

CALISTO: California Spring Tournament 2020

Edited by Justin French, Alistair Gray, Karan Gurazada, Avinash Iyer, Jeffrey Ma, James Malouf, and Shahar Schwartz. Written by the editors, Vikshar Athreya, Anishka Bandara, Nicholas Dai, Jason Hong, Daniel Jung, Victor Li, Gary Lin, Reedit Shahriar, Kyle Shi, Junu Song, Rohan Venkateswaran, Brandon Wang, Victor Wang, and Arav Watwani. Help from Ankit Aggarwal.

Packet 6 Tossups

1. **In a game in this series, the player can race a rabbit-obsessed “Running Man” but will always lose by one second. In three parallel timelines of this series, the hero is “fallen,” victorious as a child, or victorious as an adult. Seven sages protect the entrance to a Sacred Realm in the first 3D game in this series, which introduced (*) Z-targeting. The Temple of Time often features in games in this series. One entry in this series features a child protagonist who sleeps for seven years after having drawn the Master Sword and is titled for the “Ocarina of Time.”** For 10 points, name this video game series whose title princess is often saved by Link.

ANSWER: The Legend of Zelda [accept “The Legend of Zelda: Ocarina of Time” before mention; prompt on Ocarina of Time by asking “What series was that game in?”]
<Pop Culture — Lin> [Edited]

2. **During one war, this man suggested dropping a belt of radioactive cobalt to hinder the enemy’s supply routes. He’s not Patton, but this man was met with jeers of “Shame! Shame!” after he ordered troops to clear the encampments of the Bonus Army. The Prime Minister of Japan convinced this man to add an article renouncing war to the Japanese constitution. This general was replaced by (*) Matthew Ridgeway after he was fired by Truman during the Korean War. After being forced to evacuate from the Philippines to Australia, this man declared “I shall return.”** For 10 points, name this American general who defeated Japan in the Pacific theater of World War II.

ANSWER: Douglas MacArthur
<US History — Shahriar> [Ed. Hong]

3. **R times the temperature derivative of the natural log of this quantity is equal to the change in enthalpy over T -squared according to the van ‘t Hoff equation. This quantity is equal to the exponential of minus the standard change in Gibbs free energy divided by RT . According to the law of (*) mass action, this quantity equals the concentration of each product raised to its stoichiometric coefficient, divided by the same expression for the reactants. A reaction tends towards the products if its reaction quotient is less than this constant. For 10 points, what constant symbolized K is named for the point in a reaction at which reactant and product concentrations have stopped changing?**

ANSWER: equilibrium constant [accept equilibrium after “constant”; prompt on K before “K”; prompt on K with any subscript before “K” is mentioned with “that quantity is a specific subtype of what more general quantity?”; do NOT accept or prompt on “reaction quotient” or “ Q ”]
<Chemistry — Gurazada> [Edited]

4. **Benjamin Britten composed a “ceremony” of songs for this event that was originally scored for a soprano-soprano-alto children’s choir. The title character’s leg is miraculously healed after he gives away his crutch in a Gian Carlo Menotti opera set during this event. A ballet set on this event opens with a Miniature Overture, and its third act contains a (*) “Trepak” and a “Waltz of the Flowers.” A celesta (suh-LESS-tuh) introduces the main theme of that ballet’s “Dance of the Sugar Plum Fairy.”** For 10 points, name this holiday that is the setting of *A Ceremony of Carols*, *Amahl and the Night Visitors*, and *The Nutcracker*.

ANSWER: Christmas [or Christmas Day or Christmas Eve; accept the birth of Jesus or Nativity]
<Classical Music — Ma> [Edited]

5. This author listed “my dear friend’s dear son” among the “friends that cannot sup with us” in the poem “In Memory of Major Robert Gregory.” This author asked, “How can we know the dancer from the dance?” at the end of his poem “Among School Children.” This author wrote, “an aged man is but a paltry thing” in a poem about a “holy city” that is (*) “no country for old men.” This author described “twenty centuries of stony sleep” that were “vexed to nightmare by a rocking cradle” in a poem that asks, “what rough beast... slouches towards Bethlehem to be born?” For 10 points, name this Irish poet of “Sailing to Byzantium” and “The Second Coming.”

ANSWER: William Butler Yeats (yates)

<Poetry — Iyer> [Ed. French]

6. Members of this religion recite the three-part Ardas (ar-DAHS) prayer before beginning important tasks. The Akal Takht (TUKT) is one of the thrones important to this religion. To ensure the future of this religion, one leader of it assembled a group of men known as the “Panj Pyare” (punj PYAH-ray). Followers of this religion come together and volunteer to make food in community kitchens called (*) langars (LUN-gurs). Members of this religion wear a bracelet called a kara and carry a comb called a kangha, two of the five Ks carried by members of this religion. The holy text of this religion, the Adi Granth, is considered to be its last Guru. Guru Nanak founded, for 10 points, what Indian religion based in Punjab?

ANSWER: Sikhism [or Sikhi]

<Religion — Venkateswaran> [Edited]

7. A process that occurs in this organ begins with the conversion of ornithine to citrulline. Ammonia is sequestered by the urea cycle in this organ. Lactate produced by the muscles moves into this organ in one part of the Cori cycle. Deoxygenated blood is carried from the spleen to this organ by the (*) portal vein. Specialized macrophages in this organ that detoxify blood are called Kupffer cells. Blood is carried away from this organ by the hepatic vein. A surfactant that breaks down fat is transported from this organ to the gallbladder for storage; that surfactant produced in this organ is bile. For 10 points, name this organ that is damaged by excessive alcohol intake in cirrhosis.

ANSWER: liver

<Biology — Gurazada> [Edited]

8. An artwork of this type in Los Angeles depicting “Tropical America: Oppressed and Destroyed by Imperialism” was almost immediately censored. A work of this type includes scenes depicting the “arrival” and “departure” of a god and is titled *The Epic of American Civilization*. Two panels representing the “frontiers” of capitalism and communism flank a work of this type. That work was recreated as (*) *Man, Controller of the Universe* after the original at the Rockefeller center was destroyed for depicting Vladimir Lenin. For 10 points, name this type of artwork exemplified by Diego Rivera’s *Man at the Crossroads*, which is painted directly onto walls.

ANSWER: murals

<Painting — Ma> [Ed. French]

9. In one story, this author describes a mental institution that employs a “system of soothing” but abandons it after the patients overthrow the doctors; that story is “The System of Doctor Tarr and Professor Fether.” In a story by this author, the title woman reincarnates after Lady Rowena dies. This author wrote a story in which a (*) masquerade hosted by Prince Prospero ends after a guest wearing a bloody funeral shroud is revealed to be the embodiment of a deadly plague. In another story by this author, Montresor lures Fortunato to his death by promising him a barrel of fine wine. For 10 points, name this author of “Ligeia,” (lye-JAY-uh) “The Masque of the Red Death,” and “The Cask of Amontillado.”

ANSWER: Edgar Allan **Poe**

<Short Fiction — Schwarz> [Ed. French]

10. In 2016, the first use of muon tomography in archaeology discovered a giant cavity in one of these structures. These structures supplanted earlier “houses of eternity,” or *mastabas*. Many of these structures were built at the city of Meroë during a revival in the building of these structures by the (*) Kingdom of Kush. A second one of these structures built by Sneferu is described as “bent,” while a “step” one of these structures was designed by Imhotep for Djoser. Texts written on the walls of these structures preceded the Coffin Texts and the Book of the Dead. For 10 points, name these structures, one of which in Giza is only surviving wonder of the world.

ANSWER: Egyptian **pyramids** [accept Bent **Pyramid** or Step **Pyramid** or Great **Pyramid** of Giza]

<Ancient/Classical History — Hong/Ma> [Ed. Athreya]

11. This mathematician’s only paper on number theory derives an exact formula for the prime-counting function. One-dimensional complex manifolds are collectively named for this mathematician. The late Michael Atiyah announced a nonsensical proof of a conjecture by this mathematician. That conjecture posits that the line with real part one-half contains every non-trivial zero of this mathematician’s (*) zeta function. In a procedure named for this mathematician, the area under a curve is approximated by smaller and smaller rectangles. For 10 points, name this German mathematician whose eponymous sums are used to define integrals.

ANSWER: Bernhard **Riemann** [or Georg Friedrich Bernhard **Riemann**; accept **Riemann** surfaces or **Riemann** hypothesis or **Riemann** zeta function or **Riemann** sums or **Riemann** integration or **Riemann** integrals]

<Math — Venkateswaran> [Ed. French]

12. This narrator of this book describes the separation he puts between himself and his guests while discussing “big thoughts in big words” in the chapter “Visitors.” This book claims that “if a man does not keep pace with his companions, perhaps it is because he hears a different drummer.” In its chapter “Brute Neighbors,” this book depicts a war between two factions of (*) ants. This book’s chapter “Economy” cites a desire to “live deliberately” for the author’s decision to move into a cabin next to the title pond. For 10 points, name this transcendentalist book about “life in the woods” by Henry David Thoreau.

ANSWER: **Walden**; or *Life in the Woods*

<Long Fiction — Schwartz> [Ed. French]

13. In May 2019, this country’s Plurinational Assembly extended the deadline for a Truth Commission to publish a report on human rights abuses during eighteen years in the late twentieth century. In this country, a court ruling that term limits for officials were human rights violations allowed the incumbent of the MAS party to seek a fourth term in a controversial 2019 election. Protests about suspicions of fraud in that election led to (*) Jeanine Áñez assuming the presidency of this country after this country’s first indigenous president resigned. For 10 points, name this country where a coup d’état recently forced out former president Evo Morales.

ANSWER: **Bolivia** [or Plurinational State of **Bolivia** or Estado Plurinacional de **Bolivia**]

<Current Events — Dai> [Ed. Gray]

14. **One ruler of this empire was blinded by a tribal chieftain whom he made his grand vizier and was earlier defeated at the Battle of Buxar. Another ruler of this empire invited Jesuit missionaries to discussions at a “House of Worship” and created the syncretic “Din-i-Ilahi” faith. Nader Shah of the Afsharid Dynasty stole the (*) Koh-i-Noor diamond after sacking this empire’s capital. A “great” ruler of this empire abolished the *jizya* tax on non-Muslims. Babur founded this empire after winning the First Battle of Panipat. For 10 points, name this Indian empire ruled by Akbar whose fifth emperor Shah Jahan built the Taj Mahal.**

ANSWER: **Mughal** Empire [or **Moghul** Empire or **Mughal** Dynasty or **Moghul** Dynasty or **Gurkaniyan** Dynasty]
(The emperor in the first clue is Shah Alam II.)

<Asian History — Venkateswaran/Shahriar> [Ed. Iyer/Athreya]

15. **One type of this quantity is multiplied by one minus the scattering angle to yield the Compton shift. That type of this quantity is equal to Planck’s constant over mass times the speed of light. Another type of this quantity equals Planck’s constant divided by momentum. That type of this quantity is defined for all matter and is named for (*) de Broglie (BROY-glee). Electromagnetic radiation with the *lowest* value for this quantity is classified as gamma radiation. The velocity of a wave divided by this quantity gives the wave’s frequency. For 10 points, name this quantity, the spatial distance between consecutive peaks of a wave.**

ANSWER: **wavelength** [accept Compton **wavelength** or de Broglie **wavelength**; prompt on **lambda**]

<Physics — Gurazada> [Edited]

16. **A minimalist skyscraper designed by this architect’s firm was nicknamed the “plywood palace” after a design flaw caused its windows to fall out. This architect filled a trapezoidal lot with two triangular buildings in his design for the East Building of the (*) National Gallery of Art in Washington, D.C. An exterior spiral staircase descends from a cubic glass pavilion in this man’s design for the John F. Kennedy Presidential Library. This architect designed the glass pyramid that stands outside the Louvre. For 10 points, name this Chinese-American architect who died in May 2019.**

ANSWER: Ieoh Ming **Pei**

<Architecture — Ma> [Ed. Malouf]

17. **This man escaped prison with the help of Alexander Hamilton’s sister-in-law, Angelica Schuyler Church. This man ordered the disarmament of nobles during the Day of Daggers and dispersed protestors at the Champ de Mars while serving as the commander-in-chief of the National Guard. With the Comte de Mirabeau, this man drafted the (*) Declaration of the Rights of Man, which was modeled after the Declaration of Independence. This military leader was wounded at the Battle of Brandywine before leading land troops at the Siege of Yorktown. For 10 points, name this French “Hero of Two Worlds” who assisted the Americans during the Revolutionary War.**

ANSWER: Marquis de **Lafayette** [or Marie-Joseph Gilbert du Motier, Marquis de **Lafayette**]

<European History — Lin> [Ed. Iyer]

18. **Techniques like “mowing the lawn” are used to study this structure with a multibeam echo sounder. Deposition onto this structure may form siliceous ooze. The primary observation behind the Vine-Matthews-Morley hypothesis was the symmetric pattern of magnetic stripes in this structure. The topography of this structure is measured in (*) bathymetry. This structure is penetrated by hydrothermal vents that form black smokers. Large, mostly-flat regions of this structure are called abyssal plains. This structure spreads at mid-ocean ridges. For 10 points, name this structure of rock at the bottom of the ocean.**

ANSWER: **seafloor** [or **seabed** or **sea floor** or **ocean floor**; accept **oceanic crust** or lower **oceanic crust**; accept **abyssal plain** before “abyssal”; accept **seafloor** spreading; prompt on **crust** or **Earth’s crust** by asking “where is this crust?”]

<Ocean Science — Schwartz/French> [Ed. French]

19. In this thinker's ethics, a comprehensive account of morality will compel both perfect and imperfect duties to both oneself and others. "Humanity" and "autonomy" formulations are among the versions of a deontological ethical principle in this thinker's (*) *Groundwork of the Metaphysics of Morals*. In another work, this philosopher gave mathematical statements as examples of synthetic *a priori* judgments. The statement that one should only act following maxims that "should become universal law" is this philosopher's categorical imperative. For 10 points, name this German Enlightenment author of the *Critique of Pure Reason*.

ANSWER: Immanuel **Kant**

<Philosophy — Gray> [Edited]

20. A character in this play considers getting an abortion to protect "the part [of her family] that's already living," but changes her mind when she moves into a new home. Another character in this play criticizes Beneatha's decision to "mutilate" her hair by straightening it. In this play, Walter's plans to invest in a (*) liquor store are foiled when Willy steals ten-thousand dollars worth of life insurance money. The central family in this play rejects Karl Lindler's offer to buy back their house in Clybourne Park. The black Younger family's integration into a white neighborhood in Chicago is chronicled in, for 10 points, what play by Lorraine Hansberry?

ANSWER: *A Raisin in the Sun*

<Drama — Schwartz> [Edited]

Packet 6 Bonuses

1. In the 1884 campaign, this man's party was attacked as supporting "Rum, Romanism, and Rebellion." For 10 points each:

[10] Name this president, who dealt with the Panic of 1893 at the start of his second term. His two non-consecutive terms were interrupted by Benjamin Harrison.

ANSWER: Grover **Cleveland** [or Stephen Grover **Cleveland**]

[10] In the election of 1884, Cleveland was attacked using this five-word phrase for his affair and subsequent illegitimate child with Maria Halpin.

ANSWER: "**Ma, Ma, Where's My Pa?**"

[10] Cleveland sent in troops to put down this 1894 strike. This railroad strike against a namesake Palace Car company was led by Eugene V. Debs.

ANSWER: **Pullman** Strike

<US History — Shahriar> [Ed. Iyer]

2. This artist created many works showcasing the plight of the working class, such as a lithograph of a man killed by the National Guard, *Rue Transnonain*. For 10 points each:

[10] Name this French painter who depicted a woman and child in a crowded Parisian railcar in *The Third Class Carriage*.

ANSWER: Honoré **Daumier** (oh-no-RAY dome-YAY) [or Honoré-Victorin **Daumier**]

[10] Another lithograph by Daumier depicts Nadar, a practitioner of this art form, in a hot air balloon "elevating [it] to the level of art." This art form was partly invented by Louis Daguerre, the developer of the Daguerreotype.

ANSWER: **photography** [accept word forms]

[10] Daumier is also remembered for collaborating with Charles Philippon (fee-lee-PON) to produce a caricature of one of these people as a pear. Hyacinthe Rigaud's (ree-"GOAD"'s) portrait of one of these people became the de facto "official portrait" when it was in Versailles.

ANSWER: **kings** of France [accept **monarchs** of France or **King** Louis-Philippe or **King** Louis XIV]

<Painting — Ma> [Ed. Malouf]

3. A woman who loses this object at a ball considers her low-class birth to be an "accident of fate." For 10 points each:

[10] Name this object, which Mathilde Loisel (mah-TEELD lwah-ZELL) spends ten years paying for after having lost. She later discovers that this object was actually a worthless fake.

ANSWER: the **necklace** [or la **parure** or the diamond **necklace** or Madame Forestier's **necklace**]

[10] This French short story writer wrote "The Necklace." He also wrote about a pair of Frenchmen who are killed after refusing to reveal a password to a group of Prussian officers in the story "Two Friends."

ANSWER: Guy de **Maupassant** (ghee duh moh-pah-SAWN)

[10] A character with this profession stabs a Prussian officer nicknamed "Mademoiselle Fifi" in a story by Guy de Maupassant. Yet another Prussian officer extorts a character with this occupation in the story "Ball of Fat."

ANSWER: **prostitute** [or **prostituée**; accept synonyms]

<Short Fiction — Schwartz> [Edited]

4. A luminosity-temperature relationship obeyed by stars that have not yet reached this stage is called the Hayashi track. For 10 points each:

[10] Name this stage of stellar development, which is depicted as a diagonal band from the upper-left corner to the bottom-right corner of the Hertzsprung-Russell diagram.

ANSWER: **main sequence**

[10] Large stars in the main sequence use this method to fuse hydrogen. Unlike the proton-proton chain, this method interconverts between three namesake elements via the addition of hydrogen nuclei.

ANSWER: **CNO** (C-N-O) cycle [or **Carbon-Nitrogen-Oxygen** cycle]

[10] The fusion of hydrogen through both the proton-proton chain and the CNO cycle forms this element, which has atomic number two.

ANSWER: **helium** [or **He**]

<Astronomy — Gurazada> [Ed. French]

5. The rate of this tax varies per state, with California having a rate of 7.25% for this tax and Oregon having a rate of 0%. For 10 points each:

[10] Name this tax, which is levied upon the purchase of any good or service by a consumer.

ANSWER: **sales** tax

[10] Since the rate of sales tax is the same regardless of income, it is this type of tax. This type of tax takes a higher percentage of a *lower*-income individual's income than of a higher-income individual's income.

ANSWER: **regressive** tax

[10] This specific type of sales tax is commonly applied to goods that are deemed harmful to society such as alcohol or tobacco. These taxes are usually levied on the producer, who then passes the cost onto the consumer.

ANSWER: **excise** tax [accept **sin** tax]

<Economics — Shi> [Edited]

6. Preceding this battle, one commander pretended to conjure up magical southeastern winds; in reality, he had predicted the winds with astronomical observation. For 10 points each:

[10] Name this battle in which a fake surrender baited Cáo Cāo's chain-linked fleet into the fire ship trap set by Liú Bèi and Sūn Quán.

ANSWER: Battle of **Red Cliffs** [or **Chìbì** zhī zhàn]

[10] Despite occurring over a decade before the formal start of this period, the Battle of Red Cliffs is one of the climaxes in this period's "Romance," which chronicles the struggle between the Wei, Shu, and Wu.

ANSWER: **Three Kingdoms** [or **Sānguó**; accept *Romance of the **Three Kingdoms*** or **Sānguó Yǎnyì**]

[10] Zhū Yuánzhāng reused the fire ship strategy at the Battle of Lake Póyáng to destroy the fleet of Chén Yǒuliàng, uniting China to form this dynasty. The Yǒnglè Emperor of this dynasty sent Zhèng Hé on seven voyages.

ANSWER: **Míng** Dynasty [or **Míng** cháo or Dà **Míng** Dì Guó]

<Asian History — Iyer> [Ed. Ma]

7. It's not safe to be Gloucester (GLOSS-ter) in a Shakespeare play. For 10 points each:

[10] The Duke of Somerset (SUM-er-set) and the Duke of Suffolk (SUFF-ik) plot to kill Humphrey, the Duke of Gloucester, in the second of the three Shakespeare histories titled after this king.

ANSWER: **Henry VI** [prompt on **Henry**]

[10] This Duke of Gloucester is “determined to prove a villain” and murders his brothers to become king in his own Shakespeare history. This character dies in battle after shouting “my kingdom for a horse!”

ANSWER: **Richard**, Duke of Gloucester [or **Richard III**]

[10] Cornwall shouts “out, vile jelly!” as he gouges out the Earl of Gloucester’s eyes in this Shakespeare tragedy about an elderly king who divides his kingdom among his daughters Goneril, Regan, and Cordelia.

ANSWER: **King Lear**

<Drama — French> [Edited]

8. For 10 points each, answer the following about the theoretical “island of stability:”

[10] Elements in the island of stability would have a relatively high value for this quantity. This quantity gives the amount of time it takes for half of a radioactive sample to decay.

ANSWER: **half-life** [or ***t* sub one-half**]

[10] The island of stability was initially conjectured to be around flerovium, which was synthesized at this country’s Joint Institute for Nuclear Research. The periodic table was invented by a scientist from this country.

ANSWER: **Russia** [or **Russian** Federation or **Rossiya**]

[10] The island of stability may be around the atomic numbers 114, 122, 124, or 164 because they are this kind of number. If the number of protons or neutrons in a nucleus is this type of number, then the protons or neutrons are arranged into a complete shell in the nucleus.

ANSWER: **magic** numbers [or **magic** nuclei; accept doubly **magic** nuclei]

<Chemistry — Gurazada> [Ed. French]

9. A semi-mythical one of these animals in Edinburgh named Greyfriars Bobby waited 14 years on his master’s grave. For 10 points each:

[10] Name this kind of animal. An archetypically loyal one of these animals was Argos, who recognized his master Odysseus when he returned to Ithaca despite his disguise of a beggar. Just afterward, Argos died.

ANSWER: **dogs** [or **dugs** or **skýlos**; accept **doggos**; prompt on **canines**]

[10] This Akita dog waited at Shibuya Station in Tokyo every day for ten years for his master, Hidesaburo Ueno (ooh-ey-no), who had died at work. A bronze statue of this dog now stands at Shibuya Station in memory.

ANSWER: **Hachiko**

[10] In a novel by this author, the dog Buck is stolen and sold as a sled dog, but then rescued by the prospector John Thornton, to whom he becomes fiercely loyal. When Thornton is killed, Buck answers a “call” that titles that book by this author.

ANSWER: Jack **London**

<Mixed/Other — Gray> [Edited]

10. In this film, a fake bloody tissue is used to trick a woman into thinking her housekeeper has tuberculosis. For 10 points each:

[10] Name this 2019 South Korean film directed by Bong Joon-ho about the poor Kim family's infiltration of the rich Park family.

ANSWER: **Parasite**

[10] *Parasite* is the first South Korean film to win the Palme d'Or ("palm DOOR"), the highest prize awarded by this French film festival.

ANSWER: **Cannes** Film Festival [or Festival de **Cannes**]

[10] Bong's post-apocalyptic film *Snowpiercer* is set on one of these vehicles with different compartments for the rich and poor. Bong's countryman Yeon Sang-ho is best known for a film titled [one of these vehicles] *to Busan*.

ANSWER: **train**

<Film — Ma> [Edited]

11. David Fischer's book *Albion's Seed* traces cultural norms in this region to the Scotch-Irish immigrants who were prominent early settlers of it. For 10 points each:

[10] Name this region in the eastern United States. Areas like central Pennsylvania, West Virginia, and eastern Kentucky fall within this region, which is centered around and named after a mountain range.

ANSWER: **Appalachia** [accept **Appalachian** Mountains]

[10] This portion of the Appalachians is a relatively narrow part on their eastern side. This subrange contains North Carolina's Mount Mitchell in its Black Mountains, as well as the Great Smoky Mountains.

ANSWER: **Blue Ridge** Mountains

[10] This pass, one of the only passageways through the southern central Appalachians, was most famously blazed by Daniel Boone. This pass is near the boundary of Virginia, Kentucky, and Tennessee.

ANSWER: **Cumberland** Gap

<Geography — Gray> [Edited]

12. The largest Protestant denomination in the United States, a "Convention" named after this practice, holds that it can only be performed on adult believers by immersion. For 10 points each:

[10] Name this sacrament, which is usually performed by sprinkling water on the heads of infants. This sacrament was performed on Jesus by his cousin John.

ANSWER: **baptism** [accept word forms]

[10] The Southern Baptist Convention is part of this larger movement that emphasizes personal belief. This transdenominational movement was advocated for by the Great Awakenings and is contrasted with mainline Protestantism.

ANSWER: **evangelicalism** [or **evangelical** Christianity or **evangelical** Protestantism]

[10] Baptists do not practice this other sacrament, which is replaced by believer's baptism. In Catholicism, this sacrament is usually the last step of initiation into the Church.

ANSWER: **confirmation**

<Religion — Gray> [Edited]

13. One character in this novel divides people into cretins, fools, and morons, as well as lunatics, who all inevitably mention the Templars. For 10 points each:

[10] Name this novel, in which Diotallevi, Jacopo Belbo, and Casaubon invent a “Plan” connecting the occult and conspiracy theories found in books published by Manutius.

ANSWER: ***Foucault’s Pendulum*** [or ***Il pendolo di Foucault***]

[10] The author of *Foucault’s Pendulum*, Umberto Eco, also wrote this murder mystery in which William of Baskerville visits a monastery. In this novel, the librarian Jorge of Burgos kills himself by swallowing a poisoned second volume of Aristotle’s *Poetics*.

ANSWER: ***The Name of the Rose*** [or ***Il nome della rosa***]

[10] The character William of Baskerville is an extended reference to this fictional detective, who appears in stories like “The Hound of the Baskervilles” and “A Study in Scarlet” by Sir Arthur Conan Doyle.

ANSWER: Sherlock **Holmes** [or **Sherlock**]

<Long Fiction — Gray> [Edited]

14. According to this equation, Boltzmann’s constant times the critical temperature equals eight over twenty-seven times the ratio of two parameters. For 10 points each:

[10] Name this equation. This equation adjusts pressure using the parameter *a* to account for intermolecular forces.

ANSWER: **van der Waals** equation [or **van der Waals** equation of state]

[10] The van der Waals parameter *b*, on the other hand, adjusts this quantity. In the quasistatic approximation, the negative of the product of pressure and the *change* in this quantity is equal to compression work.

ANSWER: **volume** [prompt on *V*]

[10] The Maxwell construction can be used to predict the locations of these phenomena in substances described by the van der Waals equation. These physical phenomena, in which matter abruptly changes from one state to another, are exemplified by melting and boiling.

ANSWER: **phase transitions** [or **phase changes** or **phase transformations**]

<Physics — Gurazada> [Edited]

15. Isidora Ibárruri (ee-BAH-roo-ree) coined the slogan “¡No pasarán!” (no pa-sa-RAHN) while in this city. For 10 points each:

[10] Name this city whose nationalist sympathizers were called the “Fifth Column” by Emilio Mola. The National Defence Council was established in this city after the deposition of Juan Negrín.

ANSWER: **Madrid**

[10] The fall of Madrid led to the end of this war between Nationalists and Republicans. Francisco Franco rose to the position of *generalissimo* after this war.

ANSWER: **Spanish Civil War**

[10] This Nationalist political party of Francisco Franco was consolidated with the JONS party to consolidate Franco’s influence. Jose Primo de Rivera once led this party.

ANSWER: **Falange** (fa-LON-hay) [or **FET** or **Falange** Española Tradicionalista]

<European History — Shahriar> [Ed. Iyer]

16. This author described a statue that is missing its “legendary head / with eyes like ripening fruit” in his poem “Archaic Torso of Apollo.” For 10 points each:

[10] Name this poet who asked, “Who, if I cried out, would hear me among the Angelic / Orders?” in the first of his ten *Duino Elegies*.

ANSWER: Rainer Maria **Rilke** (RILL-kuh)

[10] This poem by Rilke describes “a ritual dance around a center in which a mighty will stands paralyzed.” The title animal of this poem “paces in cramped circles, over and over” while trapped behind “a thousand bars.”

ANSWER: “The **Panther**” [or “Der **Panther**”]

[10] Rilke wrote in this language. Other poets who wrote in this language include Heinrich Heine (HY-nuh) and Johann Wolfgang von Goethe (GUR-tuh).

ANSWER: **German** [or **Deutsch**]

<Poetry — Venkateswaran> [Edited]

17. The Christian apologist Julius Firmicus Maternus believed that this deity was a projection of pagans’ impious desire to commit infidelities. For 10 points each:

[10] Name this king of Olympus whose frequent affairs with nymphs and mortals often drew the wrath of his wife, Hera.

ANSWER: **Zeus** [accept **Jupiter**]

[10] Another Christian, Lactantius, suggested that Zeus’ abduction of Ganymede in the form of an eagle actually referred to an abduction by one of these military forces, which carried eagle standards called *aquilae*.

ANSWER: Roman **legions** [or **legiones**]

[10] This medieval Christian wrote that the Norse deities were actually mortal survivors of the sack of Troy in the prologue to the *Prose Edda*, which this writer compiled.

ANSWER: **Snorri** Sturluson [or **Sturluson**]

<Mythology — French> [Edited]

18. One piano sonata by this composer begins with a sustained G major chord. For 10 points each:

[10] Name this composer of the “Fantasy” piano sonata, the eighteenth of his twenty-one piano sonatas. He also composed *Six Moments Musicaux* (moh-MAWN myoo-zee-KOH) and the *Wanderer Fantasy*.

ANSWER: Franz **Schubert** [or Franz Peter **Schubert**]

[10] Schubert’s Piano Sonata No. 15 and his Symphony No. 8 both share this characteristic, which is also possessed by Mozart’s *Requiem*. A description is fine.

ANSWER: **unfinished** [or **incomplete** or **unvollendete**; accept any answer indicating the pieces are incomplete]

[10] Including the unfinished symphony, Schubert composed this many symphonies. This number of symphonies is “cursed” because Dvorak, Mahler, and Beethoven all composed this many symphonies before dying.

ANSWER: **nine**

<Classical Music — Gurazada> [Edited]

19. The sizes of components of these organelles are often measured in Svedberg units. For 10 points each:
[10] Name these organelles, which contain A, P, and E sites. They are assembled in the nucleolus and can be either free or bound.

ANSWER: **ribosomes**

[10] After an mRNA is produced from DNA through transcription, a ribosome "reads" it and pairs it to complementary tRNAs to produce a protein in this process.

ANSWER: **translation**

[10] Ribosomes can be isolated by placing lysed cells in a gradient of sucrose and performing this analytical process. This analytical process separates a sample into a low-density supernatant and a high-density pellet.

ANSWER: **centrifugation** [or **ultracentrifugation**; accept sucrose gradient **centrifugation** or sucrose gradient **ultracentrifugation** or **centrifuge** or **ultracentrifuge**]

<Biology — Schwartz/Gurazada> [Ed. Gurazada]

20. This bill was pushed for by the "Terrible Twins," David Lloyd George and Winston Churchill. For 10 points each:

[10] Name this bill that introduced taxes on land and incomes in order to use the wealthy to fund social welfare programs. This budget was not passed for over a year until the Parliament Act of 1911.

ANSWER: **People's** Budget [or **1909-1910** budget]

[10] The Liberal Party pushed for the People's Budget in response to the growing electoral threat of this social democratic party that grew out of the British trade union movement.

ANSWER: **Labour** Party

[10] This upper house of Parliament stalled the People's Budget for a year, which led to this house losing most of its veto power in the Parliament Act of 1911. This house represents the nobility, unlike the House of Commons.

ANSWER: House of **Lords** [or House of **Peers** or The Right Honourable the **Lords** Spiritual and Temporal of the United Kingdom of Great Britain and Northern Ireland in Parliament assembled]

<British/Commonwealth History — Shahriar> [Ed. Athreya]