**2019 National All-Star Academic Tournament**

**Round 19 – Tossups**

1. In the aftermath of one of these events, a genre of paintings of rich people being devoured by fish emerged in the afflicted area. One of these events that took place after a famine led the hermit Kamo no Chomei to leave civilization and live in the title *Ten-Foot Hut* of the book he describes it in. A group of three of these events named for Tokai, Nankai, and Edo that took place in 1854 and 1855 are collectively known as the Ansei. Another of these events led to a pogrom in which 231 Koreans were killed for allegedly causing it. That event left a large Mayan Revival hotel standing. That 1923 event of this type was named for the Japanese region it struck, Kanto, and did not affect Frank Lloyd Wright's Imperial Hotel. For 10 points, name these events that frequently destroyed buildings in Tokyo without sufficiently strong foundations.  
ANSWER: **earthquakes**  
*<History World - Myers>*

2. This group's languages are often written using the ALMG romanization system, which clashes with other transcription systems on how to transliterate words like “ajaw”, or “lord”. The Soviet scholar Yuti Knorozov worked on translating a script used by this group, and a group led by Linda Schele translated one of this group's most major texts in a single afternoon. Tatiana Proskouriakoff played a leading role in deciphering one script used by this group. This group's script used a base-20 system that represented the number 5 with a straight line and 1 with a dot. Modern dialects of this group's language include Kiche and M'am. A set of hieroglyphs used by this group, which speaks the Yucatec language, were used to write on stelae in cities like Chichen Itza and Tikal. For 10 points, name this culture group based in Southern Mexico and Guatemala.  
ANSWER: **Maya**ns [accept **Classic Maya**, **Yucatec**]  
*<Social Science Linguistics/Languages - Myers>*

3. In a folk custom from this city called “bitchy Lucia,” a man would cross-dress, wear blackface, and dance while a crowd screamed obscenities at him. Louis the Great of Hungary failed in an attempt to claim this city after his army was struck by the Black Death. A revolt led by Masaniello led to the declaration of a republic in this city in 1647. Gian Rinaldo Montaldeschi was executed for revealing a plan by Cardinal Mazarin and Queen Christina of Sweden to gain the throne of this city. A dynastic crisis in this city began after the death of Ferrante, the illegitimate son of Alfonso V of Aragon. The Battle of Fornovo took place during a campaign whose goal was taking this city, launched by Charles VIII of France in 1494. For 10 points, name this city that served as the capital of the Kingdom of the Two Sicilies.  
ANSWER: **Naples** [accept **Napoli**, **Neapolis**]  
*<History European 1400-1914 - Myers>*

4. High density polyethylene surrounds detectors of these particles in a method of obtaining their energy spectrum. The energy of these particles is calculated with Bonner spheres. Shielding material to protect from radiation from these particles is typically embedded with boron or cadmium. S-wave, and therefore spherically symmetric scattering of these particles was assumed by Fermi to derive a pseudopotential to explain these particles motion in hydrogenous substances. Doppler broadening acts as a passive safety measure in the absorption of the “thermal” variety of these particles. Spallation sources generate these particles which are slowed down with moderators in a nuclear reactor. This particle is made up of two down quarks and one up quark and was discovered by James Chadwick in 1932. For 10 points, name this neutral subatomic particle that makes up the atomic nucleus with protons.  
ANSWER: **neutron**s  
*<Science Physics - Etzkorn>*

5. In a deleted ending to a story by this author, one of his characters says that he wants to write the way that Cezanne painted. Henry Louis Gates is a proponent of the “wound theory” of this author's stylistic choices. A sentence by this author that starts with “I said, 'Who killed him?'“ and contains many “and's” is sometimes used to explain poly·syn·deton. That sentence is drawn from his “After the Storm”. This author claimed to have deleted the hanging at the end of “Out of Season” to demonstrate his “theory of omission.” He explained that theory by referring to an object that is only one-eighth above water. This author likely never said to “write drunk, edit sober” and probably didn't write “For sale: baby shoes, never worn.” For 10 points, name this minimalist American developer of the “iceberg theory” who wrote the Nick Adams stories.  
ANSWER: Ernest Miller **Hemingway**  
*<Literature American - Smith>*

6. During carbon fixation of C4 and CAM organisms, this ion combines with PEP to yield oxaloacetate. CPS1 catalyzes a reaction between ATP, ammonia and a molecule of this ion to generate carbamoyl phosphate in the first step of the urea cycle. Secretin triggers pancreatic centroacinar cells to release a fluid containing this ion into the duodenum. Three histidine side chains coordinate a zinc ion in an enzyme responsible for producing this ion. Sodium salts of this ion are used to treat metabolic acidosis, which is caused by the body's inability to produce or retain it. Carbonic anhydrase catalyzes a reaction between water and carbon dioxide to yield this ion and hydrogen when equilibrium favors it. For 10 points name this anion that plays a major role in the body's pH buffering system.  
ANSWER: **bicarbonate** ion [or **HCO3**-]  
*<Science Biology - Rao - Pothuraju>*

7. This artist regained popularity after nine of his paintings were placed chronologically first in a sub-gallery at the Louvre during the 1830s. Franz Marc argued that, like Cézanne, this artist “felt the mystical inner construction.” Another painting by this artist was likely the lower section of a larger painting that also depicted Sacred Love. Many attribution studies about this artist focus on works such as the *Modena Triptych*, which he painted during his decade-long Italian Period. This artist depicted John the Evangelist in a shimmering blue robe before seven writhing nudes in a painting based on the Book of Revelation. Another painting by the artist depicts saints including Augustine and Stephen at the funeral of the title Castilian nobleman. For 10 points, name this artist of *The Opening of the Fifth Seal* and *The Burial of the Count of Orgaz*, who worked in Toledo and was born on Crete.  
ANSWER: El **Greco** [or Doménikos **Theotokópoulos**]  
*<Arts Painting - Krol>*

8. In one poem by this author, a man exclaims “if only he had been a woman!” about a companion who dies of measles and had “a pretty body”. That man mentions having “fifty-two/ miserable, small volcanoes I could climb”. “Some realms I owned, two rivers, a continent” are mentioned in another poem by this author, which also contains the parenthetical command “Write It!” This author included that poem, as well as “Crusoe in England”, in *Geography III* **(three)**. A certain action is repeatedly proclaimed not to be a “disaster” in a 19-line piece by this poet which advises the reader to “accept the fluster” of misplaced door keys. For 10 points, name this American poet who asserted that “the art of losing isn't hard to master” in her villanelle “One Art.”  
ANSWER: Elizabeth **Bishop**  
*<Literature American - Smith>*

9. Adolf von Harnack and Ruth Hoppin identify the author of this work as a woman named Priscilla. This book contains a controversial passage that is often given as evidence to the idea that Christians can lose their salvation. This book gives a positive appraisal of the judge Jephthah who had to sacrifice his daughter to keep a promise he had made to God. This book analogizes the word of God to a “double-edged sword” that discerns the intentions of the heart. The Old Testament priest Melchizedek is mentioned multiple times in this text in comparison to Jesus. This book's eleventh chapter speaks of “the assurance of things hoped for, the conviction of things not seen” in its discussion of faith. This book opens by discussing the superiority of Jesus to the angels. For 10 points, name this anonymous New Testament epistle addressed to the title group of people chosen by God.  
ANSWER: Epistle to the **Hebrews** [do not accept or prompt on “Gospel of the Hebrews”]  
*<RMP Christian/Bible Religion - Suh>*

10. Dinah Washington's “What a Diff'rence a Day Made” was adapted from a song by a female composer from this country. Carlo Curti brought this country's “Typical Orchestra” to the New Orleans Cotton Exhibition. This is the home country of Maria Grever, as well as the country in which the modern two-row marimba was designed. The violin, *jarana*, and *haupangera* are used for the *huapango* music native to this country. The traditional percussion instruments of three native tribes, including the Yaqui, are used in a single-movement symphony from this country. The composer of *Sinfonia India* was a native of this country who influenced Aaron Copland 's musical depiction of one of its dance halls; that composer was Carlos Chavez. For 10 points, “La Bamba” is a song from what homeland of mariachi music?  
ANSWER: **Mexico** [or **United Mexican States** or **Estados Unidos Mexicanos**]  
*<Arts Music - Smith>*

11. In one poem in this language, the narrator is accompanied by the allegorical figures of fun, superstition, and hypocrisy to the title “Holy Fair”, where they watch an evangelical church service. One poet who wrote in this language asked, “are my poems spoken in the factories and fields?” in his “Second Hymn to Lenin”. One poem in this language ends each stanza with the Latin line “timor mortis conturbat me” and lists dead poets called *makers* who wrote in this language. The epic “A Drunk Man Looks at the Thistle” was written in this language, as was a poem that begins “O would some power give us the gift/ to see ourselves as others see us!” Another poem in this language provided the title of *Of Mice and Men* and addresses a “wee... tim'rous beastie.” “To a Louse” and “To a Mouse” were written in what language, whose Highland and Lowland dialects were used in poems by Hugh MacDiarmid and Robert Burns?  
ANSWER: **Scots** [accept **Scottish** English, prompt on English, Middle English with “where was it spoken?” and accept if the given answer is **Scotland**, do not accept Scottish **Gaelic**]  
*<Literature British Non-Shakespeare - Myers>*

12. Gnu's Bison software automatically creates programs that perform this task. Programs that perform this task often construct “first” sets, which are sets of terminals that could be the first character of each nonterminal. Earley's algorithm and the CYK algorithm perform this task. One method of performing this task involves both shifting the input and reducing trees named after this process. “LL” programs that predictively perform this task in a bottom-up fashion may cause infinite recursion when using left-recursive context free grammars. This process often follows tokenization and leads to the construction of an abstract syntax tree during program compilation. For 10 points, name this process that transforms program text into a useful computer representation.  
ANSWER: **parsing** [accept (shift-reduce or bottom-up) **parser**s or **parse** trees]  
*<Science Computer Science - Shanmugam>*

13. One of this company's projects coordinated by Louis Woo and local politician Dave DeGroot was referred to by a state legislator as “the Midwest Fyre Festival”. The CEO of this company claimed that the sea goddess Mazu called for him to run for political office in a 2019 speech. Tony Evers has promised to revise an agreement made by his predecessor with this company to build a large factory in Mount Pleasant, Wisconsin in exchange for billions of dollars in tax incentives. A wave of suicides in 2010 affected a massive factory known as this company's namesake “city” in Shenzhen, China, which assembled parts for iPhones. Terry Gou, the current CEO of this company, is mounting a bid for president of Taiwan. For 10 points, name this world's largest electronics manufacturer.  
ANSWER: **Foxconn** [accept **Hon Hai** Precision Industry Company]  
*<Current Events US - Myers>*

14. A creature whose name begins with this word pays farmers with golden corn cobs to take and eat their unbaptized children. A deity whose name ends with this word is honored on an August 1 festival in which families put food in the ground and later dig it up. This is the first word in the name of a deity who introduced textiles to the people of Lake Titicaca, whom she civilized with the help of her husband, Manco Capac. In the name of that goddess, this word precedes “Ocllo”. Depictions of the Virgin Mary in Andean art frequently depict her as triangular and mountain-like due to her syncretization with a goddess whose name ends in this word. In Incan myth, that goddess whose name ends in this word is responsible for both fertility and earthquakes. For 10 points, name this Quechua word preceded by “Pacha” in the name of an earth goddess.  
ANSWER: **mama** [accept **Pachamama**, **Mama Pacha**, **mother**, **Mama Ocllo**; accept **Pacha** before mentioned]  
*<RMP Non-Greek/Roman Myth - Myers>*

15. This film uses two pieces titled *De Natura Sonoris*. A crane shot transitions between a model and the object it represents in a part of this film that uses an excerpt of “night music” by Bela Bartok. This film's theme, which adapts the “Dream of a Witches' Sabbath” from *Symphonie Fantastique*, was made by Rachel Elkind and Wendy Carlos. Though it does not star Linda Blair, parts of the tone cluster-heavy pieces *Utrejna*, *Polymorphia*, and *The Awakening of Jacob* were used in this film. In this movie, “Midnight, the Stars and You” plays as a slow zoom into the Gold Room shows the main character anachronistically appear in a photo of a 1921 party. A piece by Penderecki plays in this film when a bigwheel rider turns the corner to see identical twins. For 10 points, name this Stanley Kubrick film set in a hotel in Colorado, which influenced the music of subsequent horror films.  
ANSWER: *The* ***Shining***  
*<Arts Film - Smith>*

16. Frank Farrington proved the safety of part of this project to workers in a 22 minute crossing of its site on a boatswain's **(bosun's)** chair. Decompression sickness was first identified in workers on this project who worked in pressurized caissons underwater. After the supervisor of this project began suffering from that disease, his wife, Emily, took over as *de facto* chief engineer. While surveying for this project its originator, John Augustus Roebling, had his foot crushed by a ferry and died of tetanus, leaving his son Washington to take charge. After twelve people died in a crush at this structure, P.T. Barnum led Jumbo and 20 other elephants across it to prove its structural integrity. Opened by Chester A. Arthur in 1883, for 10 points, name this historic bridge linking Manhattan to a borough on Long Island.  
ANSWER: **Brooklyn Bridge** [accept **East River Bridge**]  
*<History American (1865-1945) - Jackson>*

17. William Jencks proposed finding TSA haptens to screen for antibodies to employ in this process. French chemist Paul Sabatier's **(sah bah tee ay's)** contribution to the study of this process resulted in his namesake principle, where the best substances have an ideal heat of adsorption near the peak of a volcano plot. While working for Standard Oil, Ernest Thiele developed a namesake modulus to qualitatively assess the effect of grain size on this process. This process reaches “perfection” when diffusion becomes a limiting factor. Crown ethers are commonly employed in this process for phase-transfer reactions. This process can be weakened with compounds like lead-acetate in a method of “poisoning.” Generally-speaking, this process works by lowering the activation energy. For 10 points, name this process of increasing the rate of a chemical reaction.  
ANSWER: **catalysis** [accept any mention of introducing **enzymatic** or **catalytic** activity to a reaction]  
*<Science Chemistry - Etzkorn>*

18. Johannes Fabian is best known for a book on *How Anthropology Creates Its Object* titled for this concept *and the Other*. L.E.J. Brouwer's intuitionist foundation for mathematics uses two “acts” based on perception of this phenomenon to construct the natural numbers and the continuum, respectively. Paul Ricoeur argued that language is intrinsically creative in a three-volume work titled for this concept *and Narrative*. Henri Bergson elaborated his idiosyncratic theory of this phenomenon in a book titled for this concept *and Free Will*. The A-series and B-series models of this phenomenon were formulated in J. M. E. McTaggart's essay on “The Unreality” of this concept. Augustine lamented that this concept's being depends on non-being, since the past is gone, the future is not yet here, and the present is not resolvable. For 10 points, name this non-spatial dimension.  
ANSWER: **time**  
*<RMP Philosophy/Thought - Marvin>*

19. A verse section at the beginning of a work in this genre calls a man a “skipper of the sea-steed” who is “greedy for gore.” In a work in this genre, a beautiful girl is told that the four dreams she had during winter portend her four future husbands, the first of whom she will divorce and the last three of whom will die. In one of these works, a man tries to shield himself and his family with an ox-hide as his house is burnt down in a blood feud. In one work in this genre, Sigi rules the Huns, who defeat the Burgundian kingdom. In a work from the “*fornaldar*” subgenre of this genre, a man gains the ability to talk to birds after drinking the blood of the dragon Fafnir. The most famous work in this genre is named for the Volsung family. For 10 points, name these medieval Icelandic epics.  
ANSWER: **saga** [or **Icelandic saga**s or **Old Norse saga**s or **viking saga**s; accept specific sagas or sub-genres of sagas; prompt on epic or prose epic before “epic”]  
*<Literature European - French>*

20. One soldier who fought in this country was nicknamed “the ghost” for returning to combat after being wounded seven separate times. One army used gliders rather than paratroopers to fly over a canal and capture a fort in this country. This country's defenses during World War II were centered around the KW Line and Fort Eben-Emael. One of this country's colonies supplied most of the Uranium for the Manhattan project despite being under Axis occupation. Joachim Peiper was responsible for a massacre of prisoners-of-war that took place in this country's town of Malmedy. One general replied “nuts” to a demand to surrender while stationed in this country's city of Bastogne during the Battle of the Bulge. For 10 points, name this country that was invaded along with its northern neighbor, the Netherlands, in 1940.  
ANSWER: Kingdom of **Belgium** [accept **Belgique**, **Belgie**, **Belgien**]  
*<History European 1914-present - Myers>*

21. Tensions between these two countries escalated after the monarch of one of them gave a disastrous magazine interview in which he said “I am a friend..., but you make things difficult for me” and called the people of the other “mad as march hares”. Two ships from one of these countries were renamed the *Yavuz Sultan Selim* and *Midili* after a failed attempt to capture them by the navy of the other. The “turnip winter” was caused in one of these countries by a blockade led by the other. An admiral from one of these countries said “there seems to be something wrong with our bloody ships” during an inconclusive naval battle with the other off the coast of Jutland. These two countries went through a naval arms race named for a class of ship from one of them, the *Dreadnought*. For 10 points, name these two countries whose Royal Navy and Reichsmarine frequently clashed during World War I.  
ANSWER: **Germany** and the **United Kingdom** [accept **Great Britain**, **Britain** for **United Kingdom**, accept **Deutschland**, **Deutsches Kaiserreich** for **Germany**]  
*<History European 1914-present - Myers>*

**2019 National All-Star Academic Tournament**

**Round 19 – Bonuses**

1. A Greek statesman of this city-state claimed that to show the newfound power of their city-state that they would bring the Propylaea, a monumental gateway, from the Acropolis in Athens to this city-state. For 10 points each:  
[10] Name this city-state that targeted the capture of the Propylaea. The Cadmeia, a citadel similar to the Acropolis, was named after this city-state's mythological founder, Cadmus.  
ANSWER: **Thebes**  
[10] Xenophon attributed Theban popularity to the Greeks never forgiving Thebes for surrendering to this invading King in 480 BCE while the rest of the Greeks fought on, eventually defeating this king's army at Salamis.  
ANSWER: **Xerxes I** [**the Great**]  
[10] Although this man's Plutarchan “Life” has been lost, his claim that the Propylaea gateway would be brought to Thebes is preserved by Demosthenes. This Theban was the military strategist behind the Theban victory over Sparta at Leuctra, and he was called “the first man of Greece” by Cicero.  
ANSWER: **Epaminondas**  
*<History European to 1400 - Jankov>*

2. Answer some questions about the role of a muezzin, for 10 points each:  
[10] A muezzin recites the call to prayer, known by this Arabic term, five times per day while facing Mecca. This text reminds people that it is better to pray than to sleep while it is announced for the Fajr, or dawn prayer.  
ANSWER: **adhan** **(Ath-en)**  
[10] The muezzin recites the adhan from one of these towers in a mosque with a circular, onion shaped roof.  
ANSWER: **minaret**s  
[10] The adhan itself starts out by reciting this phrase, which is repeated during prayer while worshipers raise their hands to their head. Prayers on Eid al-Adha repeats this phrase an extra six times. Give the Arabic term for the phrase instead of the phrase itself.  
ANSWER: **takbir** [because of the instructions, prompt on Allahu Akbar]  
*<RMP Non-Christian/Bible Religion - Hijazi>*

3. A “step-function” type of these proteins can be opened by blue light and closed by yellow light. For 10 points each:  
[10] Identify these proteins which function as light-gated ion channels to control phototaxis in green algae.  
ANSWER: **channelrhodopsin**s [prompt on **rhodopsin**s or **opsin**s]  
[10] Unlike most rhodopsins, channelrhodopsins are not this kind of receptor because they operate ion channels directly. These receptors convert GDP into GTP when triggered, allowing other proteins to dissociate.  
ANSWER: **G-protein coupled receptor**s [or **GPCR**s]  
[10] Rhodopsins are commonly found in this structure, a part of the eye rich in photoreceptors. It contains the macula and fovea.  
ANSWER: **retina**  
*<Science Biology - Mitchell>*

4. For one book, this author used a press secretary he had saved from execution to gain access to former servants at a royal court. For 10 points each,  
[10] Name this Polish journalist who wrote books including *Another Day of Life* and *The Emperor* about conflicts he witnessed in Africa.  
ANSWER: Ryszard **Kapuscinski** **(Ka-poosh-CHEEN-ski)**  
[10] In *The Emperor*, Kapuscinski chronicled the palace intrigues and incompetent administration that led to the fall of this last emperor of Ethiopia at the hands of the military Derg government.  
ANSWER: **Haile Selassie** I [accept Ras **Tafari** Makonnen]  
[10] In *Another Day of Life*, Kapuscinski recounts several near-death experiences sustained while covering the beginning stages of this conflict, in which the MPLA was supported by a Cuban intervention against the South African-backed UNITA and Holden Roberto's FNLA.  
ANSWER: **Angolan Civil War**  
*<History World - Myers>*

5. A line in Edward Fitzgerald's “translation” of the Rubaiyat that states “Before we too into [this substance] descend” may have actually been based on a line from Genesis. For 10 points each:  
[10] Name this substance. A line from *The Wasteland* begins “I will show you fear” and then states a phrase about this substance.  
ANSWER: **dust** [accept “Before we too into **dust** descend” or “in a handful of **dust**”]  
[10] This author used a line from Eliot to title his novel *A Handful of Dust*. He also wrote *Brideshead Revisited*.  
ANSWER: Evelyn **Waugh**  
[10] Eliot cites his reference to a “handful of dust” as originating from a Tennyson poem named for a girl with this first name. Another poem titled after a woman with this first name includes the lines “for all sad words of tongue and pen/ the saddest are these: “it might have been”“  
ANSWER: **Maud** [accept **”Maud Muller**]  
*<Literature British Non-Shakespeare - French>*

6. Suburbs of this city feature houses that are raised on timber stumps and have a characteristic veranda extending around the structure. For 10 points each:  
[10] Name this city located on a namesake river approximately 9 miles from Moreton Bay. This city's suburb of Woollongabba is home to a major sporting venue.  
ANSWER: **Brisbane**  
[10] The distinctive residential architecture of Brisbane is named for this second-largest Australian state, of which Brisbane is the capital and largest city.  
ANSWER: **Queensland**  
[10] Many Queenslander homes in Brisbane were heavily damaged in a 1974 flood which occurred on this holiday, during which new honors are announced and citizenship ceremonies are conducted. Comedian John Raskopolous humorously proposed moving the date of this holiday to May 8 because it sounds like the common Australian greeting “mate.”  
ANSWER: **Australia Day** [prompt on January 26; prompt on Invasion Day or Survival Day]  
*<Geography World - Rombro>*

7. This magazine featured both “No Stars” and “Five Stars” reviews of Ornette Coleman's album *Free Jazz*. For 10 points:  
[10] Name this music magazine with a famous “Blindfold Test” column. This now monthly periodical is devoted to “jazz, blues, and beyond.”  
ANSWER: ***DownBeat*** [or **DOWNBEAT**]  
[10] This phrase was coined by longtime *DownBeat* critic Ira Gitler in a set of liner notes to a soul-influenced album. This three-word phrase refers to a dense improvisational style used between 1957 and 1960 on tracks like “Mr P.C” and “Naima.”  
ANSWER: “**sheets of sound**”  
[10] John Coltrane developed his “sheets of sound” approach while playing with this musician's trio, with which he recorded “Trinkle, Tinkle.” This pianist's spacey style can be heard on such tracks as his “Straight No Chaser” and 'Round Midnight.”  
ANSWER: Thelonious **Monk**  
*<Arts Jazz - Smith>*

8. The second coefficient of this expansion quantifies the interactions between *pairs* of molecules. For 10 points each:  
[10] Name this equation of state. It is typically expressed as a power-series of the number density.  
ANSWER: **virial** equation of state [do not accept “virial theorem”]  
[10] Like the van der Waals equation, the virial equation models deviations from this law, which states that “P V equals n R T.”  
ANSWER: **ideal gas** law  
[10] In this model, analytic solutions exist for the second, third, and fourth virial coefficients. The van der Waals equation uses this model to derive its *b* coefficient.  
ANSWER: **hard sphere** model [or **hard sphere** potential; prompt on partial answer]  
*<Science Chemistry - French>*

9. A novel by this author opens with the protagonist killing several lizards between his house and his neighbour's; when his neighbour Roberto disapproves, he tries to kill him with a slingshot, but instead kills his cat. For ten points each:  
[10] For ten points, name this novelist who discussed Marcello's attempts to live a normal life under a Fascist regime in that work, *The Conformist*. This novelist's other works include *The Indifferents* and *Contempt*.  
ANSWER: Alberto **Moravia**  
[10] *The Conformist* is set under the wartime regime of this European country. Luigi Pirandello had his Nobel Prize medal melted down for this country's military to use in weapons.  
ANSWER: **Italy** [or **Italia**]  
[10] The Italian dictatorship's anti-Semitic policies gave this author difficulty in finding an advisor for his thesis, as described in his memoir *The Periodic Table*. This author narrated his experiences in Auschwitz in *If This Is A Man*.  
ANSWER: Primo **Levi**  
*<Literature European - Krol>*

10. Cassandra was not the only Trojan with the power of prophecy. For 10 points each:  
[10] Name this twin brother of Cassandra who, when captured by the Greeks outlined a the conditions that they had to fulfill to take Troy. These included having Neoptolemus fight and getting Philoctetes to bring Heracles' bow and arrow to battle.  
ANSWER: **Helenus**  
[10] Neoptolemus was the son of this Greek hero, who refused to fight in battle after Agamemnon dishonored him. This hero went into a rage after the death of Patroclus, killing Hector and dragging his corpse around the city.  
ANSWER: **Achilles**  
[10] Helenus also stated that this man's bones must be brought to Troy before the Greeks could win the war. While a boy, this man's father Tantalus chopped him up and fed him to the gods. This man later killed his would be father in-law by bribing Myrtilus into replacing that man's chariot pins with wax, causing a crash.  
ANSWER: **Pelops**  
*<RMP Greek/Roman Myth - Jankov>*

11. The two kinds of numbers named after this mathematician are similar denoted similarly to binomial coefficients, except instead of parentheses either rectangular brackets or curly braces are used instead. For 10 points each:  
[10] Name this mathematician. The “first kind” of numbers named after him count permutations with a fixed number of cycles, while the “second kind” count partitions into a fixed number of subsets.  
ANSWER: James **Stirling** [accept **Stirling numbers of the first kind** or **Stirling numbers of the second kind**]  
[10] The Stirling numbers appear in this field of mathematics, which studies ways of counting.  
ANSWER: **combinatorics**  
[10] Like most numbers in combinatorics, each kind of Stirling numbers can be defined using one of these functions. For a given sequence, this function is defined so that the *n*th coefficient of its power series expansion equals the *n*th term in the sequence.  
ANSWER: ordinary **generating** function  
*<Science Math - French>*

12. Sofia Gubaidulina composed *The Canticle of the Sun* for this musician's seventieth birthday. For 10 points each:  
[10] Name this musician for whom Shostakovich wrote two concerti and Prokofiev wrote his Symphony-Concerto. He commissioned over 100 pieces during his lifetime, and sometimes collaborated with his pianist daughter Elena.  
ANSWER: Msistlav “Slava” **Rostropovich**  
[10] This earlier cellist popularized his country's “Carol of the Birds.” He recorded Bach's six suites for his instrument between 1936 and 1939.  
ANSWER: Pablo **Casals**  
[10] This cellist recored Dvorak's concerto for his instrument twice. This Chinese-American founded the *Silkroad* arts non-profit to promote multicultural artistic crossovers.  
ANSWER: Yo-Yo **Ma**  
*<Arts Music - Smith>*

13. If the three eigenvalues of the tensor representing this quantity are distinct, then rotation around the second principal axis will be unstable. For 10 points each:  
[10] Name this quantity. The eigenvectors of this quantity's matrix are the principal axes of rotation.  
ANSWER: **moment of inertia**  
[10] This quantity equals the moment of inertia times the angular velocity. This conserved quantity is the time derivative of torque.  
ANSWER: **angular momentum**  
[10] The derivation of this theorem begins by taking the second derivative of the moment of inertia. The usual statement of this theorem includes a sum of the dot products of each particle's force and position.  
ANSWER: **virial** theorem  
*<Science Physics - French>*

14. For 10 points each, answer the following about the radical feminist group known as WITCH:  
[10] WITCH originally splintered from another radical feminist group from this state. Members of this state's WITCH coven cast a hex on Wall Street, supposedly causing a sharp drop in the stock market, and released 100 white mice into a Bridal Fair held at Madison Square Garden.  
ANSWER: **New York**  
[10] An early spin off of the WITCH movement was founded in this city by Heather Booth, who also led the Jane Collective, which helped women find abortions while they were outlawed. This city's Women's Liberation Union published the pamphlet *Socialist Feminism*.  
ANSWER: **Chicago**, Illinois  
[10] The Chicago WITCH coven protested in favor of the Chicago 8, a group arrested for their actions during this event. That group who protested this event included Bobby Seale, who was gagged and bound and eventually removed from the trial proceedings, and Abbie Hoffman, who shouted “why have you forsaken me, dad?” at the unrelated Judge Julius Hoffman.  
ANSWER: 1968 **Democratic National Convention** [or the 1968 **DNC**]  
*<History American (1945-present) - Shanmugam>*

15. The protagonist of this novel is criticized by his West Indian coworker for his decision to grow a beard and moves back home after his lover Erica dies. For 10 points each:  
[10] Name this novel in which the Princeton graduate and former consultant Changez may be assassinated by a CIA agent after giving a viral anti-American speech.  
ANSWER: *The* ***Reluctant Fundamentalist***  
[10] The author of *The Reluctant Fundamentalist*, Mohsin Hamid, is from this country. In a novel by another author, Iskander Harappa and General Raza Hyder are politicians who rule an allegorical version of this country.  
ANSWER: Islamic Republic of **Pakistan**  
[10] This author's novel *Shame* is a political satire set in Pakistan. In another novel by this author, Saleem Sinai and other children born on India's independence day have supernatural powers.  
ANSWER: Salman **Rushdie**  
*<Literature World - Myers>*

16. One historian argued that this concept was redefined throughout American history to give legitimacy to all sorts of causes, including both sides of the Civil War. For 10 points each:  
[10] Name this concept. The *Declaration of Independence* places this concept alongside “life” and the “pursuit of happiness” in its list of “certain unalienable rights.”  
ANSWER: **liberty** [or **freedom**]  
[10] *Give me Liberty*, which examined the concept in American history, was written by this Columbia historian and author of histories of 19th century America including *The Fiery Trial*.  
ANSWER: Eric **Foner**  
[10] The American obsession with liberty was called a “cult of freedom” in this text. This text advances an argument that the title concept is defined by civil society groups like churches and clubs.  
ANSWER: ***Democracy in America***  
*<History American (pre-1865) - French>*

17. Mathematical platonism's reliance upon abstract objects originally helped to justify this philosophical position. For ten points each,  
[10] Name this position which, in one form, describes mathematics as a game that applies transformations to strings. David Hilbert, a prominent holder of this philosophical position, proposed a system to construct mathematics from a consistent set of axioms.  
ANSWER: **formalism**  
[10] This philosopher, along with Nelson Goodman, wrote “Steps towards a Constructive Nominalism” in favor of formalism. He later adopted a platonist viewpoint and co-names an argument with Hillary Putnam that, due to science's reliance upon math, mathematical objects should be seen as ontologically real.  
ANSWER: Willard Van Orman **Quine** [or W.V.O. **Quine**]  
[10] Hilbert's plan for to axiomatize math fell into dispute after this mathematician's 1931 publishing of his two incompleteness theorems. This mathematician was paired with artist M.C. Escher and comoposer J.S. Bach in the title of a Douglas Hofstadter book.  
ANSWER: Kurt **Gödel**  
*<RMP Philosophy/Thought - Lucas>*

18. In a 2017 paper, Curran and Hill implicated neoliberalism, meritocracy, and increasing parental demands in the rising prevalence of this attitude. For 10 points each:  
[10] Name this attitude which D E Hamachek divided into “normal” and “neurotic” forms in one paper. This attitude can be divided into self-oriented, other-oriented, and socially prescribed forms.  
ANSWER: **perfectionism** [accept word forms]  
[10] Perfectionism is often cited as a cause for these disorders, which include bulimia and anorexia.  
ANSWER: **eating** disorders  
[10] Perfectionism has also been refered to as a risk factor for this behavior due to the tendancy of people with high levels of perfectionism to show a “perfect face” and set unreasonable goals. This behaviors “ideation” is strongly associated with borderline personality disorder.  
ANSWER: **suicide** [accept obvious equivalents such as **killing yourself**; do NOT accept or prompt on “self-harm”]  
*<Social Science Psychology - Shanmugam>*

19. This poet wrote “perhaps the great error is believing we're alone” in a poem whose title was inspired by *2001: A Space Odyssey*. For 10 points each:  
[10] Name this poet of “My God, It's Full of Stars.” This poet's collection *Life on Mars* also includes a poem that discusses the killing of Canada Geese outside of JFK Airport entitled “Solstice.”  
ANSWER: Tracy K. **Smith**  
[10] As of June 2019, Tracy K. Smith was the current holder of this United States position appointed by the Library of Congress. Former holders of this position such as Gwendolyn Brooks and Billy Collins frequently instituted programs to foster interest in poetry among the population.  
ANSWER: **Poet Laureate** Consultant in Poetry to the Library of Congress [accept answers related to being the **Poet Laureate** of the **US**, prompt on “Consultant in Poetry”],  
[10] Smith cited this man's poem “Digging” as the poem that “invited” her “to start writing poetry.” In another poem, this man described the “great slime kings” who were “gathered there for vengeance.”  
ANSWER: Seamus Justin **Heaney**  
*<Literature American - Husar>*

20. The lighting of this device is provided by the moon through the window, unlike its artist's painting of an orrery, which is lit by a central, artificial source. For 10 points each:  
[10] Name this device. A girl looks away as a scientist demonstrates an experiment on the title animal using this device.  
ANSWER: **air pump** [prompt on pump]  
[10] *An Experiment on a Bird in an Air Pump* and *A Philosopher Lecturing on the Orrery* are both paintings by this English artist. This member of the Lunar Society often painted scientific discoveries and scenes of the Industrial Revolution.  
ANSWER: Joseph **Wright** of Derby  
[10] During an October 1774 trip to Italy, Wright of Derby painted several paintings of one of these events. A 79 AD one of these events destroyed the Roman town that houses the *Alexander Mosaic*.  
ANSWER: **eruption**s of Mount Vesuvius [accept volcanic **eruption**s]  
*<Arts Painting - Bentley>*

21. Kenau Hasselaer recruited a regiment of 300 women to defend her hometown during this war. For 10 points each:  
[10] Name this war during which one side employed “sea beggars” and “hell-burners” against Alessandro Farnese's forces. That side in this war was led by a prince nicknamed “the silent”.  
ANSWER: **Dutch War of Independence** [accept **Dutch Revolt**, **Eighty Years' War**]  
[10] Farnese was proceeded by this governor of the Netherlands, his mother, who attempted to reconcile with the Dutch rebels.  
ANSWER: **Margaret** of Parma [accept **Margarita**, **Margherita**, **Margarethe**]  
[10] The Dutch declared independence from this kingdom, which was established from the union of Castile and Aragon after the death of Queen Joana the Mad.  
ANSWER: Kingdom of **Spain** [accept Reino de **España**]  
*<History European 1400-1914 - Myers>*