



NASAT 2015 - Round 11 - Tossups

1. Indications for this process are represented by the mnemonics SLIME and AEIOU. Spondyloarthropathy due to beta-2 microglobulin accumulation can result from long-term use of a type of this process, which may result in a namesake form of amyloidosis. Standardized Kt over V and URR are used to assess the adequacy of this process. A Cimino fistula may be created during this process. A form of this process that can be automatic or continuous ambulatory uses the peritoneum as a semi-permeable membrane. This treatment performs diffusion and ultrafiltration, which normally take place in the glomerulus. For 10 points, name this technique whose hemo- form removes creatinine and urea from the blood during treatment for kidney failure.

ANSWER: **dialysis** [or hemod**dialysis**; or peritoneal **dialysis**; prompt on **renal replacement** therapy] <Smart>

2. An equation named for this man can be obtained from the Klimontovich equation using an ensemble average over particles and no collisions, and that equation further simplifies to the Vlasov equation in plasmas. A second equation named for this man integrates the probability log probability over all space, assumes molecular chaos before collisions but not afterward, and violates time reversal symmetry. A third of his equations takes the logarithm of the number of permutations of the available thermodynamic states, which is symbolized W. This namesake of a transport theorem and an H-theorem had that third equation written on his tombstone. For 10 points, name this Austrian whose namesake constant, symbolized k, is used to calculate entropy.

ANSWER: Ludwig **Boltzmann** <Silverman>

3. The collision of two Standard Oil tankers in this body of water inspired "planetwalker" John Francis to stop using motor vehicles. After World War II, shipyards on this body of water gave way to the houseboat communities of Sausalito. Landmarks on this body of water include Fisherman's Wharf and the sea lion-dominated Pier 39. The San Joaquin River flows into this body of water, which is frequently obscured by fog in summertime. Asian immigrants were processed at this body of water's Angel Island. The 1989 Loma Prieta earthquake damaged cities on its shores, including Oakland. For 10 points, name this body of water home to Alcatraz Island, whose outflow is spanned by the Golden Gate Bridge.

ANSWER: **San Francisco** Bay <Golimlim>

4. In a play by this author, a man remembers tossing another character's child in the air at a party, but doesn't remember that it happened in his kitchen. The unseen author Casey is frequently mentioned by that play's male leads, who run a publishing company and play squash. A play by this author opens with a character reading news stories about an old man being run over by a bus and an eight-year-old killing a cat. One of his plays details Jerry and Emma's affair in reverse chronological order. This author wrote a play in which an argument over the phrase "light the kettle" takes place in a basement equipped with a speaking tube where the hit men Gus and Ben wait for their assignment. For 10 points, name this playwright of *Betrayal* and *The Dumb Waiter*.

ANSWER: Harold **Pinter** <Brownstein>

5. A 1983 manifesto by Jerome McGann argued that scholars of this movement uncritically accept the assumptions of the writers they study in a diagnosis of its "ideology." M. H. Abrams argued that this movement triggered a shift between critical views of artists as the two title objects in *The Mirror and the Lamp*. Representatives of this movement are the subjects of *The Ringers in the Tower* by Harold Bloom, who revitalized studies of it in his early phase with a string of books including *The Visionary Company*. A member of this movement distinguished between "imagination" and "fancy" in his *Biographia Literaria*. For 10 points, name this movement whose English exemplars included the primary author of *Lyrical Ballads*, William Wordsworth.

ANSWER: **Romanticism** <Casalaspis>

6. Ed Rollins quit working with this man shortly after an aide accused Rollins of being a CIA plant. During a debate, this man joked that he was not here to "play Lawrence Welk music." He was mocked for repeatedly saying "let me finish" during another debate on *Larry King Live*. This man promised there would be a "giant sucking sound" as jobs went to Mexico when speaking out against NAFTA. In a national election, he picked Admiral James Stockdale as his running mate and challenged both Bill Clinton and incumbent George H.W. Bush. For 10 points, name this Texan businessman who ran as a third party presidential candidate in 1992.

ANSWER: Ross **Perot** [or Henry Ross **Perot**] <Cheyne>

7. William Huskisson, an MP from Liverpool, was killed by one of these objects while shaking the hand of the Duke of Wellington. Early examples of these objects were made to compete in the Rainhill Trials. A mass-produced example of these objects was named for Swedish opera singer Jenny Lind. George Stephenson created an example of these objects known as his namesake "Rocket." The Whyte notation was made to differentiate between types of these objects by the amount and placement of their wheels. A "Great Western" system for these vehicles was built by Isambard Kingdom Brunel. For 10 points, name these vehicles that were typically powered by steam engines and pulled trains along the Great Western Railway.

ANSWER: steam **locomotives** [prompt on **trains** until it is read] <Golimlim>

8. This author wrote about talking to a woman who claimed a chestnut tree told her "I am here—I am life, eternal life." He wrote about learning the truth behind the sentence "The angels are lost in perpetual contemplation of an 'infinite glory.'" This man proposed that a "Statue of Responsibility" be built on the West Coast to complement the Statue of Liberty. This author of *The Unconscious God* noted that people in his condition faced initial shock, apathy, and depersonalization but managed to survive by discovering salvation "through love and in love." This founder of logotherapy wrote about his determination to find a purpose while serving as an inmate in Auschwitz. For 10 points, name this Austrian psychiatrist who wrote *Man's Search for Meaning*.

ANSWER: Viktor **Frankl** <Cheyne>

9. A book titled for this phrase contains an analysis of "stable intermediate forms" inspired by a Herbert Simon argument about two watchmakers, and introduces the concept of something that is both a whole and a part, which this book terms a "holon." That book with this title argues that the pre-human features of the brain are responsible for emotions and destructive impulses, and was written by Arthur Koestler. This phrase was coined to be "deliberately abusive" in an earlier book that argues against a longstanding "category mistake," which the book also refers to as "the official doctrine" in the section "Descartes' Myth." For 10 points, give this phrase used in *The Concept of Mind* by Gilbert Ryle to denounce mind-body dualism.

ANSWER: the **ghost in the machine** <Bollinger>

10. An opera in which one of these beings named Ada falls for a noble named Arindal was composed at Wurzburg when its composer was only twenty. In a later operetta, a shepherd named Strephon is the son of one of these beings, who come to dominate the British House of Lords. In an Italian opera, a male tutor named Alidoro *replaces* one of these beings in the narrative. Gilbert and Sullivan's *Iolanthe* is titled for one of these beings, which also name the first completed opera by Richard Wagner. In an adaptation of Shakespeare by Henry Purcell, one of these beings sprinkles love-juice on the eyes of Demetrius. For 10 points, name this type of supernatural being which is *omitted* from Rossini's opera version of Cinderella.

ANSWER: **fairy** [or The **Fairies**; or Die **Feen**] <Jackson>

11. Plutarch reports that Marius deeply offended the Senate by appearing before them with a certain type of this item. By placing one of these items over his head, the Pontifex Maximus Scipio Nascia rallied the senators to assassinate Tiberius Gracchus. White chalk was used to mark a type of this item associated with office seekers, the "candida" type. A crimson stripe differentiated the "praetexta" variety of this item. This item largely replaced the pallium and served as a counterpart to the stola. Marine snails were boiled to make the Tyrian purple dye used for the picta type of this item, which were used by triumphing generals and later worn by emperors alone. For 10 points, name this garment composed of a folded piece of white, woolen fabric, which was worn in Ancient Rome.

ANSWER: **togas** <Brownstein>

12. This god's enemies included the Syracusan man Cyanippus, who is driven to rape his own daughter Cyane. Another enemy of this god rejects him and instead tells the story of Pyramus and Thisbe; she and her two sisters, who then transform into bats, are the Minyades. As punishment for exiling this god from Thrace, Lycurgus is driven insane and axes his son Dryas to death. Acoetes is the only man aboard a ship to condemn the kidnap of this god; the guilty remainder of those pirates are transformed into dolphins. This god rewards the rescue of Silenus by granting the golden touch to Midas. This god's mother, who perishes after she requests to see Zeus in his full glory, is Semele. For 10 points, name this god of wine.

ANSWER: **Dionysus** [or **Bacchus**; or **Liber**] <Kim>

13. The characteristic of a field always has this property. The Meissel-Mertens constant relates log of log of n to the partial sums of the reciprocals of numbers with this property. The log of a number with this property is the output when a number n, that is a power of a number with this property, is input to the von Mangoldt function. n minus one factorial equals negative one mod n only if n has this property, by Wilson's theorem. Carmichael numbers do not have this property, but nonetheless can serve as the modulus in Fermat's little theorem. The number of them less than n is approximately n over log of n. Euclid proved their infinitude. For 10 points, name these numbers only divisible by one and themselves.

ANSWER: **prime** numbers <Schindler>

14. This artist earned a far smaller annuity than his successor in one post, the female miniaturist Levina Teerlinc. This artist was championed by a letter declaring that "the arts are freezing in this part of the world." This artist realistically depicted the effects of putrefaction on Christ lying horizontally in his tomb in his widest painting. The woodcut series he published in Basel include illustrations of Old Testament scenes called the *Icones*, as well as 42 *Dances of Death*. A Lutheran hymnal, a lute with a broken string, and an extremely anamorphic skull appear in the most famous painting of this artist, who painted his close friend Erasmus. For 10 points, name this German court painter to Henry VIII, who created *The Ambassadors*.

ANSWER: Hans **Holbein** the Younger <Gupta>

15. A concerto grosso by this composer begins with a ten-bar slow introduction, and then a fast fugue that begins with violins playing repeated F's in half notes, then quarter notes, then eighth notes. He is not Arcangelo Corelli, but an E-flat major musette is the central movement of the G minor sixth piece in his twelve Op. 6 concerti grossi. This composer gave the tempo marking *Largo alla siciliana* to the "La Paix" movement of a suite that commemorates the end of the War of the Austrian Succession with movements such as "La Rejouissance." He included "Alla Hornpipe" in a set of pieces written for a concert on the River Thames. For 10 points, name this composer of *Music for the Royal Fireworks* and *Water Music*.

ANSWER: George Friedrich **Handel** <Kim>

16. In a novel by this author, a woman "pleads her belly" to avoid going to prison until the birth of her daughter, whose first memory is traveling with a band of gypsies. Another character created by this man is surprised when the wooden stakes he uses to keep up his bower end up sprouting. That character created by this writer builds a canoe out of a cedar tree but cannot bring it to sea. At the end of a novel by this author, the title character goes to a plantation with Jemy and sees her son Humphrey, who was conceived with her half-brother. Another of his title characters becomes enslaved in Saltee before owning a plantation in Brazil and befriending a cannibal he names Friday. For 10 points, name this author of *Moll Flanders* and *Robinson Crusoe*.

ANSWER: Daniel **Defoe** [or Daniel **Foe**] <Sy>

17. The Gambia has announced their openness to housing people of this ethnicity. The 969 Movement, led by Ashin Wirathu, has frequently attacked people of this ethnicity. Many people of this ethnicity have departed from the port of Sittwe. Thein Sein proposed a plan to relocate these people, many of whom have migrated to Cox's Bazar. In their native country, these people have been marked as Bengalis as of 2014. People of this ethnicity, who have regularly been targeted by the Rakhine Buddhists, have been denied entry into Malaysia while seeking refuge as "boat people." For 10 points, name this often persecuted Muslim minority in Burma.

ANSWER: **Rohingya** [prompt on **Burmese** until "Burma" is read; prompt on **boat people** until it is read]
<Golimlim>

18. Mayor Fletcher Bowron claimed these events were sparked by Southerners. Eleanor Roosevelt was labeled a Communist after she wrote "it is a problem with roots going a long way back" in response to these events. Jack Tenney suggested these events were Nazi attempts to spread disunity. Hatred in the city was high prior to them after the Sleepy Lagoon murder case two years earlier. During these events, almost 200 men drove downtown in 20 taxicabs to begin the second wave of violence. These events reflected tensions between servicemen and the "Pachuco" gangs. For 10 points, name these 1944 riots in Los Angeles in which sailors attacked Latino youths wearing the namesake distinctive pieces of clothing.

ANSWER: **Zoot Suit** Riots <Cheyne>

19. Van Maanen's star was the first star of this type not found in a binary or triple system. ZZ Ceti and GW Vir stars are stars of this type that have variable luminosities, making them their "pulsating" type. In a cataclysmic variable system, an accretion disk forms around a star of this type as it siphons matter from its companion. The progenitor of type Ia (**one a**) supernova is accretion onto a star of this type. Stars of this type are found near the bottom left corner of the Hertzsprung-Russell diagram. The upper mass limit of these stars is given by the Chandrasekhar limit. These stars are formed by stars, such as the Sun, that are not massive enough to become neutron stars. For 10 points, name this type of dwarf star.

ANSWER: **white dwarf** [or word forms; or **white** dwarf after "dwarf star" is read; prompt on **dwarf** stars until "dwarf star" is read] <Lee>

20. In a novel by this author, the unusual appearance of a hotel clerk in a romantic comedy greatly alarms the history teacher Tertuliano. In another novel, this author also wrote about several religious elders who order the burial of some mysterious glowing earth. Early in that novel by this author, the protagonist's father dies while attempting to save Ananias, and he sacrifices a sheep with a marked ear after being ordered to do so by God. This author of *The Double* also wrote a novel in which the protagonist uses a pair of scissors to kill a rapist while quarantined with her doctor husband during the title pandemic. For 10 points, name this Portuguese author of *The Gospel According to Jesus Christ* and *Blindness*.

ANSWER: José **Saramago** [or José de Sousa **Saramago**] <Clarke>

21. The overall value for this quantity can be calculated knowing two j and two m quantum numbers in a product involving many square roots and factorials. The commutator of this quantity with the Hamiltonian is zero, but the commutator for two of its component operators equals i times \hbar times the operator of the other component. Spherical harmonics are eigenfunctions of this quantity. This quantity equals \hbar times the square root of the azimuthal quantum number, times that number plus one. Vector addition of two forms of this quantity occurs in L-S coupling. Areal velocity is constant because it is conserved. For 10 points, name this quantity that classically equals moment of inertia times angular velocity, and is symbolized L .

ANSWER: **angular momentum** operator [or **L** until "L-S coupling" is read] <Silverman>



NASAT 2015 - Round 11 - Bonuses

1. *Mimosa pudica* responds to touch via changes in turgor pressure in a swelling at the base of this structure.

For 10 points each:

[10] Name this structure that attaches the blade to the stem and sometimes features a pulvinus at its base. It is flanked by stipules and is sometimes called the leaf stalk.

ANSWER: **petiole** [or **petiolule**]

[10] Sudden unloading of sucrose into the pulvinar apoplast causes a difference across the membrane in this quantity, which is the sum of several factors such as hydrostatic pressure and osmotic pressure. It is represented with the letter psi.

ANSWER: **water potential** [prompt on **potential**]

[10] Sucrose is shunted into the pulvinus from this vascular tissue, which transports sugars via its sieve tubes. Its cells are alive at maturity, unlike the vessel elements of xylem.

ANSWER: **phloem** <Smart>

2. Answer the following about the field of historical linguistics, for 10 points each.

[10] Because they can be traced back to a common ancestor, Spanish, Swedish, Farsi, and Hindi are all members of this large language family prominent in its two namesake regions.

ANSWER: **Indo-European** languages [do not accept "Proto-Indo-European"]

[10] Grimm's law describes a set of sound changes in the proto-language of this family, whose namesake "umlaut" is the process in which vowels became fronted before the phoneme /i/ ("**eeh**").

ANSWER: **Germanic** languages [do not accept "German"]

[10] This technique uses a feature-by-feature comparison of multiple related languages to produce a reconstruction of their ancestral language.

ANSWER: **comparative method** <Kim>

3. This nine-word line begins a speech which ends, "none but thou shalt be my paramour." For 10 points each:

[10] Name this line spoken by Doctor Faustus after summoning back Helen of Troy.

ANSWER: "**Was this the face that launch'd a thousand ships**"

[10] *Doctor Faustus* was written by this English playwright and contemporary of Shakespeare. Barabas and Ithamore poison Abigail in his play *The Jew of Malta*.

ANSWER: Christopher **Marlowe**

[10] At the end of the sixth scene of *Doctor Faustus*, Lucifer presents personifications of this group as entertainment for Faustus. A member of this group cries, "O, my sweet gold!"

ANSWER: the **Seven Deadly Sins** <Sy>

4. In 1256, this city used public funds to abolish slavery and end serfdom by promulgating the "Paradise Law." For 10 points each:

[10] Name this north-central city in Italy controlled by the Pepoli family, which is home to the oldest university in the world.

ANSWER: **Bologna**

[10] Bologna is also home to dozens of these structures controlled by the richest families in the city, the two most prominent of which were named for Asinelli and Garisenda. Many other medieval Italian cities, particularly San Gimignano, were littered with these structures.

ANSWER: **towers** [or **torre**]

[10] During the height of the Black Death, Bologna fell to the Visconti family of this city, the capital of Lombardy, which was later dominated by the Sforza.

ANSWER: **Milan** [or **Milano**] <Gupta>

5. Inspired in part by Symbolism, this group met at first as a secret society organized by Paul Serusier, and took its name from a Biblical Hebrew word implying their visionary status. For 10 points each:

[10] Name this group of post-Impressionist artists in 1890s France. They included Pierre Bonnard and the painter of *Interieur*, Edouard Vuillard.

ANSWER: Les **Nabis** ("**lay**" nah-"**BEE**") ["Navi" is Hebrew for "prophet".]

[10] Maurice Denis painted an *Homage to this painter*, in which many members of Les Nabis look at one of this man's still-lives of fruit. This man also painted views of Mont Sainte-Victoire.

ANSWER: Paul **Cezanne**

[10] Nabis member Pierre Bonnard was heavily inspired by the flat art style of this country, which also inspired Whistler's Peacock Room.

ANSWER: **Japan** [or **Nippon**; or **Nihon**] <Jackson>

6. This neighborhood, found just northeast of its city's downtown, is centered on 7th Avenue and was the birthplace of a sandwich also known as the "mixto." For 10 points each:

[10] In what neighborhood, named for the industrialist who moved his factory there from Key West, did Italian and Cuban immigrants once roll over five hundred million cigars yearly?

ANSWER: **Ybor City**

[10] Ybor City is found in what Florida city which is separated from St. Petersburg by its namesake body of water?

ANSWER: **Tampa**

[10] This third-largest city in the Tampa Bay area is infamous for being the "worldwide spiritual headquarters" of the Church of Scientology.

ANSWER: **Clearwater** <White>

7. The time-independent form of this equation is essentially an eigenvalue problem for the Hamiltonian. For 10 points each:

[10] Name this quantum mechanical equation, whose time-dependent form describes how a wavefunction evolves over time. Its Austrian namesake also investigated quantum phenomenology with a thought experiment involving a cat.

ANSWER: **Schrödinger** equation

[10] These operators are the Green's functions for a system's Schrodinger equation. They give the probability amplitude for a particle to travel from one time and place to another.

ANSWER: **propagators**

[10] This man names a prescription for computing propagators that always yields a time-ordered expectation value. He shared a Nobel Prize with Schwinger and Tomonaga for developing QED.

ANSWER: Richard Phillips **Feynman** <Eltinge>

8. This book opens with a "Polemical Introduction" in which the author states that popularity and quality have no correlation, necessitating the title discipline. For 10 points each:

[10] Name this book composed of four essays that define "a theory of symbols" and "a theory of genres" to analyze literature.

ANSWER: **Anatomy of Criticism**

[10] This Canadian literary critic penned the influential *Anatomy of Criticism*. This major proponent of archetypal criticism began his career with an analysis of Blake called *Fearful Symmetry*.

ANSWER: Northrop **Frye** [or Herman Northrop **Frye**]

[10] In *Anatomy of Criticism*, Frye invites the reader to imagine promoting or demoting Shakespeare, Milton, and this Romantic poet of "Ozymandias."

ANSWER: Percy Bysshe **Shelley** <Sy>

9. Burning bridges just isn't enough in the Balkans. For 10 points each:

[10] Near the end of a campaign against this group, a bridge over the Neretva River was destroyed, rebuilt, then destroyed again. This group often feuded with Draza Mihailovic's Chetniks.

ANSWER: **Partisans** [or the **National Liberation Army** and Partisan Detachments of Yugoslavia]

[10] The real life Bridge on the Drina was used as an execution site in this present-day country. This country's capital was the site of a so-called Sniper Alley after it was overrun by forces from its eastern neighbor in the 1990s.

ANSWER: **Bosnia** and Herzegovina [or **Bosna** i Hercegovina; or **BiH**]

[10] Another bridge in Bosnia, the Stari Most, was shelled during the war but was rebuilt largely due to the efforts of this organization. It keeps a list of World Heritage Sites.

ANSWER: **UNESCO** [or **United Nations Educational, Scientific and Cultural Organization**; prompt on **United Nations** or **UN**] <Golimlim>

10. This novel provided a second, non-sexual meaning for the term "gunsel." For 10 points each:

[10] Name this Dashiell Hammett novel centering on a detective firm headed by Sam Spade. Toward the end of this novel, Spade finds out that the title object is a fake.

ANSWER: *The **Maltese Falcon***

[10] Early in *The Maltese Falcon*, Spade is accused of killing this man, his partner. This man was murdered while following Lloyd Thursby for Brigid O'Shaughnessy.

ANSWER: **Miles** Archer [or Miles **Archer**]

[10] Brigid O'Shaughnessy anticipates the arrival of *La Paloma*, the ship bringing the fake Maltese Falcon, from this city that O'Shaughnessy and Thursby left while Joel Cairo was jailed.

ANSWER: **Hong Kong** <Golimlim>

11. If this quantity is large, then a droplet will not wet the surface. For 10 points each:

[10] Name this quantity which multiplies the cosine of the contact angle in the Young equation. It is usually symbolized gamma.

ANSWER: **surface energy** density [or **interface energy**; or **surface tension**]

[10] The very high surface energy that this element has with glass explains why it has a concave meniscus. This metal is liquid at room temperature.

ANSWER: **mercury** [or **Hg**]

[10] An equation named for this chemist relates the surface energy to the chemical potential of each interfacial species. He's not French, but the equation giving the differential of chemical potential in terms of pressure and volume bears his name.

ANSWER: Josiah Willard **Gibbs** <Silverman>

12. This author's essay *Art and Intellect* is described as being as good as Schiller's essays. For 10 points each:

[10] Name this fictional author of *Maya*, a biography of Frederick the Great. This man decides to go on a trip south after seeing a tourist near a Byzantine-style building in Munich.

ANSWER: **Gustav** von Aschenbach [or Gustav von **Aschenbach**]

[10] Gustav von Aschenbach falls in love with the young Polish boy Tadzio in this novella by Thomas Mann.

ANSWER: **Death in Venice** [or *Der **Tod in Venedig***]

[10] Late in *Death in Venice*, Gustav describes Tadzio as essentially immortal while calling him by this name. This name is a reference to a Platonic dialogue whose usage of the term "pharmakon" was heavily analyzed by Jacques Derrida.

ANSWER: **Phaedrus** <Sy>

13. A Joseph Haydn piece in this genre nicknamed *The Joke* ends with a series of pauses that trick the listener into thinking that the piece has ended. For 10 points each:

[10] Name this chamber genre performed by two violins, a viola, and a cello, whose "father" is traditionally considered to be Haydn himself.

ANSWER: **string quartets** [prompt on **quartet**]

[10] *Quinten* and *Sunrise* are two pieces in this set of six string quartets by Joseph Haydn that includes the *Emperor*, a piece which quotes the melody to "Deutschland uber alles."

ANSWER: **Erdody Quartets** [or String Quartets, Op. **76**]

[10] Three of Haydn's Op. 20 *Sun* quartets end with this type of piece, which characterizes the second movement of Wolfgang Amadeus Mozart's requiem.

ANSWER: **fugue** [or **fugal**; or **fugato**; or **Fuga**; or **Fuge**] <Kim>

14. A chronicle of this man's reign, describing such events as his pardoning his rebellious half-brother Mirza Hakim, was written by Abul Fazl, one of the "nine jewels" of his court. For 10 points each:

[10] Name this great Mughal emperor who built a new capital at Fatehpur Sikri, where he invited religious scholars to debate and established the syncretic Din-i-Ilahi faith.

ANSWER: **Akbar** the Great

[10] Akbar placated Hindus by abolishing this onerous tax on non-Muslims.

ANSWER: **jizya** tax

[10] The *jizya* tax was brought back by this son of Shah Jahan, a militant ruler who beheaded the Maratha emperor Sambhaji, and warred for the throne with his brothers Shah Shuja and Dara Shikoh.

ANSWER: **Aurangzeb** <Yu>

15. These people must always travel in pairs in a "companionship," and live off a food stipend that amounts to about 160 dollars per month. For 10 points each:

[10] Name these religious officials who get the title of "Elder" or "Sister." It is more or less expected that every adult male in their denomination report to training in Provo at around age 19 to become one of these people for two years.

ANSWER: **Mormon missionaries** [or **missionaries** of the Church of Jesus Christ of **Latter-Day Saints**; or **LDS missionaries**]

[10] All Mormon elders are members of the Melchizedek priesthood, a rank named for a man in this Biblical book. This book also includes the planned sacrifice of Isaac atop Mount Moriah.

ANSWER: Book of **Genesis** [or **Bereshith**]

[10] Missionaries are typically assigned to this level of church congregation, which is larger than a branch but smaller than a stake. In some regions, separate examples of these congregations exist for singles apart from already-married people.

ANSWER: **wards** <Jackson>

16. Malecasta falls in love with this character after she fights off a group of six knights. For 10 points each:
[10] Name this character, an embodiment of chastity, who ventures into Faerie Land to find Arthegall after seeing him in a magic mirror.

ANSWER: **Britomart**

[10] Britomart is the focus of Book III of this epic poem by Edmund Spenser. Its title character, Gloriana, represents Elizabeth I.

ANSWER: *The **Faerie Queene***

[10] Britomart is introduced and revealed as a woman at the beginning of Book III after she unhorses this other knight in a joust.

ANSWER: **Guyon** <Sy>

17. The Westinghouse Lamp Plant attempted to produce these components from uranium. For 10 points each:

[10] Name these components that are typically made of tungsten and surrounded by an inert gas to prevent them from degrading over time.

ANSWER: incandescent bulb **filaments**

[10] This scientist was the first to discover the practical uses of inert gases in light bulbs. He proposed the 18-electron rule for metal complexes and denounced experiments whose results were tainted by bias, which he called "pathological science."

ANSWER: Irving **Langmuir**

[10] Incandescent bulbs use a screw socket named for this American inventor of the incandescent bulb.

ANSWER: Thomas **Edison** <Golimlim>

18. This goddess's rejection of a seabird as husband causes a great storm that threatens to subside only if she is thrown into the ocean by her father Anguta. For 10 points each:

[10] Name this goddess who becomes ruler of the underworld Adlivun in the aftermath of that debacle.

ANSWER: **Sedna**

[10] Another rainstorm occurs when Illapa, a god of these people, spills his jug containing the Milky Way. This civilization attributes its creation to Virococha, father of the sun god Inti.

ANSWER: **Inca**

[10] The storm god Susanoo is the crass brother of this sun goddess, who is considered to be the ancestor of the emperors of Japan.

ANSWER: **Amaterasu** <Kim>

19. This man had a spat with the Secretary of the Interior, Richard Achilles Ballinger, which hastened the split of the Republican and Progressive parties. For 10 points each:

[10] Name this two-time governor of Pennsylvania who applied his principle of conservation through wise use as the first Chief of the United States Forest Service under Theodore Roosevelt.

ANSWER: Gifford **Pinchot**

[10] Unlike John Muir, Pinchot supported the damming of Hetch Hetchy Valley in this California national park. Eventually, the Raker Act enabled the construction of O'Shaughnessy Dam here.

ANSWER: **Yosemite** National Park

[10] This landmark 1900 conservation law, named for an Iowa Republican, prohibited trade in illegally obtained wildlife and plants. In 2011, Gibson Guitar was prosecuted for violating this act.

ANSWER: **Lacey** Act of 1900 <Kothari>

20. A displeasing equestrian statue of this ruler was stuck in a corner of shrubbery until Francois Girardon modified it, carving the "mountain of virtue" under the horse into flames and the rider into Marcus Curtius. For 10 points each:

[10] Name this French king whose ugly statue by Bernini was balanced with a gigantic bronze equestrian statue by Girardon in the Place Vendome. Andre Le Notre landscaped this Sun King's Palace of Versailles expansions.

ANSWER: **Louis XIV** [prompt on **Louis**]

[10] According to Louis, the "greatest French painter of all time" was an artist with this surname who decorated the Hall of Mirrors and the Salons of War and Peace. A female artist with the maiden name Vigee who married into this family painted portraits of Marie Antoinette.

ANSWER: **Le Brun** [or Charles **Le Brun**; or Louise Elisabeth Vigee **Le Brun**; do not accept or prompt on "LeBron"]

[10] This chief architect of Louis XIV designed the Place Vendome as well as the Hall of Mirrors and other Versailles buildings such as the Grand Trianon and the Orangerie.

ANSWER: Jules Hardouin-**Mansart** [or Jules **Hardouin**-Mansart] <Smart>

21. Answer the following about the Serpent Column, for 10 points each.

[10] According to Herodotus, the Serpent Column was created after this Greek victory, which took place on the same day as the Battle of Mycale. This 479 BC loss for Mardonius largely ended the wars between Greece and Persia.

ANSWER: Battle of **Plataea**

[10] The Serpent Column is made from this metal, using melted-down Persian weapons. The ancient period named for this metal ended around the 11th century BC with the concurrent collapse of the Mycenaeans, the Hittites, and the Egyptian New Kingdom.

ANSWER: **bronze**

[10] The Serpent Column is now located at this city's Hippodrome, a stadium for holding chariot races. One such chariot race devolved into chaos while rioters chanted the word "Nika."

ANSWER: **Constantinople** [or **Byzantium**; or **Istanbul**] <Golimlim>