magazine**; or **NAT GEO**]

<Michael Bentley, Fine Arts - Photography> ~20147~ <Editor: Young Lee>

13. A woman dwells on the death of her pet bird in the last story this author completed, “The Canary.” For 10 points each:

[10m] Name this author who, while in the late stages of tuberculosis, wrote “The Daughters of the Late Colonel” and a story about an event partly organized by Laura Sheridan.

ANSWER: Katherine **Mansfield** [or Kathleen Mansfield **Murry** or Kathleen Mansfield **Beauchamp**] (The latter story is “The Garden Party.”)

[10h] After going to Cornwall to aid her condition, Mansfield published this story in which Bertha Young feels an odd connection to Pearl while hosting a dinner party.

ANSWER: “**Bliss**”

[10e] While recovering from tuberculosis, Mansfield received a letter reading “You revolt festering in your consumption... You are a loathsome reptile - I hope you will die” from this author of *Women in Love* and *Lady Chatterley’s Lover*.

ANSWER: D. H. **Lawrence** [or David Herbert **Lawrence**]

<Joseph Krol, Literature - World and Miscellaneous> ~20326~ <Editor: Joseph Krol>

14. This island was named after an Egyptian god of dance, music, and sex, three qualities still associated with it. For 10 points each:

[10m] Name this island whose nightclub scene includes the Circoloco parties held at its DC10 nightclub. DJs working on this island helped develop the Balearic beat.

ANSWER: **Ibiza**

[10e] This language's eivissenc ("ay-vee-senk") dialect is spoken on Ibiza. A mandate to teach more Castilian Spanish compared to this language sparked protests in Barcelona schools in 2019.

ANSWER: **Catalan** [accept Balearic **Catalan**; prompt on **Balearic**]

[10h] A ferry connects Ibiza to this city, home to the Albufera lagoon and the birthplace of the dish of paella. Firecrackers are set off during this city's Fallas festival.

ANSWER: **Valencia**

<Michael Bentley, Geography - Europe> ~21121~ <Editor: Ganon Evans>

15. The economist Nathaniel Baum-Snow found that this program led to a 17% reduction in the population of major American cities between 1950 and 1990. For 10 points each:

[10m] Name this massive federal project built partly for defense purposes. The Overtown neighborhood of Miami lost much of its population due to this project.

ANSWER: **Interstate** Highway System [prompt on **highway**; accept but DO NOT REVEAL Dwight D. Eisenhower National System of **Interstate** and Defense Highways]

[10e] The first bill for the Interstate Highway System was signed into law by this president, a former World War II general.

ANSWER: Dwight D. **Eisenhower** [or Dwight David "Ike" **Eisenhower**; prompt on **Ike**]

[10h] Another major domestic spending policy of the Eisenhower administration was the National Defense Education Act, passed during the "crisis" spawned by this 1957 event.

ANSWER: launch of **Sputnik 1** [accept anything involving **Sputnik**; prompt on answers like the beginning of the **space race** or the Soviets launching a **satellite**]

<Michael Bentley, History - American - 1945+> ~20262~ <Editor: Michael Bentley>

16. Chemistry textbooks routinely assign water a value of 15.74 for this quantity, even though decades of experiments have shown that estimate is too high. For 10 points each:

[10m] Name this molecular property which decreases as a compound becomes more acidic. This quantity and the pH determine the degree of ionization in the Henderson-Hasselbalch equation.

ANSWER: **pKa** [or the **negative logarithm** of the **acid dissociation constant**; or the **negative logarithm** of the **Ka**, but reject any partial answers that do not include all three parts; prompt on **pKw**; reject "Ka" or "acid dissociation constant" by themselves]

[10e] Water's actual pKa is this two-digit integer, the typical upper bound of the pH scale.

ANSWER: **14**

[10h] The confusion stems from incorrectly using water's molarity in the law of mass action, rather than this dimensionless quantity, which is defined to be 1 for all pure solids and liquids.

ANSWER: **activity** [reject "activity coefficient"]

<Adam Silverman, Science - Chemistry> ~20758~ <Editor: Adam Silverman>

17. Thomas Mapfumo, a musician nicknamed the “lion” of this country, created its frequently-banned genre of music named for “revolutionary struggle.” For 10 points each:

[10h] Name this African country whose most popular genre of music, *sungura*, is often played on its traditional thumb piano, the *mbira*.

ANSWER: **Zimbabwe** [or Republic of **Zimbabwe**] (The genre is chimurenga.)

[10m] This genre of music is by far the most popular one in contemporary Zimbabwe. In the United States, this genre was popularized by singers like Mahalia Jackson and songs like “O Happy Day.”

ANSWER: **gospel** music [accept **gospel** blues; prompt on Christian music or church music; prompt on hymns; reject “blues”]

[10e] In 1980, this Jamaican reggae musician celebrated Zimbabwe’s independence by performing in Harare along with his band, The Wailers.

ANSWER: Bob **Marley** [or Robert Nesta **Marley**]

<Jonathan Magin, Fine Arts - Music - Miscellaneous> ~18940~ <Editor: Young Lee>

18. Answer the following about words whose roots are in Greek theater, for 10 points each.

[10e] An off-stage crane bringing in divine characters, like Helios’s chariot in *Medea*, is the root of this three-word plot device in which a supernatural force suddenly resolves the conflict. It translates to “god from the machine.”

ANSWER: **deus ex machina** [or **dei ex machina**]

[10m] This man, who Aristotle claimed to be the first actor after he broke from a chorus and introduced dialogue to tragedy, lends his name to a word for “actor.”

ANSWER: **Thespis** [prompt on thespians]

[10h] This word originated to describe actors as “interpreters from underneath” because of their usage of masks. Tu quoque is an ad hominem logical fallacy sometimes called an appeal to this word.

ANSWER: **hypocrisy** [accept word forms such as a **hypocrite** or being a **hypocrite**]

<Ganon Evans, Other - Other Academic and General Knowledge> ~20252~ <Editor: Ganon Evans>

19. This object creates a loud noise after a man observes that women “don’t seem to hold together like men” after you kill them. For 10 points each:

[10m] Name this object central to a play in which it carries a note to Ben and Gus reading “Macaroni Pastitsio. Ormitha Macarounada,” leading them to place “One Smith’s Crisps! One Eccles cake!” inside of it.

ANSWER: the **dumb waiter**

[10e] *The Dumb Waiter* was written by this author of *The Caretaker* and *The Birthday Party*.

ANSWER: Harold **Pinter**

[10h] *Description acceptable*. In the beginning of *The Dumbwaiter*, Ben reads Gus newspaper headlines about a man of eighty-seven getting killed in this manner.

ANSWER: getting run over by a **bus** [or getting run over by a **lorry**; prompt on a car accident or getting run over with "by what?"]

<Yingzhi Nyang, Literature - British - Drama> ~21101~ <Editor: Jaimie Carlson>

20. More soldiers drowned in the rough seas on the way back from a campaign against this city than in capturing a fleet in this city. For 10 points each:

[10m] Name this capital city that was bombarded by the British in 1807. A monarch from the House of Oldenburg was crowned in this city's cathedral in 1449.

ANSWER: **Copenhagen** [or **København**]

[10h] In another Royal Navy campaign from the Napoleonic Wars, Alexander Ball captured this island from France's Henry Pigo in 1800. During World War II, the entire population of this island was given a George Cross for acting as an "unsinkable aircraft carrier" against Axis attacks.

ANSWER: **Malta**

[10e] The 1814 Siege of Ragusa was part of a British naval campaign named for this sea that separates the Balkan Peninsula from most of Italy.

ANSWER: **Adriatic** Sea [accept **Adriatic** Campaign; prompt on **Gulf of Venice**]

<Michael Bentley, History - European - 1500-1900> ~20098~ <Editor: Michael Bentley>

21. After a description of a report consisting of this sentence, a character develops "an expression of calm" on his face like he was "glad the end had come." For 10 points each:

[10m] Name this title phrase of a 1928 novel that describes the ordinary day on which a man who earlier received Kemmerich's ("KEH-muh-rick's") boots is killed.

ANSWER: "**All quiet on the Western Front**" [or "**Im Westen nichts Neues**"]

[10e] That sentence titles a novel by Erich Maria Remarque set during this conflict, where Paul and his fellow soldiers initially live in trenches.

ANSWER: **World War I** ("one") [or the **First World War** or the **Great War** or **WWI**]

[10h] This soldier, who is a mentor figure to Paul, is the last of his friends to be killed, leading Paul to lose his will to live in the penultimate chapter of the novel. He has an impressive ability to find food.

ANSWER: **Kat** [or **Stanislaus**; or **Katzinsky**]

<Lalit Maharjan, Literature - European - Long Fiction> ~20282~ <Editor: Joseph Krol>