LONE STAR

Head Edited by Daniel Ma. Edited by Daniel Ma, Thomas Gioia, Michael Yue, Roman Madoerin, Dr. Eric Mukherjee, Robert Condron, Sean Doyle, and Michael Patison. Written by the editors, Jisoo Yoo, Johnny Vasilyev, Nikita Nair, Aayush Goodapaty, Josh Rubel, Ketan Pamurthy, Ned Tagtmeier, Akshay Shyam, and Michael Artlip. Playtested by Dean Ah Now, Hari Parameswaran, and Rohan Venkateswaran.

Packet 4

Only read this packet if the last tossup of the previous round was Parksinson's Disease.

TOSSUP 1

The slope of a coexistence curve equals latent heat divided by this quantity and the change in specific volume. The reciprocal of this quantity is proportional to thermodynamic beta. The change in this quantity is multiplied by the mass of a material and a constant to find the heat added. (*) Superconductivity arises as this quantity is lowered below the critical point for this quantity. Gibbs free energy is equal to enthalpy minus entropy times this quantity. For 10 points, name this quantity, a measure of the average kinetic energy of a system, measured in Celsius.
ANSWER: **temperature** <Shyam>

BONUS
This politician established his reputation as a strong orator in a debate with Robert Hayne in 1830. For 10 points each:
[10] Name this American congressman who controversially supported the Compromise of 1850 in his Seventh of March speech and argued *McCulloch v. Maryland*.
ANSWER: Daniel **Webster**
[10] Webster also argued this case to prevent his alma mater's charter from being revoked, tearfully saying it was "a small college. And yet there are those who love it!" This case established that states could not alter private contracts.
ANSWER: Trustees of **Dartmouth** College v. **Woodward** [prompt on partial answers]
[10] Webster was a senator from this state. Other notable senators from this state include Charles Sumner and John Quincy Adams.
ANSWER: **Massachusetts** <Nair>

TOSSUP 2

One poem in this collection describes "perfumes as cool as the flesh of children" and asserts that "Nature is a temple" with "living pillars." This collection features a poem in which the narrator beseeches the "wisest and fairest of the Angels" to "take pity on my long misery." This collection includes the poems "Correspondences" and "The (*) Litanies of Satan," and it addresses the "hypocrite reader" in its opening poem. For 10 points, name this Symbolist collection whose sections include "Revolt" and "Spleen and Ideal," written by Charles Baudelaire.
ANSWER: The ***Flowers of Evil*** [accept Les ***Fleurs du mal***] <Yoo>

BONUS
Philip Johnson designed the Brasserie restaurant inside this building. For 10 points each:
[10] Name this International Style building located on Park Avenue between 52nd and 53rd Streets, separated from the street by a small plaza. This building contained a Four Seasons restaurant for decades.
ANSWER: **Seagram** Building
[10] This German architect designed the Seagram building. This last director of the Bauhaus is known for the phrase "less is more."
ANSWER: Ludwig **Mies** van der Rohe
[10] The Seagram Building's exterior is made of this material, tinted black. Other skyscrapers with exteriors of this material include the Freedom Tower, which can reflect the sky on a clear day.
ANSWER: **glass** <Pamurthy>

TOSSUP 3
This substance causes a burning splint to make a characteristic pop. An ionized version of this substance is a classic example of a quantum 3-body problem. Electrolyzing brine produces sodium hydroxide, chlorine, and this substance. This substance is produced in the half-reaction with a potential of (*) zero volts. Three molecules of this gas react with one molecule of N_2 in the Haber process. When water is electrolyzed, it produces oxygen gas and this diatomic gas. For 10 points, name this gas consisting of two atoms of the lightest element.
ANSWER: di**hydrogen** gas [accept **H_2**] <Madoerin>

BONUS
"Comfort ye, my people" is the first vocal work in this piece. For 10 points each:
[10] Name this Handel work containing the "Hallelujah" chorus that celebrates the life of Christ. It is often performed around Christmas, owing to the brilliance of its Part I on the birth and prophecies of Christ.
ANSWER: *Messiah* [accept **HWV 56**]
[10] *Messiah* is one of these works, often called religious operas. They differ from opera in being concert pieces with relatively little acting, and other examples of them include Bach's *Christmas* and *Easter* ones.
ANSWER: **oratorio**
[10] This contemporary of Handel wrote many oratorios in Hamburg in the mid 1700s, including a philosophical one on *The Day of Judgement* and one on *The Death of Jesus*. He is often called the most prolific composer of all time.
ANSWER: Georg Philipp **Telemann** <Ma>

TOSSUP 4
Akhmad Kadyrov, the first President of Chechnya, was killed at a site used for these events. A crush at one of these events killed 96 people in the Hillsborough Disaster. Souvenir swaps, singing contests, and these events occurred between lines locked in stalemate after the Race to the Sea, an event known as the Christmas (*) Truce of 1914. Pussy Riot interrupted a "final" one of these sporting events in 2018 that included Paul Pogba scoring a goal. For 10 points, name these games that will occur in Qatar at the 2022 World Cup.
ANSWER: **soccer** matches [accept equivalents like **football** or **calcio**; accept equivalents for "matches"; antiprompt on World Cup by asking "what happens there?"]
<Goodapaty>

BONUS
While k-selected species gradually approach this value and deviate from it only slightly, r-selected species fluctuate around it often. For 10 points each:
[10] Name this value denoted K, the theoretical maximum population of a species that an environment can sustain.
ANSWER: **carrying capacity**
[10] In the graphical representation of this model of population growth, which usually manifests as a sigmoidal curve, the carrying capacity is one asymptote. In this model, the rate of reproduction is proportional to both the existing population and the amount of available resources.
ANSWER: **logistic** growth
[10] The Lotka-Volterra equations model the populations of prey and these animals that consume them. Apex ones of these animals are at the top of the food chain.
ANSWER: **predator**s <Shyam>

TOSSUP 5
A song sung during this holiday begins with a father buying a goat for two *zuzim* ("zoo-zeem"). Another song repeating "it would have been enough" is sung during this holiday. The youngest child repeats "*Ma Nishtana*," or "why is this night (*) **different from all other nights" during a meal during this holiday.** During this holiday, people read from the Haggadah and recite songs commemorating the ten plagues that afflicted the cruel Pharaoh. Jews eat a Seder meal during, for 10 points, what Jewish holiday celebrating the Israelites' exodus from Egypt?
ANSWER: **Passover** [or **Pesach**] <Rubel>

BONUS
This story ends with a character crying out, "Well, I didn't do anything, did I?" as the Easterner claims that all five of them had a hand in the murder of the Swede. For 10 points each:
[10] Name this story in which the Swede accuses Johnnie of cheating at a game of high-five and later dies after getting stabbed by the Gambler in a saloon fight.
ANSWER: "The **Blue Hotel**"
[10] "The Blue Hotel" is a story by this American author of "The Bride Comes to Yellow Sky." In a novel by this author, Henry Fleming feels shame for running from battle and desires the title *Red Badge of Courage*.
ANSWER: Stephen **Crane**
[10] "The Blue Hotel" is set during a snowstorm in Fort Romper, a town in this state. In Willa Cather's novel *My Ántonia*, Jim Burden travels from Virginia to the town of Black Hawk in this state to live with his grandparents.
ANSWER: **Nebraska** <Yoo>

TOSSUP 6
The son of Napoleon III died fighting these people, ending the Bonapartists' dreams. One king of these people killed a rival's mother by locking her in a house with jackals. These people were defeated by Lord Chelmsford at their capital of Ulundi. These people used impi infantry units with the short iklwa and long (*) assegai spears in "buffalo horn" formations. These people's namesake war started with Cetshwayo's victory over the British at Isandlwana. For 10 points, name these people led by Shaka, a South African ethnic group.
ANSWER: ama**Zulu** <Goodapaty>

BONUS
Unitary triangles are often used to visualize this interaction. For 10 points each:
[10] Name this interaction between subatomic particles that is responsible for radioactive decay. This interaction is important in nuclear fission and is mediated by W plus, W minus, and Z bosons.
ANSWER: **weak** nuclear force [accept **weak** interaction]
[10] One of these constructs named for Cabbibo, Kobayashi, and Maskawa describes the weak interaction. Hermitian examples of these constructs named for Murray Gell-Mann are used to study the strong interaction.
ANSWER: **matrix** [or **matrices**]
[10] These elementary particles experience all four fundamental forces, and combinations of three of them make up baryons like protons and neutrons. Their six flavors are up, down, top, bottom, strange, and charm.
ANSWER: **quark**s <Pamurthy>

TOSSUP 7
A face on a black banner is the "King of the Carnival" in this artist's *Burial of the Sardine*. This artist's etching collection *Los Caprichos* includes one of a sleeping man with bats around his head, *The Sleep of Reason Produces Monsters*. This artist's later works made in the Villa of the Deaf include (*) *Saturn Devouring his Son* and the other *Black Paintings*. Another of this artist's paintings shows a central figure in white with arms flung wide, facing a firing squad. For 10 points, name this Spanish artist of *The Third of May, 1808*.
ANSWER: Francisco Jose de **Goya** y Lucientes <Vasilyev>

BONUS
This man was given his new surname by the Yongle emperor. For 10 points each:
[10] Name this Muslim eunuch who was comissioned to go on seven "treasure voyages" in the oceans south of China, ranging all the way to Africa. His ships were the largest wooden ships ever built.
ANSWER: **Zheng** He [accept **Ma He**; prompt on **Ma**]
[10] Zheng He sailed under the flag of this Chinese dynasty that overthrew the Yuan in the Red Turban Rebellion and was succeeded by the Qing.
ANSWER: **Ming** Dynasty
[10] This emperor led part of the Red Turban Rebellion and founded the Ming Dynasty. He won the Battle of Lake Poyang during the chaos after the collapse of the Yuan.
ANSWER: **Hongwu** Emperor [accept **Zhu Yuanzhang**] <Rubel>

TOSSUP 8
A thinker in this philosophical school summarized the three hundred *Odes* as, "swerving not from the right path." According to this school, the moral quality of benevolence is possessed by "gentlemen" or "superior men." The founder of this school claimed that when "language is not in accordance with the truth of things," (*) "rectification of names" must be attempted. The relation between father and son and filial piety were central to, for 10 points, what Chinese philosophical tradition whose foundational text is the *Analects*?
ANSWER: **Confucianism** <Condron>

BONUS
Because this event was cancelled due to the COVID-19 Pandemic, both Novak Djokovic ("JOE-kuh-vich") and Simona Halep ("sih-MOH-nuh HAL-up") remain reigning champions of this event. For 10 points each:
[10] Name this sporting event that is played annually at the All-England Club, the only Grand Slam event that is still held on grass courts.
ANSWER: The Championships, **Wimbledon**
[10] In the 2019 Wimbledon tournament, this American woman became the youngest qualifier in Wimbledon history when she made it to the fourth round at the age of 15, losing to the eventual champion Halep in straight sets.
ANSWER: (Cori) "Coco" **Gauff** ("goff")
[10] In the first round of that tournament, Gauff defeated this fellow American 6-4, 6-4 ("six four, six four"). This woman won multiple Grand Slam doubles titles with her younger (and more successful) sister in the 2000s.
ANSWER: **V**enus **Williams** [prompt on Williams] <Rubel>

TOSSUP 9
A composition titled as a work of this type says that man must accept the doctrine that "Whatever IS, is RIGHT." Another text titled as one of these works is the source of the quote "A little learning is a dang'rous thing." In a work of this type set in Moulmein, a figure performs the title action "solely to avoid looking a fool." Alexander Pope wrote two compositions in heroic couplets titled as [these works] (*) "on Man" and "on Criticism." George Orwell's "Shooting an Elephant" is an example of, for 10 points, what form of short writing pioneered by Michel de Montaigne that is often used in college admissions processes?
ANSWER: **essay**s [accept "**Essay on Man**"; accept "**Essay on Criticism**"; accept **essay**s by Alexander **Pope** before "Moulmein"; prompt on works, writings, or other synonyms by Alexander Pope] <Yoo>

BONUS
Self-Portrait in a Convex Mirror is a painting in this style. For 10 points each:
[10] Name this artistic style exemplified by Parmagianino's *Madonna with the Long Neck*. This art style makes use of elongated and unrealistic proportions.
ANSWER: **Mannerism** [prompt on Late Renaissance]
[10] This Cretan artist who worked in Spain often used long figures and heavy contrast, influenced by Mannerism. His unique style can be seen in paintings including *The View of Toledo* and *The Burial of the Count of Orgaz*.
ANSWER: **El Greco** [or Domenikos **Theotokopoulos**]
[10] Agnolo Bronzino, another Mannerist painter, created a painting named after these two mythological figures, along with Folly and Time. They are often depicted together as allegories of love.
ANSWER: **Venus** and **Cupid** [accept in either order] <Vasilyev>

TOSSUP 10
A party with this primary ideology currently governs the German state of Baden-Württemberg. Iceland's ruling party is partially named for this ideology, as is the most left-leaning party in Denmark's "red bloc." Ed Markey and Alexandria Ocasio-Cortez proposed a package partly named for this ideology to combat (*) climate change, which is this ideology's New Deal. Jill Stein ran for president for a party named for, for 10 points, what ideology, which gets its colorful name from its adherence to pro-environmental policies?
ANSWER: **Green** politics [accept **Green** party or the **Greens**; prompt on descriptions of environmentalism; do not accept or prompt on "Alliance '90/The Greens", "Left-Green Movement", or "Red-Green Alliance"] <Patison>

BONUS
This man won the 1819 Battle of Boyacá, freeing Colombia from Spanish rule. For 10 points each:
[10] Name this Venezuelan nicknamed "The Liberator" who was the first president of Gran Colombia. He names a country with capitals of La Paz and Sucre, the latter being named for one of his top generals.
ANSWER: Simon **Bolivar**
[10] This Argentinian general gave his army to Bolivar at the Guayaquil Conference and was appointed Protector of Peru. He also achieved Chilean independence at the battles of Chacabuco and Maipú.
ANSWER: José de **San Martin**
[10] The other victorious general at Chacabuco had this ethnicity and later became dictator of Chile. During the Mexican War, US deserters of this ethnicity led a battalion named for their patron saint at Churubusco.
ANSWER: **Irish** (Bernardo O'Higgins and the Saint Patrick's Battalion) <Rubel>

TOSSUP 11
This composer wrote an opera in which Ninetta enters singing about her happiness in "Di piacer mi balza il cor." She is later accused of stealing a silver spoon taken by a magpie. In another opera by this composer, Lindoro is aided by a character who enters in the aria "Largo al factotum" repeating his name, (*) Figaro. The title character shoots an apple off his son's head in an opera by this composer whose overture contains the "March of the Swiss Soldiers." For 10 points, name this Italian composer of *The Barber of Seville* and *William Tell*.
ANSWER: Gioachino **Rossini** <Vasilyev>

BONUS
A character in this novel is almost killed by a falling boulder dropped by Andrew Pennington while on a tour of some ancient ruins. For 10 points each:
[10] Name this novel about the murder of Linnet Ridgeway in which Simon Doyle pretends to get shot in the leg, kills his wife, then shoots himself in the leg to avert suspicion. It is largely set on the steamship *Karnak*.
ANSWER: ***Death on the Nile***
[10] This author of *Death on the Nile* wrote of island guests slowly being killed off one by one in the novel *And Then There Were None*. One of this author's famous recurring characters is Miss Marple.
ANSWER: Agatha **Christie**
[10] Like Miss Marple, Hercule Poirot has this profession in Agatha Christie mystery novels like *Death on the Nile* and *Murder on the Orient Express*. Other recurring literary characters with this profession include Sherlock Holmes.
ANSWER: **detective** [accept private **inspector**, **sleuth**, and other synonyms] <Yoo>

TOSSUP 12
In this largest meromictic sea, the world's first known saline undersea river flows through an anoxic bottom layer. A biodiverse wetland delta at Sulina, on this sea, is the least populated temperate region of its continent and is located in Bessarabia and Dobruja. This sea south of the Kerch Strait is the terminus of the (*) Dnieper. This sea flows south into the Sea of Marmara through the Bosporus and contains the mouth of the Danube. For 10 points, name this sea north of Turkey, connected to the Mediterranean and named for its color.
ANSWER: **Black** Sea <Ma>

BONUS
Adherents of this religion take fully clothed baths to represent spiritual death as part of the kanzo initiation ceremony. For 10 points each:
[10] Name this Afro-Haitian religion whose houngans and mambos use *pwens*. *Pwens* are commonly misrepresented as being this religion's namesake "dolls" and having the power to hurt others in popular culture.
ANSWER: **Voodoo** [or Haitian **Vodou** or **Vaudou** or **Vodun** or **Vodoun** or **Vodu** or **Vaudoux**]
[10] In vodou, this husband of Maman Brigitte rules over the dead. This leader of the guédé is commonly depicted with a cigar and white skull-like makeup.
ANSWER: **Baron Samedi** [accept **Baron Saturday** or **Baron Samdi** or **Bawon Samedi** or **Bawon Sanmdi**]
[10] Baron Samedi is one of these vodou spirits that also include Papa Legba and can be summoned through the process of "mounting."
ANSWER: **loa**s [accept **lwa**s] <Tagtmeier>

TOSSUP 13
One pathway used by organisms in this biome converts bicarbonate and PEP into malate to be stored in the central vacuole. Ruminants in this biome have low cortex to medulla surface area ratios in their kidneys. Plants in this biome use Crassulacean acid metabolism to delay (*) carbon fixation to night and have waxy cuticles. Adaptations like large ears and fatty humps to store water are common for this biome's animals, which include camels. For 10 points, name this biome known for its low precipitation, examples of which include the Sonoran.
ANSWER: **desert** <Shyam>

BONUS
This author described a woman who "died of love" in a poem he wrote in memory of the Little Girl of Guatemala. For 10 points each:
[10] Name this poet who wrote that "I'm a traveller to all parts, And a newcomer to none" in "A Sincere Man Am I." Selected lines from this poet's collection *Simple Verses* are used as lyrics in a patriotic song in his home country.
ANSWER: José **Martí**
[10] *Guantanamera* is a patriotic song for this nation, where Martí is a national hero for his role in its liberation. Alejo Carpentier, a novelist from this country, wrote about the Haitian Revolution in *The Kingdom of this World*.
ANSWER: Republic of **Cuba**
[10] The narrator of a Martí poem about cultivating a white one of these flowers performs the title action "In June as in January." The title flower is "newly sprung in June" in a Burns poem about a "Red, Red" one of these flowers.
ANSWER: **rose**s [accept "Cultivo Una **Rosa** Blanca"; accept "I Cultivate a White **Rose**" or similar translations; accept "A Red, Red **Rose**"] <Yoo>

TOSSUP 14
This king ended the Isin-Larsa period by establishing an empire using the resources of Yamhad and Mari. The empire this king created was conquered by the Kassites. This Amorite king went up a mountain to receive a stele from the sun god Shamash that was later discovered in Susa. This king's conquests spread the worship of (*) Marduk and ended the Sumerian revival in Mesopotamia. For 10 points, name this Babylonian king who included examples of lex talionis, exemplified in "an eye for an eye," in his namesake law code.
ANSWER: **Hammurabi** <Goodapaty>

BONUS
This term refers to rocks that form in batholiths, laccoliths, and lopoliths. For 10 points each:
[10] Give this term describing large-grained rocks that form in namesake non-tabular regions underground. Some scientists use this term to also refer to hypabyssal rocks that form in dikes and sills; others disagree.
ANSWER: **plutonic** [prompt on intrusive igneous; do not reveal "igneous"]
[10] This very hard rock is the most common type of plutonic rock. It is felsic, meaning it is primarily made of quartz and feldspar, and is large-grained and often pinkish.
ANSWER: **granite**
[10] Granite and other plutonic rocks are also this general type of rock. These rocks form directly from crystallizing magma, hence their name from the Latin for "fire."
ANSWER: **igneous** <Ma>

TOSSUP 15
In a short story by this writer set at Henry's lunch-room, the two criminals Al and Max attempt to find the whereabouts of the Swedish boxer Ole Andreson. This author's theory of omission was first articulated in a non-fiction description of the traditions and background of bullfighting titled *Death in the Afternoon*. In a novel by this author of (*) "The Killers," the matador Pedro Romero seduces Lady Brett Ashley, much to the chagrin of Jake Barnes. For 10 points, what American author wrote about expatriate members of a "lost generation" in *The Sun Also Rises*?
ANSWER: Ernest **Hemingway** <Yoo>

BONUS
For 10 points each, answer these questions about recent elections delayed by COVID-19.
[10] A deal reached between this country's Law and Justice party and a junior partner postponed this country's elections from early May. The runoff in mid-July saw incumbent Andrzej Duda ("OND-shay DOO-duh") narrowly defeat challenger Rafał Trzaskowski ("RAHF-ow tsha-SKOHV-ski").
ANSWER: **Poland** [or Republic of **Poland** or Rzeczpospolita **Polska**]
[10] After its 2019 results were ruled invalid, this country's presidential elections were slated for May, but were delayed until October. Luis Arce ended up winning the election with an outright majority.
ANSWER: **Bolivia** [or Plurinational State of **Bolivia**]
[10] The election of the leader of this country's Conservative Party was postponed after leader Andrew Scheer resigned following his general election defeat by Justin Trudeau's Liberal Party.
ANSWER: **Canada** <Patison>

TOSSUP 16
This figure's mount was born from the second of two eggs said to be equal to all of Kadru's 1,000 children. This deity assumed the form of a beautiful woman to swap the elixir of immortality with alcohol. A mountain was placed on this god's back to aid in churning the ocean of milk, during which this deity's wife (*) Lakshmi rose up on a lotus flower. This deity rides the legendary bird Garuda, and his 7th and 8th avatars are Rama and Krishna. For 10 points, name this four-armed "preserver" deity who makes up the Trimurti with Brahma and Shiva.
ANSWER: **Vishnu** <Yoo>

BONUS
This stadium built by architect Li Xinggang was used for a gold medal soccer match between Argentina and Nigeria. For 10 points each,
[10] Name this Beijing stadium that was home to opening and closing ceremonies in 2008 and received its nickname from the steel beams and retractable roof that comprise the majority of this stadium.
ANSWER: The **Bird's Nest** [accept **Beijing National Stadium** or **Guójiā Tǐyùchǎng** or **Niǎocháo**]
[10] The Bird's Nest was built for the 2008 summer iteration of these events, where Michael Phelps won a record 8 gold medals in swimming. The most recent iteration of these events hosted in North America was in Atlanta in 1996.
ANSWER: **Olympic** Games [or **Olympics**]
[10] This Mexico City stadium hosted the soccer events in the 1968 Summer Olympics and has also hosted many NFL games, the most recent being the Kansas City Chiefs' victory over the LA Chargers. With a capacity over 86,000, this stadium is the largest in Mexico.
ANSWER: Estadio **Azteca** [accept **Aztec** Stadium] <Rubel>

TOSSUP 17
Some types of these components employ variable TDP to control power dissipation. Vulnerabilities in these components include Spectre, in which speculative execution allows side-channel attack. When these devices have superscalar architecture, they can employ instruction-level parallelism. Registers supply instructions to the (*) **ALU in these components. AMD and Intel manufacture these components, which typically lie under a fan or heatsink. For 10 points, name these computer components responsible for executing programs, whose clock speed is measured in hertz.**
ANSWER: **CPU** [or **central processing unit** or **processor** or **microprocessor** prompt on **chip**, prompt on **integrated circuit**] <Mukherjee>

BONUS
Brother Juniper witnesses several deaths caused by the failure of a Peruvian bridge in one of this man's works. For 10 points each:
[10] Name this American author of *The Bridge of San Luis Rey*, who depicted the lives of the Antrobus family during various catastrophes in his play *The Skin of Our Teeth*.
ANSWER: Thornton Niven **Wilder**
[10] In this Wilder play, the ghost of Emily Webb relives her twelfth birthday. This play, which is set in Grover's Corners, is narrated by the "Stage-Manager," who often breaks the fourth-wall.
ANSWER: ***Our Town***
[10] This alcoholic character in *Our Town* directs the choir's performance of "Blessed Be the Tie That Binds." In a monologue, this character remarks that human existence is nothing but "ignorance and blindness."
ANSWER: **Simon** **Stimson** [accept either name] <Nair>

TOSSUP 18
A piece by this composer begins with the left hand playing the interval "F A-flat," echoed by the right hand an octave higher. This composer's other works include "The Girl with the Flaxen Hair," the eighth piece in his *Preludes*. This composer depicts a dancing black doll in "Golliwogg's Cakewalk," part of his (*) *Children's Corner*. **A piece of his that depicts pan pipes in a forest is titled *Prelude to the Afternoon of a Faun*. For 10 points, *Suite Bergamasque* was written by what French impressionist composer who depicted moonlight in "Clair de Lune"?**
ANSWER: Claude **Debussy** <Vasilyev>

BONUS

This thinker explored how science and reason are used as tools of power. For 10 points each:

[10] Name this philosopher who chronicled the development of prisons in *Discipline and Punish*. This philosopher described how the mentally ill received the status of "the other" in *Madness and Civilization*.

ANSWER: Michel **Foucault**

[10] In a three-volume history of this concept, Foucault introduced the concept of biopower, by which societies are regulated through norms and not laws. Foucault denied the "repressive hypothesis" about this trait, which states that the Victorians were "imperial prudes."

ANSWER: **sexuality**

[10] Michel Foucault was a philosopher from this country. Foucault analyzed how Robert-François Damiens was executed for trying to kill Louis XV, a king of this country.

ANSWER: **France** <Tagtmeier>

TOSSUP 19

Georgy Zhukov imported a "White" version of this substance despite a ban. "40 Barrels and 20 Kegs" of this substance were seized in a failed suit due to adulteration. A modified "New" version of this substance was made starting in 1985, the secret formulation of which is now at a museum called the (*) "World of [this product]" in Atlanta. Chemist John S. Pemberton first made this product as a painkiller with ingredients including its namesake nut and cocaine. For 10 points, name this soft drink that competes with Pepsi.

ANSWER: **Coca Cola** [accept **Coke**] <Goodapaty>

BONUS

This equation generates a straight line when plotting the natural log of k against one over temperature. For 10 points each:

[10] Name this empirical equation named for a Swedish scientist. It contains the pre-exponential factor A and relates the rate constant and activation energy.

ANSWER: **Arrhenius** equation

[10] The Eyring equation was derived from the Arrhenius equation using the theory of these entities. These entities are very short-lived configurations of atoms at a local energy maximum in a reaction-energy diagram.

ANSWER: **transition state** [accept **transition state** theory; accept **activated complex**]

[10] The Trautz-Lewis equation, similar to both aforementioned equations, instead models reactions as collisions. That model was based on the kinetic theory of this state of matter, which has neither definite volume nor shape.

ANSWER: **gas** <Pamurthy>

TOSSUP 20

An old textbook in this novel has a picture of Venus de Milo with a crudely-drawn moustache and armpit hair. A character in this novel is only able to say "I didn't…" before a woman kicks his head three times to end his misery during a "particicution." That character is revealed to be part of the (*) Mayday Resistance against the Gilead regime established by the Commander in this novel. Offred is one of the title women who are forced to bear children in, for 10 points, what dystopian novel by Margaret Atwood?

ANSWER: The *__Handmaid's Tale__* <Yoo>

BONUS

The Junkers were a wealthy group of landowners who lived in this country and owned large farms worked by many peasants. For 10 points each:

[10] Name this country that soundly won the Seven Weeks War and defeated Denmark to annex the state of Schleswig-Holstein.

ANSWER: Kingdom of **Prussia** [do not accept or prompt on "Germany"]

[10] This Minister-President of Prussia became the first Chancellor of Germany, in which position he targeted the Catholic Church during the *Kulturkampf*. He advocated *realpolitik* and was known as the "Iron Chancellor."

ANSWER: Otto von **Bismarck**

[10] In one of his more notorious moves, Bismarck received this message from King Wilhelm while he was in a Prussian spa village and edited it to incite the Franco-Prussian War.

ANSWER: **Ems Dispatch** [or **Ems Telegram**; prompt on partial answers] <Rubel>