

CALISTO 2

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Packet 3

1. In this play, a character gestures to the universe and asks, “This one is enough for you?” when another character refuses to hear about his dream. A character in this play struggles to recall the word “damned” when discussing the two thieves crucified alongside Jesus. After eating their last carrot, two characters in this play are left with nothing but turnips and radishes. This play opens with a character remarking “Nothing to be done” as he struggles to take off his (*) boot. In this play, a slave gives a nonsensical monologue that ends when his bowler hat is stolen by Pozzo, Vladimir, and Estragon. For 10 points, name this play by Samuel Beckett in which the title character never arrives.

ANSWER: Waiting for Godot [or En attendant Godot]
<Drama — Sheffield> [Edited]

1. The speed of these waves equals the square root of the ratio between the medium’s modulus of rigidity and its density. For 10 points each:

[H] Name these transverse waves whose “shadow zone” results from their inability to pass through liquid.

ANSWER: S waves [or secondary waves or shear waves; prompt on seismic waves or body waves; do NOT accept or prompt on “surface waves”]

[E] The S-wave shadow zone reveals the liquid nature of this layer of the Earth. According to dynamo theory, Earth’s magnetic field results from the motion of this layer below the mantle.

ANSWER: outer core [prompt on core]

[M] The difference in arrival time between S waves and P waves allows seismologists to triangulate this location, the point on Earth’s surface that lies directly above where an earthquake originates.

ANSWER: epicenter [or epicentre or epicentrum; do NOT accept or prompt on “focus” or “hypocenter”]
<Earth, Ocean, and Atmospheric Sciences — Yin> [Edited]

2. In 2019, a controversy took place on this website when the user Fram was banned without the input of this website’s Arbitration Committee. New users on this website may be told to visit the Teahouse to ask for help. “Five Pillars” followed by users of this website include civility towards others and a lack of firm rules.

Content published on this website must hold to a (*) neutral point of view and meet a notability standard. Very short pages on this website are known as stubs. On this website, disambiguation pages may help users distinguish between pages with similar titles. For 10 points, name this “Free Encyclopedia that anyone can edit.”

ANSWER: Wikipedia [or wikipedia.org]
<Other — Miles> [Edited]

2. In this novel, a group of characters “with their tongues cocked and loaded, the only real weapon left to weak folks,” is described as swaying like palm trees. For 10 points each:

[M] Name this novel whose protagonist marries twice before finding love with the much younger Tea Cake. This novel is framed as a conversation between Janie Crawford and her friend Pheoby in the town of Eatonville.

ANSWER: ***Their Eyes Were Watching God*** (by Zora Neale Hurston)

[H] Janie shoots Tea Cake after he is injured by one of these animals during a flood. In *To Kill a Mockingbird*, Atticus Finch shoots one of these animals named Tim Johnson in the street.

ANSWER: a **rabid dog** [accept descriptions of a **dog** with **rabies**; prompt on **dog** by asking “with what condition?”]

[E] During one of these events after Tea Cake’s death, the prosecutor Mr. Prescott tells Sop-de-Bottom to “shut your mouth up.” Atticus Finch fails to convince the jury to acquit Tom Robinson during one of these events.

ANSWER: **trials** [accept court **cases**; accept specific kinds of **trials** like **murder trials** or **rape trials**]

<Long Fiction — Lin> [Edited]

3. **This architect designed a Van Gogh-inspired tower that rises out of a cylindrical glass building in Arles, France. A music venue in Millennium Park designed by this architect incorporates a huge metal trellis intended to support its soundsystem. This architect designed one building to resemble a ship to match its port city location and adorned it with reflective titanium fish scales. This architect of the (*) Pritzker Pavilion employed curved sheets of metal in many of his designs, including for the Walt Disney Concert Hall in Los Angeles.** For 10 points, name this Canadian-American architect of the Guggenheim Museum Bilbao.

ANSWER: Frank **Gehry** [or Frank Owen **Gehry** or Frank Owen **Goldberg**]

<Architecture — Miles> [Edited]

3. This politician conceded the nomination but stood by his call for a national health insurance policy in his “Dream Shall Never Die” speech at the 1980 Democratic National Convention. For 10 points each:

[H] Name this Massachusetts senator who lost to Jimmy Carter in the 1980 Democratic primary. Mary Jo Kopechne died in a car accident while this politician was driving in a scandal called the Chappaquiddick Incident.

ANSWER: **Ted Kennedy** [or **Edward Moore Kennedy**; prompt on **Kennedy**]

[M] Due to the Chappaquiddick incident, Ted Kennedy declined an offer to be this candidate’s running mate. This politician was soundly defeated by Richard Nixon in the 1972 presidential election.

ANSWER: George **McGovern** [or George Stanley **McGovern**]

[E] Ted Kennedy’s campaign against Carter struggled to gain attention from the media because of heavy coverage of a hostage crisis in this country. Ayatollah Khomeini overthrew this country’s Shah in its 1979 Islamic Revolution.

ANSWER: **Iran** [or Islamic Republic of **Iran**]

<American History — Athreya> [Ed. Delot-Vilain]

4. **One leader in this conflict adopted the symbol of the sun in splendor after seeing an atmospheric phenomenon called a sun dog at the Battle of Mortimer’s Cross. According to a report by Prospero di Camulio, another leader in this conflict sang under a tree for the duration of this conflict’s Second Battle of St. Albans. (*) Anne Neville’s successive marriages to combatants on both sides of this conflict corresponded with her father Warwick’s shifting allegiances. This conflict ended with the battle of Bosworth Field, where Henry Tudor defeated Richard III.** For 10 points, name this series of 15th century conflicts between York and Lancaster named for a type of flower.

ANSWER: Wars of the **Roses**

<European History — Sheffield> [Edited]

4. This deity has ten arms in her most powerful *Maha* form. For 10 points each:

[H] Name this goddess who is summoned to a battlefield through the frown lines on another deity's forehead. This goddess of destruction then goes on to slay the demon Raktabija.

ANSWER: **Kali** [or **Kalika**; accept **Mahakali**]

[E] Kali is often depicted standing on top of this god. Since Kali is an aspect of Parvati, her consort is this Hindu destroyer god who composes the Trimurti along with Brahma and Vishnu.

ANSWER: **Shiva** [or **Shiv**]

[M] After drinking Raktabija's blood, Kali goes on a rampage and performs this action over the dead bodies of her victims. Shiva performs the *tandava* when he takes the form of Nataraja, the lord of this action.

ANSWER: **dance** [accept word forms such as **dancing** or Lord of the **Dance**]

<Mythology — An> [Ed. Venkateswaran]

5. **The observation that the size of this thing and an organism's complexity are independent is known as the C-value paradox. Scaffolds and contigs can be reordered to form these things in a process named for their "assembly." FASTQ ("fast-Q") files can be used to store sections of these entities, which can be searched using the BLAST ("blast") algorithm. The HGP was a 13-year long international project which successfully mapped out the entirety of this thing in (*) humans.** Heritability is a measure of the extent to which differences in this thing can explain variability in its counterpart, phenotype. For 10 points, name this thing which contains all of the genetic information in an organism.

ANSWER: **genome** [accept **genotype**; prompt on **genes** or **sequences** by asking "what larger entities are they a part of?"]

<Biology — Schwartz> [Edited]

5. The "New" way of this dance style includes sharper movements and tutting, while the "Old" way emphasizes fluid movement. For 10 points each:

[H] Name this style in which dancers strike poses in imitation of a photoshoot. This style was featured in a Madonna song of the same name, in which she tells the listener to "strike a pose" and "let your body move to the music."

ANSWER: **Vogue** [or **voguing**]

[M] Voguing originated from the ballroom scene of this neighborhood. During the swing era, tap dancers like Bill "Bojangles" Robinson performed in this neighborhood's Apollo Theater.

ANSWER: **Harlem**

[E] Vogue battles are often featured at competitions of this performance art. "Queens" of this art form often use elaborate costumes and makeup to perform femininity.

ANSWER: **drag**

<Misc. Art — An> [Edited]

6. **One of these creatures is slain while crawling over a pit to get to a stream. After Hymir refuses to provide bait for one of these creatures, a god kills Hymir's largest ox and uses its head to hunt for one of these creatures. The spring Hvergelmir houses one of these creatures named (*) Nidhogg who gnaws on the roots of Yggdrasil.** After stealing Andvari's ring, Fafnir's greed causes him to transform into one of these creatures. During Ragnarök, Thor will kill and be killed by one of these creatures. For 10 points, Jormungandr is known as the "Midgard" type of what creature?

ANSWER: **serpents** [or **dragons** or **snakes** or **ormr**; accept **Midgardsormr**] (In Norse mythology serpents and dragons are the same type of creature.)

<Mythology — An> [Edited]

6. Striking sandstone formations like the Kissing Camels and the Cathedral Spires are in this city's Garden of the Gods park, which may have been named by Helen Hunt Jackson. For 10 points each:

[H] Name this city. The two US Olympic Training Centers are in New York's Lake Placid and this city, which also contains the headquarters of the US Olympic Committee and USA Swimming.

ANSWER: **Colorado Springs**

[M] This tallest mountain in the southern Front Range is just west of Colorado Springs. Colorado Gold Rush participants used the slogan "[this mountain] or bust," despite no gold having been found near this mountain.

ANSWER: **Pikes Peak**

[E] Colorado Springs is the second-most populous city in Colorado, after this city. This "Mile High City", which is about 70 miles north of Colorado Springs, is Colorado's capital.

ANSWER: **Denver**

<Geography — Gray> [Edited]

7. **The French song "L'homme armé" ("lum ar-MAY") has been used as a *cantus firmus* for many pieces of this type, including ones by Guillaume Dufay ("ghee-YOWM doo-FAY") and Josquin des Prez ("joe-CAWN day-PRAY"). A "brief" one of these works composed in 1733 for the Elector of Saxony was later reused by its composer for one with a (*) "Dona nobis pacem" movement. Legendarily, a ban on polyphonic music was prevented after Palestrina composed one of these works for Pope Marcellus II. J. S. Bach's only complete work of this type is in B minor. Sections of these works include "Kyrie" ("KEE-ree-ay"), "Gloria," and "Agnus Dei." For 10 points, a requiem is an example of what type of work, which sets to music the liturgy of the Eucharist?**

ANSWER: **Mass** [or *missa*; do NOT accept or prompt on "requiem"]

<Classical Music — French> [Edited]

7. For 10 points each, answer the following about the molecular vehicles called nanocars:

[H] James Tour's original nanocar had "wheels" made of this molecule with formula C_{60} ("C-sixty"). Kroto et al. discovered this molecule in soot left over from vaporized graphite.

ANSWER: **buckminsterfullerene** [or **buckyball**; prompt on **fullerene**]

[M] Nanocars are powered by electric currents from a type of "scanning microscope" named for this quantum phenomenon, in which a particle travels through a classically forbidden potential energy barrier.

ANSWER: quantum **tunneling** [accept scanning **tunneling** microscope]

[E] Nanocars travel fastest on surfaces made of this precious transition metal. This yellow metal symbolized Au is found directly below silver on the periodic table.

ANSWER: **gold**

<Chemistry — Yin> [Ed. Schwartz]

8. **This author created a character with a half-red, half-black face who tars and feathers Major Molineux. Another character created by this author meets a man whose staff resembles a "great black snake." The protagonist of a story by this author feels "a loathful brotherhood" with a group that includes the catechism teacher (*) Goody Cloyse. In that story, the protagonist finds a pink ribbon belonging to his wife Faith while walking through a forest to a Satanic meeting. In a novel by this author, a woman has to wear a red "A" after committing adultery with Arthur Dimmesdale. For 10 points, name this author of "Young Goodman Brown" and *The Scarlet Letter*.**

ANSWER: Nathaniel **Hawthorne** (The first line is from the short story "My Kinsman, Major Molineux")

<Other Literature — Lin> [Edited]

8. Soumay Tcheng was the only female delegate at this event. For 10 points each:

[M] Name this conference at which Tcheng and her fellow delegates unsuccessfully sought to regain the city of Qingdao (“CHING-dao”) for China. China joined the League of Nations when it was established after this event.

ANSWER: **Paris Peace Conference** [or **Versailles Conference** or **Conference of Versailles**]

[E] The Paris Peace Conference ended this war, during which Japan captured Qingdao from the German Empire. During this war, Chinese labor battalions assisted the Allies in the trenches of the Western Front.

ANSWER: **World War I** [or **First World War** or **Great War**]

[H] Anger over unsatisfactory outcomes for China at the peace talks led to the birth of this student-led protest movement. China refused to sign the Treaty of Versailles due to the influence of this movement, which is named for the date on which protests started.

ANSWER: **May 4th** movement [or **New Culture Movement** or **Wusi**]

<World History — Prabhakar> [Edited]

9. **One axiomatization of these objects includes the axiom of regularity and the axiom of extensionality. The supremum and infimum can be defined for these objects when they are equipped with a partial order. The Cartesian product produces ordered pairs by taking two of these objects as its arguments. The predicate is written on the right side of a vertical bar or colon in the (*) “builder notation” for these objects. The size of one of these objects is called its cardinality. The union and intersection operators on these objects can be visualized with Venn diagrams.** For 10 points, name these collections of elements.

ANSWER: **sets** [accept **posets** or partially-ordered **sets**]

<Math — Bowman> [Edited]

9. After his wife accuses him of not caring about her nerves, this character responds, “They are my old friends. I have heard you mention them with consideration these last twenty years at least.” For 10 points each:

[H] Name this character. After his wife threatens to disown their daughter if she doesn’t marry the pompous clergyman who proposed to her, this character quips that he would disown her if she *does* marry him.

ANSWER: **Mr. Bennet** [or **Elizabeth’s father** or any answer indicating **the male parent of the Bennet family**; prompt on **Bennet**]

[M] In addition to rejecting Mr. Collins’ proposal, Elizabeth Bennet also rejects this character’s first proposal, though she accepts his second proposal at the novel’s end. In their first interaction, this character describes Elizabeth as “tolerable; but not handsome enough to tempt me.”

ANSWER: Mr. **Darcy** [or **Fitzwilliam** Darcy]

[E] Elizabeth Bennet agrees to marry Mr. Darcy at the end of this novel by Jane Austen.

ANSWER: ***Pride and Prejudice***

<Long Fiction — Tagtmeier> [Ed. French]

10. **The emperor Galba was murdered by Otho at this location next to a pool called Lake Curtius. The corpses of executed criminals were sometimes cast down the Gemonian Stairs leading to this location. The tribune Gaius Licinius was the first to symbolically “turn his back” to face this location while standing on its *rostra*. Septimius Severus built a (*) triumphal arch at one end of this location, near the base of a hill. Mark Antony gave his funeral oration for Caesar at this location, which contained various stands and shops frequented by women and slaves.** For 10 points, name this outdoor space that was the center of public life in Rome.

ANSWER: Roman **forum** [or **Forum** Romanum; accept **Forum** Magnum; prompt on **Rome**]

<European History — Ashbrook> [Edited]

10. For 10 points each, answer the following about monetary policy:

[M] This organization uses monetary policy, like open market operations and the discount rate, to control the U.S. economy. The current chair of this organization is Jerome Powell.

ANSWER: **Federal Reserve** [or the **Fed**; accept **Federal Reserve** System or **Federal Reserve** Bank]

[H] This term refers to monetary policy aimed at increasing aggregate demand. To combat a recessionary gap, the Fed may use this type of monetary policy, such as by buying bonds or lowering the reserve ratio.

ANSWER: **expansionary** monetary policy

[E] Expansionary monetary policy results in a decrease in these rates, increasing propensity to consume and decreasing propensity to save. These rates determine the amount of additional payment a borrower owes to a lender.

ANSWER: **interest** rates [accept nominal **interest** rates or real **interest** rates]

<Economics — Sheffield>

11. **One work by this thinker begins by describing how mankind disrupts the beauty of nature by cross-breeding fruit trees. This thinker argued that citizens should be required to affirm only general religious tenets as part of a civil religion. This thinker defined self-preservation and the desire for others' approval as two forms of (*) "self love" called *amour de soi* ("ah-MOOR de SWAH") and *amour propre* ("ah-MOOR PROP"). This thinker outlined the ideal education of the title boy in *Emile*. This thinker wrote that in a perfect society, citizens' self-interests would combine to form the "general will." For 10 points, name this philosopher who wrote, "Man is born free, but is everywhere in chains" in *The Social Contract*.**

ANSWER: Jean-Jacques **Rousseau**

<Philosophy — Tagtmeier> [Ed. Gemmill-Nexon]

11. The general Siyaj K'ak' overthrew the king of this city in 378 CE and replaced him with a ruler from Teotihuacan. For 10 points each:

[H] Name this Mayan city in modern-day Guatemala that was home to the Lost World complex. This city fought a series of wars with the rival city of Calakmul.

ANSWER: **Tikal**

[E] Tikal's Lost World Complex was centered on one of these structures. Teotihuacan was home to two of these structures named for the Sun and Moon, and the ancient Egyptians built a "Great" one of these structures at Giza.

ANSWER: **pyramids**

[M] The Mayans also constructed a pyramid named El Castillo, or the Temple of Kukulcán, in this city. This city in the Yucatán peninsula also contained the Great Ball Court.

ANSWER: **Chichen Itza**

<World History — Prabhakar> [Edited]

12. **In a poem in this language, a group of thirty birds realizes that the great bird they are looking for is actually themselves. Another poem in this language begins, "Listen to this reed how it complains: / it is telling a tale of separations." A poem based on a poem in this language declares, "Oh, Wilderness were Paradise enow!" That poem was adapted from this language by (*) Edward FitzGerald and also describes "A Jug of Wine, a Loaf of Bread— and Thou." Another poet used this language to write the *Masnavi*, which was inspired by Sufism. For 10 points, Omar Khayyam and Rumi wrote in what language spoken in Iran?**

ANSWER: **Persian** [or **Farsi**] (The first poem is *The Conference of the Birds* by Farid ud-Din Attar.)

<Poetry — French> [Edited]

12. Victor Vasarely is considered the leader of an art movement that focused on creating these things, which he used in works such as *Zebra*. For 10 points each:

[H] Name these things, one of which was depicted by Bridget Riley in *Movement in Squares*. Another artist's painting *Waterfall* was inspired by another one of these things, the Penrose steps.

ANSWER: **optical illusions** [or **visual illusions**; prompt on **illusions**]

[E] This artist of *Waterfall* depicted impossible staircases in works such as *Ascending and Descending* and *Relativity*. This Dutch artist's many tessellations include one in which a school of fish turns into a flock of birds.

ANSWER: M. C. **Escher** [or Maurits Cornelis **Escher**]

[M] Optical illusions may use this technique, which creates the illusion of depth in a two-dimensional painting. In works that use the linear form of this technique, parallel lines appear to converge at the vanishing point.

ANSWER: **perspective** [accept linear **perspective**]

<Painting — An> [Edited]

13. **The dichotomy between early and late binding applies to when these things are looked up. Algebraic systems of these things use “products” and “sums” of them. C++ templates act polymorphically across these things, as do Java generics. “Stronger” systems of these things impose more compiler checks. Autoboxing, coercion, and (*) casting are ways to convert between these things. Natively-supported “primitive” examples of these things contrast with classes, which are user-defined examples of these things. Common examples of these things include booleans, strings, and integers.** For 10 points, name these categories for computer data.

ANSWER: **types** [or data **types**; accept algebraic **types** or **type** systems or generic **types** or primitive **types** or **classes** before mention]

<Computer Science — Gray> [Edited]

13. In a novel titled for this author, Geoffrey Braithwaite searches for the stuffed bird that inspired this author to write the story “A Simple Heart.” For 10 points each:

[H] Name this subject of a metafictional novel by Julian Barnes titled for *[this author's] Parrot*. This author described a “legion of interpreters” with parrots tattooed on their chests in *Salammbô*.

ANSWER: Gustave **Flaubert** [accept **Flaubert's** Parrot]

[M] “The Revival,” a story from Barnes's collection *The Lemon Table*, describes a tryst aboard a train car between this author and a younger actress. Gustave Flaubert was good friends with this Russian author of *Fathers and Sons*.

ANSWER: Ivan **Turgenev** [or Ivan Sergeyevich **Turgenev**]

[E] In 2005, Julian Barnes wrote *Arthur & George*, which tells the story of how this author attempted to overturn the half-Indian George Edalji's false conviction. This author created the detective Sherlock Holmes.

ANSWER: Sir Arthur Conan **Doyle**

<Other Literature — Delot-Vilain> [Edited]

14. **It's not Methodism, but four central tenets of this denomination are listed in its Chicago-Lambeth Quadrilateral. This denomination's Thirty-nine Articles were argued to be compatible with Catholicism in a tract by John Henry Newman, who later converted from this denomination to Catholicism. In this denomination, the canonical hours are called the Daily Office. The phrase (*) “ashes to ashes, dust to dust” originates from this denomination's Book of Common Prayer. This denomination's communion includes the Episcopal Church, and its primate is the Archbishop of Canterbury.** For 10 points, name this denomination which broke from Rome under the leadership of Henry VIII.

ANSWER: Church of **England** [or **Anglican** Church or **Anglicanism** or **Anglican** Communion; accept **Episcopal** Church or **Episcopalianism** before “Episcopal” is read]

<Religion — French> [Edited]

14. Markov models can predict the manner in which this process occurs within habitat patches. For 10 points each:
[M] Name this process which describes how an ecosystem's species composition and structure changes over time. The secondary form of this process begins when pioneer species colonizes an area affected by a disturbance such as a volcanic eruption or wildfire.

ANSWER: ecological **succession** [or primary **succession** or secondary **succession**]

[E] Primary succession occurs when a barren location becomes habitable, such as by new ground being exposed due to the retreat of these bodies. These slow moving bodies of ice have been losing their mass through calving more frequently due to global warming.

ANSWER: **glaciers**

[H] Stabilization of an ecosystem after succession coincides with a relatively stable measure of this value, which counts the number of species in an ecosystem. This quantity and evenness are used to calculate the Shannon diversity index.

ANSWER: **richness** [prompt on **biodiversity**]

<Biology — Athreya> [Ed. Schwartz]

15. **A consort from this dynasty claimed that she only needed an iron whip, an iron hammer, and a dagger to subdue a horse. The Silla kingdom sought this dynasty's help in defeating Goguryeo, ending the Three Kingdoms of Korea period. A consort from this dynasty, (*) Yang Guifei, was put to death during a rebellion led by her adopted son. This dynasty was interrupted by the reign of the female emperor Wu Zetian. An Lushan led a rebellion during this dynasty, which succeeded the Sui. For 10 points, name this Chinese dynasty that ruled from 618 to 907 AD and saw the flourishing of poets like Du Fu and Li Bai.**

ANSWER: **Tang** dynasty

<World History — An> [Edited]

15. A movement depicting these animals opens with Group II ("two") woodwinds imitating these animals before Group III ("three") enters with the melody. For 10 points each:

[H] Name these animals depicted in the finale of Einojuhani Rautavaara's *Cantus Arcticus*. The second movement English horn solo of another composer's *Lemminkäinen Suite* depicts one of these animals in the underworld.

ANSWER: **swans** [or **joutsen**; accept whooper **swans** or "**Swans** Migrating" or *The **Swan** of Tuonela*; prompt on **birds**; do NOT accept or prompt on other types of birds]

[M] This countryman of Rautavaara frequently drew inspiration from the *Kalevala* in composing works like *Tapiola*, *Kullervo*, and the *Lemminkäinen Suite*.

ANSWER: Jean **Sibelius**

[E] Both Rautavaara and Sibelius are composers from this country. This country offers one of the most robust music education programs in the world, including the Sibelius Academy, part of its University of the Arts Helsinki.

ANSWER: **Finland** [or Republic of **Finland** or Republiken **Finland**; accept **Suomen** tasavalta or **Suomi**]

<Classical Music — An> [Ed. Ma]

16. **Echoing a similar scene in *The Brothers Karamazov*, a character in this novel recounts feeding a dog steak embedded with sharp metal. That character from this novel later avenges a soldier who died after contracting gangrene from wearing wooden clogs named Roland Weary. This novel ends with a bird chirping "Poo-tee-weet" and repeatedly juxtaposes images of death with the phrase (*) "so it goes." The protagonist of this novel becomes trapped in an alien zoo after he is kidnapped by Tralfamadorians. In this novel, the protagonist witnesses a firing squad execute Edgar Derby after Dresden is firebombed. For 10 points, name this novel in which the World War II veteran Billy Pilgrim travels through time, written by Kurt Vonnegut.**

ANSWER: ***Slaughterhouse-Five*** [or ***Slaughterhouse-Five***, or *the Children's Crusade: A Duty-Dance with Death*]

<Long Fiction — Lin> [Ed. Orr]

16. Lee and Yang earned the Nobel Prize in 1957 after their prediction that this force violates the conservation of parity was experimentally confirmed. For 10 points each:

[M] Name this third-strongest of the fundamental forces. The unification of this force with electromagnetism was confirmed by the discovery of W and Z bosons.

ANSWER: **weak** force

[H] This scientist proved that the weak force violates the conservation of parity in an experiment she conducted in 1956, for which she was awarded the inaugural Wolf prize.

ANSWER: Chien-Shiung **Wu**

[E] The Wu experiment was carried out by observing the beta type of this process for a neutron in a cobalt-60 atom. This process, which is when a nucleus loses energy via radiation, has a half-life of 5,730 years for carbon-14.

ANSWER: radioactive **decay** [or **radioactivity**; accept beta **decay**]

<Physics — An> [Edited]

17. **Bonds between two atoms of this element are formed during the oxidation of a certain tripeptide antioxidant from its GSH form to its GSSG form. Rieske proteins and aconitase are proteins which contain a complex in which this nonmetal is bound to iron. The enzyme PDI is used during protein folding to create (*) “bridges” between two atoms of this element. The only two amino acids that contain this element are methionine and cysteine. Analogues of hydroxides that contain this element in place of oxygen are known as thiols.** For 10 points, name this element with atomic number 16 whose compound with hydrogen smells like rotten eggs.

ANSWER: **sulfur** [accept **S**]

<Chemistry — Schwartz> [Edited]

17. A cult surrounding this deity saw seven levels of initiation for new members, corresponding to the seven known planets in the solar system. For 10 points each:

[H] Name this deity believed to be born from a rock carrying a dagger and a torch. This deity’s cult involved a “tauroctony,” or bull-sacrifice.

ANSWER: **Mithras**

[M] Mithras was derived from Mithra, a deity in Zoroastrianism who guards one of these structures named Chinvat. A Latin word for priest, *pontifex*, literally translates as “one who builds [these structures].”

ANSWER: **bridges** [accept Chinvat **bridge**]

[E] Manichaeans also imported Mithra and turned him into Mihrzad and Mihr, two of these types of beings.

Examples of these beings in Christianity include Michael and Gabriel.

ANSWER: **angel** [accept **archangel**]

<Religion — Dai> [Ed. French]

18. **This general provoked outcry from the British government after capturing and executing Alexander Arbuthnot (“ARE-buth-not”) and Robert Ambrister. This general forced the cession of 23 million acres of land in a treaty signed at a fort named for him. This general ended the Creek War by decisively defeating the Creek at the Battle of (*) Horseshoe Bend. Jean Lafitte (“LA-feet”) assisted this general during a battle which took place 18 days after the Treaty of Ghent was signed. This general, who won the Battle of New Orleans, was nicknamed “Old Hickory.”** For 10 points, name this general who defeated John Quincy Adams in 1828 to become the first Democratic president.

ANSWER: Andrew **Jackson**

<American History — Athreya> [Ed. Delot-Vilain]

18. One provision in this section allows platforms to proactively block content that might be abusive or harmful while still being legal, without fear of liability. For 10 points each:

[H] Name this U.S. Code section that provides immunity for websites from liability arising from users' posts. Criticisms of this section include that it enables hate speech or that it causes anti-conservative bias.

ANSWER: Section **230** [or Title 47 U.S. Code Section **230**; prompt on the Communications Decency Act of 1996 or the Telecommunications Act of 1996]

[E] Donald Trump filed an executive order in May 2020 trying to change Section 230 in response to this platform's marking of his "disputed claims" about mail-in voting. This platform has a 280-character limit on posts.

ANSWER: **Twitter** [or **twitter.com**]

[M] This Republican senator attacked Section 230 through a bill that would require platforms to be "politically neutral." This Missouri senator, often a critic of "Big Tech," saluted the protestors who attacked the Capitol on January 6.

ANSWER: Josh **Hawley**

<Current Events — Gray> [Edited]

19. **Members of this organization inexplicably wield guns to extort a secret from a shopkeeper in a redacted episode of the show they appear in. Butch and Cassidy are part of a squad in this organization. The boss of this organization owns an amusement park island featuring giant creatures. Chimecho and (*) Wobuffet occasionally accompany three members of this organization, which is led by Giovanni. A bumbling trio in this organization introduce themselves by saying "Prepare for trouble / And make it double" and they "blast off again" at the end of each episode. For 10 points, Jessie, James, and Meowth are part of what evil organization in the Pokemon anime?**

ANSWER: **Team Rocket** [or **Roketto-dan**]

<Pop Culture — Bowman> [Edited]

19. During one of these events, Shukumar admits to exchanging the sweater-vest that Shoba gave him for their anniversary for money and using it to get drunk. For 10 points each:

[H] Name these events which last for one hour beginning at eight P.M. in "A Temporary Matter." During one of these events, Shukumar reveals the sex of their stillborn child to Shoba.

ANSWER: power **outages** [accept synonyms like **blackouts**]

[M] "A Temporary Matter" is a story from this author's collection *Interpreter of Maladies*. Ashoke Ganguli narrowly survives a train accident in this author's novel *The Namesake*.

ANSWER: Jhumpa **Lahiri** [or Nilanjana Sudeshna **Lahiri**]

[E] In *The Namesake*, Ashoke Ganguli is an Indian immigrant to this country. The narrator of Lahiri's story "The Third and Final Continent" works at a library in M.I.T. after immigrating to this country.

ANSWER: **United States** [or **America** or **US** or **USA** or **United States** of America]

<Other Literature — Li> [Ed. Orr]

20. **In this musical, a character with an all-white costume performs a *developpé* in a "coming of age" solo and later dances a *pas de deux* ("PAH de DOO"). A song in this musical repeatedly asks questions like, "Are you tense when you sense there's a storm in the air?" Another song in this musical includes the lyric, "The street lamp dies, Another night is over / Another day is dawning." In this musical, the henchmen of (*) Macavity kidnap Old Deuteronomy, but he returns soon after when he is conjured by Mr. Mistoffelees. At the end of this musical, Grizabella ascends to the Heaviside layer after singing the song "Memory." For 10 points, name this musical about a tribe of felines.**

ANSWER: **Cats**

<Musicals — French> [Edited]

20. Valdemar Atterdag plundered the city of Visby during his war with this organization. For 10 points each:
[M] Name this trade confederation that operated trading posts called *kontors* in cities like Lübeck. This trade confederation was active in Northern Europe, especially the Baltic.

ANSWER: **Hanseatic League** [or **Hansa**]

[E] Valdemar Atterdag was the king of this country that was eventually forced to sign the Treaty of Stralsund with the Hanseatic League. Valdemar was the first king of this country to rule from its current capital of Copenhagen.

ANSWER: Kingdom of **Denmark**

[H] Valdemar earlier sold the province of Danish Estonia to this other organization. This organization had previously lost the 1242 Battle of the Ice to the forces of Novgorod under Alexander Nevsky.

ANSWER: **Teutonic Knights** [or the **Teutonic Order** or **Order of Brothers of the German House of Saint Mary in Jerusalem**; prompt on the **Livonian Order** with “what larger organization was it part of?”]

<European History — Prabhakar> [Edited]