



The Illinois Mathematics and Science Academy of Aurora, IL presents

IMSANITY 4

-ROUND 1-

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Tossups

- (1) **Jay Sherman was a film critic in this city in the television show *The Critic*. This city is the birthplace of Hank Hill. In this city, Homer Simpson chooses to drink crab juice instead of Mountain Dew while waiting for a parking officer. Residents of this city worship an unexploded nuclear bomb and tell the legend of El Chupanibre, and it is home to Panucci's Pizza and Applied Cryogenics. The Simpsons see the musical *Kickin' It* in this city, whose future(*) Madison Cube Garden houses the Harlem Globetrotters. For ten points, name this setting of Futurama in which Homer's car was booted on the plaza of the World Trade Center.**

ANSWER: New York City (accept Old New York or New New York)

- (2) **According to Theodore Shoebat, this figure was first mentioned crying for a revolution against Enlil in the epic of Atrahasis. Robert Morey considered this figure to be a "moon god". This figure made creatures from smokeless fire, including Iblis and Shaytan, called the jinn. This figure has ninety-nine(*) "most beautiful names", and the Shahadah recognizes the sovereignty of this figure. This figure took a man on the Night Journey, which included traveling to the Dome of the Rock. For ten points, name this divine being who revealed himself to the Prophet Muhammad and is worshipped in the Qu'ran.**

ANSWER: Allah

- (3) **The quantum variety of this entity is described by the Wheeler-DeWitt equation. The Hulse-Taylor binary pulsar was found releasing waves named after this force, which can be detected using instruments such as LISA or a Weber bar. The stress-energy tensor is responsible for this force in one theory, and an attempt to measure this force using a torsion balance was the(*) Cavendish experiment. According to General Relativity, this force is a result of spacetime curvature, and Newton devised an inverse-square law to measure its strength. For ten points, name this attractive fundamental force that causes objects to fall to the ground when dropped.**

ANSWER: gravity

- (4) **At this battle, the winning commander's injuries while capturing Breymann's and Balcarre's redoubts were memorialized with a statue of a boot. This battle saw the death of General Simon Fraser at the hands of Daniel Morgan's sharpshooters, and fighting at this battle took places such as Bemis Heights and Freeman's farm. The British forces under John(*) Burgoyne were defeated by Horatio Gates and Benedict Arnold at, for ten points, what 1777 battle in New York which began the Franco-American alliance and is often called the turning point of the American Revolution?**

ANSWER: Battle of Saratoga

- (5) One character in this novel wrote “A candle burned on the table; a candle burned” about a scene in which another character is embarrassed that his fiancé finds him without his collar on. That writer is later convinced that the sound of that man’s suicide was that of a watercolor crashing. In this novel, Pamphil makes wooden figurines with the same axe he uses to kill his family, and Liberius is the leader of the Forest Brotherhood. A man nicknamed “the shooter,”(*) Pasha Antipov, and his wife, Lara, continue to love each other, though the same is not true of the title character and Tonia. Yuri Andreevich is the title physician of, for ten points, what Boris Pasternak novel?

ANSWER: Doctor Zhivago

- (6) Richard Vedder and Lowell Galloway wrote a book introducing a model for this quantity that justified its classical theory. The hysteresis hypothesis describes how negative shocks influence this quantity. When this quantity is high, an economy operates below the production-possibility frontier, and a one percent increase in this quantity is related to a two to three percent drop in GDP by(*) Okun’s Law. This quantity is related to inflation on the Phillips curve and via NAIRU. This quantity comes in “cyclical”, “frictional”, and “structural” varieties. For ten points, name this economic quantity measuring joblessness.

ANSWER: unemployment

- (7) This disease can be treated by drugs that target the nonsense G542X mutation, which substitutes a stop codon for glycine. A heterozygous allele for this disease confers resistance to cholera and other diarrhea. One symptom of this disease is the congenital bilateral absence of the vas deferens, and one test for it involves pilocarpine iontophoresis. The delta F508 mutation results in a phenylalanine mutation which affects(*) chloride ion transport in this disease, which can be diagnosed with the sweat test. For ten points, name this chronic genetic disease that causes buildups of sticky mucus in the digestive tract and lungs.

ANSWER: cystic fibrosis

- (8) One character created by this author killed Ella Reinthem’s ability to love by marrying her sister, Gunhild, and another killed Irene’s living soul to create the sculpture *Resurrection Day*. This author of *John Gabriel Borkman* wrote a play in which Rita Allmers doesn’t want to share her husband’s love with anyone, including their child, *Little Eyolf*. This author of(*) *When We Dead Awaken* wrote a play in which Thea Elvsted’s “child” is a book by Eilert Lovberg, and another where Nora Helmer leaves her husband when he’s not willing to sacrifice his honor for her. For ten points, identify this author of *Hedda Gabler* and *A Doll’s House*.

ANSWER: Henrik Johan Ibsen

- (9) This artist created several engravings of General McClellan's camp on the Potomac, in addition to painting *Home, Sweet Home* and *Prisoners from the Front*. Hungry crows chase the titular creature in his *The Fox Hunt*. This artist of *Snap The Whip* painted a(*) sailboat in the right side while in the center four people are seen sailing the Gloucester. This artist of *Breezing Up* also painted a modified version which sees a black man in a rudderless boat surrounded by sharks and choppy waves. For ten points, name this American artist of *The Gulf Stream*.

ANSWER: Winslow Homer

- (10) This ruler's father was overthrown by John Hunyadi, who later employed him as an advisor. This man answered the call of Pope Pius II to crusade against the Ottomans, whose messengers he killed by nailing their turbans to their heads. He outwitted Mehmed II in the Night Attack, but he later lost the siege of Poenari Castle due to the janissaries under his brother,(*) Radu the Handsome. Ruling as Prince of Wallachia in three separate reigns, for ten points, name this ruler who got his epithet from his preferred method of killing involving wooden stakes.

ANSWER: Vlad the Impaler (or Vlad Tepes or Vlad III or Vlad Dracula, prompt on "Vlad")

- (11) This composer wrote music for a ballet set at a Thursday night "dark town ball subtitled *A Stop-Time Two Step*. Collaborations of this composer with Scott Hayden and Arthur Marshall include *Sunflower Slow Drag* and *Swipesy Cakewalk*. This man wrote an opera about Theodore Roosevelt's dinner with Booker T. Washington and another in which the title character is saved from a wasp nest by Remus. This composer of *A Guest of Honor* and(*) *Treemonisha* is best remembered for two syncopated piano pieces. For ten points, name this American musician whose wrote *The Entertainer* and *Maple Leaf Rag*.

ANSWER: Scott Joplin

- (12) This man argued for a natural aristocracy rather than a landed one in his *Thoughts on Government*. Benjamin Stoddert was his Secretary of the Navy, a position that was created under his presidency. He sent Elbridge Gerry and John Marshall to Paris, where they were part of an incident that saw Charles Pinckney declare "no, not a six-pence" and led to the undeclared Quasi-War. Along with Josiah Quincy II, this man(*) defended the British soldiers implicated in the Boston Massacre. For ten points, name this man who presided over the XYZ affair, passed the Alien and Sedition Acts, and succeeded George Washington to become the second U.S. President.

ANSWER: John Adams (prompt on "Adams", do not accept or prompt on "John Quincy Adams")

- (13) **These objects form the von Neumann Universe, and the Axiom of Choice can be used to show that these objects can always be well-ordered. These objects are described by axioms of Zermelo and Fraenkel. An example made up of these objects which do not contain themselves is the core of(*) Russell's Paradox. One of these objects is called countable if there is a one-to-one function to the natural numbers with it as the domain. Symmetric difference is an operation on these objects, which are more commonly operated on by intersection and union. For ten points, name these mathematical collections of elements.**

ANSWER: sets

- (14) **In this novel, a man who could not be a doctor, Mr. Dobbins, keeps an anatomy book locked in his desk. Another character wishes she had a brass and iron knob to remember her lover by. Peter the cat destroys flower pots after one character in this novel feeds him painkillers, and that character believes David and Goliath were the first disciples. In one scene, people give away precious possessions to be allowed to(*) whitewash a fence, and the title character is trapped in a cave with Becky Thatcher and Injun Joe. For ten points, identify this novel by Mark Twain, which preceded *The Adventures of Huckleberry Finn*.**

ANSWER: The Adventures of Tom Sawyer

- (15) **Muzio Clementi wrote more than one hundred of this type of work, including his "Octave Lesson", *Opus 2*. One of these works, also known as *From the Street*, memorialized the death of a Czech carpenter on October 1, 1905 and was written by Leos Janacek. *White Mass* and *Black Mass* are nicknames of two Alexander Scriabin works in this form, and Chopin's funeral march is found in another work of this type. Beethoven's works in this form include those nicknamed(*) *Les Adieux* and *Hammerklavier* and another inspired by Lake Lucerne. For ten points, identify this form of composition exemplified by Beethoven's *Moonlight [one]*.**

ANSWER: piano sonatas (prompt on partial answer)

- (16) **The change in this value for a polymer mixed in a solvent is given by Flory-Huggins theory. The partial molar type of this value equals the chemical potential under isobaric conditions. This value per surface area is equal to the surface tension, and for a voltaic cell it equals negative n times Faraday's constant and the standard cell potential. The change in this quantity equals maximum non-expansive work at constant pressure and temperature, and it is defined as the(*) difference between enthalpy and the product of temperature and entropy. For ten points, identify this thermodynamic quantity that determines spontaneity of a reaction, named after an American scientist.**

ANSWER: Gibbs free energy

- (17) This nation's early history was recorded by the monk Nagasena in the *Pali Chronicles*. This country got its independence with the help of the Soulbury Commission. The ancient Kingdoms of Rohana and Anuradhapura were located in this modern-day country, and this nation was first ruled by Prince Vijaya. In the 1980s, it faced the brutal Eelam civil war, which ended with the killing of rebel LTTE leader Velupillai Prabhakaran. The Nayaks of Kandy ruled this nation, and its(*) Singhalese minority fought the separatist Tamil Tigers. For ten points, name this island nation formerly known as Ceylon and located at the southern tip of India.

ANSWER: Democratic Socialist Republic of Sri Lanka (accept Ceylon before mention, accept Shri Lamka Prajatantrika Samajayadi)

- (18) The Bailey-Borwein-Plouffe Formula uses this computational system to compute isolated digits of π . An encoding scheme for HD-DVDs and Blu-Ray created by the AACS is formatted in this system and is known as the 09 F9 code. In Unix and Java, this system is indicated with a prefix of $0x$. HTML uses strings of six numbers in this system to represent(*) colors. In this system, each numeral takes four bits to store. The letters *A* through *F* represent digits larger than nine in this system. For ten points, name this number system with a base of sixteen.

ANSWER: hexadecimal (accept hexcode, accept base sixteen before mention)

- (19) One aspect of this god blew on the sun and moon until they moved, was worshipped in a circular temple, and was the wind god Ehecatl. This god once got drunk and slept with his sister, after which he took the form of Kukulcan. With the help of Cihuacoatl, he bled over the crushed bones of previous races to make the fifth sun. This god's twin was the dog-like skeleton(*) Xolotl, and he will return in the "One Reed" year. He was exiled on a raft of snakes by Tezcatlipoca, and Hernan Cortez was mistaken for this god. For ten points, name this feathered serpent deity of the Aztecs.

ANSWER: Quetzalcoatl (accept Ehecatl before mention)

- (20) One character in this novel trades fifteen minutes of hand-holding so she can play a Turkish knight, and "those with an austere artistic code can assume the more consistent conclusion" and not the ending where a reddleman married a protagonist. When her daughter-in-law doesn't open the door, one character in this novel dies of heat exhaustion and an adder bite, and her son became a furze cutter because he'd strained his eyes studying to open a night school.(*) Thomasin marries Diggory Venn after her husband Damon Wildeve drowned attempting to rescue Eustacia Vye. Taking place in Egdon Heath and including Clym Yeobright is, for ten points, what novel by Thomas Hardy?

ANSWER: The Return of the Native

- (21) **The Touchet Formation has been used to study a sequence of these events named for Missoula. Another of these events destroyed Lake Bonneville fifteen thousand years ago. These events can be mitigated using bunding. The areal form of these events can be predicted by data from Doppler Radar, and Riparian zones are especially prone to these events. The destruction of(*) wetlands has exacerbated the impact of these events, which levees attempt to prevent. These events occur after soil is fully saturated, and cloudbursts can cause their “flash” variety. For ten points, name these inundations of water.**

ANSWER: floods

Bonuses

- (1) This work was commissioned for the Saint Bavo Cathedral. For ten points each:
- [10] Identify this work in which a dove radiates light over the central figure, who is dripping blood into a chalice. This work was designed by the artist's brother Hubert.
ANSWER: The Ghent Altarpiece (accept Adoration of the (Mystic) Lamb or Het Lam Gods)
- [10] This other work by the artist of *The Ghent Altarpiece* depicts a chandelier with a single lit candle and a small dog, representing unity and fidelity, between the two central figures as they hold hands.
ANSWER: The Arnolfini Wedding (or The Arnolfini Marriage)
- [10] This early Flemish painter of *The Arnolfini Wedding* and *The Ghent Altarpiece* also created a self-portrait in a red turban.
ANSWER: Jan van Eyck
- (2) Answer some questions about community ecology for ten points each.
- [10] This phenomenon is the accumulation of harmful chemicals across trophic levels. The insecticide DDT underwent this process and decimated bald eagle populations.
ANSWER: biomagnification
- [10] These diagrams represent the biomass of each trophic level or show biomass turnover rates to determine biomass productivity.
ANSWER: ecological pyramid (accept trophic pyramid, energy pyramid, pyramid of productivity, pyramid of biomass)
- [10] These organisms appear the bottom of the ecological pyramid. Because of their high photosynthetic output, they usually have the highest biomass of all the trophic levels.
ANSWER: producers or autotrophs (accept photoautotrophs and chemoautotrophs)
- (3) Members of this group used logical positivism in their approaches to philosophy. For ten points each:
- [10] Name this 20th century group of philosophers headed by Moritz Schlick and that including Hans Hahn, Rudolf Carnap, and Kurt Gödel. This group, which sought a system of “unified science”, strongly argued against previous practices of metaphysics.
ANSWER: Vienna Circle (or Wienerkreis or Ernst Mach society)
- [10] Perhaps the greatest influence on the Vienna Circle was this Austrian-British philosopher, who wrote that “the picture is a model of reality” and argued that facts rather than objects comprise the world in his *Tractatus Logico-Philosophicus*.
ANSWER: Ludwig Wittgenstein
- [10] This later work by Wittgenstein expands upon the “here is one hand” argument by G. E. Moore and attacks philosophical skepticism. This work uses hinges on a door as an analogy to unscrutinized propositions.
ANSWER: On Certainty

- (4) The narrator of this novel thinks of the Song of Songs when with a girl, and later is told that girl is a witch because he feels desire when looking at her. For ten points each:
 [10] Identify this novel in which Adso of Melk, and primarily William of Baskerville, solve the murders in a Benedictine monastery.
ANSWER: The Name of the Rose (or Il Nome della Rosa)
 [10] *The Name of the Rose* was a work by this Italian author, who wrote about Belbo, Diotallevi, and Casaubon inventing a conspiracy theory of “The Plan” and the Knights Templar in *Foucault’s Pendulum*.
ANSWER: Umberto Eco
 [10] Eco’s novel *The Island of the Day Before* followed Roberto Della Griva after this event happened to him. A more notable literary character to experience this fate was Robinson Crusoe.
ANSWER: shipwrecked or marooned (accept equivalents)
- (5) The Visigoth Pelagius of Asturias started this period. For ten points each:
 [10] Name this time period that ended with the Moors being pushed out of Spain. In this conflict, Christians took Spain back from the Muslims, and Isabella I of Castile and Ferdinand of Aragon were the monarchs of a united Spain at its end.
ANSWER: La Reconquista
 [10] The Reconquista started after this caliphate conquered the majority of Spain. This caliphate followed the Rashidun caliphate, and its last ruler, Marwan II, was defeated at the Battle of the Great Zab River.
ANSWER: Umayyad Caliphate (accept Umayyad Dynasty)
 [10] This man was the last Muslim ruler in Spain. He was the last Nasrid ruler of Granada, and he was defeated by Ferdinand of Aragon only a few years after he had signed the Pact of Cordoba.
ANSWER: Boabdil (accept Abu’abd Allah Muhammad XI)
- (6) The Queen’s club championship and Aegon classic serve as warm-up tournaments to this event. For ten points each:
 [10] Name this annual Grand Slam championship played on outdoor grass courts. The venue for it was also used for the 2012 Olympic tennis tournament.
ANSWER: The Championships, Wimbledon
 [10] The longest tennis match in competition occurred during the first round of the 2010 Wimbledon tournament, when this American player defeated Nicolas Mahut after more than 11 hours of play. This player had his best Grand Slam finish at the quarterfinals of the 2011 U.S. Open.
ANSWER: John Isner
 [10] This Swiss player won seven of his eight appearances at the finals of the Wimbledon, losing once to Rafael Nadal. He also held the top spot on the ATP rankings for 237 consecutive weeks.
ANSWER: Roger Federer

- (7) For a solid sphere, it is calculated as mass times the radius squared times two fifths. For ten points each:
 [10] Name this rotational analogue of mass that represents a spinning object’s resistance to a change in its angular velocity.
ANSWER: moment of inertia (or rotational inertia, do not prompt on a partial answer)
 [10] The Parallel Axis Theorem can be used to calculate the moment of inertia for this kind of object, which is not subject to deformational forces.
ANSWER: rigid body
 [10] This rule states that deforming a rigid body in a direction parallel to its axis of rotation does not affect its moment of inertia.
ANSWER: Stretch Rule or Routh’s Rule
- (8) Operation Ajax was a CIA-backed plot to overthrow Prime Minister Mohammad Mosaddegh in this country, and previously the Zand and Safavid Dynasties ruled this country. For ten points each:
 [10] Name this country, that fought a war which fought an eight-year war with its neighbor, Iraq. The United States supported Iraq over hard feelings about this country holding American hostages for over a year in Tehran.
ANSWER: Islamic Republic of Iran
 [10] Mossadegh was replaced in Operation Ajax, which put this man into power after the 28 Mordad coup. This monarch, backed by the United States, established the SAVAK secret police.
ANSWER: Shah Mohammad Reza Pahlavi (prompt on “Shah (of Iran)”)
 [10] Shah Pahlavi enacted this series of reforms in 1963, which included giving women the right to vote and establishing the Literacy Corps.
ANSWER: White Revolution
- (9) A Natsume Soseki work wrote about ten of these, with each section beginning “I had” one of these. For ten points each:
 [10] Identify this event, which confused Chuang Tzu as to whether he was a butterfly or a man. Felix Hobain experiences this while sobering up in jail in a work titled for *[this] On Monkey Mountain*, and an Edgar Allan Poe poem asks whether “all that we see or seem” is one of these events within another.
ANSWER: dream (or yume or mengxian)
 [10] *Dream on Monkey Mountain* was a work by this Saint Lucian poet. Another of his works was the epic *Omeros*.
ANSWER: Derek Walcott
 [10] Saint Lucia was called “[this figure] of the West Indies.” In *Omeros*, this is the name of the housemaid Achille and Hector fight over, and in *The Iliad*, she ran away with Paris, causing her husband Menelaus to start the Trojan War.
ANSWER: Helen

- (10) Thor kicked the dwarf Littr into the funeral pyre of this god, and all but one of the objects on Earth vowed to never hurt this him. For ten points each:
[10] Name this Norse god, the son of Odin and Frigg, who was killed by a spear made out of mistletoe due to the scheming of Loki.
ANSWER: Baldr or Balder or Baldur
[10] Baldr was killed by this blind brother of his, who was later killed by another brother, Vali.
ANSWER: Hodr or Hoder or Hodur
[10] Baldr's funeral pyre was set on this ship of his, often described as the greatest ship of the Norse Gods. It was pushed off to sea with the help of the giantess Hyrrokkin.
ANSWER: Hringhorni
- (11) This event led to the creation of the American Society of Safety Engineers. For ten points each:
[10] Name this 1911 fire, which saw 146 people die at a clothes factory in New York. Many of the casualties were due to the fact that the doors on the eighth floor were locked.
ANSWER: Triangle Shirtwaist Factory fire
[10] Labor rights in New York were also impacted by this 1905 case that stated that laws outlawing 60-hour work weeks for bakers were void. This case held that people had a liberty of contract because of the Due Process Clause of the 14th Amendment.
ANSWER: Lochner v. New York
[10] In *Lochner v. New York*, this man wrote a lone dissent by noting that the Fourteenth Amendment "does not enact Mr. Herbert Spencer's Social Statics." He established the "clear and present danger" test in his opinion on *Schenk v. United States*.
ANSWER: Oliver Wendell Holmes, Jr.
- (12) The rose variety of this mineral gets its color from trace amounts of iron, titanium, or manganese. For ten points each:
[10] Name this mineral primarily formed of silicon dioxide. It is the second most abundant mineral in the Earth's crust.
ANSWER: quartz
[10] Quartz can be found in this type of plant fossil formed by calcite and silica replacing the initial form of the xylem.
ANSWER: petrified wood
[10] Petrified wood is one form of this type of quartz that is composed of microcrystalline structures that cannot be seen by the naked eye. Agate is one form of this quartz, whose name is derived from an Anatolian town.
ANSWER: Chalcedony

- (13) Bertrand Russell suggested the Tristram Shandy paradox as its converse. For ten points each:
 [10] Identify this paradox in which a faster runner can never overcome a slower runner's head start, because in the time it takes to make up the initial advantage, the slower runner will have advanced.
ANSWER: Achilles and the Tortoise (or Achilles and the Turtle or The Paradox of Achilles)
 [10] The paradox of Achilles and the Tortoise was posed by this philosopher. This man also argued that one can never reach a goal because he first must reach the midpoint in his Dichotomy Paradox, and challenged motion in the Arrow Paradox.
ANSWER: Zeno of Elea
 [10] Both the Dichotomy Paradox and Achilles and the Tortoise can be refuted mathematically using the convergence of this type of series in which each term is computed by multiplying the previous term by a common ratio.
ANSWER: geometric series
- (14) The protagonist develops a friendship with Baxter while he's recuperating in a hospital, and is somewhat responsible for the return of his wife, Clara Dawes. For ten points each:
 [10] Identify this novel, whose title refers in large part to the complicated relationship between Gertrude and Paul Morel.
ANSWER: Sons and Lovers
 [10] *Sons and Lovers* was a novel by this author, who wrote about the title character's affair with the gamekeeper Oliver Mellors in *Lady Chatterley's Lover*.
ANSWER: David Herbert Lawrence
 [10] D.H. Lawrence also wrote this novel in which Mr. Sisson, with the help of Rawdon Lilly, leaves his wife and children to become a flautist in Italy.
ANSWER: Aaron's Rod
- (15) This work includes sections such as *The Ascent* and *Calm Before the Storm*, while the use of flutter tonguing represents the bleating of sheep. For ten points each:
 [10] Identify this symphonic poem, the last one written by its composer. Its 19th movement, *Thunder and Tempest, Descent*, uses an organ to represent an ominous storm, and the theme of its titular location is in the key of B-flat minor.
ANSWER: Alpine Symphony (or Opus 64)
 [10] The *Alpine Symphony* was written by this late Romantic German composer, who included the *Dance of the Seven Veils* in his *Salomé* and wrote the tone poem *Also Sprach Zarathustra*.
ANSWER: Richard Strauss (prompt on partial answer)
 [10] In Strauss's *Till Eulenspiegel's Merry Pranks*, the horn and the D version of this instrument represent the title character. This woodwind instrument also comes in a smaller E-flat version, but its B-flat soprano version is the most common.
ANSWER: clarinet

- (16) This country was an early sea-power due to the actions of the son of King Joao I. For ten points each:
 [10] Name this country, home to the explorers Bartholomew Dias, Vasco de Gama, as well as Prince Henry the Navigator. The Pink Map Document claimed the land between Mozambique and Angola for this country.
ANSWER: Kingdom of Portugal
 [10] The ascension of this dynasty to power in Portugal ended a two-year interregnum after the death of King Ferdinand I. Its legitimacy was cemented after a victory for John I at the Battle of Aljubarrota.
ANSWER: Aviz Dynasty
 [10] A more recent episode in Portugal's history saw the rule of this man, who advocated lusotropicalism and served as the Prime Minister from 1932 to 1968. He utilized the PIDE secret police, and his Estado Novo was overthrown after his death by the Carnation Revolution.
ANSWER: António de Oliveira Salazar
- (17) This man's forces defeated the Amalekites after Hur helped this man raise his arms, and this man died atop Mt. Nebo. For ten points each:
 [10] Name this prophet and leader of the Israelites who parted the Red Sea and received Ten Commandments while on Mount Sinai. God appeared to him in the form of a burning bush.
ANSWER: Moses (or Moshe)
 [10] This man was the father of Zipporah, and thus was a father-in-law to Moses.
ANSWER: Jethro
 [10] Jethro's tomb is a site of pilgrimage for this religion. Its followers are split into the Uqqal and Juhhal groups. This religion is primarily found in Syria and Lebanon, and it is symbolized by a five-pointed star.
ANSWER: Druze
- (18) This nation contains the island of Sulawesi, which is a part of the Greater Sunda island group. For ten points each:
 [10] Name this populous Asian island country whose province of Puncak Jaya is on an island shared with Papua New Guinea. The eastern half of its island of Timor gained independence in 1999.
ANSWER: Republic of Indonesia
 [10] The Indonesian capital city of Jakarta is located on this densely populated island, which is neighbored by the islands of Bali and Sumatra.
ANSWER: Java
 [10] This term refers to the Indonesian portion of the island of Borneo, which Indonesia shares with the Malaysian states of Sarawak and Sarawak and the country of Brunei. Five Indonesian provinces share this name.
ANSWER: Kalimantan

- (19) This process uses an external source of electricity to drive a nonspontaneous reaction, unlike in a galvanic cell. For ten points each:
 [10] Name this process in which a DC current drives the formation of products at the anode and cathode in its namesake cell.
ANSWER: electrolysis
 [10] Electrolysis is used in this industrial process to produce pure aluminium from molten aluminium oxide dissolved in cryolite. The anode of the electrolytic cells in this process produce carbon dioxide, and hydrogen fluoride is released as a by-product from the cryolite.
ANSWER: Hall-Heroult process
 [10] The first of these two laws states that the amount of substance produced at an electrode is directly proportional to current. The namesake of these laws also names a constant equal to electric charge over mole of electrons.
ANSWER: Faraday's Laws of Electrolysis
- (20) The speaker states that "Spring is the mischief in me" and says that "there are no cows" after lamenting "He is all pine and I am apple orchard." For ten points each:
 [10] Identify this poem in which the speaker's neighbor firmly believes that "Good fences make good neighbors."
ANSWER: Mending Wall
 [10] *Mending Wall* is a work by this poet, who described two roads diverging in a yellow wood in *The Road not Taken* and said "But I have promises to keep / And miles to go before I sleep" in *Stopping by Woods on a Snowy Evening*.
ANSWER: Robert (Lee) Frost
 [10] his Frost poem describes "Some boy too far from town to learn baseball," and concludes that "one could do worse than to be a swinger of" the title object.
ANSWER: Birches
- (21) This conflict was partially caused by the Doctrine of Lapse, and it featured fighting at Chinhat and Agra. For ten points each:
 [10] Name this 1857 Indian revolt after animal fat was found in Enfield Rifle cartridges, led by its namesake natives who worked for the British East India Company.
ANSWER: Sepoy Mutiny (accept synonyms for mutiny such as rebellion or revolt; also accept First War of Indian Independence)
 [10] The Sepoy mutiny occurred after the downfall of this Indian empire, which was founded by Babur and featured the construction of the Red Fort and the Peacock throne.
ANSWER: Mughal Empire
 [10] During the Sepoy Mutiny, both Sir Henry Lawrence and Sir Henry Havelock died while trying to capture this city, the former capital of Awadh. Its capture was assigned to Sir Colin Campbell.
ANSWER: Lucknow