

Detroit Country Day Academic Regular Tournament II

Packet 4

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Special thanks to Neil Gurram



1. **Foreign intervention in this country was facilitated by Operation Carlota. The non-US Halloween Massacre took place during a democratic election in this country mandated by the Bicesse Accords. The United States covertly backed an independence leader of this country named Jonas Savimbi. The Alvor Agreement was signed by this country's first president, (*) Agostinho Neto. FLEC-R [fleck R] fought for the independence of the exclave of Cabinda during a civil war in this country, which saw the U.S.-backed UNITA fight its Cuba-backed MPLA. For 10 points, name this former Portuguese colony whose capital is Luanda.**

ANSWER: **Angola** [or Republic of **Angola** or República de **Angola**]

<World History, Verma and Hartung> [Ed.]

Return to Forever's *Light as a Feather* and the Mahavishnu Orchestra's *Birds of Fire* are both albums in this style. For 10 points each:

[M] Name this style of music that combines jazz with elements of rock and funk.

ANSWER: jazz **fusion**

[E] This musician's albums *In a Silent Way* and *Bitches Brew* are both in the fusion style. This jazz trumpeter also recorded albums such as *Kind of Blue*.

ANSWER: Miles **Davis**

[H] This modern jazz fusion band was founded by Michael League. This band's album *We Like It Here* features tracks such as "Shofukan" and "Lingus", the latter of which features a keyboard solo by Cory Henry.

ANSWER: **Snarky Puppy**

<Jazz, Yang> [Ed. Bowman]

2. **One of this author's characters becomes obsessed with finding an unknown woman after accidentally grabbing her record card while working at an archive. Another character created by this author describes seeing a painting that blends elements of Vincent van Gogh and Francisco Goya. A dog licks the tears off a woman's face in that novel by this author, which sees the girl with the (*) dark glasses kick the car thief before starting a relationship with the old man with the black eye patch. That novel by that author begins as a doctor treats a patient with the "white sickness." For 10 points, name this Portuguese author of *Seeing* and *Blindness*.**

ANSWER: José **Saramago** [accept José de Sousa **Saramago**] (The first clue is from *All the Names*)

<European Literature, Melkumian>

The light-dependent reactions of this process consist of an electron transport chain on the thylakoid [THYE-luh-koyd] membrane. For 10 points each:

[E] Name this process that plants use to produce sugars from sunlight.

ANSWER: **photosynthesis**

[H] The electron transport chain begins with the splitting of water by the oxygen evolving center of this protein complex. Electrons freed by that process are passed from this complex to plastoquinone [plass-toh-KWIN-ohn].

ANSWER: **Photosystem II** [two] [or **PS II**; prompt on **photosystem** or **PS**]

[M] In this specific type of photosynthesis, products of the electron transport chain are used to make malate [MAL-ayt], which is transported to bundle sheath cells where the Calvin cycle occurs.

ANSWER: **C4** [C-four] photosynthesis [or **Hatch-Slack** pathway]

<Biology, Yin> [Ed.]

3. **The ceilings of these structures may contain “cosmic spirals” representing a domain with “no beginning and no end.” The practice of staying inside one of these structures for a certain number of days is known as *i’tikaf*. In these buildings, certain people may address crowds at the (*) *minbar*, which is to the right of a semicircular niche in one of the walls. Many of these buildings contain ablution fountains at their entrances to perform the act of *wudu*. People in these buildings pray towards the *qibla* wall facing in the direction of a holy city. For 10 points, name these buildings such as the Masjid Al-Haram in Mecca, the Islamic places of worship.**

ANSWER: **mosques** [or **masjids** before mention; prompt on place of worship before mention]

<Religion, Peela and Verma> [Ed.]

In 1998, this author began a comic strip called “Servants to the Cause” for *The Advocate*, a queer newspaper. For 10 points each:

[M] Name this author, whose namesake “test” for fiction is passed if two women discuss any topic other than a man.

ANSWER: Alison **Bechdel** [accept the **Bechdel** Test, accept the **Bechdel**-Wallace Test]

[H] In this graphic memoir, Bechdel describes learning that her father, Bruce, is a closeted homosexual. Bechdel also depicts her own experiences coming out and her first girlfriend, Joan, in this memoir.

ANSWER: ***Fun Home: A Family Tragicomic***

[E] Bechdel described the themes of her second graphic memoir, *Are You My Mother?: A Comic Drama* as “the self, subjectivity, desire, the nature of reality,” paraphrasing this English author’s novel *To the Lighthouse*.

ANSWER: Virginia **Woolf**

<Mixed/Other Literature, Joshi> [Ed.]

4. **This artist may have modeled the severed head of John the Baptist held by Judith in his work *Salome* after himself. As part of his “poesies” series, this artist showed a man with the head of a stag being attacked by dogs, a follow up to his work *Diana and Actaeon*. A man struggles with snakes as a god leaps out of a chariot drawn by two (*) cheetahs in another painting by this artist. This painter showed a white bull carrying a woman away from a shore in his *The Rape of Europa*. A maid rummages through a chest while a dog sleeps next to a reclining nude woman in a work by this painter. For 10 points, name this Venetian painter of *Venus of Urbino*.**

ANSWER: **Titian** [TISH-uhn] [accept **Tiziano Vecellio**; accept any underlined portion]

<Painting, Guo> [Ed. Sun]

GOLAZOOO! Answer the following questions about magnificent goals in soccer. For 10 points each:

[H] This award is awarded annually to the scorer of the year's most beautiful goal. This award is named after a Hungarian striker who played for Real Madrid during the 1950s and 60s.

ANSWER: FIFA **Puskás** [POOZ-kas] Award

[E] This Manchester United forward won the inaugural Puskás Award in 2009 for his long range strike against FC Porto. Only Lionel Messi has won more Ballon D'or [ball-own door] awards than this Portuguese striker.

ANSWER: Cristiano **Ronaldo** [or Cristiano **Ronaldo** dos Santos Aveiro or **CR7**; do NOT accept or prompt on "Ronaldo Luís Nazário de Lima" or "R9" or any answer that indicates the Brazilian Ronaldo]

[M] Colombian midfielder James [HA-mez] Rodríguez won a Puskás Award for his spectacular volley off the crossbar against this country in the 2014 FIFA World Cup Round of 16. This country won the first FIFA World Cup, and it defeated Brazil in the most-attended-ever World Cup final in 1950.

ANSWER: **Uruguay** [or Oriental Republic of **Uruguay**; prompt on La Celeste]

<Sports, Gayden> [Ed.]

5. **In April 2022, this state passed the "Responsible Fathers" Bill. Mayor Daniella Levine Cava called for an audit of old high-rise buildings after 98 people in this state were killed when the Champlain Towers South collapsed. In April 2022, this state's governor signed a 15-week abortion ban into law. (*)** Disney CEO Bob Chapek has pledged to help repeal this state's controversial "Don't Say Gay" Bill. Andrew Gillum lost in this state's 2018 gubernatorial race. Matt Gaetz and Marco Rubio represent this state. Ron DeSantis is the governor of, for 10 points, what state that contains Miami?

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

<Current Events, Gayden> [Ed.]

Fans of this sport destroyed the Baths of Zeuxippus during one revolt. For 10 points each:

[M] Name this sport whose *greens* and *blues* factions attempted to install Hypatius as emperor while chanting "Victory!" in the Nika Riots.

ANSWER: **chariot racing** [or **chariot races**; prompt on partial answer]

[E] This "great" sixth century Byzantine emperor faced the Nika Riots during his reign. This ruler's advisor Tribonian helped him to compile his namesake law code.

ANSWER: **Justinian the Great** [or **Justinian I**; prompt on Justinian alone]

[H] During the Nika Riots, Justinian sent this general into the Hippodrome to mediate the rioters before slaughtering them anyway. This Armenian eunuch's victory at the Battle of Taginae allowed for Justinian's temporary recapture of the Italian peninsula.

ANSWER: **Narses**

<European History, Li and Hartung> [Ed.]

6. **In a story by this author, a character is embarrassed to admit that her ex-boyfriend died when a stove exploded in his face. That character's daughter sleeps on the side of the bed to make room for her imaginary friend, Jimmy Jimmereeno. The protagonist of another story by this author kisses the arch of a young girl's foot and calls a woman "a (*) god damned sneak" for staring at his feet in an elevator. Sybil Carpenter learns of the title animals in a story by this author that ends with Seymour Glass' suicide. For 10 points, name this author of "A Perfect Day for Bananafish" who created Holden Caulfield in *The Catcher in the Rye*.**

ANSWER: J. D. **Salinger** [or Jerome David **Salinger**]

<US Literature, Li> [Ed.]

Three modes of these quasiparticles contribute to the heat capacity of a solid. For 10 points each:

[H] Name these quasiparticles. The Debye [duh-BYE] model considered the motion of them in a box to recover a low-temperature heat capacity law.

ANSWER: **phonons** [FOH-nahnz] [do not accept or prompt on “photons”]

[E] Phonon interactions explain why diamond conducts heat well but electrically is one of these materials. These materials have high resistivities and thus conduct electricity poorly.

ANSWER: **insulators**

[M] At low temperatures in the Debye model, the heat capacity of a solid is proportional to temperature raised to this power. This number times the ideal gas constant equals the molar heat capacity of a solid by the Dulong-Petit law.

ANSWER: **three** [accept **third** power]

<Physics, Wu> [Ed.]

7. **One of these compounds named for Manfred Schlosser cannot be stored in water due to the leveling effect. The Wolff-Kishner reduction uses these compounds to convert ketones or aldehydes into alkanes [AL-kaynz], unlike the Clemmensen reduction. Under one theory, these compounds include pyridine [PEER-ih-deen] as well as the hydride and fluoride ions. That theory (*) defines these compounds as electron donors. These compounds are proton acceptors according to their Brønsted-Lowry definition, and “strong” examples of them include sodium hydroxide. For 10 points, name these compounds with pHs higher than 7.**

ANSWER: **bases** [accept subtypes such as Lewis **bases**; prompt on **nucleophiles** before “Brønsted-Lowry” is read]

<Chemistry, Wu> [Ed. Yin]

Answer the following about initial opponents of the US Constitution. For 10 points each:

[E] This man criticized the reach of the federal government, claiming that the presidency “squin[t] toward monarchy.” On the eve of revolution, this man proclaimed, “give me liberty or give me death!”

ANSWER: Patrick **Henry**

[H] This other founding father refused to sign the constitution without the addition of a Bill of Rights. Earlier, he had written the Fairfax Resolve, rejecting British sovereignty over its colonies.

ANSWER: George **Mason**

[M] Patrick Henry and George Mason were both from this colony, whose last colonial governor was Lord Dunmore. This was the most populous of the 13 colonies.

ANSWER: **Virginia** [or **VA**]

<US History, Gayden> [Ed.]

8. **In an opera by this composer, the prayer “Almighty Father” is alluded to in the overture, which begins with a solo trumpet call and ends with a military march. This composer replaced the traditional operatic overture with preludes, such as one featuring a long E-flat major drone after which three (*) maidens play by a river. This composer of *Rienzi* used one of his many *leitmotifs* to represent the dwarf Alberich in a set of operas performed annually at the Bayreuth Festival. For 10 points, name this notoriously anti-semitic composer who based his *Ring Cycle* on German legends.**

ANSWER: (Wilhelm) Richard **Wagner**

<Opera, Gayden> [Ed. Bowman]

This group is described as “all that we are not” in one book. For 10 points each:

[H] Name this group that occupy strategic command posts of the social structure, according to a C. Wright Mills book. That book named after this group also comments on how the failure for this group to act often has greater consequences than their actions.

ANSWER: the **power elite** [prompt on elites]

[M] In *The Power Elite*, Mills argues that the corporate rich maintain wealth partially due to loopholes in this kind of tax. This kind of tax is levied on the profit of an investment that is held for more than one year.

ANSWER: **capital gains** tax [accept long-term **capital gains** tax]

[E] Mills also analyzes this economic system that the US operates in. Private companies produce goods for profit in a public market in this economic system.

ANSWER: **capitalism** [accept word forms like **capitalist**]

<Social Science, Wu> [Ed.]

9. **Blue and yellow variants of GFP are used to visualize this element by chameleon [chameleon] proteins. Channels for this element are activated by the second messenger IP3 [I-P-three]. Low serum levels of this element can cause tetany [TET-uh-nee]. This element binds to troponin [TROH-puh-nin], causing a conformational change. Some cells store this element in the (*) sarcoplasmic reticulum. This element’s oxalate [AWK-suh-layt] salt makes up most kidney stones. Absorption of this element requires vitamin D, and deficiency of this element can cause osteoporosis. For 10 points, name this alkaline earth metal whose ions are stored in bones.**

ANSWER: **calcium** [or **Ca**; accept **calcium** ions or **calcium** 2+ or **Ca** 2+ or **calcium** channels]

<Biology, Melkumian> [Ed. Yin]

Stephen Guest proposes that he and Maggie elope after rowing to Mudport on this body of water. For 10 points each:

[H] Name this river, which breaks through a dam and drowns Tom and Maggie Tulliver at the end of the novel partially titled for it.

ANSWER: the River **Floss**

[M] In this novel by the author of *The Mill on the Floss*, the clergyman Edward Casaubon resists the contributions of Dorothea Brooke as he completes his scholarly project, *The Key to All Mythologies*.

ANSWER: **Middlemarch**, (*A Study of Provincial Life*)

[E] *The Mill on the Floss* and *Middlemarch* were written by this pseudonymous female Victorian author.

ANSWER: George **Eliot** [accept Mary Ann **Evans**]

<British Literature, Joshi> [Ed.]

10. *Two answers required.* **In one document, these two leaders stated that their countries should “seek no [territorial] aggrandizement.” One of these two leaders was criticized for violating the Neutrality Act after purchasing from the other in the Destroyers-for-Bases Agreement. The “Arsenal of Democracy” speech was given by one of these two leaders in support of the other. One of these two leaders aided the other’s (*) war effort with the Lend Lease program. Along with a Soviet counterpart, these two leaders met at the Yalta Conference to discuss a postwar peace agreement. For 10 points, name these two leaders, the British Prime Minister and the US president during most of World War II.**

ANSWER: **Franklin D(elan) Roosevelt** and Winston (Leonard Spencer) **Churchill** [accept **FDR** in place of Roosevelt’s name; prompt on answers that include Roosevelt alone; do NOT accept or prompt on answers with only one name]

<Mixed/Other History, Hartung> [Ed. Nageswaran]

A generation of turmoil has detached the Wakhan Corridor's Kyrgyz population from their former nomadic life. For 10 points each:

[E] The Kyrgyz of the Wakhan Corridor were originally residents of this country, whose capital is Kabul.

ANSWER: **Afghanistan** [accept Islamic Republic of **Afghanistan** or Islamic Emirate of **Afghanistan**]

[M] During the Saur Revolution, many Kyrgyz were resettled near Lake Van. Lake Van is in the Kurd-inhabited Armenian Highlands in this country, which is west of Armenia and north of Iraq and Syria.

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

[H] The Wakhan Corridor's porous borders allowed the Kyrgyz to access grazing grounds in this country to the north. This country is south of Kyrgyzstan and east of Uzbekistan.

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

<Geography, Ma> [Ed.]

11. **In a paper titled in part for this concept, Frank Jackson argued the character Mary's gain of it refutes physicalism. Michel Foucault created a theory of "discursive formations" in a book titled *The Archaeology of [this concept]*. A paper on this concept discusses a prediction that a job applicant with ten coins in his pocket will get the job. This concept's definition in *Theaetetus* is challenged by a set of (*) "problems" named for Edmund Gettier, which aim to refute Plato's definition of this concept as "justified true belief." For 10 points, name this concept studied in epistemology and which Francis Bacon claimed "is power."**

ANSWER: **knowledge** [accept **knowledge** about color or the **knowledge** argument; accept word forms like **knowing** in place of "knowledge"; prompt on **justified true belief** before it is read; prompt on **experience** or word forms like **experiencing**; prompt on **phenomenology** or **epiphenomenalism**]

<Philosophy, Melkumian> [Ed. Golfinos]

This poet described hitting a beggar with the "obstinate energy of a cook who wants to tenderize a steak" in his poem "Let's Beat up the Poor." For 10 points each:

[H] Name this poet who compared "the poet" to "a monarch of the clouds" whose wings "trail at their sides like drifting oars."

ANSWER: Charles **Baudelaire**

[E] Baudelaire wrote about this French capital in the collection *The Flowers of Evil*, which includes a section named after this city's "scenes."

ANSWER: **Paris**

[M] In a poem titled after the "litanies" of this figure, Baudelaire begs this "wisest of angels" to "Have pity on my long despair!" In another work, this figure orders the construction of Pandemonium.

ANSWER: **Satan** [accept the **Devil** or **Lucifer**]

<European Literature, Li> [Ed. Siddiqui]

12. **While serving a ruler of this name, the Earl of Feversham defeated a rebellion that occurred simultaneously to one led by the Earl of Argyll. A secret passage connected a ruler of this name's bedroom to that of his supposed lover, George Villiers. In response to the Millenary Petition, a ruler of this name convened the Hampton Court Conference. The (*) "Immortal Seven" invited William III to overthrow a king of this name in the Glorious Revolution. Robert Catesby and Guy Fawkes attempted to blow up a king of this name in the Gunpowder Plot. For 10 points, give this name of two Stuart monarchs, one of whom lends his name to a version of the Bible.**

ANSWER: **James** [accept **James** I or **James** II]

<European History, Hartung> [Ed.]

This composer began one symphony with a seven-octave drone on A played by the strings. For 10 points each:

[M] Name this composer, whose first symphony's third movement contains a funeral march based on "Frère Jacques" starting with a double bass solo.

ANSWER: Gustav **Mahler**

[H] The "Frère Jacques" funeral march is then interrupted by oboes, clarinets, and trumpets emulating the sound of a band playing this style of Ashkenazi Jewish folk music.

ANSWER: **klezmer**

[E] The *Titan* symphony's fourth movement quotes the "Inferno" movement of this earlier composer's *Dante Symphony*. This composer of 19 *Hungarian Rhapsodies* set Paris audiences into a "mania" with his virtuosity.

ANSWER: Franz **Liszt**

<Classical Music, Chapman> [Ed. Bowman]

13. **This poet asked a "daughter of Jove" to "teach me to love and to forgive" and "know myself a Man" in his "Hymn to Adversity." This poet wrote an epitaph about "a youth to fortune and to fame unknown." This poet asked, "what female heart can gold despise" and concluded "not all that glisters is gold" in a mock elegy on the drowning of Horace Walpole's (*) cat, Selima. This poet wrote "where ignorance is bliss, 'tis folly to be wise" while fondly remembering his school days in "Ode on a Distant Prospect of Eton College." For 10 points, name this English poet of "Elegy Written in a Country Churchyard."**

ANSWER: Thomas **Gray**

<British Literature, Palavajjhala> [Ed. Gayden]

Functions with this property have a positive semi-definite Hessian matrix. For 10 points each:

[M] Name this property of a function in which its second derivative is always nonnegative.

ANSWER: **convex** [accept **concave up**; do NOT accept or prompt on "concave" alone]

[H] This inequality generalizes the fact that secants lie above graphs of convex functions. This inequality states that a convex function f applied to a weighted mean of several inputs is less than or equal to the weighted mean of f applied to the inputs.

ANSWER: **Jensen's** inequality

[E] An example of a convex function is the function y equals x squared, which forms this shape. This conic section has an eccentricity of one.

ANSWER: **parabola** [accept word forms like **parabolic**]

<Math, Wu> [Ed.]

14. **"Trajan's New Road" stretched north from a port in this modern-day country, and its capital was called "Philadelphia" while in the Roman *Decapolis*. A city in this country known as "Rekem" contains the "Urn Tomb," the "Monastery" ad-Deir, and the "Treasury" al-Khazneh, accessed through the al-Siq sandstone canyon and built by Nabatean kings in the first century. This country's (*) Red Sea port of Aqaba lies south of the ancient rock-cut "rose city" of Petra. For 10 points, name this Levantine country whose namesake river runs into the Dead Sea, with its capital at Amman.**

ANSWER: **Jordan** [or Hashemite Kingdom of **Jordan**]

<Geography, Gayden> [Ed. Ma]

This character is hired as a housekeeper by the Harlings and is later molested by Wick Cutter. For 10 points each:

[M] Name this Bohemian immigrant who settles in Black Hawk in a novel narrated by Jim Burden.

ANSWER: **Ántonia** Shimerda Cuzak [accept *My Ántonia*; prompt on Shimerda or Cuzak]

[E] *My Ántonia* is part of this Nebraskan author's *Prairie Trilogy*.

ANSWER: Willa **Cather** [or Wilella Sibert **Cather**]

[H] In this Willa Cather short story subtitled "A Study in Temperament," the title character visits the actor Charley Edwards before stealing \$1,000 from a Pittsburgh bank to stay at the Waldorf Astoria Hotel.

ANSWER: "**Paul's Case**"

<US Literature, Melkumian> [Ed.]

15. **When the phase is set to pi in a phi junction, this quantity is zero, but is in an unstable state. A phenomenon in which this quantity quantum tunnels across a boundary allows for the construction of SQUIDs. This quantity passes through a weak link in Josephson junctions. The generation of (*) magnetic fields by this quantity is described by the Biot-Savart law. The amount of this quantity entering a node of a circuit must be equal to the total exiting the node by Kirchoff's junction rule. This quantity equals voltage divided by resistance by Ohm's law. For 10 points, name this quantity measured in amperes.**

ANSWER: electric **current** [accept super**currents**]

<Physics, Wu> [Ed. Liu]

Answer some questions about people who turned into plants in Greek mythology. For 10 points each:

[E] Hyacinthus, a lover of this Greek god of the sun, was turned into a namesake flower after he was hit in the head by a discus. Other domains of this twin god of Artemis include archery, medicine, and prophecy.

ANSWER: **Apollo** [or **Apóllōn** or **Phoebus** Apollo]

[M] This nymph was turned into a laurel tree when trying to get *away* from Apollo, who promptly took her leaves to create a wreath.

ANSWER: **Daphne**

[H] This mother of Adonis, the beloved of both Aphrodite and Persephone, was turned into a namesake tree after being cursed to fall in love with her father Cinyras ["sin-NYE-russ"].

ANSWER: **Myrrha** [or **Smyrna**]

<Mythology, Hoffert> [Ed.]

16. **Joseph Corn argued that this activity was made "Thinkable" for ordinary Americans by people like Louise Thaden and Helen Richey. The Ninety-Nines were an organization of women who engaged in this activity. The Powder Puff Derby for this activity was organized by a woman who was accompanied by Fred Noonan during a (*) 1937 event. The spokesperson for the America First Committee was a man who gained fame for performing this activity using the *Spirit of St. Louis*. This activity was first done in Kitty Hawk, North Carolina. For 10 points, what activity were Charles Lindbergh and Amelia Earhart famous for?**

ANSWER: **flying** a plane [accept **flying** or **aviation**; accept any answers referring to **piloting** aircraft]

<US History, Gayden> [Ed. Nageswaran]

They are not clouds, but these objects can be seen behind a steam train crossing the Starrucca Viaduct in a painting by Jasper Cropsey. For 10 points each:

[H] Name these objects, one of which can be seen behind three Native Americans fishing in shallow water in a painting by Albert Bierstadt.

ANSWER: **mountains** [accept **mountain** ranges; prompt on **hills**]

[E] Jasper Cropsey and Albert Bierstadt were members of this American art movement named for a river in eastern New York, pioneered by Thomas Cole.

ANSWER: **Hudson River** School [prompt on **Luminism** or **HRS**]

[M] Hudson River School artist Thomas Cole depicted a bird nest on a lone pillar in *Desolation* as part of this series of five paintings depicting the *Destruction* and *The Savage State* of a civilization.

ANSWER: *The Course of Empire*

<Visual Fine Arts, Melkumian> [Ed.]

17. **This poet discussed the cultural significance of poetry in his Heraclitus-inspired essay “The Bow and the Lyre.” This author wrote, “I go on a journey in a gallery of sound” in a poem that describes the “calm course of a star” and a “pillar of fountain.” A nine-part essay by this author discusses the illegitimate children of the title raped woman. Besides “The (*) Sons of La Malinche,” this author described a “poplar of water” and a “willow of crystal” in a poem based on the Aztec calendar. For 10 points, name this Mexican author of *The Labyrinth of Solitude* and “Sunstone.”**

ANSWER: Octavio **Paz** [or “Octavio **Paz** Lozano”]

<World Literature, Melkumian> [Ed.]

A message reading “Text me when you get home” went viral on Instagram following this woman’s disappearance. For 10 points each:

[H] Name this woman who was raped and murdered by Wayne Couzens while walking through Clapham Common in 2021.

ANSWER: Sarah **Everard**

[M] Everard’s kidnapper worked for this police force, which covers all of Greater London.

ANSWER: **Metropolitan** Police [or **Met** Police or **Scotland Yard** or the **Yard** or **MPS**]

[E] This British Prime Minister expressed his concern for violence against women following Everard’s kidnapping.

ANSWER: Boris **Johnson** [accept **BoJo** or Alexander Boris de Pfeffel **Johnson**]

<Current Events, Chapman> [Ed. Gayden]

18. **A 2021 study confirmed that one of these phenomena observed in 2018 was caused by electron capture. The Phillips relationship gives the peak luminosity of a kind of these phenomena that occurs when pair production lowers radiation pressure, leading to thermal runaway. The presence of ionized (*) silicon is used to classify these phenomena, which can proceed by the core-collapse mechanism. Carbon detonation causes a type of these phenomena when a white dwarf exceeds the Chandrasekhar limit, known as their Ia [one-A] type. For 10 points, name these powerful stellar explosions.**

ANSWER: **supernovae** [or **supernovas**; accept specific types such as type II **supernovae**]

<Astronomy, Melkumian> [Ed.]

This dynasty was led to victory at the Battle of Sagrajas by its leader Yusuf ibn Tashfin. For 10 points each:
[H] Name this Islamic dynasty, which was overthrown and succeeded by the Almohad Caliphate in 1147.

ANSWER: **Almoravid** dynasty [or **Almoravids**]

[M] The Almoravids, like the Almohads, kept their capital in this modern day country. This country's Rif Region was historically occupied by its northern neighbor.

ANSWER: **Morocco** [or Kingdom of **Morocco**]

[E] The Almoravid victory at the Battle of Sagrajas halted this modern-day country's *Reconquista*. This country was ruled by the Catholic Monarchs Ferdinand and Isabella.

ANSWER: **Spain** [or Kingdom of **Spain**]

<World History, Guo> [Ed. Nageswaran]

19. **A scene in this film during which black blood stains spread across white snow was intended to portray neorealist themes by cinematographer Janusz Kaminski. Shots of this film's protagonist kissing a child's forehead at a birthday party are interspersed with shots of the maid Helen being beaten by Amon Goeth. This film's protagonist spots a girl in a red coat during its (*) "liquidation" scene. At the end of this black-and-white film, an accountant gives the protagonist a gold ring on behalf of 1100 Polish factory workers. For 10 points, name this Steven Spielberg film about a German who saved Jews from the holocaust.**

ANSWER: ***Schindler's List***

<Film, Gayden> [Ed.]

The banliang, a coin with a square hole in the center, was first introduced by this ruler. For 10 points each:

[E] Name this third-century BCE Chinese emperor who ruled over the first unified Chinese state after prevailing in the Warring States period.

ANSWER: Qin **Shi Huangdi** [or **Ying Zheng** or **Zhao Zheng**; prompt on **Qin**]

[H] This Grand Chancellor of Qin Shi Huangdi helped enact a series of sweeping reforms which included instituting the *shi* as the universal unit of measuring weight in his master's empire.

ANSWER: **Li Si** [lee suh]

[M] *Description Acceptable*. Li Si purportedly ordered this practice to suppress anti-Qin dissidents and promote Legalism. This practice was infamously performed alongside the "burying of scholars" during the Qin dynasty.

ANSWER: the **burning** of (anti-Qin) **books** [accept descriptive answers related to **burning books**]

<Ancient History, Hartung> [Ed.]

20. **After destroying Barg'N-Mart, this character rips off his hand in anger. This character wins a trophy for doing absolutely nothing longer than anyone else. When asked about his name, the character responds "twenty-four." He gets upset after another character calls him "tubby" in front of the Salty Spitoon and claims that he will starve after another character eats his (*) "only food" which is a bar of chocolate. This character asks whether mayonnaise is an instrument at a band rehearsal. The underside of a rock is the home of, for 10 points, what pink starfish who lives in Bikini Bottom, the best friend of SpongeBob?**

ANSWER: **Patrick Star** [accept either underlined portion]

<Popular Culture, Chae> [Ed.]

This law explains why soda cans “fizz” when they are opened. For 10 points each:

[M] Name this law which states that the partial pressure of a gas dissolved in solution is proportional to its solubility.

ANSWER: **Henry's** law

[H] Henry's law implies that this quantity of a gas is proportional to solute concentration when the latter is small enough. This quantity represents the “effective pressure” of a real gas.

ANSWER: **fugacity** [prompt on *f*]

[E] Both fugacity and pressure are expressed in this SI [S-I] unit named after a French polymath, which is equal to 1 newton per square meter.

ANSWER: **pascal** [or **Pa**; do NOT accept or prompt on “kilopascals” or “kPa”]

<Chemistry, Wu> [Ed.]