

**LADUE INVITATIONAL  
SPRING TOURNAMENT 2011**

Round 13

## TOSS-UPS

**1. One poet from this time period wrote about grass that “withers and returns/ Never extinguished by the prairie fires” and another wrote that “to keep your departing ship in sight/ I must ascend to another floor” in “On the Stork Tower”. In addition to Bai Juyi and Wang Zhi Huan, another poet from this time period wrote about the (\*) “Eight Immortals of the Wine Cup.” That term was later used to describe a group of scholars from this time period which includes the author of “Quiet Night Thoughts,” who apocryphally died trying to catch the moon’s reflection in a river. Du Fu and Li Po are poets from, for ten points, which Chinese dynasty which followed the Sui?**

ANSWER: Tang

<HX>

**2. The last step in the synthesis of this compound involves a methylation by phenylethanolamine N-methyltransferase, and this catecholamine can provide quick relief to patients with asthma by dilating the bronchioles. Adrenocorticotrophic hormone and the (\*) sympathetic nervous system can trigger the release of this compound, which then stimulates the secretion of a hormone that raises blood glucose levels. Glucagon production can be initiated by, for ten points, what hormone, also known as epinephrine, a “rush” of which is characteristic of the “fight-or-flight” response?**

ANSWER: Adrenaline (accept epinephrine before mention)

<HX>

**3. The Mercato and Avellino eruptions occurred here, and this volcano’s most recent eruption damaged about 80 American aircraft in World War II, making it the only volcano on the European mainland to have erupted in the last century. Its most famous eruption was written about by a man whose uncle died as a result, (\*) Pliny the Younger, and it destroyed the city of Herculaneum, alongside a city whose well-preserved remains were recently discovered. For ten points, give the name of this Italian volcano, whose eruption in 79 AD devastated the city of Pompeii.**

ANSWER: Mount Vesuvius

<MS>

**4. A nun and confessor stand in the mid-ground of this painting, which includes several paintings from Rubens’s *Metamorphosis* series in the background. Evidence suggests that the Cross of St. James was added to the drapery of one figure in this work after the artist was inducted into the Order of Santiago. Notably, this painting is the only known double portrait of King Philip IV and his wife Mariana of Austria, whose countenances are (\*) reflected by a mirror in the background of this painting, while their daughter the Infanta Margarita is flanked by dwarves, a large dog, and the titular attendants in the foreground. For ten points name this 1656 painting which resides in the Prado, the magnum opus of Diego Velazquez.**

ANSWER: Las Meninas or The Maids of Honor

<ZK>

**5. One of these creatures, Surma, embodies sudden and violent death and guards the gates of Tuonela in Lönnrot's Kalevala. Chantico was turned into one of these animals by Tonacatecuhli after eating banned foods. Folklore of the British Isles gives this type of animal names such as Churchyard Beast, Oude Rode Ogen, and Dip, and associates them with the (\*) Devil. The father of Erigone, Maera, was one of these animals, as was Argus, a companion of Odysseus. For ten points, name this animal from mythology, examples of which include Sirius and the three-headed Cerberus.**

ANSWER: **Dog** (accept equivalents)

<HX>

**6. One of this group's songs asks, "Who killed the Kennedys?" before answering that it was "you and me." In 1969, one of this band's seminal members, Brian Jones, was found dead in his swimming pool, and was replaced by Mick Taylor, who played the electric guitar on their albums, "Let it Bleed," and "Sticky Fingers." Their songs (\*) "Ruby Tuesday" and "Honky-Tonk Women" both reached the top of the Billboard Hot 100, while "(I Can't Get No) Satisfaction" was recently ranked the second greatest rock song of all time by a magazine that shares this band's name. For ten points, name this British band led by Keith Richards and Mick Jagger.**

ANSWER: The **Rolling Stones**

<ZK>

**7. While trying to make light-bulbs glow brighter, this man corrected the Rayleigh-Jeans law, and, in doing so, solved the problem of the ultraviolet catastrophe. His work with black-bodies also led him to his (\*) 1918 Nobel Prize winning conclusion, that energy could be released only in multiples of a certain constant. For ten points, name this German physicist, the founder of quantum theory, whose namesake constant is symbolized "h".**

ANSWER: Max **Planck**

<KT>

**8. One device in this novel is called an ansible and carries information faster than the speed of light, allowing for Earth to communicate with its interstellar fleets, while Earth is ruled by a triumvirate including the Polemarch and Strategos. This novel sees Hyrum Graff recruit children from Earth to be trained as fleet commanders, while two siblings under the codenames (\*) Locke and Demosthenes stir up public sentiment against the Battle School. For ten points, name this novel by Orson Scott Card about Andrew Wiggin defeating the buggers in what he believes is a computer simulation.**

ANSWER: **Ender's Game**

<CC>

**9. The Green-Tao theorem states that there exist finitely long arithmetic sequences of these numbers, and the function  $p_n$  denotes the  $n$ th one of these numbers. The Lucas-Lehmer test identifies whether or not (\*) Mersenne numbers have this property, and they can be identified by the Sieve of Eratosthenes. Euclid proved that there were infinitely many of, for ten points, what numbers, which are only divisible by one and themselves, the only even one of which is two?**

ANSWER: Prime Numbers

<MS>

**10. This war saw Sir John Jellicoe defeat Reinhard Scheer in a naval engagement fought off the coast of Denmark, and this war also saw the first use of aircraft carriers. Air power also made the name of ace Manfred von Richthofen, called the (\*) “Red Baron”, who was finally downed by Allied forces during this war. This war’s other technological advances included chemicals like mustard gas, useful in storming the machine gun-guarded trenches. For ten points, name this war sparked by the death of Archduke Franz Ferdinand, lasting from 1914 to 1918.**

ANSWER: World War One or The Great War

<MS>

## HALFTIME

**11. The masque in Act IV of this play has been interpreted by some as an allusion to the wedding of Elizabeth of Bohemia and Frederick V. One character in this play believes that Stephano, a drunk butler, is a God from the moon. That character, the son of Sycorax who was played by Djimon Hounsou in a 2010 adaptation of this play, mounts a revolt abetted by (\*) Stephano and Trinculo, but is recaptured by his master. Another subplot of this play features the courtship of Miranda by Ferdinand, the son of Alonso, who later marry in Milan. For ten points, name this Shakespeare play that features the magical antics of Ariel, Caliban, Prospero, caused by the title storm.**

ANSWER: *The* Tempest

<ZK>

**12. This man’s concert schedule suffered many cancellations due to health problems, and he later contracted syphilis, which he tried to remedy with mercury and opium. The melody of one of this man’s works for inspired the third of six études composed by Liszt, and another, his opus 11, features four pages of continual sixteenth notes. This composer of *Moto Perpetuo* suffered from (\*) Marfan syndrome and was a notable violin virtuoso, and, in a favorite cinematic scene, is seen playing on a violin that has three broken strings. *La Campanella* takes its melody from the second violin concerto of, for ten points, which Italian virtuoso, composer of the *24 Caprices*?**

ANSWER: Niccolò Paganini

<HX>

**13. One person to symbolically do this action was CPR financier Donald Smith, who did so in Canada, while the same action in the United States occurred soon after the meeting of the No. 119 and the Jupiter. This action was done by Leland Stanford as a representative of the Central Pacific company at (\*) Promontory Summit, but a more famous man to do this died of exhaustion in an attempt to save his job. For ten points, what is this action, which was ceremonially done to complete the Transcontinental Railroad, and done by folk hero John Henry faster than a machine?**

ANSWER: Hammering in railroad Spikes (accept equivalents, accept Completing the Transcontinental Railroad and equivalents before “exhaustion”)

<MS>

**14. Vladimir Ashkenazy was appointed chief conductor of this city’s symphony in 2009, which resides in a building designed by Jorn Utzon. The world’s second oldest national park, Royal National Park, lies midway between this city and Wollongong. Cathy Freeman lit the torch for the (\*) 2000 Summer Olympics held in this city, which used venues like Bondi Beach and its famed opera house for competition. Marked by Darling Harbour and Botany Bay, for ten points, name this capital of New South Wales, the largest city in Australia.**

ANSWER: Sydney

<ZK>

**15. One variety of this mineral was used to create the most perfect sphere in human history, and another is found at areas which saw immense pressure, like nuclear bomb tests and the K-T event. In addition to the “fused” and (\*) “shock” varieties, colorful instances of this mineral are sometimes called citrine, “rose”, or the purple amethyst. Composed of one silicon atom for every two oxygen atoms, this is, for ten points, what second most common mineral in the Earth’s crust after feldspar?**

ANSWER: Quartz

<MS>

**16. This mythological figure turned Battus into stone and was raised by Abacus, the king of Arcadia. His son with Aphrodite fused with the nymph Salmacis, causing him to have both male and female body parts, and his mother, one of the Pleiades, bore him in (\*) Mount Cyllene. This son of Maia delivered Pandora to mankind, directed Perseus to the Graeae, and, soon after birth, stole Apollo’s cattle and invented the lyre. For ten points, name this father of Pan, the Greek messenger god.**

Answer: Hermes

<CC>

**17. This value was first calculated by Johann Josef Loschmidt, though Jean Baptiste Perrin improved the approximation and named it after the man who claimed that molecules were composed of atoms. That man also realized that gases at equal temperature, pressure, and volume have the (\*) same number of molecules, the proportion of which is equal to this constant, the number of atoms in 12 grams of Carbon-12. Equal to 6.02 times 10 to the 23rd, for ten points, what is this number of units in a mole?**

ANSWER: Avogadro's Number

<MS>

**18. This man raised a militia 10,000 strong called the “men in black”, and he went to Versailles to beg Wilson to help liberate his country, a request that was ignored. This man sent his subordinate Vo Nguyen Giap to Na San and (\*) Dien Bien Phu, and the “trail” named after him was used to transport troops and weapons to prepare for a strike on the new year, the Tet Offensive. Saigon was renamed after, for ten points, which man, who led the North to victory in the Vietnam War?**

ANSWER: Ho Chi Minh or Nguyen Sinh Cung or Nguyen Ai Quoc

<MS>

**19. This author wrote about Hugo's assassination of the Illyrian politician Hoederer in *Dirty Hands*. His first novel sees the title “sweetish sickness” brought about by memories of the protagonist's former lover Anny and regular meetings with Ogier. In addition to writing about Antoine Roquentin in (\*) *Nausea*, this author wrote about Joseph, Estelle, and Ines getting locked in a room for eternity, prompting the claim that “hell is other people.” For ten points, name this French existentialist author of *No Exit*.**

ANSWER: Jean-Paul Sartre

<MS>

**20. This country's 2010 Constitutional Council declared election results from the northern districts invalid, prompting a civil war, which saw massacres at Bolequin and Duékoué. That war saw fighting in San Pedro, the world's largest cocoa port, and forces of (\*) Alassane Outtara recently defeated the enemy and arrested this country's incumbent president Laurent Gbagbo in Abidjan. For ten points, name this West African country with capital at Yamoussoukro, which is often called the Ivory Coast.**

ANSWER: Cote d'Ivoire (accept Ivory Coast before mention)

<MS>

## **BONUSES**

1. Bonus: In this book, we learn that Meyer Wolfsheim fixed the World Series, and Owl Eyes is one of few to attend the title character's funeral. For ten points each:

[10] Name this novel narrated by Nick Carraway, which sees George Wilson murder Jay after Daisy Buchanan runs over his wife Myrtle.

ANSWER: **The Great Gatsby**

[10] *The Great Gatsby* is a work by this author of *This Side of Paradise* and the short story "Bernice Bobs Her Hair".

ANSWER: F. Scott **Fitzgerald**

[10] This other Fitzgerald novel sees the psychiatrist Dick Diver marry the schizophrenic Nicole. As the story progresses, Nicole becomes more sane while Dick begins to go on a downward spiral and it ends with Nicole leaving Dick for Tommy Barban.

ANSWER: **Tender is the Night**

<MS>

2. Bonus: It began with fighting at the First Battle of St. Albans. For ten points each:

[10] Identify this series of florally-named wars which raged through England in the 15th century, which pitted the House of York against their rivals.

ANSWER: Wars of the **Roses**

[10] The House of York opposed this Plantagenet house, which was founded by John of Gaunt.

ANSWER: **Lancasters**

[10] This penultimate battle of the Wars of the Roses saw the Stanley family ally with Henry Tudor to defeat Richard III.

ANSWER: Battle of **Bosworth** Field

<MS>

3. Bonus: Name some artists associated with woodcuts, for ten points each:

[10] This native of Nuremberg's most famous woodcut was *The Four Horseman of the Apocalypse*, though he is better known for his engraving *Melencolia I*.

ANSWER: Albrecht **Dürer**

[10] This Japanese artist created a collection of 46 woodcuts, including *The Great Wave off Kanagawa*.

ANSWER: **Katsushika Hokusai** (accept either)

[10] In addition to *The Great Wave off Kanagawa*, Hokusai included *South Wind, Clear Sky*, and *Rainstorm Beneath the Summit* of this mountain in a collection entitled "Thirty-six views of this".

ANSWER: Mount **Fuji**

<MS>

4. Bonus: Name these people associated with DNA. For ten points each:

[10] These men proposed the double helix structure of DNA in 1953, and later won a Nobel Prize for their work.

ANSWER: James Watson and Francis Crick (prompt if only one is given)

[10] Watson and Crick used an x-ray diffraction image produced by this woman to aid their discoveries.

ANSWER: Rosalind Franklin

[10] In 1952, these researchers' namesake experiments confirmed Avery-MacLeod-McCarty's conclusion that DNA carried genetic information.

ANSWER: Alfred Hershey and Martha Chase (prompt if only one is given)

<SS>

5. Bonus: Some of its members are Iraq, Kuwait, and Saudi Arabia. For ten points each:

[10] Name this organization, headquartered at Vienna, which consists of twelve oil-producing countries.

ANSWER: OPEC (accept Organization of the Petroleum Exporting Countries)

[10] This is the only southern African nation in OPEC. It controls the exclave of Cabinda and has capital at Luanda.

ANSWER: Angola

[10] This country, along with Venezuela, is one of the two South American members of OPEC. Its largest city is Guayaquil and it controls the Galapagos Islands.

ANSWER: Ecuador

<JD>

6. Bonus: After his good friend dies, this man tries to be buried in his place. For ten points each:

[10] Name this literary character, who escapes from the Chateau d'If to find a treasure. He then takes on the titular title of the book in which he appears to get revenge on Danglars, Villefort, and Fernand, who stole his love, Mercedes.

ANSWER: The Count of Monte Cristo or Edmond Dantes (accept any underlined part)

[10] *The Count of Monte Cristo* is one of the most famous works of this French novelist.

ANSWER: Alexandre Dumas, père

[10] Soon after returning to the French mainland, the Count visits this former neighbor of his, now a poor inn-keeper. This man relates all that had happened, and the Count gives him a large diamond.

ANSWER: Caderousse

<MS>



7. Bonus: Name some programming languages, for ten points each:

[10] This object-oriented language was designed by Bjarne Stroustrup in 1979 to improve on its predecessor by adding classes.

ANSWER: **C++** (do not accept C)

[10] This other object-oriented language was developed by James Gosling of Sun Microsystems.

ANSWER: **Java**

[10] This other programming language was the brainchild of Larry Wall, and is sometimes called “the duct tape that holds the internet together.”

ANSWER: **Perl**

<MS>

8. Bonus: Answer the following about the sport of horse-racing, for ten points each:

[10] This race, the first in the Triple Crown, was won in 2010 by SuperSaver, and is run in early May at Churchill Downs.

ANSWER: **Kentucky Derby**

[10] Though he never won the Triple Crown, this horse, known for his head-to-head competition with War Admiral in 1938, was jockeyed primarily by Red Pollard, who was portrayed by Tobey McGuire in a 2003 film.

ANSWER: **Seabiscuit**

[10] This horse, a grandson of War Admiral, rendered Alydar the first horse to place second in all three Triple Crown races, becoming the most recent Triple Crown winner in 1978.

ANSWER: **Affirmed**

<ZK>

9. Bonus: It began due to a violation of the Butler Act. For ten points each:

[10] Name this trial in which a teacher was prosecuted for teaching evolution. Its guilty verdict was later overturned due to improper sentencing procedures.

ANSWER: **Scopes** monkey trial (accept *State of Tennessee v. Scopes* or *Scopes v. State of Tennessee*; prompt on “monkey trial”)

[10] This former Secretary of State was the main lawyer for the prosecution; he died five days later, and he had unsuccessfully run for President on the Democratic ticket in 1896 and 1900.

ANSWER: William Jennings **Bryan**

[10] Scopes was defended by this lawyer, who brought Bryan as an expert witness on the Bible during the trial. He also successfully defended eleven people in Ossian Sweets trial, and was the attorney for Leopold and Loeb.

ANSWER: Clarence Seward **Darrow**

<BZ>

10. Bonus: It provides incidental music on Ibsen's satirical play of the same name about the title Norwegian procrastinator. For ten points each:

[10] Name this set of two four-movement suites that includes movements titled "Anitra's Dance" and "Morning Mood". It was published after its composer's death by Johan Halvorsen.

ANSWER: *Incidental music to Peer Gynt*, Op. 23

[10] The *Incidental music to Peer Gynt* was written by this Norwegian composer of *Lyric Pieces* and *Holberg Suite*.

ANSWER: Edvard Grieg

[10] This most famous movement from *Peer Gynt* contains a repeating ostinato, which starts slowly as Peer sneaks around, and gets louder and faster while he is chased by trolls.

ANSWER: "In the Hall of the Mountain King"

<HX>

11. Bonus: This landmass's Goryeo dynasty was overthrown by the Joseon. For ten points each:

[10] Name this peninsula, whose Silla kingdom allied with the Chinese Tang to the northwest.

ANSWER: Korean Peninsula

[10] This faith was adopted as the national religion of Silla Korea soon after a visit from the monk Ado.

ANSWER: Buddhism

[10] This man led North Korea to split off in 1948. His son, Kim Jong-Il, currently rules from Pyongyang.

ANSWER: Kim Il-Sung

<MS>

12. Bonus: Rachel Verinder is married to Franklin Blake at the end of this novel. For ten points each:

[10] Name this novel about Sergeant Cuff's attempts to find the title object, which was stolen from India years earlier by John Herncastle.

ANSWER: *The Moonstone*

[10] This author of *The Moonstone* was a friend of Charles Dickens, whose novel *A Tale of Two Cities* was partially inspired by his play *The Frozen Deep*. This author's other novels include *The Woman in White* and *Armadale*.

ANSWER: William Wilkie Collins

[10] The Moonstone is a yellow of one of these objects. Another example of this object is the Koh-i-Noor and they have a value of 10 on the Mohs hardness scale.

ANSWER: diamonds [prompt on "gemstone"]

<BZ>

13. Bonus: It states “every simply connected, closed 3-manifold, is homeomorphic to the 3-sphere.” For ten points each:

[10] Identify this topological theorem, which is named for a French mathematician.

ANSWER: **Poincarè** Conjecture

[10] This Russian mathematician proved the Poincarè Conjecture, but he declined the monetary prize given for solving it, claiming that Richard Hamilton had equally contributed to the proof. He has since stopped working on mathematics.

ANSWER: Grigori **Perelman**

[10] The Poincarè Conjecture was one of the Millennium Prize problems. For solving one, you get one million dollars from this organization, which sponsors promising mathematicians worldwide.

ANSWER: **Clay** **Mathematics** **Institute** (accept just **Clay**)

<ZK>

14. Bonus: When you open the box, the wavefunction collapses. For ten points each:

[10] Identify this thought experiment, where a feline is cruelly locked in a box with a vial of poison and a Geiger counter.

ANSWER: **Schrodinger's Cat**

[10] Schrodinger's Cat provided a challenge to this most common interpretation of quantum mechanics, developed by Bohr and Heisenberg, which is named after the city in which Bohr was born.

ANSWER: **Copenhagen** Interpretation

[10] Another challenge to the Copenhagen equation was the EPR Paradox, which purported to transmit information faster than this benchmark value of physics.

ANSWER: **Speed of Light** (accept equivalents)

<MS>

15. Bonus: Name some members of Obama's current cabinet. For ten points each:

[10] The current Secretary of State is this former First Lady, the wife of the 42nd President. She was a leading candidate for the Democratic presidential nomination in 2008.

ANSWER: Hillary Rodham **Clinton**

[10] This man is the current Secretary of Defense. He was preceded by Donald Rumsfeld, and previously served as the president of Texas A&M University.

ANSWER: Robert Michael **Gates**

[10] This Secretary of Energy is known for his work at Bell Labs in the cooling and trapping of atoms with a laser light. Along with Claude Cohen-Tannoudji and William Daniel Phillips, this man received the 1997 Nobel Prize in Physics.

ANSWER: Steven **Chu**

<HX>

16. Bonus: After seeing a Burning Bush, this man led his people out of Egypt. For ten points each:

[10] Name this Jewish leader who was rescued from the Nile and raised as an Egyptian Prince.

ANSWER: **Moses** (accept **Moshe**)

[10] This woman, the daughter of the Midianite King Jethro, became the wife of Moses.

ANSWER: **Tzipporah**

[10] This elder brother of Moses led the Israelites while Moses was up on Mount Sinai and created the Golden Calf.

ANSWER: **Aaron** (or **Aharon**)

<ZK>

17. Bonus: He will be killed by the dog of Hel, Garm. For ten points each:

[10] Name this Norse god of war, who sacrificed his hand to tie up a son of Loki.

ANSWER: **Tyr** [accept **Teiwaz**]

[10] This wolf bit off Tyr's hand as the gods bound him up. He kills Odin at Ragnarok but is killed by Vidar.

ANSWER: **Fenrir** [accept **Fenrisulfr** or **Fenris** wolf]

[10] Loki also fathered this eight-legged horse, which presently belongs to Odin.

ANSWER: **Sleipnir**

<BZ>

18. Bonus: Aside from being the day this set was first used, April 2 was a major day in world history.

Answer the following related to that date, for ten points each:

[10] On April 2, 1513, this explorer was the first European to set foot on region of Florida, in search of the elusive "fountain of youth." Earlier, he had been appointed the first Governor of Puerto Rico by King Ferdinand II.

ANSWER: Juan **Ponce de Leòn** y Figueroa

[10] On April 2, 1900, the US Congress passed the Foraker Act, allowing limited self-rule for this territory in the wake of the Spanish-American War.

ANSWER: **Puerto Rico**

[10] On April 2, 1982, Argentine forces mounted an amphibious landing of this island chain, combating British troops organized by Governor Rex Hunt.

ANSWER: **Falkland Islands** or **Islas Malvinas**

<ZK>

19. Bonus: It was criticized by Derek Freeman, who conveniently waited until after the author's death to publish his findings. For ten points each:

[10] Identify this anthropological work, a study of teenage girls on a certain Pacific Island, which argues that troubled adolescence is merely a product of Western society, not an intrinsic human trait.

ANSWER: *Coming of Age in Samoa*

[10] *Coming of Age in Samoa* was the most important work of this anthropologist, who also wrote about *Sex and Temperament in Three Primitive Societies*.

ANSWER: Margaret Mead

[10] This "father of modern anthropology" wrote the introduction to *Coming of Age in Samoa*. He also created the first Ph.D. program of anthropology in America at Columbia University.

ANSWER: Franz Boas

<MS>

20. Bonus: It is composed of two up quarks and one down quark. For ten points each:

[10] Name this subatomic particle with no charge, which is found in the nucleus of an atom along with the proton.

ANSWER: Neutron

[10] The neutron was discovered by this British Nobel laureate.

ANSWER: James Chadwick

[10] During this process, neutrons slam into the nucleus of an atom, breaking them in half. Energy released in this process was harvested by the first atomic bombs.

ANSWER: Nuclear Fission

<BZ>