

Detroit Country Day Academic Regular Tournament II

Packet 2

Head Edited by Arthur Gayden with help from Chris Gilmer-Hill, Dylan Bowman, Daniel Ma, Eric Yin, Steven Liu, Sarod Nori, Arjun Nageswaran, Jon Suh, Adam Sun, Zaid Siddiqui and Jason Golfinos

Written by the editors, Stan Melkumian, Geoffrey Wu, Cole Hartung, Neal Joshi, Austin Guo, Hrudy Peela, Ben Chapman, Louis Li, Allie Hoffert, Vedul Palavajhala, Costas Pavlou, Aeres Zhou, Reece Chae, Yashwanth Bajji, Dennis Yang, Vishesh Verma, and Sriyan Madugula
Special thanks to Neil Gurram



1. **A poet from this country described his “palms sticky as Bluebeard's” in a poem that concludes, “each year I hoped they’d keep, knew they would not.” Sages stand like “the gold mosaic of a wall” in a poem from this country whose speaker’s heart is “fastened to a dying animal.” One poet from this country imagined a “squat pen” resting “between my finger and my thumb” in the poem (*) “Digging.” A “tattered coat upon a stick” is likened to “a paltry thing” in a poem from this country that begins, “that is no country for old men.” For 10 points, name this home country of Seamus Heaney and William Butler Yeats.**

ANSWER: **Ireland** [or Republic of **Ireland** or Poblacht na hÉireann; accept Northern **Ireland**; prompt on **United Kingdom** or **UK**]

<British Literature, Melkumian> [Ed. Gayden]

The price of used examples of these products rose over 45% over the past year. For 10 points each:

[E] Name these products. Supply chain disruptions have led companies such as GM to announce they would make fewer of these products.

ANSWER: **cars** [accept used **cars** or pickup **trucks** or **autos** or **automobiles**; prompt on **vehicles**]

[H] A major shortage in the car production market is for chips. TSMC, a major chip producer from this country that also is the home of Foxconn, recently received approval from its government to build a plant to produce them.

ANSWER: **Taiwan**

[M] This chip manufacturer projected lower than expected earnings for the remainder of 2021 because of a glut in the market, which led chip stocks to fall. This company is better known for inventing the handheld calculator.

ANSWER: **Texas Instruments** [or **TI**]

<Current Events, Chapman> [Ed.]

2. **In this state, Charles Moore photographed a man being hit by a pressure hose. James Reeb was killed in this state. *Browder v. Gayle* struck down a law in this state that had been protested by Claudette Colvin. One man declared, “the arc of the moral universe is long, but it bends toward justice” in a speech given in this state that asked, (*) “How long? Not long!” Protesters marched across the Edmund Pettus Bridge during a march from a city in this state to its capital. Rosa Parks’ refusal to give up her seat ignited a bus boycott in this state. For 10 points, name this state home to Selma and Montgomery.**

ANSWER: **Alabama** [or **AL**]

<US History, Gayden> [Ed.]

A misconception is that this force dictates the direction water swirls when a toilet is flushed. For 10 points each:
[E] Name this fictitious force that causes objects to deflect perpendicular to their direction of motion. Hurricanes spin in opposite directions in different hemispheres due to this force.

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

[M] The Coriolis force occurs in rotating reference frames, which belong to this class of reference frame. In general, these reference frames have nonzero acceleration.

ANSWER: **non-inertial** reference frame(s) [do NOT accept or prompt on “inertial”]

[H] The fact that, in many cases, the fourth and fifth of these points are stable is due to the Coriolis effect. These points are used in solutions to the three-body problem where one body is massless.

ANSWER: **Lagrange** points [accept **Lagrangian** points; prompt on L4 or L5]

<Physics, Chapman> [Ed.]

3. **A type of these events called VLFES [V-L-F-E's] may result from extended nucleation. Mohr-Coulomb theory is employed as part of rupture dynamics to model these events. An increase of 1 unit of intensity equals a roughly 32-fold energy increase on a scale for these events named for Giuseppe (*) Mercalli [joo-SEH-pee mur-KAH-lee].** These events can result in liquefaction, and they are often measured on a moment magnitude scale. These events originate at a point called the focus, which maps to a point on the surface called the epicenter. For 10 points, name these geologic events measured on the Richter [RICK-tur] scale.

ANSWER: **earthquakes** [or **tremors** or **temblors** or **seismic** events] (VFLE stands for very low frequency earthquake)
<Earth Science, Wu> [Ed.]

Answer the following about references to Abraham Lincoln in American literature. For 10 points each:

[E] In Suzan-Lori Parks' play *Topdog/Underdog*, Lincoln is shot by his brother, who is named for this real life killer of Abraham Lincoln.

ANSWER: John Wilkes **Booth**

[M] This Walt Whitman elegy refers to Abraham Lincoln as “the great star early droop'd in the western sky” and a “western orb sailing the heaven.”

ANSWER: “**When Lilacs Last in the Dooryard Bloom'd**”

[H] This poet wrote that “here at midnight,” Lincoln can be seen “Near the old court-house pacing up and down.”

ANSWER: Vachel **Lindsay** [the poem is “Abraham Lincoln Walks at Midnight”]

<U.S. Literature, Joshi> [Ed.]

4. **Instruments in this family have Hornbostel-Sachs numbers beginning with the digit “3.” The *konso*, made up of a series of leather rings, is often used to tune the *kora*, an instrument in this family used by the Mandinka. The Iranian *barbat*, an instrument in this family, evolved into the *oud* [ood]. The Chinese *guqin* [goo-tseen] bears similarity to another instrument in this family used in European folk music called the (*) zither. A bluegrass instrument in this family has a resonator consisting of a membrane over a circular frame and typically uses a plectrum. For 10 points, name these instruments that can be plucked or bowed, such as banjos and fiddles.**

ANSWER: **string(ed)** instruments [or **strings**; accept **chordophone**; prompt on specific string instruments like guitars, banjos, zithers, lyres, harps, or lutes by asking “to which more general family does that instrument belong?”]

<Misc. Music, Yang> [Ed. Bowman]

The “substantive” form of this legal principle allows the courts to protect unenumerated rights. For 10 points each:
[M] “No person shall be deprived of life, liberty, or property” without the recognition of what legal principle as outlined in the Fifth Amendment?

ANSWER: **due process** of law [accept substantive **due process**]

[H] The supreme court ruled that Susette Kelo’s land was seized through Eminent Domain without due process in a case originating from this state. In a 1965 case, John Marshall Harlan ruled that this state had subverted due process by violating marital privacy regarding the use of contraception.

ANSWER: **Connecticut** [accept **CT**] [Writer’s Note: The cases mentioned are *Kelo v. New London* and *Griswold v. Connecticut*]

[E] The phrase “due process of law” originated in this 1215 “Great Charter” signed by King John to appease his barons.

ANSWER: **Magna Carta** (Libertatum)

<Social Science, Gayden> [Ed.]

5. **According to Nonnus, this hero killed Ariadne who was accompanying Dionysus in his wanderings across Greece. This man was killed by Megapenthes, with whom he had earlier exchanged kingdoms. While on the island of Seriphos, this man lived with his mother and the fisherman Dictys, the brother of (*) Polydectes. Zeus impregnated this man’s mother as a shower of gold. This man accidentally killed his grandfather Acrisius with a discus. To accomplish his most famous task, he stole the single eye shared by the three Graeae [GRAY-ay] and used a mirror to shield himself. For 10 points, name this son of Danae who slew Medusa.**

ANSWER: **Perseus**

<Mythology, Hoffert> [Ed.]

George Cecil Ives founded an “Order” named for this city's greatest defeat, which is commemorated by a statue of a lion. For 10 points each:

[M] Name this city state that employed an elite military unit of 300 homosexual lovers known as its "Sacred Band.”

ANSWER: **Thebes** [accept Sacred Band of **Thebes**]

[E] The Sacred Band was defeated by this kingdom's ruler Philip II at the Battle of Chaeronea. Alexander the Great hailed from this kingdom.

ANSWER: **Macedonia**

[H] Pelopidas led the Sacred Band at this 371 BC victory for Epaminondas’s forces. Cleombrotus died at this battle, which weakened Spartan hegemony over Greece.

ANSWER: Battle of **Leuctra**

<Ancient History, Hartung> [Ed.]

6. **A type of this technique has an “acoustic” variant in which the sample is placed on a piezoelectric transducer. Quartz tuning forks are used to make qPlus [Q-plus] sensors for that type of this technique, which runs a microcantilever [micro-KAN-tih-lever] over a surface. The sample is vitrified [VIH-trih-fyde] using liquid ethane in a form of this technique termed “cryogenic.” Samples are sputter-coated with gold in types of this technique named for (*) “scanning” and “transmission.” Antonie van Leeuwenhoek [AN-tuh-nee vahn LAY-ven-hook] used the “optical” type of this technique to observe bacteria. For 10 points, name this technique that magnifies small features.**

ANSWER: **microscopy** [accept equivalents like using a **microscope**; accept subtypes like electron **microscopy** or atomic force **microscopy**; prompt on cryo-**EM** or **AFM**]

<Chemistry, Melkumian> [Ed. Yin]

This country surrounds the Principality of Monaco except for its southern Mediterranean border. For 10 points each:
[E] Name this country whose Mediterranean ports include Marseille and Nice.

ANSWER: **France** [or **French** Republic]

[H] Marseille and Nice lie in this historical province of France with a distinct dialect of Occitan. This historical province is now in an administrative region whose acronym, PACA, stands for it, the Azure Coast, and the Alps.

ANSWER: **Provence**

[M] This river empties into the Mediterranean Sea near Marseille after passing through Avignon and Lyon. This river is the primary inflow of Lake Geneva after first rising in the Swiss Alps.

ANSWER: **Rhône** River [do NOT accept or prompt on “Rhine River”]

<Geography, Gayden> [Ed. Ma]

7. **A woman in this novel breaks down crying after being caught trying to steal a child from a shopping cart. A character in this novel is unable to buy cigarettes after the money on her Compucard is frozen. Criminals in this novel are publicly hung in “salvagings” and beaten to death in Particutions. This novel’s protagonist is given (*) hand lotion and magazines when playing Scrabble with the Commander. Serena Joy sets up this novel’s protagonist with the chauffeur Nick so she will get pregnant. For 10 points, name this Margaret Atwood novel set in the Republic of Gilead.**

ANSWER: *The **Handmaid’s Tale***

<World Literature, Li> [Ed.]

A work by this photographer shows a Black child choosing a white doll over a black doll. For 10 points each:

[H] Name this photographer who captured Ella Watson holding a mop and broom while standing in front of the American Flag in “American Gothic, Washington DC.”

ANSWER: Gordon **Parks**

[M] Parks captured “American Gothic” while working with the Farm Security Administration, which also commissioned *this other photograph* in which Florence Owens Thompson stares into the distance sheltering two of her children.

ANSWER: ***Migrant Mother***

[E] In 1966, Gordon Parks captured a series of photos of this boxer for *Life* magazine, including one of him at a Nation of Islam meeting. A Neil Leifer photograph shows this boxer standing over and taunting Sonny Liston.

ANSWER: Muhammad **Ali** [accept Cassius **Clay**]

<Photography, Guo> [Ed. Gayden]

8. **A commander from this country was advised by the privateer Timoji while capturing a city controlled by the Adil Shahi dynasty. One explorer from this country ordered the *Miri* to be set on fire, causing the deaths of hundreds of pilgrims. An explorer native to this country was defeated by Lapu-Lapu at the Battle of (*) Mactan. One explorer from this country was killed in the Philippines and led the first mission to circumnavigate the earth. This country’s Prince Henry the Navigator funded the explorers of its golden age. For 10 points, name this native country of Vasco da Gama and Ferdinand Magellan.**

ANSWER: **Portugal** [or **Portuguese** Republic]

<European History, Pavlou> [Ed.]

Answer the following about ways organisms get rid of nitrogenous [nye-TRAH-jin-uss] waste. For 10 points each:

[E] In vertebrates, nitrogenous wastes are expelled in this liquid after being filtered out by the kidneys. This liquid exits the bladder through the urethra [yoo-REE-thruh].

ANSWER: **urine** [or **pee**; accept slang equivalents]

[M] Most mammals remove excess ammonia by converting it to this nitrogenous waste. In contrast, birds and reptiles use uric acid, which takes more energy to produce than this compound.

ANSWER: **urea** [or **carbamide** or **CO(NH₂)₂**]

[H] In plant seeds, ammonia is removed through the synthesis of this compound. This neurotransmitter may help seed dispersal by influencing animals' guts, which secrete it from enterochromaffin [IN-tuh-roh-KROH-muh-fun] cells.

ANSWER: **serotonin** [or **5-hydroxytryptamine** or **5-HT**]

<Biology, Yin> [Ed.]

9. **This artist detailed a method combining contour and gesture drawing in his art manual *Quick Lessons in Simplified Drawing*. A massive whale makes a splash in a harbor in one work from this artist's *Oceans of Wisdom* series. This artist, who was nicknamed "The Old Man Mad About Art," contrasted the green base of a mountain with a red upper portion in (*) *Fine Wind, Clear Morning*. This artist depicted three boats struggling against claw-like waves in an *ukiyo-e* style woodblock print. For 10 points, name this artist who included "The Great Wave off Kanagawa" in his *Thirty-Six Views of Mount Fuji*.**

ANSWER: **Hokusai** [or **Katsushika** Hokusai]

<Painting, Guo> [Ed. Sun]

A poem in this form by Sir Thomas Wyatt begins, "Whoso list to hunt." For 10 points each:

[H] Name this poetic form. The speaker of one poem in this form states that "I see clearly now I have become an old tale amongst all these people."

ANSWER: **Petrarchan sonnet** [accept word forms; prompt on **sonnet** alone; accept but do NOT otherwise reveal **Italian** sonnet]

[M] Many of Petrarch's sonnets are collected in this collection of 366 poems split into "Life" and "Death" sections. The first one begins by describing a sound "in scattered rhymes."

ANSWER: ***Il Canzoniere*** [accept translations such as ***Song Book*** or ***Rime Sparse*** or ***Rerum vulgarium fragmenta*** or ***Fragments composed in vernacular***]

[E] Petrarch wrote in this language, which was also used by Dante Alighieri to write the *Divine Comedy*.

ANSWER: **Italian** language

<European Literature, Melkumian> [Ed.]

10. **In a Rolling Stone interview, this song's singer stated that, despite its lyrics, neither she nor producer Dan Nigro had ever watched *Glee*. A girl in a green dress flickers in a mirror in this song's music video, which ends with the artist destroying TVs with a hammer. This song states, "I made the jokes you tell to her" and laments, "I was the one who taught you (*) Billy Joel." This second single from the album *Sour* opens by describing "car rides to Malibu" and asks "when you gonna tell her that we did that, too?" For 10 points, name this song in which Olivia Rodrigo asks, "when she's with you, do you get [the title feeling]?"**

ANSWER: **"deja vu"**

<Popular Music, Joshi> [Ed.]

While staying on this island, one leader was warned of an attempted assassination by Jose Antonio Paez. For 10 points each:

[M] Name this island which titles an 1815 “Letter” advocating for Latin American unity. Earlier, this island was the site of Maroon revolts led by Nanny and Cudjoe.

ANSWER: **Jamaica** [or the Letter from **Jamaica**]

[E] This “Libertador” of South America wrote the *Letter from Jamaica* after leaving his home country of Venezuela. This man met with fellow independence leader José de San Martín at the Guayaquil Conference.

ANSWER: Simón **Bolívar**

[H] While leading the "Admirable Campaign" to liberate Venezuela, Bolivar issued this document which legalized and encouraged atrocities against Spanish-born residents of South America.

ANSWER: ***Decree of War to the Death*** [or ***Decreto de Guerra a Muerte***]

<World History, Hartung> [Ed.]

11. **An operator named for this quantity that satisfies the composition property can be expressed in terms of an exponential of the Hamiltonian. The energy operator is equal to i times \hbar time the derivative with respect to this quantity. The products of the uncertainties of (*) energy and this quantity is greater than \hbar over 2. The SI unit for this quantity is defined using hyperfine transitions in cesium. An “arrow” named for this quantity is caused by the second law of thermodynamics. The change in velocity over the change in this quantity equals acceleration. For 10 points, name this quantity measured in seconds.**

ANSWER: **time** [accept **time** operator]

<Physics, Wu> [Ed.]

According to René Guénon, this religious symbol represents the North Pole, while Carl Sagan posits that it represents a comet. For 10 points each:

[E] Name this symbol which represents the footsteps of the Buddha and is found in the center of the emblem of the Falun Gong. Unfortunately, it is probably best known for its association with Nazi symbolism.

ANSWER: **swastika** [accept **sauwastika**]

[M] Ceremonies in this religion often begin and end by creating a swastika symbol with rice around the altar. This religion which advocates for nonviolence reveres 24 “ford makers” including Mahavira.

ANSWER: **Jainism** [or **Jain** Dharma]

[H] This neo-religion is controversial for adopting a symbol which interconnects the Star of David to a swastika. Founded by Claude Vorilhon, this religion believes that an alien species known as Elohim created humanity.

ANSWER: **Raëlism** [or **Raëlianism**; or International **Raëlian** Movement or **IRM**; or **Raëlian Church**]

<Religion, Suh> [Ed.]

12. **This man took the name “Black Raven” while living with one tribe. This man’s forces won a battle with the help of a pair of cannons known as the “Twin Sisters.” This man’s request for federal rations for Native Americans led to an affair in which he beat Ohio Representative William Stanbery with a cane. Edward Clark succeeded this man as governor after he refused to secede to the (*) Confederacy. This man’s popularity surged after his victory at the Battle of San Jacinto, allowing him to defeat Stephen Austin in an 1836 election. For 10 points, name this two-term president of the Republic of Texas who names its most populous city.**

ANSWER: Sam **Houston**

<US History, Gayden> [Ed.]

One character in this film laments, “I picked the wrong play, the wrong director, the wrong cast... where did I go right?” For 10 points each:

[H] Name this Mel Brooks film in which Max Bialystock and Leopold Bloom try to stage the worst musical possible while still keeping their investor money.

ANSWER: *The **Producers***

[E] Bialystock and Bloom stage a musical titled *Springtime for* [this dictator], containing a song that claims Germany needs a “new leader to restore its former glory.”

ANSWER: Adolf **Hitler** [accept *Springtime for **Hitler**: A Gay Romp with Adolf and Eva at Berchtesgaden*]

[M] In the 1967 adaptation of *The Producers*, Leopold Bloom is portrayed by this actor. This actor played Willy Wonka in 1971’s *Willy Wonka and the Chocolate Factory*.

ANSWER: Gene **Wild**er [accept Jerome **Silberman**]

<Popular Culture, Joshi> [Ed.]

13. **For a 1926 production of this ballet, a Coronation backdrop was painted by a founder of Rayonism. A character typically dressed in a red costume flaps her arms over a bassoon lullaby as part of the choreography to this ballet’s Berceuse, which leads into a finale in 7/4 time. A group of monsters exhaust themselves during this ballet’s frantic (*) “Infernal Dance.”** Like *Petrushka*, which was produced two years later, this ballet was choreographed by Michel Fokine. At the end of this ballet, Prince Ivan kills Koschei the Immortal. For 10 points, name this ballet with music by Igor Stravinsky named for a winged creature from Russian folklore.

ANSWER: *The **Firebird*** [or *L’oiseau de feu* or *Zhar-ptitsa*]

<Performance, Bowman> [Ed.]

The speaker of this work recounts writing stories with “white and blue-eyed” characters who “played in the snow,” “ate apples,” and “talked a lot about the weather.” For 10 points each:

[H] Name this TED [ted] talk whose speaker quotes Alice Walker in that by rejecting the title concept, “we regain a kind of paradise.”

ANSWER: “The **Danger of a Single Story**” [prompt on, but do NOT otherwise reveal, descriptions of **Adichie**’s TED talk]

[M] “The Danger of a Single Story” is by this Nigerian author, who wrote about Ifemelu starting a blog called “Raceteenth” in *Americanah* and wrote the book-length essay *We Should All Be Feminists*.

ANSWER: Chimamanda (Ngozi) **Adichie** [uh-DEE-shay]

[E] In “The Danger of a Single Story,” Adichie cites Camara Laye and this other Nigerian author for exposing her to African literature. This author wrote about Igbo men named Okonkwo in *No Longer at Ease* and *Things Fall Apart*.

ANSWER: Chinua **Achebe** [uh-SHAY-bay]

<World Literature, Melkumian> [Ed.]

14. **It’s not near Washington D.C, but a city on this body of water hosts the National Cherry Festival. Fossilized corals found in this body of water are named for its city of Petoskey. Sand dunes on this body of water’s eastern coast were legendarily created when a mother bear lost her two cubs, whose bodies formed North and South (*) Manitou Islands. North of Traverse City, the Straits of Mackinac connect this body of water to Lake Huron. This is the only Great Lake located entirely in the United States. Chicago overlooks, for 10 points, what lake that names the state containing Detroit?**

ANSWER: Lake **Michigan** [prompt on the Great Lakes; do NOT accept or prompt other specific lakes]

<Geography, Gayden> [Ed.]

In response to the demands made during this event, Charles Pinckney declared “no, not a sixpence!” For 10 points each:

[M] Name this event, named for diplomats serving under Talleyrand, that led to the undeclared “Quasi-War.”

ANSWER: **XYZ** Affair

[E] The XYZ Affair involved asking for bribes to be made out to Talleyrand, who served as foreign minister for this country. Many Democratic-Republicans were sympathetic to this country’s 1789 revolution.

ANSWER: **France** [accept **French** (First) Republic or République **française**; prompt on **First Republic** or **Première République**]

[H] In an earlier example of tensions between France and the United States, this French diplomat was recalled after he attempted to recruit American privateers to aid the French in their fight against the British.

ANSWER: Edmond-Charles **Genêt** [accept Citizen **Genêt**]

<US History, Nageswaran> [Ed.]

15. **In a story from this country, Athena Hopballehus resists the advances of Boris before a prioress transforms into the title Monkey. A cook spends her lottery winnings on a “real French dinner” for Martina and Philippa in another story from this country. After the splinters of a troll mirror freeze Kai’s heart, Gerda saves Kai from the title (*) Snow Queen in a story by an author from this country. A girl exchanges her voice for human legs to win over a prince in a story by an author from this country who also wrote “The Ugly Duckling.” A statue of the Little Mermaid honors Hans Christian Andersen in, for 10 points, what country’s capital of Copenhagen?**

ANSWER: **Denmark** [or Kingdom of **Denmark**] [The unnamed author is Isak Dinesen]

<European Literature, Melkumian> [Ed. Gayden]

These devices can be left for unsuspecting victims to find in namesake “drop attacks.” For 10 points each:

[E] Name these removable data-storage devices. These devices are considerably more compact than other removable storage devices, such as CDs and DVDs.

ANSWER: USB **flash drives** [or **USBs** or **USB** drives or **thumb drives** or **pen drives** or **memory sticks** or other common names; accept **Universal Serial Bus** in place of “USB”; do not accept or prompt on “hard drives”]

[H] Drop attacks can be conducted by having a fake drive spoof this type of device, allowing a malicious payload to be injected. Keyboards and mice belong to this class of devices that use the USB protocol to receive user input.

ANSWER: **human interface** devices [accept **HIDs**; prompt on **peripherals**]

[M] The cyberweapon Stuxnet, one of these malicious self-replicating programs, often enters networks via USB drive. Unlike viruses, these programs do not require a host program as they are independent programs.

ANSWER: computer **worms**

<Computer Science, Sun> [Ed. Liu]

16. **Reforms passed during this dynasty included the Three Hall system and an agency overseeing the trade of tea and horses. A court official during this dynasty wrote the *Zizhi Tongjian* [zuh-jer tong-dzyen]. The *baojia* system was introduced during this dynasty as one of the New Policies. The reign of this dynasty’s Emperor Shenzong saw a feud between (*) Sima Guang [suh-mah gwahng] and Wang Anshi [wahng ahn-sheer]. This first Chinese dynasty to print paper money was decisively defeated in Kublai Khan’s Mongol invasion. For 10 points, name this Chinese dynasty that was conquered by the Yuan.**

ANSWER: **Song** Dynasty [or **Sòng** Cháo; accept Northern **Song** Dynasty or Southern **Song** Dynasty]

<World History, Gayden> [Ed. Nageswaran]

William Blake described this sculpture as “copied from the Cherubims of Solomon’s Temple” in a print showing this sculpture surrounded by text in multiple languages. For 10 points each:

[H] Name this marble sculpture that depicts the title figure struggling against snakes wrapping around his body.

ANSWER: **Laocoon** and his Sons [or the **Laocoon** group]

[E] A 1510 competition proposed by Bramante sought to replace Laocoon’s missing one of these body parts, which was originally outstretched. The *Venus de Milo* notably lacks both of these body parts.

ANSWER: **arms** [prompt on **limbs**]

[M] The Laocoon group inspired this Mannerist artist to paint a depiction of Laocoon’s death. In that work, a horse in the background approaches this artist’s adopted hometown of Toledo.

ANSWER: El **Greco** [or Domenikos **Theotokopoulos**]

<Painting and Sculpture, Guo> [Ed. Sun]

17. **An alternative to these compounds in therapy consists of short polymers produced by SELEX [SELL-ecks], called aptamers [AP-tuh-murs]. A part of these compounds is made of four framework regions and three hypervariable regions. One of these compounds found in high concentrations in breast milk is denoted “A.” These compounds bind to the target protein in (*) ELISA [ee-LYE-zuh] and in Western blots. These compounds consist of two heavy chains and two light chains, and are secreted by plasma cells, a type of activated B cell. For 10 points, name these Y-shaped proteins that bind to antigens as part of the immune response.**

ANSWER: **antibodies** [or **antibody**; or **immunoglobulins**; accept **immunoglobulin** A; prompt on **IgA**] (The second sentence refers to the Fab region)

<Biology, Melkumian> [Ed. Yin]

A character in this play tells her father, Colonel Redfern, “You’re hurt because everything’s changed” after calling him to rescue her from her husband. For 10 points each:

[H] Name this “kitchen sink drama” in which Alison suffers a miscarriage before reconciling with her husband, Jimmy Porter.

ANSWER: **Look Back in Anger** [by John Osborne]

[E] Another member of the “angry young men” who wrote plays such as *Saved* and *The Sea*, has this surname. A spy with this surname created by Ian Fleming is the protagonist of the novels *Dr. No* and *Casino Royale*.

ANSWER: **Bond** [accept Edward **Bond** or James **Bond**]

[M] This playwright is also considered an “angry young man.” In one of his “comedies of menace,” Goldberg and McCann arrive at a rundown boarding house looking for a piano player.

ANSWER: Harold **Pinter** [the play is *The Birthday Party*]

<British Literature, Joshi> [Ed.]

18. **The “consciousness” of these objects titles an Alice Bailey book beginning with the premise that they possess intelligence. A later thinker described a key property of these objects as *clinamen*. The Abderites studied these objects, whose major proponent was called the “laughing philosopher.” The idea that these objects (*) “swerve” was introduced by Lucretius in *On the Nature of Things*. These objects float in a vacuum called the void according to Democritus, who believed the universe was made of them. For 10 points, name these “indivisible” objects composed of protons, neutrons, and electrons.**

ANSWER: **atoms** [or **atomon** or **atoma**; accept *The Consciousness of Atoms*]

<Philosophy, Melkumian> [Ed. Golfinos]

After these people supposedly committed host desecration in Brussels, a cult known as the “Sacrament of Miracle” was established to worship the recovered bread. For 10 points each:

[M] Name these people who were burned alive in Strasbourg during a 1349 “Valentine's Day massacre.” These people were widely accused of poisoning wells in 14th century Europe.

ANSWER: **Jews** [or **Jewish** people]

[E] Jews were persecuted for supposedly spreading this disease in the 14th century. This disease ended up killing around a half of Europe's population.

ANSWER: the **Black Death** [or **Bubonic Plague** or **Black Plague**]

[H] A pope with this name sheltered Jews during the Black Death. A later pope with this name excommunicated Henry VIII and established the League of Cognac.

ANSWER: **Clement** [accept **Clement VI** or **Clement VII**]

<European History, Hartung> [Ed.]

19. **A musician in this play reflects upon advice to “take the crooked with the straights.” The children of this play’s protagonist fondly sing about a dog who “treed a possum in Noah’s Ark” named Blue. This play’s protagonist recounts realizing his father was the “devil himself” to his friend Bono. In this play, (*) Rose agrees to raise the protagonist’s lovechild Raynell as her own. The protagonist of this play tries to prevent his son Cory from playing football because of his own failed career playing baseball, which he attributes to racism. For 10 points, the garbage collector Troy Maxson builds the title structure in what play by August Wilson?**

ANSWER: **Fences**

<U.S. Literature, Joshi> [Ed. Gayden]

This chemist names an equation relating the equilibrium constant to the change in temperature, given the standard enthalpy change. For 10 points each:

[M] What Dutch chemist also names a “factor” equal to the number of dissolved particles produced from each formula unit of solute?

ANSWER: Jacobus Henricus **van 't Hoff** [accept **van 't Hoff** factor or **van 't Hoff** equation]

[H] A linear plot of the van 't Hoff equation has the natural log of the equilibrium constant on the y-axis, and *this* function of temperature on the x-axis.

ANSWER: **one over** temperature [accept equivalents like **reciprocal** of *T* or **one divided by T**]

[E] This type of reaction has a van 't Hoff plot with a negative slope, since the change in enthalpy is positive. This type of reaction absorbs heat from its environment.

ANSWER: **endothermic** reaction [do NOT accept or prompt on “endergonic”]

<Chemistry, Chapman> [Ed. Yin]

20. *Description Acceptable.* **The central figure of this event was known as “Banana Man.” A Taiwanese Embassy refused to shelter a group of men involved in this event. Iván Márquez denied involvement in this event amid reports that some of its Spanish-speaking perpetrators, including Mario Antonio Palacios, had Colombian ties. A member of (*) Tèt Kale named Joseph Lambert feuded with Claude Joseph in the aftermath of this event, after which Ariel Henry took power. For 10 points, name this violent event that took place in July 2021 at Jovenel Moïse’s residence in Port-au-Prince.**

ANSWER: **assassination** of the **Haitian President** [or **assassination** of Jovenel **Moïse**; accept equivalents]

<Current Events, Gayden> [Ed.]

The purchase of this piece's original manuscript by Arthur Rubinstein solved a mystery regarding its publication.
For 10 points each:

[H] Name this virtuosic solo piano piece from the early Romantic repertoire. This piece begins with a rippling 4-against-3 polyrhythm in C-sharp minor, the piece's home key.

ANSWER: ***Fantaisie-Impromptu*** [or ***Fantasy-Impromptu***]

[E] The *Fantaisie-Impromptu* was written by this Polish pianist and composer in 1834, but was only published after his 1849 death.

ANSWER: Frédéric (François) **Chopin**

[M] Chopin requested that the *Fantaisie-Impromptu* be burned after his death due to its striking resemblance to this C-sharp minor piano piece's *presto agitato* third movement.

ANSWER: ***Moonlight Sonata*** [or Piano **Sonata** no. **14** in C-sharp minor] (by Ludwig van Beethoven)

<Classical Music, Bowman> [Ed.]