



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 19 - Tossups

1. This symphony's finale ends as the orchestra plays a modal variation of the plagal cadence followed by an E major Picardy third. This symphony begins with the cellos playing a slow double pianissimo (read slowly) "E, D, short E, down to B" in 4/8 time. This symphony's *Allegro con fuoco* finale opens with the slurred string figure (*) "B, C" followed by a fortissimo French horn theme. A recording of this symphony was taken to the moon by Neil Armstrong. Harry Burleigh's singing inspired an English horn theme in this symphony's *Largo* second movement based on the song "Swing Low, Sweet Chariot." For 10 points, name this symphony by Antonín Dvořák ("d'VOR-jock") composed while he was visiting the United States.

ANSWER: "From the New World" Symphony [or New World Symphony; or *Symphony No. 9 in E minor* by Antonín Dvořák; or Dvořák 9; accept 9th Symphony after "Dvořák" is read]
<Ethan Ashbrook, Fine Arts - Music - Romantic> ~25478~ <Editor: Young Lee>

2. An iconic photo from this city depicts a tree jutting out of John Schultz's house. David McCullough's first book includes a section on a fire at the Stone Bridge over the Conemaugh ("cohn-uh-maw") River in this city. It's not Pittsburgh, but this city's Cambria Iron Company was once the biggest steel producer in the US. People in this city received donations from (*) Henry Clay Frick after Frick's South Fork Fishing and Hunting Club was absolved of responsibility for their suffering. Clara Barton spent five months in this city in one of the first American Red Cross relief efforts following an 1889 disaster that also wiped out all the structures in the town of Mineral Point. For 10 points, name this Pennsylvania city that was the site of a devastating flood.

ANSWER: Johnstown, Pennsylvania

<Michael Bentley, History - American - 1865-1945> ~23888~ <Editor: Michael Bentley>

3. A category for which these structures are "broken" was added to a morphological system by Gérard de Vaucouleurs ("ZHAY-rah duh VOH-koo-lur"). These structures rotate with a quantity denoted capital omega-sub-*p* called pattern speed. Though it was later applied to planetary rings, the "winding problem" of the persistence of these structures motivated the development of Lin-Shu density wave theory. These structures are the defining features of members of *both* right branches of the (*) Hubble tuning fork. Orion lends its name to one of these structures that contains the Earth. These structures are directed outward from a central bulge and may be connected by a "bar." For 10 points, name these spoke-like structures that distinguish spiral galaxies from elliptical galaxies.

ANSWER: spiral arms [prompt on spiral galaxies or spiral galaxies before read with "What feature of galaxies?"]

<Joseph Krol, Science - Astronomy> ~25998~ <Editor: David Bass>

4. In a story by this author, the potentially lesbian Adrienne drops flowers on a convent's portico, which are swept away after she is barred from it. In a story by this author of "Lilacs," a character "disappeared among the reeds and willows" after being dismissed by her husband, who almost burns a letter that describes how he "will never know... his mother." This author created a woman who whispers "body and soul free" before dying when her husband returns home. (*) Armand discovers his mixed-race blood in a story by this author, who wrote a novel in which a friend of Mademoiselle Reisz ("rise") walks into the sea after a failed relationship with Robert Lebrun. For 10 points, name this author of "Désirée's Baby," "The Story of an Hour," and *The Awakening*.

ANSWER: Kate Chopin [or Katherine O'Flaherty]

<Yingzhi Nyang, Literature - American - Short Fiction> ~25962~ <Editor: Chandler West>

5. An artist claimed that "with [one of these objects], I want to astonish Paris" with a painting of them spread out over a table that was exhibited by Ambroise Vallard. A painting of one of these objects with the phrase "Au revoir" written on it was owned by Paul McCartney and inspired a corporate logo. One of these objects takes up the entirety of a room in the painting *The Listening Room*. A painting titled after these objects includes an impossible (*) table with no right angles, a rare example of its artist's signature, and a tilted wine bottle. Paul Cézanne painted a still life depicting *A Basket of*, for 10 points, what objects, one of which blocks the face of a man wearing a bowler hat in René Magritte's painting *The Son of Man*?

ANSWER: apples [or pommes; accept green or red or any specific type of apples; prompt on fruit] (The Magritte painting owned by Paul McCartney inspired the logo for Apple Records and in turn the technology company Apple.)

<Ganon Evans, Fine Arts - Painting - Misc> ~26088~ <Editor: Chandler West>

6. This author described a nuclear test as the "final act of betrayal by a ruling class that has failed its people" in the essay "The End of Imagination." In a novel by this author, the security guard Saddam Hussein moves into a graveyard with an intersex person. In a novel by this author, six policemen create a haunting smell of "old roses" when they beat up a man in the History House. Ammu is ostracized for her affair with (*) Velutha in a novel by this author, in which a boy is molested at a screening of *The Sound of Music* by the Orangedrink Lemondrink Man. The debut novel by this author of *The Ministry of Utmost Happiness* ends with the siblings Rahel and Estha having a relationship. For 10 points, name this Indian author of *The God of Small Things*.

ANSWER: Arundhati Roy [or Suzanna Arundhati Roy]

<Yingzhi Nyang, Literature - World and Miscellaneous> ~25138~ <Editor: Joseph Krol>

7. The underwater speed of sound was first measured in this body of water. The castle from 1989's *Little Mermaid* was inspired by an island on this body of water. The longest non-stop rowing regatta in the world is on this body of water and references its Roman name of Lacus Lemanus. A city on this body of water hosts the second-largest jazz festival in the world after Montreal and was the site of a casino fire that inspired Deep Purple's song (*) "Smoke on the Water." The Lavaux Vineyards overlook this body of water from Vaud. Mont Blanc is visible from cities on this body of water like Montreux ("mon-TROO"). The department of Haute-Savoie ("oht sah-VWA") shares this body of water with three cantons, including its namesake. For 10 points, name this large lake between France and Switzerland.

ANSWER: Lake Geneva [or Lac de Genève; accept Lago Lemano or Lago di Ginevra; accept Lacus Lemanus or Lac Leman before "Lacus Lemanus"]

<Ganon Evans, Geography - Europe> ~26031~ <Editor: Ganon Evans>

8. Hymen’s torch gets smoke in this woman’s eyes during her wedding. A man atoning for his crime against this woman sacrifices four bulls, four heifers, and a calf, and sees bees rising from their corpses. This woman claims “I am taken, wrapped around by vast night,” after which a man weeps for seven months. A severed head repeats this woman’s name while floating downstream after its owner is killed by (*) Maenads. While fleeing from Aristaeus trying to rape her, this Aulonid nymph dies after being bitten by a viper. After a man plays such sad music that even the Furies cry, Hades gives that man permission to rescue this woman; however, she disappears when he turns back to look at her. For 10 points, name this wife of Orpheus.

ANSWER: Eurydice

<Jaimie Carlson, RMP - Greco-Roman Mythology> ~25799~ <Editor: Jaimie Carlson>

9. Two answers required. Collisions of these two particles were detected by early B factories like the BaBar experiment. These two particles interact in Bhabha scattering. Blackett and Occhialini’s discovery of one of these particles by observing its curving relative to the other was scooped by a scientist who observed their tracks from cosmic rays in a (*) cloud chamber. Radiotracers like carbon-11 emit one of these particles whose interaction with the other is detected by gamma cameras. These two particles correspond to opposite-sign solutions to the Dirac equation according to hole theory. These two particles have opposite charges with magnitudes equal to the elementary charge. For 10 points, name this negatively-charged nucleus-orbiting fermion and its antiparticle.

ANSWER: electron AND positron [accept in either order; prompt on e-minus instead of electron; prompt on e-plus or beta-plus instead of positron; accept antielectron instead of positron]

<Lalit Maharjan, Science - Physics> ~25541~ <Editor: David Bass>

10. The Brahimi Report, issued in 2000, argued that people in this job should be ready to take action in as little as 30 days. Thom Karremans, a Dutch leader of people in this job, ignominiously trusted the VRS to carry out a bus transfer in July 1995. People in this job under Canada’s Romeo Dallaire working in the Great Lakes region badly handled the aftermath of a plane crash that killed (*) Juvénal Habyarimana (“zhoo-ven-al hahb-yah-ree-MAH-nah”). In 2010, people in this job caused a cholera outbreak in Haiti. People in this job were ineffective in controlling “Safe Areas” in Bosnia. Resolution 377A sent people in this job to Egypt in 1956 despite a British veto in the Security Council. For 10 points, name this blue-helmeted job of people deployed by the UN to manage conflicts.

ANSWER: United Nations peacekeepers [prompt on anything mentioning people sent by the United Nations; prompt on soldiers or international police officers or UN officials or aid workers or Dutchbat; prompt on the Blue Helmets or the Blue Berets before “blue” is mentioned]

<Yingzhi Nyang, History - Cross, Historiography, and Miscellaneous> ~25749~ <Editor: Michael Bentley>

11. Hollis Scarborough developed a “rope” infographic for assessing this skill. Marie Clay’s studies in New Zealand informed an ineffective “three-cueing” approach to teaching this skill in the 1990s. Lucy Calkins’s “balanced” approach to this skill includes a focus on memorizing Dolch lists. People who have not mastered this skill can struggle when Flesch–Kincaid scores are low. When teaching this skill, some scholars advocate building (*) sight memory for high-frequency irregular encounters. A “war” over teaching this skill pitted advocates of a systemic technique against advocates of “whole language”. This skill might be practiced during SSR or “sustained silent” periods intended to promote recreational interest. For 10 points, name this skill that can be harder to master for people with dyslexia.

ANSWER: reading [or literacy; prompt on teaching English or language learning]

<Michael Bentley, Social Science - Psychology> ~25720~ <Editor: Athena Kern>

12. A disastrous land invasion of British India by these people was averted by the Pahlen Plot. Baturyn was sacked after a leader of these people switched sides to join Charles XII of Sweden at Poltava. Anger over fishing rights contributed to a rebellion led by the Yaik subgroup of these people. Under the “stanitsa democracy” practiced by these people, widespread bribery occurred in races to be elected (*) Hetman. A vulgar letter sent to Mehmed IV by some of these people is the subject of Ilya Repin’s painting *Reply of the Zaporozhians*. Ivan Mazepa and Yemelyan Pugachev led rebellions of these people who settled along the Don. For 10 points, name this nomadic people from the Ukrainian steppe that formed the cavalry of the Russian Empire.

ANSWER: **Cossacks** [accept Don **Cossacks** or Zaporizhzhian **Cossacks**; accept **Kazak** even though that’s similar to the unrelated “Kazakh”; prompt on Russians or Ukrainians or Russian cavalry or Russian soldiers] <Ganon Evans, History - European - 1500-1900> ~25860~ <Editor: Michael Bentley>

13. An author is struck with inspiration for this novel while walking naked in the rain in a 2019 Jeanette Winterson book. In this novel, the protagonist’s father derides the writings of Cornelius Agrippa as “sad trash.” The innermost nested story in this novel describes how the Turkishwoman Safie is saved by Felix de Lacey, whose family leaves out copies of *Paradise Lost* and *Plutarch’s Lives*. This novel was written with John (*) Polidori’s story *The Vampyre* as part of a contest in the Villa Diodati during the “Year Without a Summer.” Letters by Captain Walton recount finding this novel’s protagonist trying to avenge his wife Elizabeth on an Arctic ice sheet, chasing the Creature he brought to life. For 10 points, name this Mary Shelley novel.

ANSWER: ***Frankenstein***; or, *The Modern Prometheus*

<Ethan Ashbrook, Literature - British - Long Fiction> ~25149~ <Editor: Jaimie Carlson>

14. A society celebrating this person’s birthday ceremonially laid siege to the old city hall in Laredo, Texas. In 2019, the San Francisco Board of Education voted to cover up a Victor Arnautoff mural of this person standing near the dead body of a Native American. John Greenwood possibly made an object for this person sourced from enslaved people and (*) hippopotamus ivory. William Frishmuth cast an aluminum apex for a structure named for this person that was eclipsed by the Eiffel Tower as the tallest building in the world. Parson Weems spread a legend in which this person admits “I did cut it with my hatchet.” For 10 points, name this person who supposedly admitted to cutting down a cherry tree as a child before going on to win the Battle of Yorktown.

ANSWER: George **Washington**

<Michael Bentley, Other - Other Academic and General Knowledge> ~25450~ <Editor: Ganon Evans>

15. Hugo Winckler and Robert Morey misguidedly conflated Allah with a deity of this object whose followers threw arrows at a statue that was destroyed after the Battle of Badr. This object names the 54th surah, which describes people turning away from “transient magic,” possibly as a reference to the pre-Islamic god Hubal. A Keralan king converted to Islam after witnessing a miracle in which Muhammad (*) split this object in two. The exact Gregorian date of Eid al-Fitr may not be known ahead of time because the holiday can only start after the first sighting of *hilal*, a form of this object described in the Surah al-Qamar. The Islamic calendar is based on this object. For 10 points, name this object that is depicted on the flags of Mauritania and Turkey alongside a star.

ANSWER: **Moon** [accept crescent **moon**; accept **qamar** until read]

<Athena Kern, RMP - Islam> ~25983~ <Editor: Athena Kern>

16. An early copyright performance for an opera titled for this profession had only one rehearsal that resulted in members of D'Oyly Carte's ("DEE-OIL-ee CART's") performing company carrying scripts on-stage. An opera titled for this profession borrowed a song from the unfinished opera *Thespis* that is sung by maidens climbing a rocky landscape. Members of this profession attempt to kidnap a group of women while singing "Here's a first rate opportunity" before being interrupted by a famous (*) "patter song." A man born on a leap year is apprenticed to a "rollicking band" of this profession, despite his love for a daughter of the "modern Major-General." For 10 points, name this profession of Frederic and his adopters in a Gilbert and Sullivan opera set along the coast of Penzance.

ANSWER: **pirates** [accept *The Pirates of Penzance*; accept **Pirate** King or **Pirate** Apprentice; prompt on **Lieutenant** or **Apprentice**; prompt on **privateers** or **robbers** or **bandits** or **buccaneers** or **thief** or **thieves**; prompt on **sailors** or **seamen** or **mariners**]

<Ethan Ashbrook, Fine Arts - Opera> ~26097~ <Editor: Young Lee>

17. Genomes of patients with this condition are collected in the GENIE ("genie") database and by an NIH-run Genome Atlas. Cell-free ctDNA is sequenced after a liquid biopsy to identify mutations that cause this condition. Alfred Knudson popularized the idea that this condition is caused by a second "hit" that causes the alleles for Rb ("R-B") to lose heterozygosity. This condition can be caused by hyperactivation of Ras ("razz") kinase or by inactivation of the (*) pro-apoptotic suppressor gene BRCA ("BRACK-uh"). p53 guards the genome mainly by preventing this condition. This condition occurs when cell cycle checkpoints are bypassed so that mitosis always proceeds. For 10 points, what disease condition occurs when oncogenes are mutated by carcinogens?

ANSWER: **cancer** [accept word forms like **cancerous**; accept any specific type of cancer such as **breast cancer** or **ovarian cancer**; accept **tumor** formation or **tumorigenesis**; **carcinogenesis** or **oncogenesis**; accept **metastasis**]

<Adam Silverman, Science - Biology> ~25693~ <Editor: Adam Silverman>

18. Anthony van Dyck painted a balapush robe from this empire depicting the Aryan king Hushang crushing a dragon; that robe was gifted to Robert Shirley. Shaykh Bahai designed a square called the "Exemplar of the World" in front of this dynasty's new Ali Qapu palace. The Sackler Gallery contains a miniature painting of a ruler of this empire hugging the Mughal emperor Jahangir. A ruler of this empire curtailed the influence of the (*) red hat-wearing Qizilbash troops and moved his capital to Isfahan. With its western neighbor, this empire signed the Peace of Amasya after being crushed by Selim the Grim at the Battle of Chaldiran. This empire converted to Twelver Shi'ism under its founder Ismail I. For 10 points, Shah Abbas I ruled what gunpowder empire in Iran?

ANSWER: **Safavid** Empire [accept the **Safavid** Dynasty; prompt on **Persia** or **Iran**]

<Ganon Evans, History - World - Middle Eastern> ~26139~ <Editor: Jordan Brownstein>

19. This work names a project that included Edwidge Danticat's "One Thing" and that was published in the *New York Times Magazine* in 2020. This work's format and title inspired an unfinished 72-part work by Marguerite de Navarre ("MAR-guh-REET duh nah-VAR"). In a story originally from this work, a man tells his wife that their two children have been killed, then pretends to have divorced her for several years, in order to test her (*) patience. Dioneo ("DEE-oh-NAY-oh") narrates the last section of this work, which concerns that wife, Griselda. In this work, stories are told by a group of people including Filostrato ("FILL-oh-STRAH-toh") and Fiammetta ("f'yam-ET-ah"), who are fleeing a Black Death epidemic in Florence. For 10 points, name this collection with a ten-day frame structure written by Giovanni Boccaccio ("joh-VAH-nee boh-CATCH-ee-oh").

ANSWER: *The Decameron* [or *Decamerone*]

<Joseph Krol, Literature - European - Other> ~25879~ <Editor: Joseph Krol>

20. Most nano-zymes react this compound with substrates like ABTS or TMB to trigger a color change. This compound is synthesized in a cycle that combines the elemental gases that reduce and oxidize a quinone (“quinn-own”). Luminol luminesces when it reacts with this compound. This eco-friendly reagent kicks off classroom demos of chemical clock reactions when its reactive atoms are reduced from a minus-one to a (*) minus-two oxidation state. Ethers are stored in amber bottles to stop them from forming explosive derivatives of this compound. Dis-proportion-ating this compound produces oxygen and water, and breaking its weak single bond forms two hydroxyls. For 10 points, name this compound used in wastewater treatment and antiseptics, which has formula H₂O₂.

ANSWER: hydrogen peroxide [or H₂O₂ until it is read; prompt on peroxide]

<Victor Prieto, Science - Chemistry> ~24133~ <Editor: Adam Silverman>

21. The narrator of a story by this author encounters a group of “ageless,” “sexless” ascetics when he is dragged through the solid wall of a mountaintop monastery that Anna joins. This author of “Monte Verità” wrote a story in which the central family hears three planes crash before the news cuts off on the radio. In that story by this author of “Don’t Look Now” set during a very cold winter, Nat Hocken seals up his chimney and the other entrances to his Cornish cottage after he is (*) attacked by the title animals. In this author’s best-known novel, the housekeeper Mrs. Danvers is devoted to the memory of the title character, a former wife of Maxim de Winter and mistress of Manderley. For 10 points, name this author of “The Birds” and *Rebecca*.

ANSWER: Daphne du Maurier [or Dame Daphne du Maurier, Lady Browning; prompt on Lady Browning; reject “Maurier”]

<Yingzhi Nyang, Literature - British - Short Fiction> ~24775~ <Editor: Jaimie Carlson>

NSC 2023 - Round 19 - Bonuses

1. Amateur ornithologist David Lack pre-empted a classic study on these animals by two decades when he discovered that robins will attack a headless red doll that looks nothing like a bird. For 10 points each:

[10h] Name this fish that Niko Tinbergen was studying when he discovered fixed action patterns.

ANSWER: three-spined **stickleback** [or red **stickleback**]

[10m] The enormous diversity among sticklebacks also makes them ideal models for this process, epitomized by Darwin's finches, by which species rapidly evolve from a common ancestor to occupy available niches.

ANSWER: adaptive **radiation**

[10e] Sticklebacks and *S. solidus* are also popular organisms to study co-evolution, since they engage in this type of symbiotic relationship in which one species benefits and the other is harmed.

ANSWER: **parasitism** [or **parasites**]

<Adam Silverman, Science - Biology> ~20872~ <Editor: Adam Silverman>

2. Answer the following about colorfully titled books, for 10 points each.

[10e] Many quotations by this Chinese leader were included in the *Little Red Book*, which is sometimes cited as the most-printed book of all time.

ANSWER: **Máo** Zédōng [or Chairman **Mao** or **Mao** Tse-tung; accept *Quotations from Chairman **Mao** Tse-tung*]

[10m] This author inserted himself as a character into his novel *The Black Book*, a narrative trick he reused in a 2002 novel in which the poet Ka meets the revolutionary Blue amidst a spate of suicides following a headscarf ban.

ANSWER: Orhan **Pamuk** [or Ferit Orhan **Pamuk**] (That novel is *Snow*.)

[10h] This Korean author published *The White Book* not long after the success of the English translation of her novel *The Vegetarian*, in which a graphic designer refuses to eat meat and begins to perceive herself as a tree.

ANSWER: **Han** Kang [prompt on **Kang**]

<Joseph Krol, Literature - World and Miscellaneous> ~21056~ <Editor: Joseph Krol>

3. In this year, Allied forces broke through the Hindenburg Line during the Hundred Days Offensive, reversing the gains Germany had made in the spring. For 10 points each:

[10e] Name this year in which German defeats led to the armistice that brought an end to World War I.

ANSWER: **1918**

[10m] Repeated defeats and one hour of sleep each night caused this German general to suffer nervous breakdowns in 1918. He sidelined his superior von Hindenburg to plan the pyrrhic Spring Offensive.

ANSWER: Erich **Ludendorff** [or Erich Friedrich Wilhelm **Ludendorff**]

[10h] Ludendorff described the first day of this battle as the “black day of the German Army” after 500 tanks broke through German lines. It was the first battle of the Hundred Days Offensive.

ANSWER: Battle of **Amiens** [or **Third** Battle of **Picardy**; prompt on Battle of **Picardy**]

<Yingzhi Nyang, History - European - 1900+> ~19904~ <Editor: Michael Bentley>

4. This novel's creator vehemently insisted that it was “just a story about rabbits” and not an anti-war allegory. For 10 points each:

[10m] Name this novel, in which Hazel leads Fiver and Blackberry as they flee humans' destruction of the Sandleford warren.

ANSWER: ***Watership Down*** (by Richard Adams)

[10e] The narrator meets the hyper-rational horses Houyhnhnms (“**HWIN-ums**”) and the savage Yahoos in this author's novel *Gulliver's Travels*.

ANSWER: Jonathan **Swift**

[10h] An author from this country, NoViolet Bulawayo, was inspired by *Animal Farm* to describe the ousting of the “Old Horse” in a 2022 novel. That book, *Glory*, allegorizes a 2017 coup in this home country of Tsitsi Dangarembga (“t’SIT-see dan-gar-EMB-gah”).

ANSWER: Republic of **Zimbabwe**

<Chandler West, Literature - British - Long Fiction> ~20514~ <Editor: Jaimie Carlson>

5. Roman Abramovich used a British court to sue Catherine Belton over allegations in Belton’s 2020 book about this leader’s “people.” For 10 points each:

[10e] Name this leader who launched an invasion of Ukraine in 2022.

ANSWER: Vladimir **Putin** [or Vladimir Vladimirovich **Putin**; accept **Putin**’s People]

[10m] Yevgeny Prigozhin, the leader of this organization, has benefited from an exception in the Sanctions and Anti-Money Laundering Act for paying for legal fees. This Russian mercenary group used human waves of prisoners in their attack on the Ukrainian city of Bakhmut.

ANSWER: **Wagner** Group [or PMC **Wagner**]

[10h] The shell company Jusan Technologies, funded by this man, has also used UK courts to sue the group openDemocracy. After almost 30 years in power, this man handed the presidency to Kassym-Jomart Tokayev in 2019.

ANSWER: Nursultan **Nazarbayev** [or Nursultan Abishuly **Nazarbayev**]

<Michael Bentley, Current Events - World> ~21073~ <Editor: Ganon Evans>

6. *Description acceptable.* Assuming ideal conditions and this condition, a projectile launched at angle theta achieves a range of (read slowly) velocity squared times the sine of two theta over little g. For 10 points each:

[10h] Describe this condition that causes a term in the formula for the range of a projectile to vanish, resulting in the simplified term “sine of two theta.”

ANSWER: **y nought equals zero** [accept answers describing that y nought, the **initial height** of the projectile, is **zero** or there is **no difference in height** between the initial and final locations of the projectile; accept the ground is **flat**]

[10e] Under non-ideal conditions, the range is reduced by this force that arises due to air resistance and opposes the motion of objects in a fluid.

ANSWER: **drag** force [prompt on **friction** force]

[10m] The projectile spins after launch, causing this effect named for a German physicist that often appears in sports. In this effect, a rotating projectile generates lift, disrupting its trajectory.

ANSWER: **Magnus** effect [or **Magnus** force]

<Joseph Krol, Science - Physics> ~21205~ <Editor: David Bass>

7. *Description acceptable.* The queens of Balobedu, the inspiration for H. Rider Haggard’s *Ayesha*, are said to have the hereditary ability to perform this task. For 10 points each:

[10h] Name this task accomplished by the Maya by lowering boys into a hole as they make frog noises. A tool used for this task is often made from a hollow cactus.

ANSWER: bringing **rain** [accept **Rain** Queens; or a **rainstick**; accept bringing **water** or **storms** or **precipitation**; accept **ending a drought**; prompt on bringing **clouds** or **lightning** or **thunder**] (The tool mentioned is a rainstick.)

[10e] In a story from this country, an owl got the frog Tiddalik to laugh and release the water he drank. This country’s Aboriginal stories also include the water-bringing Rainbow Serpent and the Dreamtime.

ANSWER: **Australia** [or Commonwealth of **Australia**]

[10m] In times of drought in India, frog weddings may be held to appease this god, who kills the serpent Vritra with the *vajra*, a thunderbolt-like weapon.

ANSWER: **Indra**

<Jaimie Carlson, RMP - World Mythology> ~21224~ <Editor: Jaimie Carlson>

8. A voiceover in a film by this director accompanies a red and yellow light surrounded by darkness and asks, “Where were you... when... all the sons of God shouted for joy?” For 10 points each:

[10h] Name this director of *The Tree of Life* who used voiceover for narration in *Days of Heaven* and the multiple narrators in *The Thin Red Line*.

ANSWER: Terrence **Malick** [or Terrence Frederick **Malick**]

[10m] This director himself narrates his film *The Magnificent Ambersons*. This director of a documentary on forgeries and hoaxes titled *F for Fake* also starred as Harry Lime in *The Third Man*.

ANSWER: Orson **Welles** [or George Orson **Welles**]

[10e] This Orson Welles film uses voiceover through its News on the March newsreels narrated by the actor William Alland. The title character of this film drops a snow globe and says “Rosebud” as he dies.

ANSWER: ***Citizen Kane***

<Michael Bentley, Fine Arts - Film> ~20386~ <Editor: Young Lee>

9. “Affirming the consequent” and “denying the antecedent” are common argument forms that do not possess this property. For 10 points each:

[10h] Name this property of an argument in which the conclusion is guaranteed to be true if all the premises are true.

ANSWER: **validity**

[10e] Validity is a property of arguments in this type of reasoning, in which rules of logical consequence are used to arrive at conclusions. It is contrasted with induction.

ANSWER: **deduction** [or **deductive** reasoning]

[10m] This sort of statement will be true in every row of a truth table, regardless of truth value assignments. Ludwig Wittgenstein used “it is either raining or not raining” as an example of this sort of statement.

ANSWER: **tautology** [or **tautological** statement]

<Jordan Brownstein, RMP - Philosophy> ~20130~ <Editor: Jordan Brownstein>

10. Grace Thorpe provided an ambulance service for this event, which began to falter after Richard Oakes’s daughter Yvonne died from a fall. For 10 points each:

[10h] Name this 1969 event organized by LaNeda Means and John Trudell in which the Indians of All Tribes partly swam to an island to reclaim it by discovery.

ANSWER: the **Occupation** of **Alcatraz** [accept word forms indicating **occupying Alcatraz**; accept anything Native American involving **holding** or **takeover** of **Alcatraz**; accept third **occupation** of **Alcatraz** or 1969 **occupation** of **Alcatraz**; prompt on **Alcatraz**]

[10m] The occupation was justified by an 1868 treaty named for this location that was the subject of a 1980 lawsuit over stolen tribal sovereignty. This Wyoming fort began as a junction for the Mormon and Oregon trails.

ANSWER: Fort **Laramie** [accept the Treaty of Fort **Laramie**]

[10e] Thorpe also took part in the occupation of Fort Lawton in this city. This city is named for a Suquamish chief and is home to the Space Needle.

ANSWER: **Seattle**

<Ganon Evans, History - American - 1945+> ~20531~ <Editor: Michael Bentley>

11. Using two photons for excitation improves the resolution of a fluorescence microscope because it suppresses this quantity. For 10 points each:

[10m] Analytical assays often report the ratio of “signal” to what measurement of an experiment’s random background fluctuations?

ANSWER: **noise** [or signal-to-**noise** ratio]

[10e] Noise is reduced because the photons used for excitation are in this region of the electromagnetic spectrum, which has slightly less energy and a longer wavelength than the visible light that’s emitted.

ANSWER: **infrared** [or **IR**; or near-**infrared** or near-**IR**]

[10h] Confocal microscopes instead reduce noise by shrinking this region of the sample that receives light. This region is “bright” or “dark” in the two main types of light microscopy.

ANSWER: **field** of view [or bright **field** or dark **field** microscopy]

<Adam Silverman, Science - Chemistry> ~20851~ <Editor: Adam Silverman>

12. In his multivolume *Histoire Naturelle*, Georges-Louis Leclerc, Comte de Buffon advanced a theory of degeneracy for the animals of this place, arguing that they tended to be small and weak. For 10 points each:

[10e] Name this general place. Watercolors of the birds of this title place constitute the best-selling book by John James Audubon.

ANSWER: **America** [or the **Americas**; or **North America**; or the **Western Hemisphere**; or **New World**; prompt on the **United States** by asking “What more general region of the world is it part of?”]

[10m] This polymath used examples of mastodon bones found in North America to counter Buffon in his *Notes on the State of Virginia*.

ANSWER: Thomas **Jefferson**

[10h] This well-traveled naturalist once dined beneath Charles Wilson Peale’s mastodon skeleton in Philadelphia. He also wrote the encyclopedic book *Kosmos*.

ANSWER: Alexander von **Humboldt** [or Friedrich Wilhelm Heinrich Alexander von **Humboldt**]

<Michael Bentley, Other - Other Academic and General Knowledge> ~17883~ <Editor: Michael Bentley>

13. This composer used quotes from Paul Laurence Dunbar as epigraphs for each movement of his First Symphony. For 10 points each:

[10h] Name this composer, who was the first Black composer to have a piece performed by a leading orchestra when the Rochester Philharmonic premiered his *Afro-American Symphony* in 1931.

ANSWER: William Grant **Still** Jr.

[10m] The third movement of the *Afro-American Symphony* features offbeat chords from the tenor form of this instrument. Earl Scruggs pioneered a move away from the clawhammer technique of this stringed instrument.

ANSWER: tenor **banjo**

[10e] The first movement begins by quoting “St. Louis Blues,” which uses a classic blues progression that is this many bars long. This is the number of distinct tones in a chromatic scale.

ANSWER: **twelve** [accept **twelve**-bar blues]

<Benjamin Chapman, Fine Arts - Music - 1900 to 1970> ~20538~ <Editor: Young Lee>

14. A betting game that uses these objects involves either paying or taking chocolate coins known as *gelt*. For 10 points each:

[10m] Name these objects whose letters represent the expression “nes gadol haya sham,” which translates to “a great miracle happened there.”

ANSWER: **dreidels** [accept **sevivon**; prompt on spinning **tops**]

[10e] Dreidels are spun on this Jewish holiday in which eight candles are lit to commemorate the Maccabees using a small pot of oil to keep a light aflame for eight nights straight.

ANSWER: **Hanukkah** [accept **Chanukah**]

[10h] *Description acceptable*. A “shin” is replaced with a “peh” on one of the sides of dreidels with this property to indicate that a miracle happened “here” instead of “there.”

ANSWER: the dreidel was **made in Israel** [accept obvious equivalents like “it is **from Israel**” or was **produced in Israel**; prompt on answers of **Israel** not mentioning its production]

<Shahar Schwartz, RMP - Jewish Practice> ~20519~ <Editor: Athena Kern>

15. The Ojibwe poet Jane Johnston was scarcely recognized for her translations that inspired this poem in *Algie Researches*. For 10 points each:

[10e] Name this Henry Wadsworth Longfellow poem about the lover of Minnehaha that begins “by the shores of Gitche Gumee.”

ANSWER: *The **Song of Hiawatha***

[10m] Hiawatha’s disappearance into the sunset on a canoe after inviting Christ to his land was likely inspired by this epic poem. This epic poem was collected by Elias Lönnrot.

ANSWER: **Kalevala**

[10h] Longfellow also used this meter of the *Kalevala* for *The Song of Hiawatha*. This meter consists of “long-short” syllables over four feet.

ANSWER: **trochaic tetrameter** [prompt on **tetrameter**]

<Ganon Evans, Literature - American - Poetry> ~20978~ <Editor: Chandler West>

16. In 2022, amateur archaeologist Ben Bacon published a paper arguing that dots and lines in these artworks represented animal lifespans. For 10 points each:

[10m] Name these artworks that include finger flutings and blown-paint outlines of hands. Four French teenagers discovered some of these artworks in 1940.

ANSWER: **cave paintings** [or **cave art**; or **cave drawings**; prompt on **painting** by asking “Painted where?”; prompt on **caves** or **cave walls** by asking “What is in the cave?”; prompt on **rock art**]

[10e] Bacon argued that the letter “Y” symbolized this activity for animals. This process became more difficult for human women as the pelvis changed shape to account for walking upright.

ANSWER: **childbirth** [accept word forms such as giving **birth**; accept descriptions like **having a child**; accept **delivering a child**; prompt on **labor**; prompt on **delivery**]

[10h] The paper also studied this cave discovered by Marcelino Sanz de Sautuola’s eight-year-old daughter María. This cave in Northern Spain was the first to which prehistoric artists were attributed.

ANSWER: **Altamira** [or the Cave of **Altamira**]

<Ganon Evans, History - Cross, Historiography, and Miscellaneous> ~20635~ <Editor: Michael Bentley>

17. The firm Polymateria developed the first additive for inducing this process in polyolefin-based packaging. For 10 points each:

[10m] Name this microbe-facilitated process that involves “deterioration,” “fragmentation,” and “assimilation” steps.

ANSWER: **biodegradation** [prompt on degradation]

[10e] Biodegradation is the natural analogue to this human-driven process that involves converting organic waste into fertilizer in a namesake “pile” or “heap.”

ANSWER: **composting** [accept **compost** pile or **compost** heap]

[10h] Composting can be accelerated by inducing this phenomenon in a namesake “static pile.” A garden tool with curved spikes facilitates this phenomenon in compacted lawns, helping to improve soil drainage.

ANSWER: **aeration** [accept **aerator**; prompt on air flow]

<Michael Bentley, Science - Engineering and Miscellaneous> ~21135~ <Editor: David Bass>

18. In a 1928 essay, Sigmund Freud argued that an author’s case of this medical condition was a reflection of “severe hysteria” over his father’s death. For 10 points each:

[10m] Name this condition that causes Prince Myshkin to check into a Swiss clinic in Fyodor Dostoyevsky’s novel *The Idiot*.

ANSWER: **epilepsy** [accept word forms such as being **epileptic**; accept temporal lobe **epilepsy**; accept **epileptic** seizures; prompt on seizures]

[10h] A son of Dostoyevsky with this first name, who died from a seizure, inspired him to create a character with this first name who studies under Father Zosima at a monastery.

ANSWER: **Alyosha** [or **Alexei**; prompt on Alex; accept BUT DO NOT REVEAL **Alyosha** Fyodorovich Karamazov]

[10e] The epileptic Smerdyakov frames Dmitri for his father’s murder in this Dostoyevsky novel titled for the relationship between characters like Alyosha and Ivan.

ANSWER: *The **Brothers Karamazov*** [or *The **Karamazov Brothers*** or ***Brat’ya Karamazovy***]

<Ganon Evans, Literature - European - Long Fiction> ~20253~ <Editor: Joseph Krol>

19. Wealth from this industry funded the work of a sculptor with a mysterious degenerative disease, Aleijadinho (“ah-lay-jah-JEAN”). For 10 points each:

[10m] Name this industry whose 18th-century boom in Brazil inspired the name of a state that later dominated the *café com leite* period with São Paulo. The product of this industry names the law that abolished slavery in Brazil.

ANSWER: **gold** mining [or mineração de **ouro**; accept **Golden Law** or Lei **Áurea**; prompt on mining]

[10e] Minas Gerais (“MEE-nuss zeh-RICE”) was one of the divisions of colonial Brazil named for this military title. In many languages, including English, this title is used for the commander of a ship.

ANSWER: **captain** [or **captaincy**; or **capitania**]

[10h] Formerly enslaved gold miners formed some of these communities of escaped slaves. One of these places in the Captaincy of Pernambuco was called Palmares.

ANSWER: **quilombo** (“kee-LOHM-boos”) [prompt on maroon communities]

<Jordan Brownstein, History - World - Latin American> ~20928~ <Editor: Jordan Brownstein>

20. T. J. Clark's book *The Sight of Death* chronicles his changing reaction to viewing two paintings by this artist over the course of several weeks of observation at the Getty Museum. For 10 points each:

[10h] Name this artist whose 1633 *Rape of the Sabine Women* features a red-cloaked Romulus standing on a platform on the left of the painting and gesturing to his men to begin the abduction.

ANSWER: Nicolas **Poussin**

[10e] Poussin's many paintings in this genre include one "with the Ashes of Phocion." Poussin often idealized his works in this genre, balancing the natural scene with column-like tall trees.

ANSWER: **landscapes** [accept **townscape**]

[10m] A Poussin painting depicts a group of mythological figures performing the title *Dance to the Music of Time*, which influenced the composition of this Fauvist leader's paintings of five nude figures dancing and holding hands.

ANSWER: Henri **Matisse** [or Henri Émile Benoît **Matisse**]

<Michael Bentley, Fine Arts - Painting - European to 1600> ~2015~ <Editor: Chandler West>

21. After Alauddin Ibrahim Mansur Syah gained control of a sultanate named for this region, he subdued its rajas which controlled half the world's supply of pepper. For 10 points each:

[10h] Name this region that also names a modern-day province of Indonesia. From 1976 to 2005, the GAM fought an insurgency in this region to protect its more conservative form of Islam.

ANSWER: **Aceh** ("ah-CHAY") [or Nanggroe **Acèh**; or Provinsi **Aceh**; or **Aceh** Sultanate]

[10e] The Free Aceh Movement was brought to an end following one of these disasters produced by the 2004 Indian Ocean earthquake, which devastated the region.

ANSWER: **tsunamis** [accept Boxing Day **Tsunami**; prompt on **floods** or **waves**]

[10m] This second Indonesian president fought against the Acehnese insurgency until 1998, when his New Order ended following the Asian Financial Crisis.

ANSWER: **Suharto**

<Yingzhi Nyang, History - World - Asian> ~2026~ <Editor: Jordan Brownstein>