

# 2022 SHOW-ME

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## Packet 4

1. **This molecule lowers the melting point of rocks in a process known as flux melting. Though this molecule is a greenhouse gas, its global warming potential is zero because its concentration depends on temperature. This molecule can assemble into cage-like structures, forming clathrates [KLATH-rates], most commonly around (\*) methane. Two of this molecule occurs in each formula unit of gypsum [JIP-sum]. Unusually, the solid phase of this molecule is less dense than its liquid phase due to hydrogen bonding. In total, this molecule covers the majority of Earth's surface. For 10 points, name this molecule with the formula  $H_2O$ .**

ANSWER: **water** [accept  **$H_2O$**  before " $H_2O$ "; accept **water** vapor or **water** ice; prompt on **ice** by itself]  
<Earth Science — June Yin> [Ed.]

1. During this event, guards stopped military forces who attempted to use a black Mercedes to impersonate a politician who had recently bought a white one. For 10 points each:

[H] Over 100 hostages were rescued by Mossad during what 1976 event, in which Michel Bacos was awarded the Legion of Honor for staying with passengers of Air France Flight 139?

ANSWER: Operation **Entebbe** [or Operation **Thunderbolt**; accept answers mentioning a military **raid** at **Entebbe** International Airport; accept Operation **Jonathan**]

[M] A member of this family, Yonatan, led the Entebbe raid. Another member of this family is a Likud Party Prime Minister who bribed the media company Bezeq for positive coverage in 2019.

ANSWER: **Netanyahu** family [accept Benjamin "Bibi" **Netanyahu**; accept Yonatan "Yoni" **Netanyahu**]

[E] Entebbe Airport is in this country, near its capital Kampala. Hostage-takers were supported by Idi Amin, a former dictator of this country.

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

<World History — Andrew Gao> [Ed. Louis Li]

2. **This character, who owns a music box with a monkey figurine, appears at a masquerade ball dressed as the Red Death to steal an engagement ring. In one song, a woman calls this character "the unseen genius" before her friend Meg says "you're talking in riddles, and it's not like you." In another song, this character is called "that voice that (\*) calls to me and speaks my name." This so-called "Angel of Music" titles a song in which Christine Daaé sings that he "is there, inside my mind." For 10 points, name this mask-wearing title character of an Andrew Lloyd Webber musical who haunts a Parisian opera house.**

ANSWER: the **Phantom** of the Opera [or **Erik**; accept the **Angel of Music** before mention]

<Other Fine Arts — Joy An> [Ed. Ganon Evans]

2. After being outsmarted repeatedly by another tactician in this novel, Zhou Yu [joh yoo] dies while crying “if [I] were to be born, why must [Zhuge] Liang [JOO-guh lyong] exist as well?” For 10 points each:

[M] Name this novel in which Yu challenges Liang to gather 100,000 arrows in 3 days, so Liang creates boats manned by straw figures to lure volleys of arrows from Cao Cao’s [tsow tsow’s] army.

ANSWER: ***Romance of the Three Kingdoms*** [or ***Sanguo Yanyi***]

[H] To assuage Zhou Yu prior to this battle, Zhuge Liang conducts a fake ritual to change the direction of the wind. Guan Yu [gwan yoo] fails to intercept Cao Cao [tsao tsao] at Huarong [hwah-rohng] trail after his defeat at this battle.

ANSWER: Battle of the **Red Cliffs** [or the Battle of **Chibi**]

[E] Zhuge Liang’s genius military strategies are often compared to those of this author. This minister emphasized harmony with one’s army in his treatise *The Art of War*.

ANSWER: **Sun** Tzu [or **Sun** Zi; or **Sun** Wu; or **Changqing**]

<Long Fiction — Joy An> [Ed. Joel Miles]

3. **A character created by this author blows himself up in a metro station after forging the *Protocols of the Elders of Zion*. In a novel by this author, Ardeni uses a computer to connect the Knights Templar to “telluric currents.” This author, who wrote about Simone Simonini in *The Prague Cemetery*, ended a novel with formulators of “The Plan” being hanged from the title object in a (\*) Parisian museum. In a novel by this author, pages of Aristotle’s *Poetics* are poisoned by Jorge of Burgos, leading William of Baskerville to investigate murders at a monastery. For 10 points, name this Italian author of *Foucault’s Pendulum* and *The Name of the Rose*.**

ANSWER: Umberto **Eco**

<Long Fiction — Tanay Bodducherla> [Ed. Joel Miles]

3. A 2020 Lana Wilson documentary about this singer was the Favorite Film of 2020 at the Golden Tomato Awards. For 10 points each,

[E] Name this singer that released the albums *folklore* and *evermore*. In November 2021, she released the self-directed film “All Too Well” after a re-recording of her album *Red*.

ANSWER: Taylor (Alison) **Swift**

[H] This aforementioned verité documentary details Swift’s life as she learns to “harness the full power of her voice” by breaking from the mold of a “good girl.”

ANSWER: *Taylor Swift: **Miss Americana***

[M] *Taylor Swift: Miss Americana* draws its name from the 2019 song “Miss Americana & the Heartbreak Prince” in this album, which also features “Me!” and “You Need to Calm Down.”

ANSWER: **Lover**

<Pop Culture — Vincent Wang> [Ed. Ganon Evans]

4. **During this century, Moll King ran an underground coffeehouse in London. A queen in this century sent Gerard van Swieten to deal with a supposed vampire outbreak. A queen in this century inherited Joseph I’s land by the Pragmatic Sanction. Fake Crimean villages were built by Grigory (\*) Potemkin in this century to appease an empress who defeated Pugachev’s Rebellion. “Republics of Letters” in this century were supported by Madame Geoffrin’s Salon, which hosted Encyclopedists like Denis Diderot. For 10 points, name this century in which Maria Theresa of Austria and Catherine the Great of Russia were examples of “enlightened despots.”**

ANSWER: **1700s** [or the **18th** Century]

<European History — Ganon Evans> [Ed. Louis Li]

4. The Bahamian story of McCabe's curse inspired this painting while its artist was vacationing in the Caribbean after his father's death. For 10 points each:

[M] Name this Winslow Homer painting of a Black man stranded on a small boat in the middle of the ocean.

ANSWER: *The **Gulf Stream***

[E] Homer's painting *The Gulf Stream* depicts several of these animals. A painting by John Singleton Copley depicts one of these animals attacking Brook Watson off of the coast of Havana Harbor.

ANSWER: **sharks** [*accept Watson and the **Shark***]

[H] The sharks in Homer's *The Gulf Stream* inspired damned souls biting the title ship in this artist's *The Barque of Dante*. During his Orientalist phase, this artist painted three women sitting in an ornate room around a hookah pipe.

ANSWER: Eugène **Delacroix** [del-uh-krwah]

<Visual Fine Arts — June Yin> [Ed. Gabe Forrest]

5. **This composer's fourth symphony quotes "In the Field a Birch Tree Stood" while the strings play rapid sixteenth notes, and opens with the brasses playing an A-flat Beethoven-inspired "fate" motif. This composer's sixth symphony contains a bassoon solo with a dynamic marking of 6 p's. This composer of the "Winter Dreams" and (\*) "Manfred" symphonies wrote a work that included quotations of "God Save the Tsar" and "La Marseillaise" [mar-say-ez] to commemorate the defense of Russia from Napoleon. That piece included a part for the cannon. For 10 points, name this Russian composer of the "Pathétique" symphony and the 1812 Overture.**

ANSWER: Pyotr Ilyich **Tchaikovsky**

<Auditory Fine Arts — Vincent Wang> [Ed. Ganon Evans]

5. Answer the following about unethical medical experiments in the United States, for 10 points each:

[H] In the 1950s and 60s, Chester M. Southam injected these cancer cells into uninformed patients. George Gey isolated this first immortal human cell line without consent from the donor.

ANSWER: **HeLa** [HEE-lah] cells

[M] In 1955-57 over 100 Alaska Natives were given doses of radioactive iodine without being informed, to test the role of this butterfly-shaped gland in adapting to cold.

ANSWER: **thyroid** gland

[E] As part of Project MKULTRA, the CIA administered this hallucinogenic drug to non-consenting individuals.

This drug's inventor Albert Hofmann famously rode a bicycle under its influence.

ANSWER: **LSD** [or **lysergic acid diethylamide**]

<Biology — June Yin> [Ed.]

6. **In a work by this poet, the narrator wishes they had "loved a thunderbird instead" and dreams that their lover "sung me moon-struck." One work by this poet begins "I have done it again. One year in every ten," while another describes how "the stars go waltzing out in blue and red" and repeats the line "(I think I made you up inside my head.)" This poet described how the title being (\*) "rise[s] with [her] red hair and eat[s] men like air" at the end of one poem, and chronicled living while "barely daring to breathe or Achoo" in a poem about a "man in black with a meinkampf look." For 10 points, name this Confessional poet of "Lady Lazarus" and "Daddy."**

ANSWER: Sylvia **Plath** (The unnamed poem in the first and third lines is "Mad Girl's Love Song.")

<Poetry — Joy An> [Ed. Joel Miles]

6. Because this island was considered the birthplace of Artemis and Apollo, its residents were prohibited from dying and tainting the land, so prisoners were executed on nearby Mykonos. For 10 points each:

[M] Name this island in the Cyclades which hosted the Athenian treasury and thus lent its name to Athens' alliance of city-states.

ANSWER: **Delos** [accept the **Delian** League]

[H] Delos's importance as a port waned after it was sacked by this king of Pontus who fought the Romans in Anatolia. This ruler allegedly developed a method of ingesting non-lethal amounts of poison to build immunity.

ANSWER: **Mithridates** VI Eupator [or **Mithridates** the Great; accept **Mithridatism**]

[E] Delos was a slave trading hub for groups of these people from Cilicia who later kidnapped Julius Caesar. Pompey waged war against these people who attack and raid ships at sea.

ANSWER: **pirates** [accept Cilician **pirates**]

<European History — Ganon Evans> [Ed.]

7. In English, the pronunciation of this letter is usually a postalveolar approximant, but it is a labiodental approximant in the Cockney accent. William Labov studied whether people pronounced this letter in New York department stores. Unless it is linking to a second word, New England dialects (\*) drop this letter. After the letter L, teaching this letter's retroflex and bunched pronunciations is the most common treatment in English speech therapy, which remedies the pronunciation of this letter as W. In Spanish, this letter can be tapped or rolled by trilling the tongue. For 10 points, give this letter that begins the word "Ratatouille."

ANSWER: **R** [accept alternate pronunciations like "ur" or "oor"; accept linking **R**; accept retroflex **R**; accept bunched **R**; accept **rho**; accept **rhotacism**]

<Social Science — Ganon Evans> [Ed.]

7. Uninformed internet users have described this country's 15 county flags as "MS Paint"-like. For 10 points each:

[M] Name this African country whose flag resembles the U.S.'s except for containing a single star in its upper left.

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

[H] Liberia's county flag designs were inspired by this art form practiced by women using tripod devices. A Ghanaian example of this art form is known as *kente* [KEN-tay].

ANSWER: **textiles** [accept **weaving**; accept answers mentioning **cloth** or **fabric** or **quilts**]

[E] The flag of Maryland County depicts one of these buildings on Cape Palmas, which guided ships into the port of Harper. These tower-like buildings often have red and white stripes.

ANSWER: **lighthouses**

<Other — June Yin> [Ed. Ganon Evans]

8. These things are measured with five fractions consisting of R's and L's in the Henry Classification System. The Bertillon system was replaced by a method to classify these things created by Henry Faulds and Francis Galton. The FBI turned a warehouse into a "Factory" for analyzing these things, including ones half-burned from acid belonging to John (\*) Dillinger. Ninhydrin is used to detect these things alongside fine powders to find grease residing from friction ridges. Loops, whorls, and arches in these things create unique inputs for Apple's TouchID. For 10 points, name these unique markings left when people touch things.

ANSWER: **fingerprints** [accept **handprints**; accept **deramtylographs**; prompt on **prints**; prompt on **dactyloscopy** with "What does that analyze?"]

<Other — Ganon Evans> [Ed.]

8. Stars at the tip of the red giant branch can serve as “standard candles” when calculating this quantity. For 10 points each:

[E] Name this quantity that may be expressed in light-years or parsecs.

ANSWER: **distance** [accept answers indicating how **far** an object is from Earth]

[M] The tip of the red giant branch is a feature on this diagram, which plots the luminosity of stars against their temperature. A diagonal line across this diagram represents the “main sequence.”

ANSWER: **Hertzsprung-Russell** diagram [or **H-R** diagram]

[H] When stars leave the tip of the red giant branch, they experience a “flash” named after this element, in which it is rapidly fused into carbon.

ANSWER: **helium** [or **He**; accept **helium** flash]

<Astronomy — Joy An> [Ed. June Yin]

**9. In complex analysis, the viability of performing this operation determines the property of holomorphy. Performing this operation on each component of a square matrix gives a Jacobian matrix. For functions satisfying the conditions of Rolle’s theorem, this operation results in zero somewhere in an open interval. This operation cannot be performed at a (\*) cusp, and results in zero at a critical point. Performing this operation on a single-variable function gives the slope of the tangent to the function. For 10 points, name this operation that gives the rate of change of a function, the opposite of integration.**

ANSWER: **differentiation** [or taking the **derivative**; accept word forms such as **derivative** or first-**derivative**; reject “antiderivative” and “second-derivative”]

<Math — Yash Mandavia> [Ed. Joy An]

9. The speaker of this author’s poem “Spelling” says, “A child is not a poem, / a poem is not a child. / there is no either/or.” For 10 points each:

[E] Name this author, who created the character Aunt Lydia, “who was in love with either/or,” in the novel *The Handmaid’s Tale*.

ANSWER: Margaret **Atwood**

[H] The speaker of Atwood’s poem “[you fit into me]” says, “you fit into me / like a hook into [one of these body parts.]” In *The Handmaid’s Tale*, Gilead’s police force is named after this body part.

ANSWER: **eyes** [accept The **Eye**]

[M] This woman declares “This is a torch song. / Touch me and you’ll burn” in an Atwood poem titled for her doing “Countertop Dancing.” In *Doctor Faustus*, this woman is referred to as “the face that launched a thousand ships.”

ANSWER: **Helen** of Troy [accept “**Helen** of Troy Does Countertop Dancing”]

<Mixed Literature — Rachel Ezrielev> [Ed. Joel Miles]

**10. People living on this body of water originated the game of chunky at a site that contains a Woodhenge near a feature named for monks. The Sieur de la Salle claimed this body of water. The Woodland Period and Hopewell culture preceded a culture named for this body of water, of which Natchez People are the oldest surviving tribe, that relied on the “Three Sisters” crops and built (\*) mounds of earth at Cahokia. Hernando de Soto was the first European to cross this body of water that made up the eastern border of the Louisiana Purchase. The Steamboat Era centered on, for 10 points, what river that borders Louisiana?**

ANSWER: **Mississippi** River [accept **Mississippian** Culture]

<American History — Ganon Evans> [Ed. Louis Li]

10. Answer the following about the different forms of the Hindu god Shiva, for 10 points each:

[H] In his hermaphrodite form Ardhanarishvara [uhr-duh-nuh-REESH-vuh-ruh], Shiva is combined with this other god. This goddess was born after Sati [SUH-tee] threw herself into a funeral pyre.

ANSWER: **Parvati** [accept **Uma**]

[E] Shiva is often depicted riding Nandi [NUN-dee], a white one of these animals. The slaughter of these animals is taboo across many Hindu states in India.

ANSWER: **cows** [accept **cattle**; accept **bull**; accept **steer**]

[M] In his Nataraja [NUH-tuh-rah-juh] form, Shiva performs this action. Kali performs this action on top of Shiva in an attempt to destroy the world.

ANSWER: **dancing** [accept the Lord of the **Dance**]

<Mythology — Braden Booth> [Ed. Ganon Evans]

11. In a story by this author, Joe Hynes is accused of being a spy for Colgan while others discuss mayoral candidate Richard Tierney. In another story, this author of "Ivy Day in the Committee Room" described snow "faintly falling" over the grave of one character's dead lover. In that work, Bartell D'Arcy sings "The Lass of Aughrim" at a party, much to the chagrin of (\*) Gabriel Conroy. A stream-of-consciousness novel by this author of "The Dead" follows a day in the life of Molly and Leopold Bloom. For 10 points, what author of the short story collection *Dubliners* also wrote *Ulysses*?

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

<Mixed Literature — Tanay Bodducherla> [Ed. Joel Miles]

11. Around 1780, Joseph-Louis Lagrange [luh-GRAHNJ] reformulated classical mechanics. For 10 points each:

[E] His formulation was based on a function called the Lagrangian [luh-GRAHN-jee-un], defined as kinetic energy minus this other type of energy that objects have due to their position.

ANSWER: **potential** energy

[H] Performing this operation on the Lagrangian yields a quantity called "action." This operation performed on power gives the change in energy.

ANSWER: **time integral** [or equivalents like **integrating** with respect to **time**; prompt on **integral** or equivalents]

[M] Noether's theorem holds that this quantity is conserved due to the Lagrangian's symmetry under translations in space. Unlike kinetic energy, this quantity is conserved in *inelastic* collisions.

ANSWER: (linear) **momentum** [accept conservation of **momentum**]

<Physics — Vincent Wang> [Ed. June Yin]

12. After this event, the CIA helped smuggle out hundreds of dissidents in Operation Yellowbird. The April 26th Editorial galvanized this event's participants into opposing the government. Before this event, students presented the "7 Demands" at the funeral of Hu Yaobang [who yow-BAHNG]. A person photographed blocking a road during this event became known as the (\*) "Tank Man." Up to 300,000 troops were ordered by Deng Xiaoping [deng syao-ping] to violently suppress this event, drawing widespread international condemnation. For 10 points, hundreds to thousands of protesters were killed in what 1989 event in a namesake Beijing plaza?

ANSWER: **Tiananmen Square** protests and massacre [or **June Fourth** incident; or **6/4**; or **Liu Si Shi Jian**]

<World History — June Yin> [Ed. Louis Li]

12. Experimental philosophers conduct surveys of people with no philosophical training to learn more about the “moral” form of these things. For 10 points each:

[H] Name these thought processes, which form the basis of G. E. Moore’s ethical system. Daniel Dennett argued that thought experiments like the Chinese Room are overly reliant on “pumping” these processes.

ANSWER: moral **intuitions** [or ethical **intuitions**; accept **intuition** pumps or **intuitionism**]

[E] Ethical intuitions and the interactions of our emotions with morality are studied by the “moral” subfield of this discipline. Jean Piaget [jon pee-ah-ZHAY] was a pioneer of this study of behavior.

ANSWER: moral **psychology** [accept word forms like **psychologist**]

[M] Crowdsourced moral psychology research includes the Moral Machine project, which helps these things make decisions. The ability of these things to save some lives over others in an unavoidable accident is controversial.

ANSWER: **self-driving cars** [or **driverless cars** or **robotic cars**; accept descriptions of **cars** that can **drive themselves**; prompt on **cars** or **AI** or **robots**; reject “trollies”]

<Philosophy — Joel Miles> [Ed.]

13. **At the end of this holiday, the fifth Amidah is recited during the Closing of the Gates service. During this holiday, a goat has the sins of the community placed upon it and is released into the wild. Numbers 15:26 is recited three times after the Kol Nidre, a prayer that begins the evening service before this holiday. This holiday is referred to as the (\*) “Sabbath of Sabbaths” because observers set aside all physical comforts. This holiday marks the end of the High Holy Days. This holiday falls on the tenth of Tishrei, ten days after Rosh Hashanah. For 10 points, fasting and confessions are performed on what Jewish day of atonement?**

ANSWER: **Yom Kippur** [prompt on **Day** of **Atonement** before mention]

<Religion — Vik Wei> [Ed. Ganon Evans]

13. To describe his longing for the dead Euripides, this character asks “have you e’er felt a sudden lust for soup?,” to which another character responds “soup! Zeus-a-mercy, yes, ten thousand times.” For 10 points each:

[H] Name this character. This character judges a contest between Aeschylus [“ESS-kuh-luss”] and Euripides [“your-IP-uh-deez”] and chooses to allow Aeschylus to return to life.

ANSWER: **Dionysus**

[M] Dionysus travels to the underworld with his slave Xanthias [“ZAN-thee-us”] in this play by Aristophanes [“air-uh-STAW-fuh-neeZ”]. The title characters of this play chant “brekekekex, ko-ax, ko-ax!”

ANSWER: *The **Frogs*** [or **Bátrakhoi**]

[E] *The Frogs* opens with Dionysus consulting this hero for advice while wearing this hero’s lion skin, only for this hero to laugh at his getup. This hero traveled to the underworld to retrieve Cerberus as part of his twelve labors.

ANSWER: **Heracles** [or **Hercules**]

<Drama — Joy An> [Ed. Joel Miles]

14. **Apoplatic transport in these organs is blocked by the Casparian strip, forcing solutes to move through endodermal cells. The “cap” of these organs contains columella cells which sense gravity using auxins. Epiphytes often have “aerial” examples of these organs, and certain mangroves have (\*) upward-growing examples called pneumatophores [noo-MAT-uh-forz]. These organs often form associations with fungi known as mycorrhizas [my-kuh-RAI-zuhs]. The “tap-” variety of these organs is sometimes modified to store nutrients. Tiny “hairs” on these organs provide surface area to absorb water. For 10 points, name these branched organs that anchor plants into the ground.**

ANSWER: **roots** [accept subtypes like aerial **roots** or **taproots**; accept **root** caps or **root** hairs]

<Biology — June Yin> [Ed.]

14. Katherine Harris certified an election result in this state, despite serving as co-chair in the campaign of its winner. For 10 points each:

[M] Name this state, where irregularities such as “butterfly ballots” and “hanging chads” combined with Cuban upset over the treatment of Elián González may have swung an election.

ANSWER: **Florida** [or **FL**]

[H] In Florida’s Palm Beach County, “butterfly ballots” may have led hundreds of Gore voters to instead cast their vote for this Reform Party nominee. This paleoconservative coined the terms “silent majority” and “culture wars.”

ANSWER: Pat **Buchanan** [or Pat **Buchanan**]

[E] Florida’s electoral votes ultimately went to this presidential candidate. The Iraq War was launched by this President in response to the September 11th attacks.

ANSWER: George **W. Bush** [or **Bush 43** or George **Walker Bush** or **Bush Jr.** or **Bush the Younger**; prompt on George **Bush**; prompt on **Dubya**; do NOT accept or prompt on “George H.W. Bush”]

<American History — Connor Lee> [Ed. Louis Li]

15. **A version of this painting features several rhino horns next to a fish and land flooded with water. The Cap de Creus peninsula may have inspired the cliffs in this painting. Many brick-like blocks represent atomic weapons in a “Disintegration” of this painting. In this work, long eyelashes and an oozing tongue appear on a mysterious (\*) face that may have been a self-portrait of the artist. An object at the bottom left of this painting is covered in ants. This painting’s artist claimed he was inspired by watching Camembert cheese left in the sun. For 10 points, name this Surrealist painting by Salvador Dalí that depicts melting clocks.**

ANSWER: *The **Persistence of Memory*** [accept *The Disintegration of the **Persistence of Memory***]

<Visual Fine Arts — Andrew Gao> [Ed. Gabe Forrest]

15. Answer the following about countries that have recently changed capitals, for 10 points each:

[E] Indonesia’s new capital of Nusantara is being built on this island shared with Brunei and Malaysia. The popular online Orangutan Jungle School is located on this island.

ANSWER: **Borneo**

[M] This country moved its capital to Naypyidaw in 2005. This Asian country also contains the city of Mandalay, and the Irrawaddy River flows through this country into the Andaman Sea.

ANSWER: **Myanmar** [or **Burma**; or Union of **Burma**; or Pyidaungzu Thammada **Myanma Naingngandaw**; or Republic of the Union of **Myanmar**]

[H] This country began moving its capital from Bujumbura to Gitega in 2018. A giant man-eating crocodile named Gustave ate over 300 people along this country’s northern shores of Lake Tanganyika.

ANSWER: **Burundi** [or Republic of **Burundi**; or Republique du **Burundi**; or Republika y’u **Burundi**]

<Geography — Connor Lee> [Ed. Ganon Evans]

16. **In a story by this author, Alcee has sex with an old flame while her husband buys shrimp at the store. One of this author’s characters repeats the word “free” after Brently supposedly dies in a train crash. A book by this author opens with a parrot repeating a phrase that translates to “go away.” One of this author’s characters weeps during a (\*) piano performance by Mademoiselle Reisz [rice]. In a book by this author of “The Story of an Hour,” a character drowns herself in the Gulf of Mexico after Robert Lebrun leaves New Orleans. For 10 points, Edna Pontellier [pone-till-YAY] is the main character of what author’s novel *The Awakening*?**

ANSWER: Kate **Chopin** [accept Katherine **O’Flaherty**] (The first line refers to “The Storm.”)

<Literature — Braden Booth> [Ed. Joel Miles]



16. In an iconic scene featuring two of these objects, a man in a cowboy hat rides one while the Civil War tune “When Johnny Comes Marching Home” is played. For 10 points each,

[H] Name these objects that Major Kong attempts to use against Laputa, to the consternation of those in the War Room. These objects cause a discussion about a “mineshaft gap” and female-to-male ratios.

ANSWER: **nuclear bombs** [accept equivalents such as **nukes**; accept **atomic bombs**; prompt on **bombs**; do not accept or prompt on “rockets” or “missiles”]

[M] Nuclear bombs trigger a Doomsday Machine in this 1964 film after General Ripper launches Plan R. Peter Sellers plays this film’s title wheelchair-using scientist who is unable to control giving a Nazi salute.

ANSWER: ***Dr. Strangelove*** (or: *How I Learned to Stop Worrying and Love the Bomb*)

[E] *Dr. Strangelove*’s concrete War Room was carefully designed by this man. This director also created the films *A Clockwork Orange* and *2001: A Space Odyssey*.

ANSWER: Stanley **Kubrick**

<Other Fine Arts — Nathan Nicholas> [Ed. Ganon Evans]

17. **According to legends about this event, an angel turned an emperor to marble and buried him under the Golden Gate. The Hungarian engineer Orban created the massive Basilic cannon to aid in this event. Greek-speaking scholars like Georges Sphrantzes settled in Florence and Venice after this event. The idea that Moscow was a (\*) “Third Rome” became popular after this event. The Theodosian Walls fell during this event. The victors of this event converted the Hagia Sophia into a mosque. For 10 points, name this 1453 event in which Mehmed the Conqueror and his Turkish army successfully besieged the capital of the Byzantine Empire.**

ANSWER: **Fall of Constantinople** [accept **Conquest of Constantinople**; accept **Siege of Constantinople**; accept answers or synonyms indicating **Constantinople** being **captured** by the Ottomans; accept the **end** of the **Byzantine Empire** before “Byzantine”; reject “Sack of Constantinople”]

<European History — Ganon Evans> [Ed.]

17. An author from this literary movement asked "Does it stink like rotten meat? / Or crust and sugar over—like a syrupy sweet?" in a poem about "a dream deferred". For 10 points each:

[E] Langston Hughes was a poet from what 1920s movement centered in a majority African-American neighborhood in New York City?

ANSWER: **Harlem Renaissance**

[M] This Langston Hughes poem describes the title features as "ancient as the world and older than the flow of blood in human veins" and goes on to describe the speaker "bathed in the Euphrates" and having "heard the singing of the Mississippi.”

ANSWER: "The **Negro Speaks of Rivers**"

[H] This Harlem Renaissance poet exclaimed "We'll face the murderous, cowardly pack / Pressed to the wall, dying, but fighting back!" in his poem “If We Must Die.” This Jamaican-born author wrote the collection *Harlem Shadows*.

ANSWER: Claude **McKay**

<Poetry — Tanay Bodducherla> [Ed. Joel Miles]

18. **Some of these structures are non-degenerate by the presence of ligands in crystal field theory, which models their “splitting.” When these structures combine in molecules, the gap between two of them known as the HOMO and LUMO indicate the molecule’s stability. To explain the Lewis structure of methane, Linus Pauling proposed that these structures can undergo (\*) hybridization. At most two particles with opposite spins can occupy these structures according to the Pauli exclusion principle. The letters s, p, d, and f each label a differently shaped type of, for 10 points, what regions in which electrons are most likely to be found?**

ANSWER: (atomic) **orbitals** [accept subtypes such as d **orbitals**; accept molecular **orbitals**]

<Chemistry — Daniel Peelen> [Ed. June Yin]

18. Answer the following about standard pieces in the violin repertoire, for 10 points each:

[M] Violin students may learn Vittorio Monti's *Czardas* [CHAR-dash], which is based on a dance from this home country of Franz Liszt. Brahms wrote a series of dances based on themes from this country.

ANSWER: **Hungary** [or **Magyarország**; accept **Hungarian** Dances]

[E] Solo violin works by this composer include the 5th movement Chaconne from his *D-minor Partita No. 2*. This composer also wrote the *Brandenburg Concertos* and the *Well-Tempered Clavier*.

ANSWER: Johann Sebastian **Bach**

[H] Another piece you are probably very familiar with is the "Meditation" from *Thaïs*, an opera by this composer. He also wrote the operas *Manon* and *Werther*.

ANSWER: Jules **Massenet**

<Auditory Fine Arts — Joy An> [Ed. Ganon Evans]

19. **This deity's soul was maintained in the form of a living ram at Mendes [men-dess]. Gardens in the shape of this deity were annually constructed at his holy site of Abydos [uh-BYE-dohs]. Under Ptolemaic pharaohs, this deity was syncretized with the Apis as the god Serapis. This deity became trapped in a wooden column because he was earlier tricked into (\*) entering a box that floated down the Nile.** This deity appears wearing the *atef* crown and holding a crook and staff with green-skinned hands. This deity's wife Isis collected his body parts after he was hacked to death by his brother Set. For 10 points, name this Egyptian god of the underworld.

ANSWER: **Osiris** [prompt on **Serapis** before mention]

<Mythology — Ganon Evans> [Ed. Ganon Evans]

19. In 1989, this company's Ixtoc I [ICK-stock one] well caught fire and sank, leading to one of the worst oil spills in history. For 10 points each:

[H] Name this company, which was created by Lázaro Cárdenas in 1938 when he nationalized Mexico's oil industry.

ANSWER: **Pemex** [or **Petróleos Mexicanos** or **Mexican Petroleum**]

[M] Cárdenas was a member of this political party that held continuous power from 1929 to 2000. Under this party's *Dedazo* system, the president would appoint his successor.

ANSWER: **PRI** [or **Institutional Revolutionary Party**; or **Partido Revolucionario Institucional**; or **PNR**; or **Partido Nacional Revolucionario**; or **National Revolutionary Party**; or **PRM**; or **Partido de la Revolución Mexicana**; or **Party of the Mexican Revolution**]

[E] Pemex served as a model for Petrobrás, an oil company owned by the government of this country. This country's president Getulio Vargas committed suicide in his Rio de Janeiro Palace a year after founding Petrobrás.

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

<World History — Joel Miles> [Ed. Louis Li]

20. **Ongoing land disputes in this country's Middle Belt between herders and farmers are estimated to have killed hundreds since the late 90s. This country's army opened fire on #EndSARS [hashtag end SARS] protesters at its Lekki Toll gate in October 2020. Starting in 2020, Fulani bandits in this country have been linked to a string of massacres and mass-kidnappings. Boko (\*) Haram is centered in this country's northeastern provinces.** The leader of this country's separatist Indigenous People of Biafra has a trial date set for October 2022. For 10 points, Muhammadu Buhari leads what most populous African country from Abuja?

ANSWER: **Nigeria** [or Federal Republic of **Nigeria**]

<Current Events — Connor Lee> [Ed. Connor Lee]

20. For 10 points each, answer some things about MIT nanotechnologist Millie Dresselhaus [DRESS-uhl-house]:

[E] Dresselhaus was known as the “queen” of this nonmetallic element due to her extensive work on its allotropes [AL-uh-trohps], such as nanotubes and graphite.

ANSWER: **carbon** [or **C**]

[H] Dresselhaus pioneered the study of carbon allotropes using Raman [RAH-mun] spectroscopy, which measures this kind of molecular motion that comes in six distinct “modes.”

ANSWER: molecular **vibrations** [or **vibrational** motion or **vibrating**; accept **vibrational** modes]

[M] Dresselhaus also studied this semiconducting carbon allotrope that consists of a single flat honeycombed sheet.

ANSWER: **graphene** [GRAPH-een]

<Chemistry — June Yin> [Ed.]