HARI (Hari's Academic Regionals(-minus) Invitational): A Harimoment of peace and quiet Written by: Hari Parameswaran (Georgia Tech), Arjun Nageswaran (Harvard), Anson Berns (Brown), Michael Li (Brown), Jason Hong (Brown), Walter Zhang (Brown), Natan Holtzman (Stanford), Ethan Strombeck (Stanford), Geoffrey Chen (Cornell), Vishwa Shanmugam (Maryland), Shahar Schwartz (Berkeley), Steven Liu (MIT), Katherine Lei (MIT), Ariel Faeder, Keaton Martin (Kentucky), Dean Ah Now (Pomona), Chris Tong (MIT), and Mazin Omer (Harvard)

ROUND 9

Tossups

1. In one novel, this author described how the kneading of bread serves as the alarm clock for a family whose matriarch washes her husband every night for 25 years. Another character created by this author takes over a street with the help of the Desert Rats, but is eventually replaced by the magician Arafa. This author faced an assassination attempt at age 82 due to his defense of Rushdie's *Satanic Verses* and for a novel that allegorized (*) Muhammad in the character Qasim; that novel by this author also includes depictions of Jesus and Moses, all of whom live in an alley. This author wrote three novels about the al-Jawad family, each named after streets in a capital city. For 10 points, name this Egyptian author of *The Children of Gebelawi* and the *Cairo Trilogy*. ANSWER: Naguib Mahfouz

<Long Fiction, Zhang>

2. As well as founding the American Communist Party, a revolutionary known as "John Pepper" founded this country's communist party. The paramilitary Lenin Boys operated during this country's short stint as a Soviet republic, which occurred following the failure of the Aster Revolution. After this country's eastern neighbor occupied Alba Iulia and (*) Cluj, it was forced to cede territory in the punitive Treaty of Trianon, which was later opposed by the fascist Arrow Cross Party. This country experienced a "red terror" under Béla Kun, who was "rehabilitated" during a 1956 democratic revolution led by Imre Nagy. For 10 points, name this country which ended its dual monarchy with Austria following World War I.

ANSWER: Hungary

<European History, Parameswaran>

3. Raymond E. Brown claimed that writings by a figure with this name were actually by a community of Jews led by the "Beloved Disciple," who is only referenced in a text bearing this name. Papias and Eusebius claimed that a man with this name known as "the Presbyter" was once bishop of Ephesus. Some Greek editions of an epistle by a figure with this name contain a likely spurious passage referencing the Trinity, known as a certain (*) "comma." A book by an author with this name records the seven signs of Jesus and contains seven "I am" statements. Scholars now believe that the Book of Revelation was written by a man with this name from Patmos, not the same-named apostle. For 10 points, give this name of the apostle who wrote the fourth canonical Gospel.

ANSWER: <u>John</u> [accept <u>John</u> the Apostle or <u>John</u> of Patmos or <u>John</u> the Presbyter; accept <u>Johannine</u> comma or the <u>Johannine</u> community or the Gospel according to <u>John</u>]

<Religion, Shanmugam>

4. A monomer containing this functional group undergoes a ring-opening polymerization catalyzed by stannous octoate. The most common thermotropic liquid crystal polymers have aromatic molecules with this functional group as the monomer. A biodegradable polymer whose repeating unit contains this group is produced by the dimerization and dehydration of lactic acid. This functional group names a class of polymers derived from polyethylene (*) terephthalate, or PET, used in synthetic fibers and plastic bottles. This functional group is produced by the condensation of carboxylic acids with alcohols. A carbonyl group is bonded to oxygen and a R group in, for 10 points, what functional group with a characteristic "fruity" smell?

ANSWER: esters [or lactiones; accept polyesters or lactiones

<Chemistry, Chen>

5. Description acceptable. A person best known for performing this sort of action launched a failed Senate primary challenge against Ben Cardin in 2018. In a 2021 NYT article, Terry Albury mentioned how his Ethiopian heritage and encounters with the Somali community in Minneapolis drove him to perform this action. Reality Winner was arrested for this action, leading to criticism of The Intercept. One person who performed this action in 2013 was aided by (*) Glenn Greenwald. One of Obama's final acts in office was commuting the sentence of Chelsea Manning, who was arrested for performing this action. For 10 points, Edward Snowden performed what sort of action that made the American public aware of various government surveillance programs?

ANSWER: **whistleblow**ing [accept answers relating to **leak**ing classified American government documents; accept answers relating to **exposing** American government secrets; prompt on <u>treason</u> by asking "What specific action is being referred to?"]

<Current Events, Nageswaran>

6. Welsh composer Grace Williams wrote a set of "Sketches" depicting this thing for string orchestra. A song cycle about this thing by Charles Villiers Stanford's inspired a symphony also about this thing by a student that begins with a repeated brassy B-flat minor chord before a choir enters. Janet Baker and John Barbirolli famously recorded Elgar's *Pictures* named after this thing. Benjamin Britten's four interludes from (*) Peter Grimes are titled for this thing. A symphony named for this thing sets text from Walt Whitman's Leaves of Grass and includes movements titled "The Explorers" and "On the Beach at Night, Alone." For 10 points, name this vast natural feature that titles Ralph Vaughan Williams' Symphony No. 1.

ANSWER: the <u>sea</u> [accept <u>Sea</u> Sketches or Songs of the <u>Sea</u> or <u>Sea</u> Interludes or <u>Sea</u> Pictures or A <u>Sea</u> Symphony; accept the <u>ocean</u>]

<Auditory Fine Arts, Zhang>

7. A tavern in East Setauket was owned by a man with this profession named Austin Roe. A group of these people were organized by Benjamin Tallmadge and included a tailor who co-founded the New York Manumission Society. Anna Strong worked in an organization of people with this profession, which took its name from the contraction of Culpeper County. The slave Cato and his master (*) Hercules Mulligan held this job, as did a man who had attempted to pose as a Dutch schoolteacher. That man, who lamented, "I only regret that I have but one life to lose for my country" before being executed, was Nathan Hale. For 10 points, name this job which involved dead drops to spread information and gather intelligence on the British during the Revolutionary War.

ANSWER: spy

<American History, Nageswaran>

8. Igor Pikovski claimed that this phenomenon causes the "universal decoherence" of quantum mechanical systems on Earth, even if they are highly isolated. This phenomenon causes an effect named for Irwin Shapiro that was first observed using radar pulses reflected from Venus. The Hafele-Keating experiment directly observed this phenomenon. The magnitude of this phenomenon can be calculated in a thought experiment involving two (*) mirrors on moving trains with light bouncing between them. Gravitational redshift is caused by a gravitational form of this phenomenon that GPS clocks must properly account for. A naive application of this phenomenon results in the twin paradox. For 10 points, name this phenomenon in special relativity that causes fast-moving clocks to tick slower.

ANSWER: $\underline{\text{time dilation}}$ [accept gravitational $\underline{\text{time dilation}}$; prompt on $\underline{\text{gravity}}$ or $\underline{\text{gravitation}}$ al force with "which causes what effect?"]

<Physics, Liu>

9. In a short story collection by this author, a grandmother who smuggles mules and horses is killed by the bandit Grumby. In the title story of another collection by this author, an attorney pays to bring back the body of an executed Black man from Illinois. After her death, "a long strand of iron-gray hair" is found in the upstairs bedroom of one of this author's characters next to a (*) decomposed body. This author's collection *The Unvanquished* follows Bayard Sartoris, the son of a colonel who absolves the taxes of the Griersons. An old woman who poisons her lover Homer Barron lives in this author's fictional city of Jefferson in Yoknapatawpha County. For 10 points, name this author of the short stories "Go Down, Moses" and "A Rose for Emily." ANSWER: William Faulkner

<Short Fiction/Other, Zhang>

10. Jacques Derrida critiqued one work about this field by claiming that it attempted to reproduce Descartes's "Cogito." The first task of members of this field is "political" and involves "war against bad government." In this field, the two dimensions of "to be seen" and "to be spoken" allow someone to communicate their whole "being." An approach in this field following Xavier Bichat distinguishes (*) life at only the superficial level. The founding of one institution in this field led to a "Great Confinement" to physically separate one group from the rest of society. Practitioners of this field use a namesake "gaze" that separates the bodies from the personal identities of their clients. For 10 points, name this field which was discussed by Michel Foucault in *The Birth of the Clinic*.

ANSWER: **medicine** [accept word forms such as the **medical** field; accept **clinic** before mentioned; accept related answers such as **treating ill**nesses; accept answers relating to **treating mental ill**nesses or **psychiatry**; accept **mental** health; accept answers such as **doctor**s or **physician**s] <Philosophy, Nageswaran>

11. A writer who took this first name included a poem titled for Max Ernst in his collection *Capital of Pain*. A writer with this first name included Marceline Desbordes-Valmore and an anagram of his own name in an **1884** anthology of "accursed poets." A poet with this first name wrote "The Young Fate" and the lines "The wind is rising! We must try to live!" in "The (*) Graveyard by the Sea." An author depicted himself as the "infernal Spouse" of a man with this name in *A Season in Hell*. This is the first name of a poet who broke away from Parnassianism in favor of Symbolism in his "Songs without Words," which was about his lover Arthur Rimbaud. For 10 points, give this first name of the French poets Valéry and Verlaine.

ANSWER: **Paul** [accept **Paul** Éluard, **Paul** Valéry, or **Paul** Verlaine] <Non-Epic Poetry, Zhang>

12. Tarkanian, Hosler, and Burkett studied how ancient cultures perfected a 50-50 mixture of this substance and morning glory. The Nahuatl word for this substance, *olli*, reflected its association with speed. The Spanish historian Oviedo wrote of how the Taino used objects made of this material in *batey*. The Aztecs named their ancestors Olmeca for their extensive use of this resource. (*) Players would use *manopla* to strike an object made of this material in a game played on I-shaped courts and whose losers were sacrificed. Balls used in the Mesoamerican ball game were made of strips of this material, extracted from *Hevea Brasiliensis*. For 10 points, what material was utilized long before Charles Goodyear developed the process of vulcanization?

ANSWER: **rubber** [or **latex**]

<Ancient/Other History, Parameswaran>

13. This artist copied Horst P. Horst's photograph of a woman's back and a Mainbocher Corset for a scene in one of her music videos. The Catholic Church boycotted Pepsi for using one of this artist's songs in commercials. That song by this artist juxtaposes images of the KKK burning crosses with the stigmata. During her "Blonde Ambition" tour, this artist controversially sported Jean-Paul (*) Gaultier's cone bra. This artist popularized "Don't Cry for Me Argentina" after starring in a movie adaptation of *Evita*. David Fincher directed the black-and-white music video for this artist's most famous song, in which she rhymes the phrase "strike a pose" with the title word. For 10 points, name this American pop singer of "Like a Virgin" and "Vogue."

ANSWER: **Madonna** [or Louise **Ciccone**]

<Other Fine Arts, Parameswaran>

14. In some myths, one of these animals falls in love with a mermaid named Suvannamaccha, who had been stealing rocks meant for a causeway. Performers encircle a torch and mimic the sound of this animal in the Balinese *kecak* (KECH-ahk) ritual. One of these animals slays Mayavi, but is killed after challenging his brother Sugriva to a fight. One of these animals suffers a broken jaw after mistaking the sun for a (*) mango. Kishkinda is the domain ruled by these animals. One of these animals carries a mountain to bring *sanjeevani* to a wounded Lakshmana. Lanka's capital was destroyed after one of these animals had his tail set on fire; that one was a son of Vayu and loyal devotee of Rama and Sita. For 10 points, the Hindu god Hanuman takes the form of what animal?

ANSWER: **monkey**s [prompt on <u>vanaras</u>]

<Mythology, Parameswaran>

15. A matrix whose elements have this property has a unique maximal eigenvalue by the Perron–Frobenius theorem. A matrix is "totally [this word]" if all of its minors and their determinants have this property. If a matrix is the product of an invertible matrix and its conjugate transpose, it has a property denoted by this word and "definite." A linear map is orientation-preserving if its (*) determinant has this property. In a distance matrix, this property must be possessed by elements not on the diagonal. The value of the dot product of two vectors at an acute angle has this property. The discriminant has this property if a polynomial has all distinct, real roots. For 10 points, name this property possessed by numbers greater than zero.

ANSWER: **positive** [accept word forms like **positivity**; prompt on <u>nonnegative</u>; accept totally **positive** or **positive** definite]

<Math, Zhang>

- 16. In a volume named for a city in this present-day country, a writer from here advanced theater as "humanistic discourse" and coined the term "dramaturgy." A writer from this country described the conflict between self-consciousness and grace in his essay *On the Marionette Theatre*. In a play from this country, the adopted daughter of the Jewish title character turns out to be related to a (*) Templar and Saladin, while in another, Amalia is killed by an aristocrat-turned-criminal. This country, home to the writer of *Nathan the Wise*, also produced three plays about a Thirty Years' War general and one about Karl and Franz Moor. The *Wallenstein* trilogy and *The Robbers* are from, for 10 points, what country of Gotthold Lessing and Friedrich Schiller? ANSWER: Germany [The author of *On the Marionette Theatre* is Heinrich von Kleist.] <Drama, Zhang>
- 17. According to Arjun Appadurai, this faculty forms the basis of the "worlds" composed of the "scapes" through which cultural flow occurs. As an adjective, this faculty titles a book that claims that reverence for tombs of the unknown soldier function because no one knows who is inside. A 1959 book titled for this faculty critiques "abstracted empiricism" and claims a form of this faculty allows one to connect (*) "personal troubles to public issues." The emergence of "print capitalism" led to the development of political communities formed by this phenomenon, according to a Benedict Anderson book that traces the origins of nationalism. C. Wright Mills proposed a "sociological" form of, for 10 points, what faculty which Albert Einstein claimed is more important than knowledge?

ANSWER: <u>imagination</u> [accept word forms like <u>imagined</u> or <u>imaginary</u>; accept <u>imagined</u> worlds; accept <u>imagined</u> communities; accept the sociological <u>imagination</u>]
<Social Science, Chen>

18. This conflict saw action by the veerangini women's battalion, whose leader killed more than 30 soldiers during it and is now celebrated by the Passi ("puhs-see") community. Following this conflict, William Muir wrote a report disproving rumors of the torture and rape of European women that supposedly occurred during it. Over 200 women were massacred in the Bibighar and their bodies thrown into a well during this conflict's Siege of (*) Kanpur. Prior to this conflict, one side used the Doctrine of Lapse to justify seizing Jhansi, which was heroically defended by Lakshmibai during it. Many women joined this conflict to help soldiers offended by grease used in Enfield Rifles. For 10 points, name this 1857 revolt against the British East India Company. ANSWER: Sepoy Mutiny of 1857 [accept First War of Indian Independence; accept synonyms for mutiny like revolt, rebellion, etc]

<World History, Hong>

19. In the late 19th century, Mary Louise McLaughlin wrote an early American handbook on creating works in this medium. Darren Waterston repainted cheap works to resemble ones in this medium in the installation *Filthy Lucre*. The walls of a gold-decorated room in the Freer Gallery are lined with works in this medium. The title figures of John Singer Sargent's *The Daughters of Edward Darley Boit* are flanked by two large works in this medium. A painting that hangs above a fireplace in Whistler's (*) Peacock Room is titled *Princess From the Land of* this medium. Works in this medium imported from places like Jingdezhen (jing-duhjen) inspired the *chinoiserie* (shin-wa-ze-ree) style. For 10 points, the Ming dynasty produced what medium of blue-and-white painted glassware?

ANSWER: **porcelain** [prompt on pottery or ceramics]

<Visual Fine Arts, Zhang>

20. In the guard model, R proteins in this taxon of organisms recognize the end product of processes mediated by virulence factors, rather than the factors themselves. George McNew first proposed the disease triangle to model how infection of these organisms depends on the environment, a pathogen, and host susceptibility. Disease resistance in this kingdom of organisms is mediated by systemic acquired resistance, which is induced by (*) salicylic acid. An organism of this kingdom is infected by a "mosaic" virus, the first virus to be discovered. The entry of pathogens into organisms in this kingdom can sometimes be prevented by a thick, lignin and celluloserich cell wall. For 10 points, name this kingdom of organisms whose diseases are studied in phytopathology, a branch of botany.

ANSWER: **plant**s [or **Plantae**; accept specific plants or types of plants like **angiosperm**s or **nightshade**s or **tobacco** or **Arabidopsis** thaliana or **A. thaliana** or thale **cress**] <Biology, Chen>

Bonuses

1. Answer the following about photographer Yasumasa Morimura, who is well known for modifying pre-existing Western art. For 10 points each:

[10m] In this controversial painting, Morimura replaced Victorine Meurent's figure with that of a stereotypical geisha. The African maid in the background of this painting is replaced by a European male who wears a top hat.

ANSWER: Olympia

[10h] Another example of Morimura's "appropriation" art is the insertion of his face into *Guerrillero Heroico* ("gerree-YAIR-oh ay-ROW-ee-koh"), an iconic portrait of Che Guevara taken by this Cuban photographer.

ANSWER: Alberto Korda

[10e] Yasumasa Morimura also placed himself in this famous portrait of a woman with an enigmatic smile by Leonardo da Vinci.

ANSWER: *Mona Lisa*<Visual Fine Arts, Martin>

2. The classical enzymes in this family are named for being regulated by extracellular signals. For 10 points each: [10h] Name this family of kinases, which consist of a three-tiered phosphorylation pathway. The c-Jun N-terminal kinases are a subfamily of this group.

ANSWER: **MAP** kinases [or **mitogen-activated** protein kinases]

[10e] MAP kinases are named for being activated by proteins that begin this process in which a cell splits into two identical daughter cells.

ANSWER: mitosis

[10m] Some MAP kinases are dual-specific, meaning that they can phosphorylate either tyrosine, threonine, or this amino acid. Like the aforementioned acids, this amino acid has a polar hydroxyl group in its side chain.

ANSWER: **ser**ine [or **S**er]

<Biology, Zhang>

3. Louis Althusser was the primary author of a book titled "Reading" a work by this man. For 10 points each: [10m] Name this man. Althusser described an "epistemological break" between the "Young" and "Mature" works of this thinker in a book titled *For [him]*, which examines a series of 1844 manuscripts that introduced his concept of "alienation."

ANSWER: Karl Marx [accept For Marx]

[10e] The aforementioned Althusser work is a "Reading" of this unfinished volume by Marx, which is subtitled "A Critique of Political Economy."

ANSWER: Das Kapital [or Capital]

[10h] Althusser considered Marx's break from Young to Mature to coincide with his split with this other thinker. Marx wrote a set of 11 short observations titled for this man that criticizes materialists as objective and idealist.

ANSWER: Ludwig **Feuerbach** [accept *Theses on* **Feuerbach**]

<Philosophy, Zhang>

4. Immigrants of this nationality were targeted in the 1907 Bellingham Riots. For 10 points each:

[10e] Give this nationality of a religious leader who declared "Sisters and brothers of America!" as part of a speech at the Parliament of World Religions that spread awareness of Hinduism to the U.S.

ANSWER: **Indian**-American

[10h] Emmanuel Celler and a politician with this surname co-sponsored an act that allowed 100 Indians per year to emigrate to the U.S. A person with this surname argued for American domination of global politics in the article "The American Century."

ANSWER: <u>Luce</u> [accept Clare Booth <u>Luce</u> or Henry <u>Luce</u>]

[10m] The Luce-Cellar Act also guaranteed a quota for immigrants from this country. Immigrant farmers from this country partnered with Mexican-Americans during the Delano Grapes strike.

ANSWER: The **Philippines** [accept **Filipino**-Americans]

<American History, Nageswaran>

5. A myna bird screams "Attention!" at the end of this novel as Colonel Dipa and the forces of Rendang-Lobo invade the title place. For 10 points each:

[10h] Name this novel in which Will Farnaby visits the Kingdom of Pala after intentionally wrecking his boat there to gain rights to oil reserves. The author of this novel wrote it as a counterpart to an earlier 1932 dystopian novel.

ANSWER: Island

[10e] *Island* was written by this author as the utopian counterpart to his earlier novel which takes place "After Ford," *Brave New World*.

ANSWER: Aldous Huxley

[10m] In *Island*, marionettes portray a version of this play with a happier ending. Before the action of this play, its title character kills an old man at a crossroads after he grazes his foot with a chariot.

ANSWER: **Oedipus Rex** [or **Oedipus the King**]

<Long Fiction, Martin>

 $6. \ The \ Flesch-Kincaid \ tests \ for \ measuring \ this \ property \ assigns \ a \ text \ with \ a \ grade \ level. \ For \ 10 \ points \ each:$

[10m] Name this property, which is calculated using complexity of words and length of sentences. Unlike comprehension, this property does not measure how an audience will be able to understand a text.

ANSWER: **readability** [accept **reading level**; prompt on answers referring to how difficult a text is to **read**; do not accept or prompt on "legibility"]

[10e] The development of readability tests have contributed to simplification of these informative texts. BBC's texts of this type score lower than those of US outlets like USA Today on the Flesch–Kincaid.

ANSWER: news **article**s [accept **news**; or news **stories**; or news **feature**s]

[10h] This 1955 book by Rudolf Flesch titled for an illiterate twelve-year-old advocates for teaching reading using phonetics. It indirectly led to the writing of *The Cat in the Hat*.

ANSWER: Why Johnny Can't Read and what you can do about it

<Social Science, Zhang>

7. An author with this last name fictionalized herself as the aspiring ballerina Alabama Beggs. For 10 points each: [10m] Give this last name of the author of *Save Me the Waltz*. Another author with this last name fictionalized himself as Amory Blaine in his first novel, the success of which led to his engagement.

ANSWER: <u>Fitzgerald</u> [accept Zelda <u>Fitzgerald</u> or F. Scott <u>Fitzgerald</u>] (The novel is *This Side of Paradise*.) [10e] Perhaps the most famous F. Scott Fitzgerald self-insert was this narrator of *The Great Gatsby*.

ANSWER: Nick Carraway [or Nick Carraway]

[10h] F. Scott Fitzgerald used the name of this character from *This Side of Paradise*, who was based on John Peale Bishop, as a pen name. The epigraph of *The Great Gatsby*, "Then Wear the Gold Hat," is attributed to this poet.

ANSWER: Thomas Parke **D'Invilliers**

<Long Fiction, Zhang>

8. An incredible string quartet made up of Johann Vanhal, Carl Dittersdorf, Haydn, and Mozart played together as members of the "first school" named for this city. For 10 points each:

[10e] Name this city. This city later served as the base for composer Ludwig van Beethoven.

ANSWER: Vienna, Austria

[10h] Vanhal and Dittersdorf, like Giovanni Bottesini later in the 19th century, wrote concertos for this instrument. Haydn's concerto for this instrument remains missing.

ANSWER: double <u>bass</u> [accept string <u>bass</u> or contra<u>bass</u>, do not accept or prompt on electric bass]

[10m] Haydn did include a prominent bass solo in this symphony, after which the bass section blows a candle and leaves the stage. This symphony was written to say that the musicians wanted to go home and return to their families.

ANSWER: Farewell Symphony [accept Symphony No. 45]

<Auditory Fine Arts, Nageswaran>

9. A popular Han dynasty text was titled for the biographies of "virtuous" examples of these people. For 10 points each:

[10e] Name these people, who were the subject of numerous "chastity arches" built during the Ming dynasty. These people were subjected to the painful practice of foot-binding.

ANSWER: Chinese **women** [or **girl**s]

[10m] Perhaps the most famous woman to break from Chinese stereotypes was this Tang dynasty empress, a former concubine of the Taizong emperor. She had statues of the Maitreya Buddha constructed to justify her reign.

ANSWER: <u>Wu</u> Zetian [or Empress Consort <u>Wu</u>; or <u>Wu</u> Hao; or <u>Wu</u> Zhao]

[10h] The historian Ban Zhao popularized the saying that, along with attaining "four virtues," women should strive for this other enumerated set of qualities in relationships with men.

ANSWER: three obediences [or three submissions; prompt on obedience]

<World History, Parameswaran>

10. Interference caused by this phenomenon corresponds to higher values on the Bortle scale. For 10 points each: [10m] Name this phenomenon. The IDA establishes "Sanctuaries" to preserve spaces from it and recommends using full cutoff fixtures and low-pressure over high-pressure sodium sources to combat this phenomenon.

ANSWER: **light pollution** [accept **skyglow**; prompt on partial answer] (The IDA is the International Dark-Sky Association.)

[10h] Light pollution can affect diel migration, in which plankton move during the day in this manner. The deep scattering layer also moves in this manner throughout the day.

ANSWER: **vertical**ly [accept descriptive answers like "going **up** and **down**"; accept diel **vertical** migration] [10e] Because these animals instinctively crawl towards light after hatching, light pollution can cause them to move away from the ocean and strand on land. The leatherback species of these animals unusually lacks a hard shell.

ANSWER: (sea) **turtle**s <Other Science, Zhang>

11. The Australian towns of White Cliffs and Lightning Ridge became boom towns due to discovery of the white and black forms of this mineral. For 10 points each:

[10h] Name this mineral. Mining of this mineral is central to the economy of Coober Pedy, a town whose residents live underground in dugouts due to the daytime heat.

ANSWER: opal

[10m] 80% of the world's opal is mined in Australia, most of which is shipped through this port city and capital of South Australia.

ANSWER: Adelaide

[10e] A mine in Coober Pedy produced the most valuable opal, which was named for this type of event. The restoration of Homebush Bay was prompted by one of these events that took place in Sydney in 2000.

ANSWER: **Olympics** [accept **Olympic** Australis; accept Summer **Olympics** or Summer **Olympic** Games] <Geography, Zhang>

12. A series of crimes in one of this director's films always affect women in red on rainy nights as a special song plays on the radio. For 10 points each:

[10h] Name this director. This director frequently collaborates with an actor who played the lead role in his films *Memories of Murder* and *The Host*.

ANSWER: **Bong** Joon-ho (The actor is Song Kang-ho.)

[10e] Song Kang-ho plays Ki-taek, the patriarch of the Kim family, who are hired by the Park family in this 2019 Bong Joon-ho film. This is the first non-English film to win an Academy Award for Best Picture.

ANSWER: **Parasite**

[10m] Song played an engineer in a 2013 film in English set in one of these locations. A 2016 live-action film by Yeon Sang-ho about a zombie outbreak is titled for one of these locations.

ANSWER: **train**s [or **locomotive**s] (The 2013 film is *Snowpiercer*; the 2016 film is *Train to Busan*.) <Other Fine Arts, Zhang>

13. Two brothers with this surname collaborated on a journal that ran for 45 years and was first translated into English by Marie Belloc Lowndes and Marie Shedlock. For 10 points each:

[10m] Give this surname. It names the most prestigious French literary prize, which comes with an award of 10 euros.

ANSWER: **Goncourt** [accept Prix **Goncourt** or **Goncourt** Journals]

[10h] Théophile Gautier, a friend and frequent appearer in the Journal, wrote a story about one of these characters named Clarimonde. In a different French story, an invisible one of these creatures hides on a Brazilian boat.

ANSWER: **vampire** [prompt on Le <u>Horla</u>]

[10e] The Goncourt Journal printed a rumor that this man was an illegitimate son of Gustave Flaubert, possibly out of jealousy of his successful stories like *The Necklace* and *Le Horla*.

ANSWER: Guy de **Maupassant** <Short Fiction/Other, Zhang>

14. The Linde refrigerator uses the Joule-Thomson effect to cool gases below their boiling point. For 10 points each: [10h] The Joule-Thomson effect can be used to cool gases between the lower and upper values of this temperature, at which the Joule-Thomson coefficient changes sign.

ANSWER: **inversion** temperature

[10e] These gases have a Joule-Thomson coefficient of zero under all conditions and thus can never be cooled by the Joule-Thomson effect. The equation of state PV = nRT describes these gases.

ANSWER: ideal gas [accept perfect gas]

[10m] Ideal gases can be cooled by expansion under this condition. For a monoatomic ideal gas undergoing expansion under this condition, the pressure times volume to the 5/3 power is constant.

ANSWER: adiabatic [accept isentropic]

<Chemistry, Tong>

15. This man's *Theatrum Chemicum Britannicum* is a massive treatise of alchemy compiled from various famous authors. For 10 points each:

[10h] Name this English collector, numismatist, and Freemason. He donated his cabinet of curiosities, much of which was obtained from the Tradescants of Lambeth, to his namesake museum.

ANSWER: Elias Ashmole

[10e] The Ashmolean Museum is located in this city. This city's namesake university is the oldest in Great Britain and often combined in a portmanteau with Cambridge.

ANSWER: Oxford

[10m] The Ashmolean Museum's focus on archaeology was started in 1884 by this man, who was serving as its keeper at the time. This archaeologist most famously unearthed the Minoan palace at Knossos.

ANSWER: Sir Arthur John **Evans** <Ancient/Other History, Zhang>

16. This is the last word in a poem whose title location is "(with up so floating many bells down)." For 10 points each:

[10m] Give this word that recurs in that poem alongside the words "sun," "moon," and "stars." A different poem by the same author notes how "nobody, not even [this word], has such small hands."

ANSWER: the **rain** [The second poem is "somewhere i have never travelled, gladly beyond."]

[10e] The refrain "sun moon stars rain" appears in "anyone lived in a pretty how town," a poem by this author who used unconventional grammar and spelling in his works.

ANSWER: e. e. cummings

[10h] In a cummings poem whose addressee is "whatever a moon has always meant and whatever a sun will always sing," this four-word phrase, which begins the poem, refers to "the wonder that's keeping the stars apart."

ANSWER: i carry your heart with me

<Non-Epic Poetry, Zhang>

17. This country's witches believed that wearing the enchanted skin of dead people, known as nabrok, could make them rich. For 10 points each:

[10h] Name this modern-day country, which saw an explosion of witch trials following its conversion to Protestantism by Christian III. This country had earlier agreed to a Christian union as part of the Old Covenant.

ANSWER: **Iceland** [prompt on Denmark]

[10m] The nabrok were also named after this ethnicity because they were considered to be magicians. These reindeer-herding peoples of northern Scandinavia were also associated with the Devil.

ANSWER: **Sami** [accept **Lapps**, but remind players that the term is derogatory.]

[10e] The nabrok only worked if the user drew one of these things known as a nábrókarstafur. The Elder Futhark alphabet of these symbols was used to write various Norse languages.

ANSWER: runes

< European History, Parameswaran>

18. The electric susceptibility of many crystals is written as a tensor since the extent of this phenomenon is different when measured in different directions. For 10 points each:

[10m] Name this phenomenon where the distribution of electrons in a material is distorted in response to an applied electric field. Its density is equal to dipole moment per unit volume.

ANSWER: electric **polarization** [accept word forms such as becoming **polarized**; accept electric **polarization** density]

[10h] Inside a dielectric material, the negative divergence of polarization density equals the density of what quantity, in an application of Gauss' law?

ANSWER: **bound charge** [prompt on charge]

[10e] Dielectrics are examples of these types of materials that are polarized by an electric field. These materials are poor conductors of electrical current.

ANSWER: <u>insulator</u>s <Physics, Tong>

19. Central to this technique are lines known as "meridians," where a life force known as *qi* flows through the body. For 10 points each:

[10e] Name this traditional Chinese therapy, which uses needles inserted into the body to redirect the flow of *qi*.

ANSWER: acupuncture

[10h] Regions of life force known as *chakras* are central to this body of esoteric Asian traditions. Though associated with sex in the West, this tradition's practitioners mainly use yoga to increase well-being.

ANSWER: **tantra** [accept **tantric** yoga]

[10m] This ethnic minority of Laos practices a therapy known as *kav*, in which a silver coin is rubbed to increase circulation of body fluids. These people's clash with Western medicine is examined in Anne Fadiman's book *The Spirit Catches You and You Fall Down*.

ANSWER: **Hmong** [prompt on Miao, but remind players that it is considered a derogatory term.] <Other, Parameswaran>

20. A verse that bans these things calls them, along with gambling, idol worship, and divining arrows, the work of Satan. For 10 points each:

[10m] Name these things, whose use was discouraged and then gradually banned in a hadith describing them as *khamr*.

ANSWER: <u>alcohol</u>ic beverages [accept <u>wine</u> or specific types of <u>alcohol</u>; accept <u>liquor</u>s or <u>intoxicant</u>s or other equivalents; prompt on <u>drinks</u> or <u>beverages</u>]

[10e] The fourth sura of the Quran first bans being intoxicated while performing this action. Muslims perform this action while facing the qibla five times a day as part of the pillar of *salat*.

ANSWER: **prayer** [or word forms like **pray**ing]

[10h] This school does not consider alcoholic beverages not made from grapes or dates *khamr*, though they are still banned from consumption. This largest Sunni school is known for its flexibility in jurisprudence and use of ra'y, or personal opinion, in addition to qiya reasoning.

ANSWER: Hanafi school

<Religion, Zhang>