

### Ladue Invitational Spring Tournament VI

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## ROUND 9 - TOSSUPS

1. **The mythology of this civilization features a birdman cult headed by the chief Make-make. After his expedition to this location, one man postulated that its first inhabitants were South American “long-ears” who arrived much earlier than the opposing “short-ears”; that man was Thor Heyerdahl. Another theory that claims that the people of this island resorted to cannibalism after they drove all of the plants and animals to (\*) extinction was conceptualized by Jared Diamond in *Collapse*. Maunga Terevaka is the high point of this island that contains several monoliths created by its indigenous Rapa Nui people. For ten points, name this island currently controlled by Chile, the location of giant stone heads called “moai”.**

ANSWER: Easter Island

<RP>

2. **A low level of CREB binding proteins is indicative of this condition, and those with over 36 sequential glutamines in the relevant protein have it. The gene controlling this condition has the trinucleotide sequence CAG repeated many times, and it is located on the short arm of (\*) chromosome 4. Physical capability gradually declines with this disease, and it often presents itself earlier in subsequent generations. This condition is first noticeable around age 40, and progresses extremely slowly. For ten points, name this incurable genetic disease that eventually causes involuntary movements, an English scientist’s namesake chorea.**

ANSWER: Huntington’s disease

<LP>

3. **With Mary Hunter Austin, this artist compiled much of his work at New Mexico into a book that features a piece with crosses resting atop mud dwellings. In that book, *Taos Pueblo*, this artist used a technique he developed with Fred Archer that creates eleven different levels of exposure, known as the (\*) Zone System. This man, who took photos of young Japanese children saluting at the Manzanar internment camp, cofounded f/64[“f-stop-64”] with other photographers. For ten points, name this American photographer who took *Moon Over Half Dome* and several other photos at Yosemite.**

ANSWER: Ansel Adams

<RP>

4. **Mary Ainsworth conducted one test that distinguished secure, insecure avoidant, and insecure ambivalent attachment styles in these beings, and that experiment was known as the “strange situation”. An experimenter who studied these subjects found that they were unable to comprehend balancing and found that they develop “object (\*) permanence” before they understand logic. The Visual Cliff experiment found that depth perception was an innate quality of these people for which Jean Piaget theorized four stages of cognitive development. For ten points, name these young humans that may crawl before they can walk.**

ANSWER: infants [accept babies or toddlers or young children or synonyms; prompt on “children” or “young people”]

<RP>

5. **In one of this author’s novels, an old man decides to adopt the orphan boy Toru after seeing moles through his undershirt, and that man reappears in a novel in which he reunites with Kiyooki Matsugae. This author, who created Shigekuni Honda, included a character who uses his clubfeet to attract women, (\*) Kashiwagi, a student at Otani University, in another work. In that novel by this author of *The Decay of an Angel* and *Spring Snow*, Mizoguchi remembers “When you meet the Buddha, kill the Buddha” before he burns down the title structure. For ten points, name this man who committed seppuku on live television, the author of the *Sea of Fertility* tetralogy and *The Temple of the Golden Pavilion*.**

ANSWER: Yukio Mishima [accept either underlined part, accept “Kimitake Hiraoka”]

<RP>

6. One class of this type of this substance is known for its very low Young's Modulus and easily returns to its original shape after being warped. Another class of these substances was invented by Wallace Carothers and can be created by heating a namesake salt, and Paul Flory and Maurice Huggins derived an equation to model thermodynamics of solutions with these types of molecules. These materials can be created synthetically or biologically by (\*) repeating units of specific molecules. Chain-growth is one of the ways these compounds form, and examples of them include styrofoam and nylon, as well as other plastics. For ten points, identify these compounds formed by linking monomers.

ANSWER: polymers [accept elastomer before "Paul" is read; prompt on prompt on "ideal chain" until mentioned]

<CL>

7. In one work by this composer, the title character sings to his wife on his wedding day in the aria *Rosa del ciel, vita del mondo e degna*. Another work by this composer of *The Return of Ulysses to His Homeland* features an opening in which Ariadne repeats, "Let me die", and that opera is (\*) *L'Arianna*. A more famous opera by this composer includes a confession by Drusilla to protect her lover Ottone, who attempted to kill the future wife of Nero, *The Coronation of Poppea*. In a 1607 opera by this composer, Eurydice fails to return from the underworld. For ten points, name this composer of *L'Orfeo*, one of the earliest developers of opera.

ANSWER: Claudio Monteverdi

<GM>

8. This band performed "The Saints Are Coming" with U2 for a charity event after Hurricane Katrina. One song by this band, "Jesus of Suburbia", is roughly nine minutes long and split into 5 movements, one of which is "City of the Damned". The lead singer of this band dedicated (\*) "Wake Me Up When September Ends" to his late father, which was on the album "American Idiot", and another of this band's songs begins with "I walk a lonely road, the only one that I have ever known". For ten points, identify this American punk rock band which created the song "Boulevard of Broken Dreams".

ANSWER: Green Day

<AG>

9. In this novel, a character is described as belonging to "the coal, the iron, the clay," because his father was a coal-miner, and another character suggests to that character that he should burn the picture of his wife. The protagonist of this work also carries out an affair with Duncan while visiting Venice, and this work was famously the subject of an (\*) obscenity trial because of its crude language and content. In this work, the nurse Mrs. Bolton takes care of Clifford because he is paralyzed from the waist down while the protagonist has an affair with the gamekeeper Oliver Mellors. For ten points, name this D.H. Lawrence novel about Constance's various affairs.

ANSWER: Lady Chatterley's Lover

<MS>

10. This state's capitol building houses John Steuart Curry's *Tragic Prelude* mural, which includes a fuming depiction of an abolitionist who led a massacre to avenge the sack of Lawrence in this state. Following the Civil War, cattle were often driven from this state to Texas through the Chisholm Trail, which began at its city of Abilene. The Wyandotte and (\*) Lecompton were among four documents that have served as the official constitution of this state. In Illinois, Abraham Lincoln gave the Peoria Speech expressing his opposition to an act that established popular sovereignty in this state and Nebraska. For ten points, name this state that was nicknamed "Bleeding" in the 1850s, with its capital at Topeka.

ANSWER: Kansas

<RP>

## HALFTIME

11. "The Table" is one type of these structures in British Columbia that form under an ice sheet. From 1991 to 1993, one of these structures led to a global temperature decrease of 0.5 degrees Celsius. Indonesia contains the highest amount of these structures compared to any other country, and a (\*) caldera is a crater where one of these things caves in due to lack of support. The Ring of Fire is a collection of these structures, which can come in composite, shield, and cinder cone varieties. For ten points, name these geographical features that spew lava through a crater, examples of which include Mount Vesuvius and Mount St. Helens.

ANSWER: volcanoes

<NG>

12. **Karamu is a feast that takes place on the sixth day of this holiday, while its last day is centered on Imani, or faith. Observants of this holiday greet each other with the phrase “Habari Gani?” Nguzo Saba are the seven principles observed during this celebration, and people who follow this festivity often wear garments like (\*) kente and kaftans. The name of this holiday comes from the term for “first fruits of the harvest” in Swahili, and Maulana Karenga created this week-long celebration. For ten points, name this pan-African celebration which honors African-American heritage.**

ANSWER: Kwanzaa

<AG>

13. **A character in this novel is silenced by a police officer when he asks if it’s legal to call a man a pimp, and that character is released with a warning for beating his girlfriend after the protagonist testifies for him in court. Other characters in this work include Thomas Perez, an elderly man from The Home for Aged Persons who passes out from heatstroke at a (\*) funeral and a man that beats his dog, but becomes miserable when he runs away, Salamano. The main character in this work doesn’t cry after his mother dies, and after leaving Raymond Sintes’s house, shoots an Arab on the beach. For ten points, name this novel by Albert Camus about Meursault.**

ANSWER: *The Stranger* [accept *L’Etranger* or *The Outsider*]

<RP>

14. **The Three Kingdoms of Korea period was ended by a war between the Goguryeo and this dynasty. Like its predecessor, this dynasty abandoned the nine-rank system, and instituted a self-rule system called Jimi. By many accounts, the only female emperor ever interrupted this dynasty, which was attacked by a rebellion that led to the execution of Yang Guifei, one of the Four Beauties. Emperor Xuanzong led this dynasty to its greatest extent, though he would later be attacked by a northern (\*) Sogdian general in the An Lushan Rebellion. This dynasty was founded by Emperor Gaozu and featured poets like Du Fu and Li Po in its golden age. For ten points, name this Chinese dynasty that lasted from 618-907 AD between the Sui and Song dynasties.**

ANSWER: Tang Dynasty

<RP+GM>

15. **Bretschneider’s Formula gives the area of one of these figures, and Varignon’s Theorem describes the shape formed when connecting the midpoints of one of these shapes. One of these shapes is describable with 5 parameters, while the midpoints of the diagonals of a “complete” one of these shapes are collinear. (\*) Ptolemy’s inequality gives a relationship between the sides and diagonals of one of these shapes, and Brahmagupta’s Formula can also be used to find the area of one of these polygons that is inscribed in a circle, those are known as the “cyclic” types of these shapes. For ten points, name these shapes such as kites, squares, and rectangles, which have 4 sides.**

ANSWER: quadrilateral [accept anything more specific, such as cyclic quadrilateral]

<MS>

16. **If bosons are considered massless in the Bose-Einstein distribution, the distribution reduces to one named for this person. He derived Wien’s law before creating his namesake law, which tends to the Rayleigh Jeans law and Wien’s law at low and high frequencies, respectively. This scientist names an era in the early universe roughly 10 to the -43 seconds after the (\*) Big Bang when the four fundamental forces were combined, as well as a set of units including the shortest measurable length. In his namesake postulate, this man related energy, frequency, and his eponymous constant, which is equal to 6.63 times 10 to the -34 meters squared times kilograms over seconds. For ten points, name this German founder of quantum theory.**

ANSWER: Max Planck

<AG>

17. **In one story, this figure asks the ghost of a deceased friend about the afterlife after Shamash opens a hole to the underworld, but is denied information. The bartender Siduri gives directions to the home of Urshanabi to this man, who discovers he has failed to complete one task after finding that the first of seven loaves of bread has gone stale. A snake steals the plant of (\*) eternal youth that the flood survivor Utnapishtim advised this man to retrieve from the bottom of the sea. In the Cedar Forest, this man slays the giant Humbaba with his wild friend Enkidu on his quest for immortality. For ten points, name this King of Uruk, the central hero of a Mesopotamian epic.**

ANSWER: Gilgamesh (accept Epic of Gilgamesh)

<RP>

18. **World's End is a 4,000 foot high cliff located in this country's Horton Plains National Park, which is home to an endemic sambar deer subspecies. The Burgher people are a Eurasian ethnic group located in this country, whose longest river, the Mahaweli, empties into Trincomalee Bay. This nation is connected to its northern neighbor's Rameswaram Island by (\*) Adam's Bridge, which divides the Gulf of Mannar and Palk Bay. The Sinhalese people make up the majority of this country's population, along with the significant Tamil minority. For ten points, name this island nation south of India, once known as Ceylon.**

ANSWER: Democratic Socialist Republic of Sri Lanka

<AG>

19. **A government led by a prime minister of this party granted independence to India and Pakistan. During the Winter of Discontent in the late 1970's, trade unions insisted on higher pay in response to actions of the James Callaghan-led government of this party. After a decade of unbroken rule by their main opponent, this party's Neil (\*) Kinnock campaigned with the slogan, "It's Time for a Change." In 1924, Ramsay MacDonald became the first prime minister from this party, and in 1997, Tony Blair led this party in rebranding itself as "New" and shifting its appeal to "middle England". For ten points, name this British political party currently led by Jeremy Corbyn, opposed to the Conservatives and Liberals.**

ANSWER: Labour Party

<GM>

20. **In story in a collection by this author, Eloise sleeps on the edge of her bed to make room for her imaginary friend Mickey Mickeranno. Another imaginary friend in that story, Jimmy Jimmereeno, is killed in a car crash. Other stories in that collection include "For Esme - With Love and Squalor" and a story featuring Sharon Lipschutz, Sybil Carpenter, and the (\*) Glass family. In addition to *Nine Stories*, this author wrote a novel whose protagonist wonders where the ducks go in the winter and feels uncomfortable when his English teacher, Mr. Antolini, strokes his head. That character, who spends more time with his sister Phoebe after he is expelled from Pencey Prep, is Holden Caulfield. For ten points name this author of *Catcher in the Rye*.**

ANSWER: Jerome David Salinger

<RP>

## End of regulation, only proceed if tied

21. **Police in this country are investigating a major petroleum company's corruption in the Sergio Moro-led Operation Car Wash. That company, Petrobras, is headquartered in this nation's second largest city. Eduardo Cunha advocated for a trial in this country, which was presided over by Ricardo Lewandowski. That court case (\*) impeached this nation's former president in August of 2016, and soon after, Michel Temer came to office. A 2015 virus outbreak in this country led to urgency in treating microcephaly cases and control of the disease, especially before a major sporting event. For ten points, name this country where the Zika virus originated, which also hosted the 2016 Summer Olympics in Rio de Janeiro.**

ANSWER: Brazil

<AG>

22. **This man coined the terms "alpha" and "beta" to describe specific types of radiation, and used the former to produce Oxygen-17 and a proton, proving the latter's existence. This man's namesake effect takes advantage of the Coulomb potential of two objects, leading to it often being called Coulomb (\*) scattering. This scientist, who names the 104th element, with symbol Rf, challenged the plum-pudding model in his most famous experiment, which he carried out with his students Hans Geiger and Ernest Marsden. For ten points, name this man who discovered the existence of the nucleus with his "gold foil" experiment.**

ANSWER: Ernest Rutherford

<CL>

## **BONUSES**

1. Bonus: The inhabitants of this location survived on a mixture of flour and water known as “firecakes”. For ten points each:  
[10] The Continental Army stayed at this military camp in Pennsylvania through the brutal winter of 1777 during the Revolutionary War.

ANSWER: **Valley Forge**

[10] Soldiers at Valley Forge were trained by this Prussian officer, who outlined his procedures in the official American Revolution Drill Manual.

ANSWER: Baron Friedrich Wilhelm August Heinrich Ferdinand von **Steuben**

[10] This general was the commander-in-chief of the Continental Army through the war. He would later go on to serve as the first president of the United States.

ANSWER: George **Washington**

<RP>

2. Bonus: One webcomic contains a pie chart noting that this game makes up the majority of the author’s profanity, and the mouseover text states that avoiding blue shells in this game is “deep magic.” For ten points each:

[10] Name this series of games in which various Nintendo characters race each other in the title vehicles. Players can race on various stages such as Bowser Castle and Rainbow Road.

ANSWER: **Mario Kart** [accept anything more specific]

[10] In this other Nintendo Gamecube game, characters fight to try to drive each other off the edge of the screen and deal as much damage as possible. The second game in its series, this game contains characters such as Mewtwo and Donkey Kong.

ANSWER: **Super Smash Bros Melee** [prompt on **Super Smash Bros**, prompt on **SSBM**, do not accept Super Smash Bros Brawl, or any other Super Smash Bros game]

[10] In this Nintendo Game, the title character attempts to obtain his treasure and castle after they are taken from him from the Black Jewel. The player can spend coins in this game to buy garlic, which restores health, and other items.

ANSWER: **Wario World**

<MS>

3. Bonus: This man founded the *Il Risorgimento* newspaper to champion his country’s independence from Austria. For ten points each:

[10] Name this prime minister of Piedmont-Sardinia who became the first prime minister of a unified Italy.

ANSWER: Camillo Benso, Count of **Cavour** [accept Camillo di Benso, **Conte di Cavour**]

[10] Cavour initially enlisted the help of this French ruler to fight for Italian unification, who eventually backed out in fear of offending French Catholics. He is better known as the last emperor of France and founder of the Second Empire.

ANSWER: **Napoleon III** [prompt on “Napoleon”]

[10] This infamous chant for Italian unification was an acronym of an Italian composer, which shouted for Victor Emmanuel to become king.

ANSWER: **VERDI** [or **Victor Emmanuel, Rey d'Italia**]

<GM>

4. Bonus: In June 2016, wing debris likely from this aircraft was found on a Tanzanian island. For ten points each:

[10] Name this commercial Boeing 777 that suddenly went missing in March 2014 after departing from Kuala Lumpur to Beijing.

ANSWER: Malaysia Airlines Flight **370** [also accept **MH370**, **MAS370**]

[10] Another Malaysia Airlines flight, MH17, was shot down in 2014 in this European country, which includes the region of Crimea. Despite US intelligence, Russia denies its responsibility in the incident.

ANSWER: **Ukraine**

[10] This airplane part is extremely useful in investigating crashes since it contains data which gives insight into the recent history of the flight before it crashed. They usually give off “pings”, though MH370’s has not yet been found.

ANSWER: **black boxes** [accept **flight recorders**]

<AG>

5. Bonus: Some animals don’t have nervous, digestive, or circulatory systems, but instead use the water flowing through their bodies to obtain nutrients and get rid of waste. For ten points each:

[10] Identify this animal phylum that sponges belong to. Its name is related to the channels that allow water to flow through the organisms.

ANSWER: **Porifera**

[10] This excretory structure in sponges opens to the outside and helps the organism get rid of metabolic waste.

ANSWER: **Osculum**

[10] These cells in sponges have flagella that undulate to make water flow past their microvilli, which absorb the nutrients in the water.

ANSWER: **choanocyte**

<LP>

6. Bonus: Name some Aztec Gods, for 10 points each:

[10] This Aztec god, whose name means “feathered serpent,” created mankind by going to the underworld and using bones and his blood. He is also the god of the morning star.

ANSWER: **Quetzalcoatl**

[10] This other god and son of Omoteotl was often considered the rival god of Quetzalcoatl. This god was celebrated during an 18-day period known as the Toxcatl.

ANSWER: **Tezcatlipoca**

[10] The Templo Mayor in Tenochtitlan was dedicated to Huitzilopochtli and this other god. Aztecs believed that this god of rain lived in a mountain named after him.

ANSWER: **Tlaloc**

<MS>

7. Bonus: A poem by Amy Lowell describes these New England flowers of this type as “False blue / White / [and] Purple”. For ten points each:

[10] Name these flowers that also title another poem whose speaker mourns after he witnesses “the great star early droop’d in the western sky in the night”.

ANSWER: **Lilacs** [accept “**When Lilacs in the Dooryard Last Bloom’d**”]

[10] When Lilacs in the Dooryard Last Bloom’d was written by this American poet to commemorate the death of Abraham Lincoln. He wrote “I celebrate myself, and sing myself” in “Song of Myself”, which is in his collection *Leaves of Grass*.

ANSWER: Walt **Whitman**

[10] Whitman also wrote this other poem as a eulogy to Abraham Lincoln, which declares, “our fearful trip is done” and ends with the title character “Fallen cold and dead”.

ANSWER: **O Captain! My Captain!**

<RP>

8. Bonus: The Treaty of Brest-Litovsk ended Russia's participation in this war. For ten points each:

[10] Name this war between the Allies and Central Powers that began after the assassination of Archduke Franz Ferdinand.

ANSWER: **World War I** [prompt on "World War", prompt on "Great War"]

[10] Although this nation was the target of the Arab Revolt during World War I, it earned victories at the Siege of Kut and the Battle of Gallipoli. In 1918, after the war, this nation was partitioned under the Treaty of Sévres.

ANSWER: **Ottoman Empire**

[10] The Ottomans were also the perpetrators of this event during World War I, which exterminated a certain ethnic group of the Caucasus. Article 301 of the Turkish Penal Code forbids the discussion of this genocide.

ANSWER: **Armenian Genocide** [accept **Medz Yeghern**, **Armenian Holocaust**, or equivalents mentioning Armenians]

<GM>

9. Bonus: One of these substances is industrially produced in the Ostwald process. For ten points each:

[10] Identify these substances which produce H<sup>+</sup> ions when dissolved in water, and have a pH of less than 7.

ANSWER: **acids**

[10] This equation finds the pH of a system, and includes terms like pK<sub>a</sub>. It can be derived from the definition of the acid dissociation constant.

ANSWER: **Henderson-Hasselbalch** equation

[10] The Henderson-Hasselbalch equation can be found by applying this function to both sides of the acid dissociation constant equation. This function is also applied to the non-constant term in the Henderson-Hasselbalch equation.

ANSWER: **logarithm**

<AG>

10. Bonus: This man created the concept of merge, the idea that two consecutive words can have a single, different meaning together. For ten points each:

[10] Name this prominent MIT linguist, who along with writing *Syntactic Structures* created the notion of generative grammar.

ANSWER: Noam **Chomsky**

[10] Chomsky also developed this other theory of grammar, which asserts that the brain is instinctively designed to learn grammar.

ANSWER: **universal** grammar

[10] This broader hypothesis in linguistics puts forth the idea that a person's language plays a major role in the way he thinks as well as his world view.

ANSWER: **Sapir-Whorf** hypothesis

<AG>

11. Bonus: The ending fragment of this work forms a complete sentence when combined with the first sentence. For ten points each:

[10] Name this book which contains characters such as one who gets his nickname while trying to catch earwigs with a flowerpot, "Earwicker." Because of its unusual writing style, summaries of its plot often differ greatly.

ANSWER: **Finnegans Wake**

[10] This other novel by the author of *Finnegans Wake* describes the activities of Leopold Bloom on one day. It famously ends with his wife, Molly Bloom, thinking "yes I said yes I will yes" as she remembers accepting his marriage proposal.

ANSWER: **Ulysses**

[10] This Irish author of *Ulysses* and *Finnegans Wake* included the story "The Dead" in his collection *Dubliners*. He also wrote about Stephen Dedalus in *A Portrait of the Artist as a Young Man*.

ANSWER: James **Joyce**

<MS>

12. Bonus: The losing commander of this battle exclaimed, “my men have become women, and my women men”. For ten points each:

[10] Name this ancient naval battle fought in 480 BC; a major Greek victory in the Greco-Persian Wars.

ANSWER: Battle of Salamis

[10] Before the Battle of Salamis, the Persian army under Xerxes defeated a force of 300 men led by Leonidas, who was a king of this militaristic city-state in Greece.

ANSWER: Sparta

[10] This Athenian commanded the Greek navy to victory at Salamis. Earlier, this man suffered a loss to Xerxes I at the Battle of Artemisium.

ANSWER: Themistocles

<RP>

13. Bonus: The last one of these events on Mars ended 370,000 years ago. For ten points each:

[10] Name this term for long-term reductions in global temperature marked by lower sea level and global glacial advancements.

ANSWER: ice age

[10] The Ice Ages were home to unique animals, including these members of the family *Elephantidae* which had long hair and tusks, often contrasted with mastodons.

ANSWER: woolly mammoths

[10] This epoch began at the end of the last ice age, and is marked by extensive warming of the Earth’s surface, beginning about 11,700 years ago and continuing up to present day.

ANSWER: Holocene epoch

<NG>

14. Bonus: Answer the following about artists who painted Napoleon. For ten points each:

[10] The names “Karolus Magnus”, “Hannibal”, and “Bonaparte” are engraved into the rocks at the bottom of this artist’s *Napoleon Crossing the Alps*. This artist also painted *Oath of the Horatii* and *The Death of Marat*.

ANSWER: Jacques-Louis David

[10] This man portrayed Napoleon as emperor raising the sceptre of Napoleon in *Napoleon I on his Imperial Throne*. He also included too many vertebrae in his nude *La Grande Odalisque*.

ANSWER: Jean Auguste Dominique Ingres

[10] Napoleon touches an infected man’s armpit in *Bonaparte Visiting the Plague Victims of Jaffa*, the most famous work of this artist.

ANSWER: Baron Antoine-Jean Gros [accept Jean-Antoine Gros]

<RP>

15. Bonus: The first chapter of this novel describes “A lovely road that runs from Ixopo into the hills”. For ten points each:

[10] Identify this novel in which Stephen Kumalo searches for his son, Absalom, only to find out that he is sentenced to death after murdering Arthur Jarvis.

ANSWER: Cry, the Beloved Country

[10] Stephen Kumalo goes to Johannesburg not only to find his son, but also to visit this sister of his, who he was told had fallen ill in a letter. When he gets to Johannesburg, he finds that she has become a liquor seller and a prostitute.

ANSWER: Gertrude

[10] *Cry, the Beloved Country* is by this South African author who also wrote *Ah, But Your Land is Beautiful*.

ANSWER: Alan Paton

<AG+MS+RP>



16. Bonus: The southwestern U.S. has several interesting natural sights. For ten points each:

[10] This desert covers a large amount of the southwest before entering its namesake Mexican province.

ANSWER: **Sonoran** desert

[10] This scenic valley is located on Navajo land, and contains the notable Mitten Buttes; wide, flat, over 6000 foot high rock formations.

ANSWER: **Monument** Valley

[10] Monument Valley and much of the Sonoran desert are located in this U.S. state with its capital at Phoenix.

ANSWER: **Arizona**

<AG>

17. Bonus: People who observe this holiday often engage in Glossolalia, or speaking in tongues. For ten points each:

[10] Name this Christian holiday that celebrates the day the Holy Spirit descended on the apostles. It's Greek name translates roughly as "fifty days".

ANSWER: **Pentecost**

[10] Pentecost is celebrated fifty days after this holiday that celebrates the resurrection of Jesus. Occurring two days after Good Friday, this holiday is commonly associated with brightly colored eggs.

ANSWER: **Easter**

[10] Easter Sunday is observed towards the end of this period in which Christians give up something enjoyable, and it begins on Ash Wednesday.

ANSWER: **Lent**

<RP>

18. Bonus: This work's penultimate movement is a Berceuse, and its finale changes from 3/2 to 7/4 time. For ten points each:

[10] Name this ballet, in which Prince Ivan triumphs over Katschei after capturing the title mythical avian creature, and includes an "Infernal Dance."

ANSWER: *The **Firebird*** [or ***L'Oiseau de Feu***]

[10] This ballet by composer Firebird is based on a puppet who comes to life and attempts to woo the Ballerina. It contains a namesake dissonant chord within it many times.

ANSWER: **Petrushka**

[10] *The Firebird* and *Petrushka* were composed by this Russian, who composed another ballet that caused a riot at its premiere, the *Rite of Spring*.

ANSWER: Igor **Stravinsky**

<GM>

19. Bonus: Because he frequently wrote about them, this man was known as the "poet of the Caucasus." For ten points each:

[10] Name this poet who described Pechorin's love for Vera in diaries given to the narrator by Maxim Maximych in *A Hero of Our Time*. He wrote about a fight in *The Song of the Merchant Kalashnikov*.

ANSWER: Mikhail **Lermontov**

[10] This other Russian poet described a failed bet in his *The Queen of Spades*. Modest Mussorgsky based one opera off of this poet's *Boris Godunov*.

ANSWER: Aleksandr **Pushkin**

[10] The title character of this Pushkin play kills Lensky in a duel after he flirts with Lensky's fiancée. At the end of this play, the title character is rejected by the woman he himself had once rejected, Tatyana.

ANSWER: **Eugene Onegin**

<MS>

20. Bonus: This man's "little theorem" states that  $a^p$  to the  $p$  is congruent to  $a \pmod p$ . For ten points each:

[10] Name this man, whose namesake "Last Theorem" states that the equation  $x^n + y^n = z^n$  has no positive integer solutions when  $n$  is greater than 2. He claimed that he had a "truly marvellous proof" of it, but not enough space to write it in.

ANSWER: Pierre de **Fermat**

[10] Some cases in Fermat's Last Theorem, such as  $n=4$ , can be proved using this method. It assumes that there exists a smallest example, but uses that to show there must be a smaller one, producing a contradiction.

ANSWER: Proof by **Infinite Descent**

[10] Fermat's "marvellous" proof evaded mathematicians for 358 years, until this mathematician finally gave a proof in 1996. His proof unfortunately had a hole, which took him over a year to work around.

ANSWER: Andrew **Wiles**

<MS>

21. Bonus: The Copenhagen interpretation posits an answer to this system. For ten points each:

[10] Name this thought experiment in which the namesake animal is supposedly both dead and alive until the box containing it is opened.

ANSWER: **Schrödinger's cat**

[10] The same idea in Schrödinger's cat is applied to particles in this principle, which says that the more accurately one property of a particle is measured, another property's measurement must be less precise.

ANSWER: **Heisenberg's uncertainty** principle [prompt on "uncertainty"]

[10] Schrödinger's cat is an example of this phenomenon in quantum physics, which states that theoretically an object could exist in multiple states at once.

ANSWER: **quantum superposition**

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22. Bonus: Thinkers like Mary Astell and Mary Wollstonecraft added new perspectives to the "woman's question" during this movement. For ten points each:

[10] Name this 18th century intellectual movement in Europe that championed human reason, whose thinkers included Rousseau and Voltaire.

ANSWER: **Enlightenment** [accept Age of **Enlightenment**]

[10] Voltaire famously had a long-running correspondence with this Russian "enlightened despot," who also partitioned Poland.

ANSWER: **Catherine the Great** [accept **Catherine II**]

[10] This advisor and lover of Catherine the Great organized the coup that overthrew Paul III and put Catherine on the throne. He also gave a namesake diamond to Catherine in an attempt to get her back.

ANSWER: Grigory Grigorievich **Orlov**

<GM>