

## 2023 IQBT Undergraduate Championship

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### Round 14 – Tossups

1. The world's largest collection of this artist's work is housed in a museum completed in 2021 and designed by Juan Herreros to resemble a Greek lambda. This artist alluded to his affair with the wife of Stanislaw Przybyszewski (“pruh-buh-SHEFF-skee”) with a painting in which a frontally-exposed Eve figure picks an apple. Later paintings by this artist include a posthumous portrait of Friedrich Nietzsche (“NEE-chuh”) and a self-portrait between a (\*) clock and a bed. A sperm and fetus appear on the border of a lithograph by this artist depicting an erotically-posed, nude woman with a red halo. This artist retroactively included *Jealousy* and *Madonna* in a series featuring an image whose unnaturally red sky may have been inspired by the eruption of Krakatoa. For 10 points, name this Norwegian painter of *The Frieze of Life* and *The Scream*.

ANSWER: Edvard Munch (“munk”)

2. Hinz showed that this problem, on average, has a shortest path about “466-over-885 times the length of the worst-case path.” This problem names a backup scheme where the  $n$ th tape is used every 2-to-the- $n$ th day. The 1-based ruler function gives the position of the bit to change at each step when using Gray codes to solve this problem. Changing this problem, such that the objects involved are colored red on one side and black on the other, creates its “magnetic” variant. Because it obeys the relation “ $T$ -sub-quantity-‘ $n$ -plus-1’ equals 1 plus  $2T$ -sub- $n$ ,” applying (\*) recursion to this problem shows its solution requires 2-to-the-quantity-‘ $n$ -minus-1’ moves, where  $n$  is the number of disks. A legend about monks awaiting armageddon inspired, for 10 points, what puzzle involving moving disks between pegs?

ANSWER: Tower of Hanoi [or Towers of Hanoi or Tower of Brahma or Lucas tower or the problem of Benares Temple]

3. A character in this work, whose left-handedness signifies divination ability, opines that kingdoms are like trees: some grow large, some remain small. Another character in this work plays music that makes owls bob their heads and nine skulls come to life. A sacrifice of 100 bulls, rams, and cocks is interrupted in this work by the protagonist's half-sister. After his mother beats him for being unable to collect baobab leaves, the protagonist of this work uses an (\*) iron bar to stand up and walk for the first time. The buffalo woman Sogolon gives birth to the protagonist of this work, who uses an arrow tipped with a white rooster's spur to defeat the sorcerer-king Sumanguru. For 10 points, name this story transmitted by griots (“gree-OHS”), the foundational epic of the Mali empire.

ANSWER: *Epic of* Sundiata [or *Epic of* Sunjata or *Epic of* Son-jara]

4. A member of this group stole Vermeer's *Lady Writing a Letter to Her Maid* from the Rosborough house of Alfred Beit. This was the largest of the groups that Raymond Gilmour, a notorious "supergrass," belonged to. This group formed at the same time as a similar yet rival organization nicknamed the "Stickies." Sisters Dolours and Marian Price adopted a tactic promoted by a man nicknamed "Darkie," who had orchestrated (\*) "Bloody Friday." The same day that this group killed 18 people at Warrenpoint, it bombed the fishing boat of a former governor-general of India. This group carried out the Brighton hotel bombing in an unsuccessful attempt to assassinate Margaret Thatcher. For 10 points, what most active paramilitary group during The Troubles opposed British control of Northern Ireland?

ANSWER: Provisional Irish Republican Army [or IRA or Óglaigh na hÉireann; accept Provos; reject "Official Irish Republican Army" or "Officials"]

5. After one character in this novel breaks his promise to another, the latter declares, "Slave, I before reasoned with you, but you have proved yourself unworthy of my condescension." That character closes this novel by promising to "ascend [his] funeral pile triumphantly and exult in the agony of the torturing flames" before he is "borne away by the waves and lost in darkness and distance." That character in this novel, who teaches himself French by eavesdropping on people living in a (\*) cottage, makes good on his threat that "I will be with you on your wedding-night" by murdering the protagonist's fiancée Elizabeth Lavenza. This novel is told through letters sent from the North Pole by Robert Walton. For 10 points, the title scientist brings a monster into life in what novel by Mary Shelley?

ANSWER: Frankenstein; or, *the Modern Prometheus*

6. A work for strings named for these people begins with repeated sixteenth-note C–G perfect-fourth double stops, played by two of the three violin groups. In a set of variations later adapted for band, a melody from these people is introduced in A-flat major by a solo clarinet, below E-flat pedals in the harp and first flute. The movement "Hymning Sews" is part of a work named for these people, from whom Sydney Carter adapted the melody for (\*) "Lord of the Dance." A John Coolidge Adams work is titled for the "Loops" of this religious sect, one of whose melodies is the subject of variations in a ballet in which a revivalist preacher marries a couple in a farmhouse, with choreography by Martha Graham. For 10 points, Aaron Copland's *Appalachian Spring* uses what sect's melody "Simple Gifts"?

ANSWER: Shakers [or United Society of Believers in Christ's Second Appearing; accept Shaker *Loops*; accept *Variations on a Shaker Melody*; prompt on Christians]

7. In one poem, this activity is mentioned directly after "the immovable critic twitching his skin like a horse / that feels a flea" and before "the statistician." In another poem by that author, this activity requires "Cow's milk, 'tiger's milk,' soy milk," and "carrot juice." This is the first title activity in that poem, which ends, "O flashing Orion, / your stars are muscled like the lion." A poem about this activity describes a "lusty yell" that "rumbled through the valley" and "rattled in the dell." This activity is paired with (\*) "Writing" in a poem by mega-fan Marianne Moore. A poem about this activity concludes that although "somewhere in this favored land the sun is shining bright," "there is no joy in Mudville." For 10 points, in an Ernest Lawrence Thayer poem, Casey plays what sport?

ANSWER: baseball [prompt on ball games; prompt on sports or athletics]

8. **One type of these devices exploits the high-temperature super-protonic phase transition of caesium (“SEEZ-ium”) di-hydrogen phosphate and other solid acids. The efficiency of these devices can be increased by removing their product with an electro-osmotic pump. Another type of these devices exploits oxygen vacancies created by introducing yttrium-3+ (“ITT-rium-three-plus”) ions to zirconia, allowing mass transfer through a solid oxide. Some of these devices uses a sulfonated variant of PTFE named (\*) Nafion in their proton-exchange membranes. The simplest example of these devices could theoretically operate at +1.23 (“plus-one-point-two-three”) volts, but slow mass transfer and an over-potential prevent this. For 10 points, name this type of electro-chemical cell, which, unlike a battery, uses continuous inputs to produce electricity through the redox reactions of hydrogen and oxygen.**

ANSWER: **fuel cells** [accept hydrogen **fuel cell**, proton-exchange membrane **fuel cell**, PEM **fuel cell**, solid oxide **fuel cell**, solid acid **fuel cell**; prompt on “electrochemical cell” before mentioned]

9. **Julius Pokorny proposed that an Afro-Asiatic substrate in this language family may explain why, in many of its members, only the last word in genitive phrases takes a definite article. This family’s most-spoken language features prothesis (“PRA-thu-sis”) of “t” and “h” sounds before vowel-initial words, an example of its prolific lenitions and initial consonant mutations. All extant members of this Indo-European family strictly use V-S-O word order. (\*) Lepontic is the oldest attested member of this family and was part of its extinct “Continental” branch, while all surviving members are part of its “Insular” branch. English loanwords from this family include “galore,” “hooligan,” “bard,” and “clan.” For 10 points, what group of languages includes Cornish, Breton, Welsh, and Irish?**

ANSWER: **Celtic** languages [accept **Insular Celtic**; prompt on **Indo-European** languages before “Indo-European”; prompt on **Brythonic** or **Goidelic** or **Gaelic** or **Gaulish** languages by saying “What larger group is that a part of?”]

10. **This man feuded with Abba Eban, who called this man an “umbrella that folds up when it rains.” A “troika” proposal was defeated before the election of this man, who controversially complied with requests to withdraw an “Emergency Force” under the command of Indar Jit Rikhye (“RICK-yay”). This man successfully negotiated with Fidel Castro for the return of the remains of American pilot Rudolf Anderson Jr. This man was briefly symbolically buried at the former site of the destroyed (\*) R·U·S·U building before his namesake “funeral crisis” saw student protestors attacked by forces under Ne (“nay”) Win. After his predecessor was killed negotiating the Katanga Crisis, this man went on to become the longest holder of a position in which he was succeeded by Kurt Waldheim. Dag Hammarskjöld (“HAMMER-shuld”) preceded, for 10 points, what UN Secretary General from Burma?**

ANSWER: U **Thant**

11. **In a section titled for this entity, people who fallaciously believe that squares must lack center points, because they are not circles, are compared to people who believe that this entity is corporeal. This entity can cause things immanently but not transitively, according to a treatise whose first section is titled for this entity, and whose second section is titled “Of the Nature and Origin of Mind.” Pierre Bayle attacked that treatise’s conception of this entity as (\*) *naturans* (“nah-TOO-rahnz”) but not *naturata* (“nah-too-RAH-tah”). Because this entity is the only thing that “is in itself,” it is the only substance that “can be or be conceived,” according to a treatise that is “proved in geometrical order,” titled *Ethics*. For 10 points, name this being who is equivalent to nature according to a 17<sup>th</sup>-century Dutch philosopher’s pantheism.**

ANSWER: Baruch (de) **Spinoza’s God** [or Benedict (de) **Spinoza’s god**; or Bento de **Espinosa’s God**; prompt on **God**, **God or Nature**, or **Deus sive Natura** by asking “Which philosopher’s conception of God?”; prompt on **nature** before the powermark]

12. While working in this state, Zilphia Horton introduced Pete Seeger to the song “We Shall Overcome,” popularizing it as a civil rights anthem. A man speaking in this state recalled a high schooler’s letter telling him “I’m so happy you didn’t sneeze.” Many union leaders and civil rights activists, including Rosa Parks, were trained at this state’s Highlander Folk School. People held signs reading “I Am a Man!” during protests in this state after (\*) Echol Cole and Robert Walker were crushed to death. A man asked people to “redistribute the pain” by boycotting Wonder Bread and Coca-Cola during a sanitation strike in this state; in that speech, he claimed “I’ve seen the promised land.” For 10 points, Martin Luther King Jr. gave the “I’ve Been to the Mountaintop” speech before his death in what state?

ANSWER: Tennessee

13. The line “life is [one of these things], give it up” appears in the final couplet of a Hafez ode about being hungover. Arabic examples of these things include *mu‘ammā* (“moo-ah-mah”), whose invention is attributed to Abu Nuwas, as well as *uhjiyya* (“ooh-JEE-yeh”) and *lughz* (“loogz”). The writer Tatwine (“tah-TWEE-neh”) likely imitated the *Epistola ad Acircium* (“ay-PEE-stoh-lah ahd ah-KEER-kee-oom”) of Aldhelm, whose poetic examples of these things include *De creatura* (“day cray-ah-TOO-rah”) and the “Leiden” (“LAY-din”) one. Examples of these things concerning icebergs and onions are among the 94 of them in the (\*) Exeter Book, written in Old English. The question “what’s in your pocket?” ends an exchange of these things in the dark between Bilbo and Gollum in *The Hobbit*. A line about a creature that stands on different numbers of legs is the sphinx’s example of, for 10 points, what quandaries?

ANSWER: riddles [accept chistan; accept Leiden riddle; accept puzzles or quandaries or enigmas before “Exeter Book” and prompt on any of those answers after; prompt on questions]

14. In humans, the receptor for this molecule is also the main receptor for vesicular stomatitis (“STOH-muh-TYE-tiss”) virus. This molecule can be electro-phoretically separated into “large and fluffy” and “small dense” fractions. Complexing this molecule to another protein creates Lp(a) (“L-P-A”). LOX-1 (“locks-one”) is a receptor for a derivative of this molecule. Its acetylated and oxidized forms are taken up by scavenger receptors by macrophages to form foam cells. This molecule contains (\*) Apo-B-100, and has more protein than chylomicrons (“KYE-loh-MYE-krons”). Levels of this molecule are lowered by ezetimibe (“eh-ZET-uh-mib”), which is given with HMG-Co-A reductase inhibitors called statins (“STAT-ins”). This molecule is deposited on blood vessel walls in athero-sclerosis. For 10 points, name this molecule that transports lipids from the liver, informally called “bad cholesterol.”

ANSWER: LDL [or low-density lipoprotein; prompt on cholesterol or bad cholesterol]

15. A domed church belonging to this larger complex was designed based on a mosaic from the Hagia Sophia depicting the Virgin Mary as the “Throne of Wisdom.” White steel ribs emerging from another building in this complex form a pair of wings meant to evoke a bird released from a child’s hands. Michael Arad gave the title “Reflecting Absence” to his design for a pair of diagonally-offset inverted fountains in this complex. Two buildings in this complex, the St. Nicholas Greek Orthodox Church and the (\*) Oculus Transportation Hub, were designed by Santiago Calatrava. Daniel Libeskind (“LEE-bus-kint”) designed a building in this complex whose off-center spire reaches a height of 1,776 feet. For 10 points, name this complex built on the site of two Minoru Yamasaki buildings destroyed in the September 11 attacks.

ANSWER: World Trade Center [or WTC; accept descriptions like “the new World Trade Center,” accept One World Trade Center; prompt on Ground Zero; do not accept or prompt on “Twin Towers”]

16. Whittaker listed fourteen cases in which a force of this kind produces an integrable version of the Binet (“bee-NAY”) formula. If a system is under this kind of force, then adding a barrier term to the potential gives the effective potential. Forces of this type are conservative if and only if they are spherically symmetric. Bertrand’s theorem states that only inverse-square or linear forms of these forces can form (\*) closed orbits. Systems under this kind of force conserve specific angular momentum, since the acceleration only has a radial component—a fact used to derive Kepler’s second law. For 10 points, name this kind of force like gravity or the electrostatic force, that acts upon the line connecting two objects.

ANSWER: central force [prompt on inverse-square or linear until mentioned]

17. One text states that disbelief in this doctrine is more hidden than a black ant on a black stone in the middle of a moonless night. A book named for this doctrine is the primary source for the Maturidi (“mah-too-REE-dee”) school. In addition to justice, the Mu’tazila (“moo-tah-zee-lah”) called themselves “men of” this doctrine. Ibn Taymiyyah (“tye-MEE-ah”) divided this doctrine into three components: ibadah (“ee-bah-dah”), rububiyah, and attributes. Asserting this doctrine, while secretly having thoughts against it, is the lesser form of the only (\*) unpardonable sin, which is called shirk. Because all prophets before Muhammad preached this doctrine, they are considered Muslims whose teachings were corrupted. This doctrine is the first assertion of the shahadah (“shah-HAH-dah”). For 10 points, name this belief called *tawhid* (“tau-HEED”) in Arabic, the unity of the divine.

ANSWER: monotheism [or unitarianism; accept tawhid before mentioned; accept equivalents of the unity of God or there is only one god or God is one or God is unique or God has no partners or there is no god but God or only God is worthy of worship or God is supreme; accept Allah instead of God in any of the preceding answers; prompt on answers like God exists or Allah exists with “what attribute of God is being described?”]

18. A key substance used in this industry was imported through a monopoly held by the *mahona* of Chios (“KYE-oss”) on behalf of Genoa. Giovanni Villani’s travelogue describes over 200 workshops for this industry producing *panni* in a city whose major streets formed a cross intersecting at the headquarters of this industry’s guild. The Alberti family became a leader in this industry using raw material purchased at the Champagne fair. The Albizzi family were among the upper class members of this industry which comprised the (\*) Arte della Lana guild. Disenfranchised workers in this industry brought Michele (“mee-KAY-lay”) di Lando to power during a revolt begun by its “carders,” the Ciompi Revolt (“CHOM-pee”). For 10 points, name this major industry of late medieval Florence which employed weavers.

ANSWER: Florentine wool industry [or cloth or textiles or clothing]

19. In a story, George and Chuck delay an effort to explicate these things so that they have enough time to escape. In another work, an author named Carter Scholz submits a copy of a story titled for these things, but insists that it’s different. In one film, Lenny believes that a 216-digit number spat out by a computer named Euclid corresponds to this thing, though Max refuses to give it to him; that 1998 (\*) Darren Aronofsky film ends after Max takes a drill to his head. A symbol representing the greatest of these things is often found on Baha’i temples. In one story, after a computer lists all of these things, the stars go out without any fuss. That story titled for nine billion of these things is by Arthur C. Clarke. For 10 points, Adonai, Elohim, and Yahweh are what words designating a deity?

ANSWER: names of God [accept “The Nine Billion Names of God”]

20. An essay by this author describes a place that looks like Albert Speer read a book on Gaudi, took LSD, and began to build a catacomb for Liza Minnelli. A collection by this author includes instructions on playing a Native American in a Western film and becoming a Knight of Malta. An essay by this author compares places like LBJ's Presidential Library and waxworks museums to (\*) Superman's Fortress of Solitude. In an essay by him, a hotel charges him for removing items of a minibar to stow smoked fish in it. This author of *Travels in Hyperreality* and *How to Travel with a Salmon* wrote a novel in which the *finis Africae* is a secret room in the library of a Benedictine abbey where murders are investigated by William of Baskerville. For 10 points, name this Italian author of *The Name of the Rose*.

ANSWER: Umberto **Eco** ("ECK-oh")



## Round 14 – Bonuses

1. A British group dedicated to this philosophy was first presided over by Julian Huxley, and John Dewey wrote an article titled “What” [this philosophy] “means to me.” For 10 points each:

[10h] Name this philosophical stance, whose namesake “International” promulgated the Amsterdam Declaration in 2002. A nonreligious form of this stance usually endorses ethical naturalism and rejects dogma.

ANSWER: **humanism** [accept secular **humanism**; prompt on atheism, agnosticism, ethical culture, secularism, freethought, freethinking]

[10e] Humanists International began a campaign in 2015 to end laws against this practice, sometimes flippantly called a “victimless crime.” This is the act of saying something offensive or sacrilegious about a deity or religion.

ANSWER: **blasphemy** [prompt on answers like insulting religion, desecrating religious symbols, etc]

[10m] Humanists International has also campaigned against laws prohibiting this action, which in Islam is called *irtidād* or *riddah*. This is the act of leaving a religion.

ANSWER: **apostasy** (“uh-POSS-tuh-see”)

2. This piece’s subtitle describes it as being written “in the olden style,” which makes sense given its inclusion of Baroque dances, such as the sarabande and gavotte. For 10 points each:

[10m] Name this four-movement work, originally composed for piano but more often performed in its string orchestra version. It was written for the bicentennial of the birth of the playwright for whom it is named.

ANSWER: **Holberg Suite**, Op. 40 [or **From Holberg’s Time**; or **Fra Holbergs tid**]

[10e] This Norwegian composer of the *Holberg Suite* is better known for his incidental music to *Peer Gynt*.

ANSWER: Edvard (Hagerup) **Grieg**

[10h] The *Holberg Suite* concludes with one of these duple-meter French Baroque dances, characterized by a hopping step. Ravel’s *Le tombeau de Couperin* also concludes with one of these dances.

ANSWER: **rigaudon** (“ree-go-dawn”) [or **rigadoon**]

3. One character in this play spitefully starts a rumor that the other has gone mad, after he insults her beloved, the secretary Molachin (“Mall-uh-kin”). For 10 points each:

[10h] Name this verse comedy in which Chatsky returns to Moscow and discovers that his old sweetheart, Sofia Pavlovna, has fallen in love with Molachin.

ANSWER: **Woe from Wit** [or **Gore of Uma**; or **The Mischief of Being Clever**; or **The Woes of Wit**; or **Wit Works Woe**]

[10m] In *Woe from Wit*, Sofia Pavlovna faints after watching from the window as Molachin breaks his arm in one of these mishaps. In an Italian play, a nobleman supposedly suffers from delusions that he is Henry IV after one of these mishaps.

ANSWER: **falling** off a **horse** [or horse-**riding accident**; accept equivalents for “falling”]

[10e] That Italian play, *Henry IV*, is by this playwright who also wrote *Six Characters in Search of an Author*.

ANSWER: Luigi **Pirandello**

4. The Streeter–Phelps equation is used to model how the quality of this substance varies with the amount of oxygen present in it. For 10 points each:

[10e] Name this substance considered “hard” when it has a high quantity of dissolved minerals. A high turbidity might also indicate that this substance is of poor quality.

ANSWER: **water** [or drinking **water**, or **H<sub>2</sub>O**]

[10m] Sedimentation during wastewater treatment separates it into sludge and this substance, which is treated with aerobic bacteria. This substance is sometimes defined as “any liquid waste discharged into surface water.”

ANSWER: **effluent** (“EFF-floo-ent”)

[10h] Concentrations of this pollutant in water can increase drastically in anoxic (“ann-OX-ick”) conditions due to a shift from a +5 oxy·anion to a +3 oxy·anion. Deep tube wells are notorious for introducing this pollutant to the environment.

ANSWER: **arsenic** [or **As**; accept **arsenate** or **arsenite**]

5. This company sponsored Harvard’s Department of Tropical Medicine and it was advised by the first BlackAfrican to graduate Harvard, Plenyolo Ole Wolo. For 10 points each:

[10h] Name this company that built the company town of Harbel, where it imported trees to build a massive plantation after leasing one million acres from the Liberian government.

ANSWER: **Firestone** Tire and Rubber Company [or **Firestone** Natural Rubber Company]

[10m] That lease was granted by Charles D. B. King, who sparred over a policy of this name with Thomas Faulkner during the 1927 elections. John Hay called for a policy by this name that would allow for equal trade with China.

ANSWER: **Open Door** Policy

[10e] Firestone imported trees to create a plantation for this resource. The Force Publique terrorized workers harvesting this resource in the Belgian Congo.

ANSWER: **rubber**

6. Despite its short length, the Liz Truss ministry can teach us much about political science. For 10 points each:

[10m] The person in this role appointed Truss as prime minister. Since this role in the UK is ceremonial, the appointment was a formality, but the person in this role wields more power in executive systems.

ANSWER: **monarch** [accept **queen** or **king**; accept **ceremonial monarchy** or **executive monarchy**]

[10h] Ideologically, Truss opposed herself to this strain of Toryism named after a Disraeli (“diz-RAY-lee”) quote. This liberal wing emphasizes paternalism, and Damian Green and Amber Rudd have chaired a caucus named for this ideology.

ANSWER: **one-nation** conservatism [or **one-nation** Tory]

[10e] In the last days of the Truss ministry, the Tory caucus was thrown into chaos over whether a vote on fracking would be considered a vote of this type. This vote determines whether Parliament wants a government to continue.

ANSWER: **confidence** vote [accept vote of **no confidence** or motion of no **confidence**]



7. Marie-Rose Astié de Valsayre (“ah-stee-AY duh vahl-SAIR”) ran a school dedicated to this activity, which she encouraged women to participate in because she believed it would make them better breast-feeders. For 10 points each:

[10h] Name this activity. Receiving a *Schmiss* was once the goal of a central European fraternity tradition called *Mensur* (“men-ZOO-uh”), a form of this activity.

ANSWER: **fencing** [or **sword-fighting**; or **dueling**]

[10m] Astié de Valsayre apocryphally fought a member of this family called *La Maréchale* (“lah mah-ray-SHAWL”) who published *War Cry* in France on behalf of her parents; her parents, Catherine and William, founded the Salvation Army.

ANSWER: **Booth** [accept Catherine **Booth**; accept William **Booth**; accept Kate **Booth**]

[10e] Two men fought a duel after Astié de Valsayre tried to censure the journalist Severine, who wrote many defenses of this Jewish soldier, who was also defended by Emile Zola’s *J’accuse* (“zhah-KOOZ”).

ANSWER: Alfred **Dreyfus**

8. The current tournament’s philosophy distribution would not be complete without considering the contributions of Kurt Gödel (“GURR-dull”). For 10 points each:

[10m] Gödel’s incompleteness theorems are often considered the nail in the coffin of this three-volume work of symbolic logic that presented a ramified theory of types.

ANSWER: ***Principia Mathematica*** (by Alfred North Whitehead and Bertrand Russell)

[10h] With J. R. Lucas, this man co-names an argument that states that humans cannot be computers because we can correctly derive Gödel-unprovable results. With Stuart Hameroff, he developed a theory of consciousness called “orchestrated objective reduction.”

ANSWER: Roger **Penrose** [accept **Penrose**-Lucas Argument]

[10e] In 1959, Gödel turned towards this school of philosophical thought, after extensively reading its founder, Edmund Husserl. This school uses “bracketing” to investigate how the world is experienced, rather than how it objectively is.

ANSWER: **phenomenology**

9. This author wrote about Gifty, a woman who maintains her faith and studies neuroscience after the death of her brother Nana from oxycontin and heroin abuse, in the novel *Transcendent Kingdom*. For 10 points each:

[10h] Name this author of a novel in which Marcus experiences a panic attack after hearing a guide refer to a group of women as “them” while touring a castle.

ANSWER: Yaa **Gyasi**

[10m] Yaa Gyasi was born in this African country, a primary setting of her novel *Homegoing*. The authors of *Our Sister Killjoy* and *The Beautiful Ones are Not Yet Born*, Ama Ata Aidoo and Ayi Kwei Armah, are both from this country.

ANSWER: **Ghana**

[10e] *Homegoing* was selected for the National Book Foundation’s 2016 “5 under 35” award by this Black author of *Between the World and Me* and “The Case for Reparations.”

ANSWER: Ta-Nehisi **Coates**

10. One example of this phenomenon is paedo-morphosis or neoteny (“nee-AH-tuh-nee”), which is the retention of childhood traits in adults. For 10 points each:

[10h] Name this phenomenon in which a species differentiates itself from an ancestor by changing the timing or duration of developmental events.

ANSWER: **hetero·chrony** [reject “heterochromy” or “heterochromia”]

[10e] An example of hetero·chrony is the fact that the okapi (“oh-KAH-pee”) and this animal both have seven cervical vertebrae, but this animal has a longer development period for their necks. Lamarck believed this animal evolved by stretching.

ANSWER: **giraffe** [or ***Giraffa tippelskirchi*** or ***Giraffa tippelskirchi thornicrofti*** or ***Giraffa tippelskirchi tippelskirchi*** or ***Giraffa camelopardalis*** or ***Giraffa camelopardalis antiquorum*** or ***Giraffa camelopardalis camelopardalis*** or ***Giraffa camelopardalis peralta*** or ***Giraffa reticulata*** or ***Giraffa giraffa*** or ***Giraffa giraffa angolensis*** or ***Giraffa giraffa giraffa***]

[10m] A version of hetero·chrony was posited by this biologist, who used the phrase “ontogeny recapitulates phylogeny” to describe his discredited theory that embryos resemble evolutionary ancestors.

ANSWER: Ernst **Haeckel** (“heckle”) [or Ernst Heinrich Philipp August **Haeckel**]

11. This man fictionalized himself as the “correspondent” who drifts in a dinghy with a captain, cook, and oiler in his story “The Open Boat.” For 10 points each:

[10e] Name this American Realist author of *The Red Badge of Courage*.

ANSWER: Stephen **Crane**

[10m] In this Crane story, the sheriff Jack Potter shares a meal with his new wife in a train cabin and then talks the drunken scofflaw Scratchy Wilson out of a gun fight.

ANSWER: “The **Bride Comes to Yellow Sky**”

[10h] This magazine published Crane’s story “The Bride Comes to Yellow Sky.” Biographical “Human Documents” and “Real Conversations” appeared in this magazine, which published Willa Cather’s story “Paul’s Case” and sparked Cather’s literary career by hiring her as an editor in 1906.

ANSWER: **McClure’s Magazine**

12. One of these objects is generated by putting a capacitor and resistor to the inverting terminal of an op-amp, and then connecting two resistors to the non-inverting terminal. For 10 points each:

[10h] Name this wave that can be generated by the sign, spelled “S-I-G-N,” or signum function of a sinusoidal wave. It is the most common choice for clock signals.

ANSWER: **square** wave

[10m] Square waves and triangular waves can be generated by these instruments, which display a plot of voltage over time. These instruments often used triggered sweeps to generate a stable display when the input varies.

ANSWER: **oscilloscope** [accept cathode ray **oscilloscope**]

[10e] Digital oscilloscopes often contain very fast components that convert these kinds of continuous signals into digital signals.

ANSWER: **analog** [accept **analog**-to-digital converter]

13. This region is divided into “Little” and “Great” parts, with the latter blending into the Highveld scrubland in the east and the savannahs of Griqualand (“GREE-kwuh-land”) in the north. For 10 points each:

[10m] Name this arid semi-desert region of South Africa, found just north of the Cape Fold Mountains.

ANSWER: **Karoo** (“kuh-ROO-uh”) [accept Great **Karoo** or Little **Karoo**]

[10e] The more vegetated “Succulent Karoo” runs from South Africa up through this country’s coast. Botswana, South Africa, and this country share the Kalahari desert.

ANSWER: **Namibia** [or Republic of **Namibia**]

[10h] Like the Serengeti, the Karoo and Veldt contain many of these small hills, which are usually granite outcrops surrounded by flat terrain. Their name comes from the Afrikaans for “little head.”

ANSWER: **koppies** (“KOP-yuhs” or “KOAP-yees”) [or **koppies**; prompt on **inselberg** or **monadnock**; reject “kop”]

14. An artist from this family depicted his wife in a mean-spirited cartoon in which she and their cat dine happily while a starving naked man crawls under their table. For 10 points each:

[10e] Name this family into which the artist Josephine Nivison married. The artist of *Woman in the Sun*, who belonged to this family, used Josephine as a model for paintings like *Automat* and *Nighthawks*.

ANSWER: **Hopper** family [accept Edward **Hopper** or Josephine Nivison **Hopper**]

[10h] Josephine appears as a woman in a blue jumpsuit, standing off in a well-lit corner and resting her head on her hand, in an Edward Hopper painting set in this type of location; snowy mountains can be seen in the background.

ANSWER: **movie** theater (from *New York Movie*) [prompt on **theaters**]

[10m] Josephine Hopper served as the model for all three female figures in this Hopper painting, which depicts a woman facing her doppelganger while dining in a restaurant.

ANSWER: **Chop Suey** (“SOO-wee”)

15. It’s not in Korea, but Edward Hunter used notebooks he couldn’t read recovered from guerilla fighters during this conflict as evidence of Chinese brainwashing while testifying to HUAC (“HYOO-ac”). For 10 points each:

[10h] Name this conflict, during which the U.S. supplied arms to American-owned tin mines in what was then the world’s largest producer of tin. Gerald Templer employed a “hearts and minds” strategy during this conflict.

ANSWER: **Malayan Emergency**

[10m] The U.S. backed Britain during the Malayan Emergency under this Secretary of State, who designed the Truman Doctrine of containment.

ANSWER: Dean (Gooderham) **Acheson** (“ATCH-iss-un”)

[10e] Fear of brainwashing led to the CIA’s MKULTRA (“M-K-ultra”) program, part of which involved experimenting with using this psychedelic drug to brainwash people. Timothy Leary promoted use of this synthetic drug often taken in tabs.

ANSWER: **LSD** [or **lysergic acid diethylamide**; prompt on **acid**]

16. In a ludicrous ritual called the Buphonia, one of these objects was put on trial while a priest fled and hid. For 10 points each:

[10m] Name this type of object. Penelope lines up twelve of these objects for the archery contest at the climax of the *Odyssey*.

ANSWER: **axes** [or **axe**heads; or pole**axes**]

[10h] This German theorist analyzed the Buphonia ritual in his study of the role of sacrifice in ancient Greek religion, *Homo Necans*.

ANSWER: Walter **Burkert**

[10e] The *Odyssey* also features an elaborate description of the sacrifice of a heifer belonging to Nestor, who conducts that sacrifice in honor of this visiting son of Odysseus.

ANSWER: **Telemachus**

17. Several characters in this “play for voices” were based on real-life inhabitants of New Quay, such as Jack Lloyd, who was the inspiration for postman Willy Nilly. For 10 points each:

[10m] Name this radio play featuring such residents of Llareggub as Mrs. Ogmores-Pritchard and Captain Cat.

ANSWER: *Under Milk Wood*

[10h] The author of *Under Milk Wood* also wrote this collection that includes the stories “The Peaches” and “A Visit to Grandpa’s,” in which the young narrator’s grandfather puts on a waistcoat and a dusty hat before walking to a neighboring village to be buried.

ANSWER: *Portrait of the Artist as a Young Dog*

[10e] This Welsh poet of “Do not go gentle into that good night” wrote *Under Milk Wood* and *Portrait of the Artist as a Young Dog*.

ANSWER: Dylan (Marlais) Thomas

18. These objects are sorted by their proper elements into Hirayama families. For 10 points each:

[10h] Name these objects which are sorted by the Tholen classification into the C-group, S-group, and X-group, which are further subdivided into a total of 14 types.

ANSWER: asteroids

[10e] The asteroid belt lies between Mars and this gas giant planet. This gas giant has a large storm in its atmosphere called the Great Red Spot.

ANSWER: Jupiter

[10m] These depleted areas of the asteroid belt are caused by orbital resonances with Jupiter. Some asteroids with high-eccentricity orbits still occupy these regions.

ANSWER: Kirkwood gaps

19. Pontus Skoglund’s 2015 *Nature* paper challenged the idea that one population settled the Americas by theorizing Population Y based on genetic links between this country’s indigenous people and Australasians. For 10 points each:

[10h] Name this country that contains Pedra Furada (“PED-rah foo-RAH-dah”), a series of sites whose charcoal remains have been used to claim human presence tens of thousands of years before the Clovis culture.

ANSWER: Federative Republic of Brazil [or República Federativa do Brasil]

[10m] In 2021, archaeologists found footprints in this state that predated the Clovis culture by eight to ten thousand years. The Clovis culture is named for the town where characteristic projectile points were found in this U.S. state.

ANSWER: New Mexico

[10e] Those sites are among the many contested sites that may challenge the view that humans migrated across the land bridge spanning this strait between Russia and Alaska 13,000 years ago.

ANSWER: Bering Strait [accept Bering Land Bridge; accept Beringia]

20. For 10 points each, answer the following about the career of soprano Adelina Patti.

[10e] This Italian composer was much chagrined when Patti sang for him an overly ornamented performance of “Una voce poco fa” (“OO-nuh VOH-chay POH-koh FA”) from his *The Barber of Seville*.

ANSWER: Gioachino (Antonio) Rossini

[10h] Patti is mentioned in a couplet from *La vie parisienne*, with music by Jacques Offenbach and a libretto by Ludovic Halévy (“loo-doh-VEEK ahh-lay-VEE”) and this man, who also co-wrote the libretti for Bizet’s *Carmen* and Massenet’s *Manon*.

ANSWER: Henri Meilhac (“on-REE may-YACK”)

[10m] Patti made her debut playing the title character of this 1835 opera, who sings the mad scene “*Il dolce suono*” (“eel DOHL-chay soo-OH-no”) after killing her bridegroom, Arturo Bucklaw, on their wedding night.

ANSWER: Lucia di Lammermoor