



## 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 03 - Tossups

**1. This quantity in a varactor diode varies with the applied reverse bias voltage, since this quantity varies inversely with depletion region thickness. An analogy between mechanical and electrical systems compares this quantity to the reciprocal of the spring constant. Close proximity of circuit components at different voltages can cause the unwanted “stray” or (\*) “parasitic” forms of this quantity. In a simple circuit with two components, resistance times this quantity gives the time constant. Dielectrics are often included in a class of devices in which this quantity equals cross-sectional area times permittivity over distance and arises between two parallel plates. For 10 points, name this quantity measured in farads.**

ANSWER: **capacitance** [accept **stray capacitance** or **parasitic capacitance**; prompt on **C**]

<Lalit Maharjan, Science - Physics> ~24720~ <Editor: David Bass>

**2. A member of this family awarded one monarchy a perpetual right to the “royal third” on tithes. This family, whose sigil depicted a red bull grazing, rose to prominence with a man who attempted to reconquer Istanbul from the Turks, Callixtus III. A disposition issued by a member of this family to divide the New World was amended in the Treaty of Tordesillas. A member of this family had a third marriage to Alfonso I d’Este and supposedly owned a hollow ring to administer (\*) arsenic. A member of this family supposedly brought fifty prostitutes to the Papal Palace for the 1501 Banquet of Chestnuts. Pope Alexander VI was a member of, for 10 points, what notorious Renaissance family that included Cesare (“CHEZ-ah-ray”) and Lucrezia (“loo-CRETZ-ee-uh”)?**

ANSWER: House of **Borgia** [or **Borja**; accept Rodrigo **Borgia**; accept Cesare **Borgia**; accept Lucrezia **Borgia**]

<Ganon Evans, History - European - 1500-1900> ~24895~ <Editor: Michael Bentley>

**3. It’s not in his birth country, but while working in this city, the artist Kanda Bongo Man popularized the *kwassa kwassa* dance as part of its regional *soukous* (“SOO-coos”) scene. Bagpipe-playing rural immigrants to this city introduced its “bal” genre of street music. For a 1927 performance in this city, a Black artist donned a costume consisting only of a beaded necklace and a skirt made from artificial (\*) bananas. A pioneering venue in this city was advertised by an iconic Théophile Steinlein poster featuring a black cat. Posters for another venue in this city often featured a red windmill. Josephine Baker was a star performer at this city’s Folies Bergère (“foh-LEE bair-ZHAIR”). For 10 points, name this city home to cabarets such as the Moulin Rouge.**

ANSWER: **Paris**

<Michael Bentley, Fine Arts - Miscellaneous> ~26102~ <Editor: Young Lee>

4. *Note to moderator: read answerline carefully.* In German politics, the salt mining town of Gorleben is a byword for this stuff. An innovative facility for this stuff in Onkalo, Finland will go online in 2024. In 2009, Steven Chu reiterated that a site for this stuff once dubbed “the most studied real estate on the planet” was not under consideration. In 2013, Governor Jay Inslee announced problems at the largest repository for this stuff in the US in Hanford, Washington with (\*) single-shell containers. As of 2017, TEPCO (“tep-coh”) was generating 400 tons of this stuff per day in its continuing response to a 2011 natural disaster. In 2010, Harry Reid helped cancel a safety study for a facility for storing this stuff in Nevada named Yucca Mountain. For 10 points, name this harmful byproduct of weapons facilities and fission power plants. ANSWER: nuclear waste [or radioactive waste; accept radioactive water, nuclear sludge, or former nuclear weapons; accept spent nuclear fuel or used nuclear fuel; accept nuclear waste depository or nuclear waste storage facility; accept uranium or plutonium; prompt on pollution or waste; prompt on nuclear fuel] <Michael Bentley, Current Events - World> ~15762~ <Editor: Michael Bentley>

5. This character recites the line “Tell whoso hath sorrow / Grief never shall last” to her father, who responds by recalling an ass telling a bull not to work so hard. A man marries this narrator about three years after seeing his wife with a slave. This character talks about an artificial “ebony horse” in a translation by Antoine Galland (“AN-twan GAH-lond”). In a translation by Richard (\*) Burton, this character tells another character about a diamond-filled valley populated by birds called rocs. This character is assisted by her sister Dunyazad after she volunteers to marry a man notorious for killing a new wife every day. For 10 points, name this character who recounts the stories of Sinbad the Sailor and Ali Baba to King Shahryar (“SHAH-ree-ar”) in the *Thousand and One Nights*. ANSWER: Scheherazade (“shuh-HAIR-uh-zahd”) [or Shahrazad] <Joseph Krol, Literature - World and Miscellaneous> ~25280~ <Editor: Joseph Krol>

6. This politician was scolded to be a better man in a series of letters he exchanged with his so-called “little dwarf,” Julia Sand. As a young lawyer, this politician defended Civil Rights pioneer Elizabeth Jennings, a Black woman thrown off a New York streetcar. This president vetoed a bill sponsored by California’s John F. Miller on grounds that it violated the Burlingame Treaty, but ultimately signed a compromise (\*) Chinese Exclusion Act into law. About 10% of positions were covered by a law signed by this Stalwart president that introduced competitive exams, the Pendleton Civil Service Reform Act. For 10 points, name this President who took office following the assassination of his predecessor, James Garfield. ANSWER: Chester Alan Arthur <Michael Bentley, History - American - 1865-1945> ~24737~ <Editor: Michael Bentley>

7. This author recalled originally titling a novel “The Planet of Inexperience” in a section on “inexperience” in the essay “Sixty-Three Words.” It’s not Henry James, but this author remarked on a tendency to write seven-section novels in the 1986 essay collection *The Art of the Novel*; such novels include one with the repeated section titles “Lost Letters” and “The Angels.” A novel by this author opens by discussing the French Revolution’s possible (\*) eternal return. In that novel, a “war on kitsch” is declared by a painter who sometimes wears a bowler hat, Sabina. This author also wrote about Tomáš (“TOE-mash”) and Tereza’s experience of the Prague Spring. For 10 points, name this author of *The Book of Laughter and Forgetting* and *The Unbearable Lightness of Being*. ANSWER: Milan Kundera (“koon-DAIR-ah”) <Joseph Krol, Literature - European - Long Fiction> ~25270~ <Editor: Joseph Krol>

**8. Ralph (“rayf”) Vaughan Williams included a “Polka Melancolique” and a “Galop” in the third part of his suite for this instrument and small orchestra. The melody for the fourth movement of a concerto for this instrument comes from the German folk song “Aren’t you the swan turner.” This instrument was played by Lionel Tertis as well as the composer of the *Der Schwanendreher* (“dare SHVAN-end-dray-her”), the virtuoso Paul (\*) Hindemith, who premiered William Walton’s concerto for it. Because the part had too many rests, Niccolò Paganini refused to play the solo part for this instrument in Hector Berlioz’s *Harold in Italy*. For 10 points, name this string instrument notated with the alto clef and pitched between the violin and cello.**

ANSWER: viola

<Benjamin Chapman, Fine Arts - Music - 1900 to 1970> ~25783~ <Editor: Young Lee>

**9. During the height of a controversy, this person made a surprise appearance on U2’s Zooropa tour. Events surrounding this person led to the title cold case of Norwegian journalist Odd Isunget’s 2010 book *Who Shot William Nygaard?* Joseph Conrad and Anton Chekhov inspired this person’s alias Joseph Anton. Hitoshi Igarashi was found murdered at Japan’s Tsukuba University just a few days after another (\*) translator of this person, Ettore Capriolo, was killed in Italy. While giving a speech at New York’s Chautauqua (“shuh-TAWK-wah”) Institute in August 2022, this person was stabbed by Hadi Matar. In 1989, Ayatollah Khomeini issued a fatwa against, for 10 points, what author of *The Satanic Verses?***

ANSWER: Salman Rushdie [accept the Rushdie Affair; or L’affaire Rushdie]

<Michael Bentley, Other - Other Academic and General Knowledge> ~25222~ <Editor: Ganon Evans>

**10. Density perturbations named for the constancy of this quantity are fluctuations in relative energy densities that are contrasted with primordial adiabatic density perturbations. Setting this quantity to zero and solving for rho in the first Friedmann equation gives the critical density. W·MAP’s measurement of the (\*) density parameter as 1.02 implies that this quantity is zero. Negative values of this quantity imply a hyperbolic universe. Gravitational lensing results from an increase in this quantity’s magnitude near massive objects that can be analogized to placing a weight on a stretched piece of fabric. For 10 points, name this geometric quantity whose global value would indicate whether the universe is flat.**

ANSWER: curvature of the universe [accept isocurvature density perturbations]

<Lalit Maharjan, Science - Astronomy> ~24781~ <Editor: David Bass>

**11. This figure curses another to “fall before his time and lie unburied on the broad sand.” This figure is compared to a “deer struck by an arrow” and is courted by Iarbas. A goddess spreads rumors of a “huge and horrible monster” after a hailstorm causes this figure to shelter in a cave with a lover while hunting. The phrase “Dux femina facti” describes this figure, who claimed land by cutting an (\*) oxhide into strips after fleeing from her brother Pygmalion. This woman’s ghost ignores her lover in the Underworld, and she is advised by her sister Anna, with whom she flees Tyre to build a city in ancient Libya. This woman stabs herself on her funeral pyre after her lover leaves to settle a Trojan city in Italy. For 10 points, name this queen of Carthage who appears in Virgil’s *Aeneid*.**

ANSWER: Dido [or Elissa]

<Yingzhi Nyang, RMP - Greco-Roman Mythology> ~24774~ <Editor: Jaimie Carlson>

**12. A thinker best known for promoting this theory used the image of a train's steam-whistle to suggest that our mental events are an "epiphenomenon" with no causal impact. This theory's use in namesake "debunking" arguments against moral realism is criticized in Thomas Nagel's *Mind and Cosmos*. This theory is opposed by the "mousetrap analogy" of Michael Behe ("bee-hee"), who has been accused of seeking a "skyhook" by Daniel (\*) Dennett. This theory was used to justify laissez-faire politics by the author of *Social Statics*, Herbert Spencer. The "Bulldog" Thomas Huxley defended this theory, which is opposed by theorists of "irreducible complexity" and "intelligent design." For 10 points, name this theory put forth in *The Origin of Species* by Charles Darwin.**

ANSWER: **evolution** [or **natural selection**; accept **Darwinism**, Neo-**Darwinism**, or social **Darwinism** until "Darwin" is read; accept **evolutionary** debunking arguments; prompt on **selection** or "**survival of the fittest**"]  
<Jordan Brownstein, RMP - Philosophy> ~25043~ <Editor: Jordan Brownstein>

**13. The name of the Baluba people from this modern-day country became an epithet in Ireland after Irish troops were ambushed in 1960. A religion founded in this modern-day country uses the Mandombe script that was divinely inspired by Simon Kimbangu. The Shin·ko·lob·we Mine in this country was a key source of uranium for the Manhattan Project. During a civil war in this country, (\*) UN Secretary General Dag Hammarskjöld ("dog HAM-arr-skold") was killed. The CIA helped overthrow the first prime minister of this country, Patrice Lumumba. The Republic of Katanga's efforts to secede from this country were supported by its former colonizer, Belgium. For 10 points, name this African country sometimes named for its capital of Kinshasa.**

ANSWER: **Democratic Republic of the Congo** [or **DRC**; or **DR Congo**; prompt on The **Congo** or **Zaire**; accept **Congo-Kinshasa** before the end]  
<Michael Bentley, History - World - African> ~23958~ <Editor: Michael Bentley>

**14. A story by this author ends with a foul-mouthed woman driving the protagonist to a Greyhound station in her pickup truck and musing on the title waterway. In a novel by this author, a group of boys steal a character's keys and demand that she kiss each of them to get them back. The protagonist of a novel by this author explains that her name means "hope" in one language, but "sadness" in another. A character created by this author is abandoned by her more (\*) sexually mature friend Sally at a carnival, which leads to her being sexually assaulted. A novel by this author is told in vignettes and chronicles a year in the life of Esperanza Cordero after her family moves to the title location. For 10 points, what Chicana author wrote *The House on Mango Street*?**

ANSWER: Sandra **Cisneros** (The story described in the first sentence is "Woman Hollering Creek.")  
<Chandler West, Literature - American - Long Fiction> ~24026~ <Editor: Chandler West>

**15. J.S. Woodsworth participated in one of these events where Canada's Immigration Act was amended so that British immigrants could be deported. Thousands of University of Washington students were deputized by Mayor Ole Hanson during one of these events in Seattle in 1919. One of these events coinciding with an Intervision Song Contest started after poor treatment of Anna Walentynowicz ("VAL-en-TIN-oh-vitch") at the Lenin Shipyards. That event of this type was led by an electrician named (\*) Lech Wałęsa ("LECK vah-WEN-suh") in Gdansk. In 1892, one of these events sparked by a yellow-dog contract culminated in a bloody battle with Pinkertons on the Ohio River near Homestead, Pennsylvania. For 10 points, Grover Cleveland sent in the Army to Pullman, Illinois to suppress what type of labor unrest?**

ANSWER: general **strike** [or labor **strike**; or **strike** action; or **lockout** or steel **strike** or wildcat **strike**; prompt on **protest** or **walkout** or factory **occupation** or **industrial action**]  
<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~25723~ <Editor: Michael Bentley>

**16. This mathematician proved that the Riemann zeta function of  $s$  equals the product over all primes  $p$  of the reciprocal of one minus  $p$  to the negative  $s$  in his “product formula.” This mathematician worked 2,000 years after the other namesake of a theorem that establishes a one-to-one correspondence between even perfect numbers and Mersenne primes. This mathematician found that the Riemann zeta function of (\*) two equals pi squared over six, thus solving the Basel problem. This mathematician found that the number of vertices minus edges plus faces for all convex polyhedra equals two, which is his “characteristic.” For 10 points, name this mathematician whose “number” is the base of the natural logarithm, denoted  $e$ .  
ANSWER: Leonhard Euler (“oy-ter”) [accept Euler product formula or Euclid–Euler theorem or Euler characteristic or Euler’s number] (The theorem relating the even perfect numbers to the Mersenne primes is the Euclid–Euler theorem.)  
<Benjamin Chapman, Science - Math> ~24063~ <Editor: David Bass>**

**17. People who spend ten rainy seasons in these locations are given the title of *ajahn*. Ceremonial *namjars* and maroon *shemdap* skirts are types of clothes worn in these locations called *kāṣāya*. In addition to being a university, Nalanda evolved from one of these locations designed around an open courtyard called a *vihara*. One of these locations in Henan (“HUU-nan”) developed a form of *wushu* after a visit by (\*) Bodhidharma. People in these locations who undergo *upasampadā* followed the *Pāṭimokkha*, which includes four prohibited “defeats” like murder and sex. *Bhikkhu* and *Bhikkhunīs* are found in these locations and are known as the *Sangha*. Shaolin is an example of, for 10 points, what religious sites where the Eightfold Path is studied by monks?  
ANSWER: Buddhist monasteries [accept si; accept vihara before mention; prompt on monasteries with “Of what religion?”; prompt on temples or Buddhist temples; prompt on shrines or Buddhist shrines]  
<Ganon Evans, RMP - Buddhism> ~25785~ <Editor: Athena Kern>**

**18. This color is used for the breastplate of a Medusa head sticking its tongue out in a front-facing painting titled *Pallas Athene*. This color dominates a painting in the Neue Galerie (“NOY-uh GAH-leh-ree”) that was restituted to Maria Altmann in 2006. A 1907 painting sometimes titled for this color was inspired by a mosaic of Empress Theodora and features the title woman wearing a dress filled with eye motifs. A dome of blue and this other color decorates a building designed by (\*) Joseph Maria Olbrich that contains the *Beethoven Frieze*. This color dominates the background and dress of the first portrait of Adele Bloch-Bauer. For 10 points, Gustav Klimt paintings such as *The Kiss* are dominated by what metallic color?  
ANSWER: gold [prompt on yellow]  
<Michael Bentley, Fine Arts - Painting - European 1600-1945> ~25405~ <Editor: Chandler West>**

**19. A mutation to metabolize this compound has been the most surprising adaptation in 35 years of the long-term *E. coli* evolution experiment. Salts of this chelating (“KEY-lating”) acid are administered to neutralize stomach acid before a C-section and to alkalize (“ALK-uh-lin-ize”) urine to prevent kidney stones. The only iron-sulfur protein in central metabolism isomerizes this compound through aconitate. Glycolysis is feedback-inhibited by this six-carbon (\*) tri-carboxylic acid, which is formed when oxaloacetate condenses with acetyl-CoA. Aerobic oxidation of this compound provides high-energy electrons to N·A·D and F·A·D in a pathway that occurs inside the mitochondrial matrix after glycolysis. For 10 points, the Krebs cycle is named for what acid found in oranges and lemons?  
ANSWER: citric acid [or citrate; or sodium citrate or potassium citrate; accept citric after “acid” is read]  
<Sudheer Potru, Science - Biology> ~25606~ <Editor: Adam Silverman>**

**20. This author asked readers to “give the writer the benefit of every doubt,” while “judg[ing] with the utmost severity.” This author described bursting into laughter at a fancy party upon wondering if Tennyson was “hummed at luncheon parties before the war” in an essay which recounts being escorted out of a library. This author of “How Should One Read a Book?” wrote about being amazed by the sentence “Chloe liked (\*) Olivia” in an essay that imagined a Judith Shakespeare. This author used square brackets in the chapter “Time Passes” to describe the deaths of Andrew and Prue. This Bloomsbury Group author argued that, to write, women need five hundred pounds a year and a “Room of One’s Own.” For 10 points, name this author of *To The Lighthouse*.**

ANSWER: Virginia **Woolf** [or Adeline Virginia Alexandra **Stephen**]

<Yingzhi Nyang, Literature - British - Other> ~25573~ <Editor: Jaimie Carlson>

**21. One of these figures is suspended from the ceiling of the Dom zu Güstrow church in a “floating” war memorial by Ernst Barlach. Drivers on the A1 in Gateshead, England pass by a gigantic sculpture of one of these figures made from COR-TEN steel by the artist Antony Gormley. A male one of these figures holds a golden spear with an iron tip above the title figure in a sculpture in the Santa Maria della Vittoria as the (\*) Cornaro family looks on. That same one of these figures touches the robes of a saint who leans back her head in front of golden rays of light in Gian Lorenzo Bernini’s sculpture the *Ecstasy of Saint Theresa*. For 10 points, name these figures, one of which typically visits Mary in Annunciation scenes.**

ANSWER: **angels** [or **archangel**; accept *Angel of the North* or *Floating Angel*]

<Michael Bentley, Fine Arts - Sculpture> ~25506~ <Editor: Chandler West>

## NSC 2023 - Round 03 - Bonuses

1. In one lecture, this author wrote that “the magic power of a poem consists in it always being filled with” an inner force called *duende* (“DWEN-day”). For 10 points each:

[10m] Name this author who exemplified *duende* in his 1933 play about the Bride and Groom, the first play in his *Rural Trilogy*.

ANSWER: Federico García **Lorca** (That play is *Blood Wedding*.)

[10e] Lorca’s lecture discusses the *duende* of one of these people called Belmonte (“bel-MON-tay”). A Lorca poem is titled for being a “Lament for the Death of” one of these people, who practice a dangerous traditional Spanish sport.

ANSWER: **bullfighters** [or **matadors** de toros or **toreadors** or **toreros**; accept “Lament for the Death of a **Bullfighter**”]

[10h] Lorca’s lecture refers to the “muse” of this poetic rival of Francisco de Quevedo (“fran-SEEHS-koh day keh-VAY-doh”). The 300th anniversary of this *culteranismo* poet’s death inspired Lorca to co-found the “Generation of ‘27.”

ANSWER: Luis de **Góngora** (“loo-EES day GOHN-goh-rah”) [or Luis de **Góngora** (y Argote)]

<Tora Husar, Literature - European - Poetry> ~11859~ <Editor: Joseph Krol>

2. Composers working in this city popularized a namesake grand pause, in which the orchestra would suddenly all cease playing before starting again at loud dynamics. For 10 points each:

[10h] Name this city. This city’s court composer Johann Stamitz helped popularize the four-movement symphony.

ANSWER: **Mannheim** [or **Mossem**]

[10m] The Mannheim school’s other Classical era innovations included doing away with this section of a Baroque orchestra that played chordal progressions and the bass line. Harpsichords and lower strings were often included in this section.

ANSWER: basso **continuo**

[10e] Other performing innovations at Mannheim include the so-called Mannheim form of this technique in which musicians play louder and louder up to a given dynamic.

ANSWER: **crescendo** [or word forms]

<Ethan Ashbrook, Fine Arts - Music - Classical> ~20892~ <Editor: Young Lee>

3. Beyond the original manuscript, no evidence exists for a Spanish language printing of this text prior to the 1830s. For 10 points each:

[10h] Name this 1815 text that proclaims, “A people that love freedom will in the end be free.” This epistle was addressed to a merchant from the title British colony during its author’s exile there.

ANSWER: “**Jamaica Letter**” [or “**Letter from Jamaica**” or *Carta de Jamaica* or “**Reply of a South American to a Gentleman of this Island**”]

[10e] The Jamaica Letter was written by this Great Liberator of South America.

ANSWER: Simón **Bolívar** [or Simón José Antonio de la Santísima Trinidad **Bolívar** y Ponte Palacios y Blanco]

[10m] *Description acceptable*. After returning from exile, Bolívar began the conquest of New Granada by performing this action in the Cordillera Oriental. José de San Martín’s army performed this action to reach and win the Battle of Chacabuco.

ANSWER: **crossing** the **Andes** [accept equivalents of **crossing** like **traversing** or **climbing**; accept **Cruce** de los **Andes**; prompt on just **crossing** or synonyms; prompt on answers like **crossing** the **mountains** with “what mountain range?”]

<Michael Bentley, History - World - Latin American> ~17886~ <Editor: Jordan Brownstein>

4. Whereas low-density ice forms a cubic crystal lattice, high-density ice forms a lattice named for this 2D shape. For 10 points each:

[10e] Name this polygon that names a unit cell that packs atoms at the highest possible density. Benzene's ring forms this 2D shape.

ANSWER: regular **hexagons** [or **hexagonal** close packing]

[10m] One of these points occurs for the equilibrium between cubic and hexagonal ice around 1000 atmospheres and 200 Kelvin. On phase diagrams, these points occur at abrupt endpoints of line segments.

ANSWER: **critical** points

[10h] Thermodynamic critical points occur at a local maximum for this quantity. This quantity is the change in a system's free energy when a molecule changes phases, so it must be equal for two phases in equilibrium.

ANSWER: **chemical potential** [prompt on mu; prompt on potential; prompt on partial molar Gibbs free energy or partial molar free energy; reject "potential energy" or "chemical potential energy"]

<Ethan Ashbrook, Science - Chemistry> ~20549~ <Editor: Adam Silverman>

5. Rumors claim that tunnels connect this location with the nearby "underground Pentagon" of Raven Rock. For 10 points each:

[10e] Name this presidential retreat in Frederick County, Maryland. Jimmy Carter got Anwar Sadat and Menachem Begin ("BAY-gin") to agree to "accords" named for this place in 1978.

ANSWER: **Camp David** [or Naval Support Facility **Thurmont**; or **Hi-Catoctin**; or **Shangri-La**; accept the **Camp David** Accords]

[10h] The British equivalent of Camp David is this country estate of the Prime Minister in Buckinghamshire that unofficially names Theresa May's white paper on Brexit.

ANSWER: **Chequers** [or **Chequers** Court; accept the **Chequers** Plan]

[10m] Kirribilli House, another secondary residence of a world leader, has great views of this body of water, spanned by a bridge nicknamed The Coathanger. Jørn Utzon designed a building on this body of water resembling ship sails.

ANSWER: **Sydney Harbor** [or **Port Jackson**; prompt on the **Tasman** Sea]

<Michael Bentley, Geography - World> ~20443~ <Editor: Ganon Evans>

6. This artist depicted a trophic ulcer on her foot as it pokes out of a bathtub in the painting *What the Water Gave Me*. For 10 points each:

[10e] Name this Mexican surrealist who spent her last years at the Casa Azul in a wheelchair after her leg was amputated.

ANSWER: Frida **Kahlo**

[10h] Cubist figures with giant feet hold sugarcane in a Wifredo Lam painting titled for one of these places. The first painting of these places created by a Naïve artist depicts an animal "Surprised!" by a lightning bolt.

ANSWER: **jungles** [accept **rainforests**; accept *The **Jungle***; accept la **selva**; prompt on forests or woods] (The painting is *Surprised!* or *Tiger in a Tropical Storm* by Henri Rousseau.)

[10m] A gigantic foot appears below a cactus in *Abaporu*, a painting by an artist from this country named Tarsila do Amaral. Paul Landowski designed a massive Art Deco statue in this country with outstretched arms.

ANSWER: **Brazil** [or the Federative Republic of **Brazil**] (The sculpture is Christ the Redeemer.)

<Ganon Evans, Fine Arts - Painting - World> ~20841~ <Editor: Chandler West>



7. Marshall McLuhan's son Eric wrote a book on ten 100-letter words in this novel known as "thunder words." For 10 points each:

[10m] Name this nearly unreadable novel that loosely follows a man known as Humphrey Chimpden Earwicker, or HCE. This 1939 stream-of-consciousness novel was inspired by *La Scienza Nuova*.

ANSWER: **Finnegans Wake**

[10e] *Finnegans Wake* was the final novel by this Irish author, who invented words like "yogeybogeybox" and a verb form of "sausage" in his novel *Ulysses*.

ANSWER: James **Joyce** [or James Augustine Aloysius **Joyce**]

[10h] *Finnegans Wake* opens with this word, describing a movement "Past Eve and Adam's...back to Howth Castle and Environs." This word continues the last sentence of the book, talking about a feature "a way a lone a last a loved a long."

ANSWER: **riverrun**

<Ethan Ashbrook, Literature - British - Long Fiction> ~20833~ <Editor: Jaimie Carlson>

8. This term describes scientific projects like SETI@home ("SET-ee at home") that employ volunteers to contribute computing hours. For 10 points each:

[10m] Name this term that describes systems of distinct, networked computers that operate as a single computer.

ANSWER: **distributed** [accept **distributed** computing or **distributed** systems]

[10e] A common type of cyber-attack is the distributed denial of this thing, in which a system is rendered unavailable to users by flooding it with bogus requests from a network of computers.

ANSWER: **service** [accept distributed denial-of-**service** attacks; prompt on DDoS attacks]

[10h] DoS attacks may involve spoofing messages from this protocol onto a LAN, causing users' machines to recognize an attacker as a network host. This protocol's "reply" contains a MAC address for a requested IP.

ANSWER: **ARP** [or **Address Resolution** Protocol; accept **ARP** spoofing]

<David Bass, Science - Computer Science> ~21430~ <Editor: David Bass>

9. In Washington state, members of this religious denomination are specifically excluded from being liable for medical neglect. For 10 points each:

[10e] Name this religious group whose followers hold that prayer will bring about healing thanks to spiritual perfection. This denomination was founded by Mary Baker Eddy and runs namesake reading rooms.

ANSWER: **Christian Science** [or The **First Church of Christ, Scientist**]

[10h] This Canadian-American Pentecostal evangelist staged massive faith-healing events. This woman founded the Church of the Foursquare Gospel.

ANSWER: Aimee Semple **McPherson** [or Sister **Aimee**; or Aimee Elizabeth Semple **McPherson**; or Aimee Elizabeth **Kennedy**; prompt on **Sister**]

[10m] French Catholics often drink the water of the Grotto of Massabielle in this town for its healing properties. The Virgin Mary appeared to Bernadette Soubirous in this town in 1858.

ANSWER: **Lourdes**

<Michael Bentley, RMP - Christian Practice> ~18925~ <Editor: Athena Kern>

10. Answer the following about oral history projects, for 10 points each.

[10m] In 2017, Tanya Finchum won an award for a project that interviewed 111 centenarians in this state. This state's official archaeologist, Kary Stackelbeck, has led efforts to exhume victims of a 1921 event involving shoeshiner Dick Rowland.

ANSWER: **Oklahoma** [or **OK**] (The event was the Tulsa Race Massacre.)

[10h] This person's *testimonio* of her life and community to Elizabeth Burgos was challenged by David Stoll. This founder of Winaq won the 1992 Nobel Peace Prize for amplifying K'iche Mayan voices during the Guatemalan Civil War.

ANSWER: Rigoberta **Menchú** [or Rigoberta **Menchú** Tum]

[10e] Studs Terkel's oral history of this period, *Hard Times*, interviews people ranging from farmers to Alf Landon. The day that began this period is explored in John Galbraith's book *The Great Crash, 1929*.

ANSWER: Great **Depression** [prompt on the Dust Bowl; prompt on the 1930s; prompt on the Wall Street Crash with "What larger period did that event begin?"]

<Ganon Evans, History - Cross, Historiography, and Miscellaneous> ~20803~ <Editor: Michael Bentley>

11. Joseph Henrich coined this term after noticing that most study subjects, such as college students, were "psychologically unusual." For 10 points each:

[10h] Give this acronym that refers to the largely American and European populations that are vastly overrepresented in psychological studies despite only making up about 12% of the world population.

ANSWER: **WEIRD** [accept **Western, Educated, Industrialized, Rich, and Democratic**]

[10m] Researching a greater variety of these constructs can help address WEIRD bias. Ghost sickness and evil eye are psychological syndromes "bound" to these constructs, which shape and are shaped by the mind.

ANSWER: **cultures** [accept **cultural** psychology; accept **culture**-bound syndromes]

[10e] Henrich argued that WEIRD societies are more impersonal due to stricter norms about these groups. The "nuclear" type of these groups predominate in Western society.

ANSWER: **families** [or the **family**; accept nuclear **families**]

<Ethan Ashbrook, Social Science - Psychology> ~20842~ <Editor: Athena Kern>

12. This author responded "My tone is not meant to be obnoxious. I am in a state of shock" to an English professor who argued that her character of the Misfit was imaginary. For 10 points each:

[10e] Name this Southern Gothic author of "A Good Man is Hard to Find."

ANSWER: Flannery **O'Connor**

[10h] Paul Elie accused O'Connor of a "habit of bigotry," citing this story in which Mary Grace throws a book at an old woman in a doctor's waiting room. While dying from lupus, O'Connor wrote letters signed by the racist Mrs. Turpin from this story.

ANSWER: "**Revelation**"

[10m] In this O'Connor story that titles the collection it appears in, Julian rides the bus to the YMCA with his bigoted mother, who is attacked after she gives a penny to a young Black boy.

ANSWER: "**Everything that Rises Must Converge**"

<Ganon Evans, Literature - American - Short Fiction> ~20853~ <Editor: Chandler West>

13. George Washington's dress uniform was once on display at a cabinet of curiosities run by the government "office" that processed these things. For 10 points each:

[10m] Name these legal constructs first defined in the US by a 1790 "Act to promote the Progress of Useful Arts."

ANSWER: **patents** [accept **patent** applications]

[10e] The Patent Office's curiosities were transferred to what became this organization's National Museum of American History. It publishes *Air & Space* magazine.

ANSWER: The **Smithsonian** Institution

[10h] John Mercer Brooke received a Confederate patent for one of these objects. One of these objects designed by Swedish-American inventor John Ericsson was deployed at a March 9, 1862 stalemate.

ANSWER: an **ironclad** warship [accept USS **Monitor**; prompt on warships or steamships or other synonyms]  
<Michael Bentley, History - American - 1865-1945> ~19878~ <Editor: Michael Bentley>

14. Isothermal DNA amplification is a useful substitute for this technique in low-resource settings if thermocyclers are not available. For 10 points each:

[10e] Name this lab technique for *in vitro* DNA replication, the most accurate technique for diagnosing infectious diseases like COVID-19.

ANSWER: **PCR** [or **polymerase chain reaction**; or quantitative **PCR** or q**PCR**; or reverse-transcription quantitative **PCR** or RT-q**PCR**; accept any other specific types of **PCR**]

[10m] The simplest isothermal amplification method replaces the PCR melt step with one of these enzymes that forms the replication bubble during cellular DNA synthesis.

ANSWER: **helicases** [or **helicase**-directed amplification; prompt on **HDA**]

[10h] Melt-free isothermal amplification strategies combine a strand-displacing DNA polymerase with an enzyme that performs this process. This process cuts only one strand of the double helix and relieves topological stress in supercoiled plasmids.

ANSWER: DNA **nicking** [or forming a **nick** in DNA; or **nickases**]

<Adam Silverman, Science - Biology> ~20887~ <Editor: Adam Silverman>

15. These people use a unit of measurement called a *poronkusema*, which is based on how far a reindeer can move before urinating. For 10 points each:

[10m] Name these people of northern Scandinavia and Russia whose economy traditionally depended on reindeer herding.

ANSWER: **Sámi** [or **Saami**; or **Sabme**; accept **Lapplanders** but politely inform the person giving the answer that this term is not preferred anymore]

[10e] The Sea Sámi suffered significantly higher mortality rates during this event than the more isolated Mountain Sámi. In England, a population collapse following this pandemic contributed to the 1381 Peasants' Revolt.

ANSWER: **Black Death** [or bubonic **plague**; or **Great Mortality**; or the **Pestilence**]

[10h] Sámi demographics in Sweden were affected by mass migration of Sámi trying to avoid conscription into this industry in Nasa. This industry was made more efficient by Bartolomé de Medina's patio process.

ANSWER: **silver** mining [accept answers such as **silver** extraction or **silver** ore processing; prompt on **mining**]  
<Michael Bentley, History - European - Misc> ~20256~ <Editor: Michael Bentley>

16. This dance originally symbolized traveling through the galley of a slave ship and was popularized globally by Julia Edwards. For 10 points each:

[10e] Name this Trinidadian dance in which participants bend and lean to pass under a bar without touching it.

ANSWER: **limbo** dancing

[10m] Chubby Checker's "Limbo Rock" was released after he started a craze for this dance from a Hank Ballard cover. In *Pulp Fiction*, Mia and Vincent do this dance that involves moving on the balls of the feet.

ANSWER: The **Twist**

[10h] This man arranged Checker's cover of "The Twist" and helped popularize the Jerk dance. This original host of *New Year's Rockin' Eve* was inspired by Philadelphia's integrated rock-and-roll scene while hosting *American Bandstand*.

ANSWER: Dick **Clark** [or Richard Wagstaff **Clark**]

<Ganon Evans, Fine Arts - Miscellaneous> ~20503~ <Editor: Young Lee>

17. Answer the following about depictions of slavery in ancient Greek philosophy, for 10 points each.

[10e] This man uses his namesake method to lead a slave through a geometry lesson in the dialogue *Meno*. This sage was sentenced to death for "corrupting the youth."

ANSWER: **Socrates**

[10m] This book argues that the very fact someone is a slave proves that they ought to be one in its infamous "natural slavery" argument. This Aristotle text analyzes the governments of the Greek city-states.

ANSWER: **Politics** [or **Politiká**]

[10h] The lack of care that doctors show to slaves is used as a metaphor for bad governance in a lengthy Platonic dialogue titled for these entities. In the *Crito*, Socrates imagines a conversation with these entities.

ANSWER: **laws** [or **nómoi**; or **nomos**; accept the **Laws** of Athens]

<Jordan Brownstein, RMP - Philosophy> ~20115~ <Editor: Jordan Brownstein>

18. *Pencil and paper ready*. An ideal mass on a spring is pulled back to its maximum displacement and has 100 joules of potential energy before it is released. For 10 points each:

[10m] What is the potential energy of the system when the mass is at one-half of its maximum displacement? You have 10 seconds.

ANSWER: **25** joules (This is solved by using the fact that  $U_0 = \frac{1}{2}kx_0^2$ , so  $U = \frac{1}{2}k(\frac{1}{2}x)^2 = \frac{1}{4}(\frac{1}{2}kx^2) = \frac{1}{4}U_0 = 25$  joules, where  $U_0$  is initial potential energy,  $U$  is current potential energy,  $k$  is the spring constant, and  $x_0$  is the initial displacement.)

[10e] Assuming no frictional losses, what is the kinetic energy of the mass at one-half of its maximum displacement? Recall that the current potential and kinetic energies sum to the initial potential energy of 100 joules.

ANSWER: **75** joules (This is solved by using the conservation of energy, i.e.  $K + U = U_0$ , so  $K = U_0 - U = 75$  joules, where  $K$  is current kinetic energy.)

[10h] In the presence of frictional losses such that the mass loses half its amplitude each cycle, this quantity equals approximately 11 percent. A dynamical system undershoots when this quantity is less than one.

ANSWER: **damping ratio** [prompt on **damping** or **zeta**]

<Adam Silverman, Science - Physics> ~20501~ <Editor: David Bass>

19. After King Kpasse was protected by these animals, he built a temple for them in Ouidah (“WEE-dah”), Benin dedicated to the Vodun messenger god Dan. For 10 points each:

[10h] Name these animals, one of whom named Onini was tricked into stretching himself out as part of a deity’s tasks from the Sky God Nyame.

ANSWER: **pythons** [accept specific types of pythons such as a king **python**; prompt on **snakes**; prompt on **serpents**]

[10e] Catching Onini the Python and Osebo the Leopard were two of the four tasks that this West African trickster god accomplished to acquire the world’s stories. He takes the form of a spider.

ANSWER: **Anansi** [or **Ananse**]

[10m] In another story, Anansi tries to collect all of this property in the world in a calabash, but drops it while climbing a tree. Fionn mac Cumhaill (“FINN muh-COOL”) cooks a salmon containing all of this property in the world.

ANSWER: **wisdom** [accept word forms such as being **wise**; accept **knowledge**; accept **intelligence** or being **smart** or equivalents]

<Ganon Evans, RMP - World Mythology> ~20100~ <Editor: Jaimie Carlson>

20. This author compiled his *Anthology of the New Black and Malagasy Poetry* a year after a similar anthology by Léon Damas. For 10 points each:

[10h] Name this Négritude poet of *Nocturnes*, who included his poem “Black Woman” in the collection *Shadow Songs*.

ANSWER: Léopold Sédar **Senghor** (“LAY-oh-pold SAY-dar sen-GOR”)

[10e] The readership of Senghor’s *Anthology* was boosted by its prefatory essay “Black Orpheus,” which was written by this French author of the play *No Exit*.

ANSWER: Jean-Paul **Sartre** (“sart”)

[10m] Senghor, unlike Sartre, was eventually elected to become one of the 40 “immortals” of this organization, which was founded by Cardinal Richelieu to steer the French language and literary scene.

ANSWER: **Académie** Française (“ah-cahd-AY-mee frahn-SEZ”) [or French **Academy**]

<Charles Dees, Literature - World and Miscellaneous> ~12977~ <Editor: Joseph Krol>

21. A greeting that translates as “May God make it a blessed feast” is commonly said on this holiday. For 10 points each:

[10m] Name this holiday where Muslims traditionally distribute one-third of animal sacrifices to the needy.

ANSWER: **Eid al-Adha** (“EED all-AHD-hah”) [or **Big Eid** or **Greater Eid** or **Sweet Eid**; prompt on **Eid**]

[10e] Eid al-Adha commemorates this man’s willingness to sacrifice his son Ismail on the orders of Allah. Islam, Judaism and Christianity are often grouped as religions named for this man.

ANSWER: **Ibrahim** [or **Abraham**; accept **Abrahamic** religions]

[10h] Eid al-Adha begins on the 10th day of this final month of the Islamic calendar. Shi’ites typically perform a du’aa for the entire of afternoon during this month’s Day of Arafah.

ANSWER: **Dhu al-Hijja** [or **Zu al-Hijja**]

<Michael Bentley, RMP - Islam> ~18754~ <Editor: Athena Kern>