LADUE INVITATIONAL SPRING TOURNAMENT 2011

Round 6

TOSS-UPS

1. In one of his poems, this author writes about a boy who has his hand sawed off, and another poem's speaker notes that "her early leaf's a flower / But only so an hour" In addition to "Out! Out!" and "Nothing Gold can Stay," this poet described the title objects in another poem as "girls on hands and knees that throw their hair." He also claimed that (*) "good fences make good neighbors," while in a different poem, a traveler "took the one less traveled by." For ten points , name this American poet who wrote "Birches", "Mending Wall," and "The Road Not Taken."
ANSWER: Robert **Frost**
<HX>

2. The Penrose Process could be used to extract usable energy from the ergosphere of some of these entities, and the no-hair theorem states that they can be characterized by only mass, charge, and angular momentum. Above the TOV limit, neutron stars may form these, and if any object's size is below the (*) Schwarzchild radius, it will collapse into a singularity and form one of these. With many of the "supermassive" variety existing at the center of galaxies, for ten points, what are these extremely dense objects, from which, upon crossing the event horizon, not even light can escape?
ANSWER: **Black Hole**s
<MS>

3. This entity was originally launched under the Sunshine Press organization, and it was notably supported by Bradley Manning. The New York *Daily News* ranked this organization first among ones that could "totally change the news" in 2010, the same year its creator was named the Reader's Choice for *TIME's Person of the Year*. 2010 also saw this (*) website's disclosure of field reports from the United States Army, called the Iraq War Logs, as well as "Cablegate", the publishing of over 250,000 diplomatic cables. Featuring a logo with the earth dripping in an hourglass is, for ten points , what non-profit organization with the slogan "We open governments", created by Julian Assange?
ANSWER: **WikiLeaks**
<HX>

4. This man temporarily ruled with his half-brother Ivan V, and as a child, he staged elaborate war games in which many aristocratic boys died. This man defeated Sweden in the Great Northern War and used the shipbuilding techniques he had learned in (*) Europe to build the Russian navy. Under his reign, noblemen were forced to cut off their beards, and, in 1718, he executed his son Alexei and died without an heir, leaving the throne to his wife, Catherine I. For ten points , name this tsar who modernized Russia.
ANSWER: **Peter the Great** (accept **Peter I** , **Pyotr Alexeyevich Romanov** or **Pyotr Veliki**; prompt on **Peter**)
<SA>

5. A former head of Moral Philosophy at Glasgow University, this philosopher discussed sympathy in one work, describing it as the basis for human morality. This author of *The Theory of Moral Sentiments* used the example of a (*) pin factory to illustrate the effects of the division of labor in free market economies. For ten points , name this Scottish economist and philosopher, author of *An Inquiry into the Nature and Causes of the Wealth of Nations*, who coined the metaphor of "the invisible hand."
ANSWER: Adam **Smith**
<HX>

6. This state is home to the most symmetric mountain on Earth, Mount Shishaldin, which is located on Unimak Island. A planned bridge from Gravina Island to Ketchikan was never built, and islands off the coast of this state include (*) Attu, Nunivak, and the second largest island in the United States, Kodiak. Cities such as Wasilla and Fairbanks can be found in, for ten points, what non-contiguous U.S. state containing Anchorage and Juneau?
ANSWER: **Alaska**
<MS>

7. Along with Leo Szilard, this man invented a refrigerator with no moving parts. Many of this man's theories were confirmed by Arthur Eddington, and he initially believed that a stable universe necessitated the addition of a (*) cosmological constant to his equations**.** He won the Nobel Prize in Physics for explaining the photoelectric effect, and this man did his best work at a Swiss patent office. For ten points, name this physicist who developed the theory of relativity, *Time* Magazine's Person of the Century.
ANSWER: Albert **Einstein**
<MS>

8. This philosophy uses felicific calculus to determine the moral worth of an action. That algorithm considers factors such as the purity and intensity of pleasure, and was formulated by the English author of *The Principles of Morals and Legislation* who, along with the author of (*) *On Liberty*, was one of the most influential proponents of this philosophy. For ten points , identify this idea that advocates for "the greatest good for the greatest number," a form of consequentialism advocated by Jeremy Bentham and John Stuart Mill.
ANSWER: **Utilitarianism**
<HX>

9. Early in this novel, it is revealed that much of Heloise Dubec's wealth had been stolen by her lawyer. While in Yonville, the title character gives birth to Berthe and meets the merchant Lhereux, who sells her many items on credit. In this novel, the law clerk (*) Léon helps the protagonist gain access to her husband Charles's estate, and their romance begins soon after the conclusion of her three-year affair with Rodolphe. Ending with the title character's suicide by ingesting arsenic is, for ten points, what novel by Gustave Flaubert?
ANSWER: *Madame Bovary*
<MS>

10. One war fought on this continent was over a resource used in gunpowder, the Saltpeter War, and is sometimes called the War of the Pacific. Another war on this continent was instigated by Francisco Solano Lopez and saw fighting between four major countries in the (*) War of the Triple Alliance. Centuries earlier, the death of Huyana Capac had led to civil war on this continent between half-brothers Huascar and Atahualpa. Francisco Pizarro famously visited, for ten points , what continent, once home to the Inca empire?
ANSWER: **South America**
<MS>

HALFTIME

11. The Mannheim school is famous for its whole-orchestra type of these, and a seventeen minute long one of these is found in Ravel's orchestral composition, Boléro. One of these signs followed by its opposite is sometimes referred to as a (*) "hairpin," in reference to its shape. For ten points , name this musical symbol, the opposite of a diminuendo, drawn as two slanted lines connected on the left and meaning "get gradually louder."
ANSWER: **Crescendo**
<HX>

12. Early fighting at this battle occurred in Devil's Den and Plum Run Valley. Originally, General Joseph Hooker was to lead one side's troops into battle, but was replaced by George Meade. An ill-fated attack on Cemetery Ridge led to massive casualties for the South, and was known as (*) Pickett's Charge. For ten points , name this battle in the American Civil War, in which the Union defeated Robert E. Lee and ended his invasion of the North, the namesake of a famous Lincoln speech beginning "Four score and seven years ago."
ANSWER: The Battle of **Gettysburg**
<HX>

13. In 1959, this team's first owner Billy Sullivan was given the eighth and final original franchise in the fledgling AFL. They went to their first Super Bowl in 1986, where they lost to the Chicago Bears, and later lost Super Bowl XXXI to the Green Bay Packers. Though not the Cowboys, they won three Super Bowls in the course of (*) four years, mainly due to the 2000 hire of a new head coach. In 2007, with the help of Wes Welker and Randy Moss, they became the first modern team to have an undefeated regular season, but lost the Super Bowl to the Giants. For ten points, name this sports team coached by Bill Belichick and led by Tom Brady.
ANSWER: **New England** **Patriots** (accept either underlined part)
<SK>

14. This interaction was first mentioned by Moore and Winmill in 1912 and it is most powerful in bifluoride ions. This occurs between i and i+4 on an alpha helix, and, in water, these have length 1.97 angstroms. Adenine and Thymine interact via (*) two of these while Guanine and Cytosine share three. Adhesion often occurs because of these. For ten points, name this type of bond, which is responsible for the surface tension and high boiling point of water, the interaction between an electronegative ion and the lightest element.
ANSWER: **Hydrogen** Bond (accept **H**-Bond, prompt on bond)
<AZ>

15. In one novel by this author, the protagonist is accused of murder by Mr. Schomberg, who owns a hotel on an island, and sees Axel Heyst commit suicide. Another work by this author of *Victory* told of Chief Inspector Heat's investigation of a plot to bomb the Greenwich Observatory, and that work sees the death of (*) Verloc. In addition to *The Secret Agent*, this man wrote a novella in which the rogue ivory trader Kurtz dies crying "The horror! The horror!" For ten points , name this English novelist who wrote of Marlow's experiences in Africa in *Heart of Darkness.*
ANSWER: Joseph **Conrad**
<HX>

16. This man's wife Creusa died while he was saving his father Anchises, and he marries the princess of Latium. He is forced to fight the Rutuli who are led by Turnus, and brings a golden bough into the underworld. Earlier, this hero had an affair with a woman who once ruled (*) Tyre, but she stabbed herself and fell on a funeral pyre after he left Carthage. The lover of Dido is, for ten points, which hero of a Vergil epic, whose descendants would found Rome?
ANSWER: **Aeneas**
<MS>

17. One painting by this artist shows the inside of the title location, which has a green ceiling, red walls, largely yellow floors, and a billiards table, and another, painted in 1885 while this artist was in the Netherlands, depicts five peasants dining on the title objects by the light of a little lamp. **This painter of (*)** *The Night Cafe* and *The Potato Eaters* also depicted the night view from his sanatorium room window in what is generally considered his magnum opus. For ten points , name this Dutch impressionist artist of *The Starry Night*, who famously cut off his own earlobe.
ANSWER: Vincent Willem **van Gogh**
<HX>

18. This disease is sometimes called ogbanjes, which literally means "Children that come and go", but received its more common name from Verne Mason. Though this disease lowers life expectancy to the mid-40s, the use of hydroxyurea can alleviate many of the problems, and this disease also (*) confers resistance to malaria. Primarily affecting Africans is, for ten points, what genetically inherited disease which causes red blood cells to be in the namesake shape?
ANSWER: **Sickle Cell** Anemia (Accept **SCD**, **Sickle Cell** Disease, **SCA**, or **Drepanocytosis**; prompt on partial answer)
<KT>

19. This man provided an alternate history of rock music in *The Ground Beneath Her Feet*, and told of the title tightrope walker from Kashmir in *Shalimar the Clown*. His first novel sees Flapping Eagle sent to Calf Island after gaining immortality. Another work by this author of (*) *Grimus* tells the story of Saleem Sinai, who was born at the exact moment India was partitioned, while in another, Saladin Chamcha and Gabreel Farishta survive a plane crash. For ten points, name this author of *Midnight's Children*, who earned a fatwa for his *The Satanic Verses*.
ANSWER: Salman **Rushdie**
<MS>

20. The gamma function of this number is equal to the square root of pi, and multiplying the golden ratio by this number gives the cosine of pi over five. It is hypothesized that all non-trivial zeroes to the Riemann zeta function have a real part equal to this number, and taking x to the power of this number is equal to finding the (*) square root of x. This number's reciprocal is the smallest prime, and to find the area of a triangle, you multiply this number times the base times the height. For ten points, what is this fraction equal to 0.5?
ANSWER: **one-half** (accept **0.5** before mentioned)
<MS>

BONUSES

1. Bonus: He famously stated that "England expects every man will do his duty." For ten points each:
[10] Name this British admiral. He won a decisive victory over the French at the Battle of the Nile, but was killed by a sniper while commanding at a victory over Franco-Spanish forces, during which not a single British ship was lost.
ANSWER: Horatio **Nelson**
[10] This battle of the Napoleonic Wars was fought off the southwest coast of Spain. It is commemorated in a namesake square in London, and saw the death of Admiral Nelson.
ANSWER: Battle of **Trafalgar**
[10] This was the losing French commander at Trafalgar. At the Battle of the Nile, he commanded one of two French ships-of-the-line to escape, and supposedly committed suicide after his defeat at Trafalgar.
ANSWER: Pierre-Charles-Jean-Baptiste-Silvestre de **Villeneuve**
<MS>

2. Bonus: One character in this work is obsessed with "portable property". For ten points each:
[10] Name this novel, which sees Pip befriend a convict, visit Miss Havisham, and attempt to become a gentleman. He later meets Wemmick and Jaggers, and ends up going into business with Herbert Pocket.
ANSWER: *Great Expectations*
[10] This British author of *Hard Times* and *Oliver Twist* wrote *Great Expectations*. He is also famous for a novella about Ebenezer Scrooge, *A Christmas Carol*.
ANSWER: Charles **Dickens** (accept **Boz**)
[10] Pip falls in love with this girl, who had been adopted by Miss Havisham. She marries Bentley Drummle and is later revealed to be the daughter of Abel Magwitch.
ANSWER: **Estella** Havisham
<MS>

3. Bonus: It plots absolute magnitudes of stars against their spectral types. For ten points each:
[10] Name this doubly-eponymous graph, which helps delineate the stellar evolution of stars.
Answer: **HR** diagram (accept **Hertzsprung-Russell** diagram)
[10] The HR diagram contains this diagonal band of stars which begins with O type stars in the upper-left and ends with M type stars in the lower-right.
Answer: **Main Sequence**
[10] Below the Main Sequence on the HR diagram lies the band of white dwarf stars. White dwarf stars are supported by electron degeneracy pressure, and as such, cannot exist of above this limit, named for an Indian physicist.
Answer: **Chandrasekhar** Limit
<AZ>

4. Bonus: This musical composition, originally scored for a thirteen-member chamber orchestra, tells the story of American pioneers in Pennsylvania. For ten points each:

[10] Name this 1944 ballet, dedicated to Martha Graham, which contains variations on a famous Shaker melody, *Simple Gifts.*

ANSWER: *Appalachian Spring*

[10] In addition to Appalachian Spring, this American composer wrote *A Lincoln Portrait, Rodeo*, and *Fanfare for the Common Man*.

ANSWER: Aaron **Copland**

[10] This other ballet by Copland was commissioned by Lincoln Kirstein, and is based on the life of the title 19th century American frontier outlaw and Old West icon who, according to legend, killed 21 men.

ANSWER: *Billy the Kid*

<HX>

5. Bonus: He wants to be the very best, like no one ever was. For ten points each:

[10] Who is this character, who battles Team Rocket, gets assistance from Professor Oak, and runs around Kanto with his Pikachu in a quest to "catch 'em all"?

ANSWER: **Ash** **Ketchum** (accept either underlined part)

[10] Ash Ketchum is the main character in this TV series, which has a series of video games and a trading card game spinoffs. It is a contraction of "Pocket Monsters" and names the species of such creatures as Pikachu and Charizard.

ANSWER: **Pokémon**

[10] This Pokémon is one of very few to talk in the anime; he will eventually evolve into Persian and is a noted sidekick of Jessie and James. His signature move in the video games is Pay Day.

ANSWER: **Meowth**

<MS>

6. Bonus: This novel sees the protagonist's advisor stay awake for seven nights in order to live longer. For ten points each:

[10] What is this fictional work by Luo Guangzhong, about Sun Quan, Liu Bei, and Cao Cao, who live in a certain country during the title time period?

ANSWER: *Romance of the Three Kingdoms*

[10] Along with *Water Margin*, *Journey to the West*, and *Dream of the Red Chamber*, *Romance of the Three Kingdoms* is one of the four great classical novels of this country.

ANSWER: **China**

[10] This 15th century work by Lanling Xiaoxiao Sheng was originally one of the four great works, but is no longer considered one due to its explicit depiction of sexual scenes. Main characters include Pan Ginlian and Xi Menqing.

ANSWER: *The Plum in the Golden Vase* or *Jing Ping Mei*

<AZ>

7. Bonus: It can allow helium to creep up the sides of a container and escape. For ten points each:
[10] What is this state of matter in which the viscosity of a liquid drops to zero?
ANSWER: **Superfluid** (accept equivalents)
[10] In Helium-4, superfluidity occurs at this temperature, about 2.17 degrees Kelvin, named for a Greek letter.
ANSWER: **Lambda** point
[10] This Russian won the 1962 Nobel Prize in Physics for mathematically describing superfluidity, but the car accident which ended his scientific career prevented him from being there to accept the prize.
ANSWER: Lev **Landau**
<MS>

8. Bonus: Zurvanists believe that he created the peacock. For ten points each:
[10] Name this chief evil god of a certain religion, who will eventually be defeated by Ahuramazda and the forces of good.
ANSWER: **Angra Mainyu** or **Ahriman**
[10] Angra Mainyu and Ahuramazda are the central gods in this Middle Eastern religion, founded in the sixth century BCE by its namesake prophet.
ANSWER: **Zoroastrianism** (prompt on **Mazdaism**)
[10] These are the main texts of Zoroastrianism. The Zend is scholarly interpretation of them, and the Gathas were supposedly written by Zoroaster himself.
ANSWER: **Avesta**s
<MS>

9. Bonus: His name was Temujin, but he took on his most famous title after uniting many nomadic tribes. For ten points each:
[10] Name this conquerer of central Asia, who passed on power to his son Ogedei when he died, and whose grandson Kublai would conquer much of East Asia.
ANSWER: **Genghis Khan** (or **Chingis Khan**)
[10] One of the civilizations conquered by Genghis Khan was this one, with capital at Urgench. Many of its towns were sacked and its citizens brutally massacred, especially in the cities of Samarkand and Bukhara.
ANSWER: **Khwarezmid** Empire (accept also **Khwarezm**-Shah or **Khwarezmian** Dynasty)
[10] This offshoot of the Mongol empire was ruled by Batu, and located in modern-day Russia and eastern Europe. Sometimes called the Kipchak Khanate, legend has that it took its most common name from the color of Batu's tent.
ANSWER: **Golden Horde** (or **Altan Orda**)
<MS>

10. Bonus: It claimed that the Treaty of Versailles was a "Carthaginian Peace". For ten points each:
[10] What is this book, written by a British economist, which advocated for much more lenient terms for the Treaty of Versailles?
ANSWER: ***The Economic Consequences of the Peace***
[10] *The Economic Consequences of the Peace* is a work by this author of *Treatise on Probability*. He argued that deficit spending was necessary to lift countries out of a depression in his most famous work.
ANSWER: John Maynard **Keynes**
[10] This magnum opus of Keynes claims that demand, not supply, is what dictates economic growth. It was the inspiration for FDR's New Deal.
ANSWER: The ***General Theory*** of Employment, Interest, and Money
<MS>

11. Bonus: Those who forget history are doomed to repeat it. Name these things that you have to remember. For ten points each:
[10] By far the most famous thing we are told to remember, this battle in the Texan Revolution saw the death of Davy Crockett. Remember "this event" was used as a rallying cry during the Battle of San Jacinto.
ANSWER: Battle of the **Alamo**
[10] In addition to yelling "Remember the Alamo", Texan freedom fighters were told to remember this other massacre. Occurring less than a month after the Battle of the Alamo, it saw Santa Anna brutally execute James Fannin and his army.
ANSWER: **Goliad** Massacre
[10] The sinking of this American warship in Havana Harbor sparked the Spanish-American War. Advocates of war and yellow journalists told everyone to remember this ship.
ANSWER: U.S.S. **Maine**
<MS>

12. Bonus: In this work, Mersault shows no emotion at his mother's funeral. For ten points each:
[10] Name this novel, in which Mersault kills an Arab who had been bothering him and his friend Raymond. He is later sentenced to death for showing no remorse.
ANSWER: The ***Stranger*** (accept also: ***L'Etranger*** or The ***Outsider***)
[10] This absurdist author of *The Stranger* wrote a work about a disease outbreak in Oran, *The Plague*, as well as the short story collection *The Exile and the Kingdom*.
ANSWER: Albert **Camus**
[10] This essay by Camus describes the philosophy of the absurd, a futile search for meaning. Its last section describes the struggles of the title character, who pushes a rock up a hill, only to see it fall down again. It concludes that one must imagine him happy.
ANSWER: ***The Myth of Sisyphus*** (or ***Le Mythe de Sisyphe***)
<MS>

13. Bonus: Name some famous American photographers, for ten points each:

[10] This man is best known for his photographs of nature, such as *Moon and Half-Dome* in Yosemite National Park. He also took pictures of the internment camp at Manzanar.

ANSWER: Ansel **Adams**

[10] This female photographer took pictures at Manzanar too, but she is more famous for her photographs taken during the Great Depression, like *Migrant Mother*.

ANSWER: Dorothea **Lange**

[10] This man is sometimes called the father of photojournalism, a title earned because of his thousands of photographs of the Civil War. His exhibition, "The Dead of Antietam", was the first introduction of many Americans to the graphic violence of war.

ANSWER: Matthew **Brady**

<MS>

14. Bonus: Examples of these include 6, 28, 496, 8128 and 33,550,336. For ten points each:

[10] What is this type of number, so named because the sum of their proper divisors is exactly equal to the number itself?

ANSWER: **Perfect** Numbers

[10] All even perfect numbers are this type of number. The first few are 1,3,6, and 10, and the *n*th one of these numbers is equal to the sum of all numbers up to *n*.

ANSWER: **Triangular** Numbers

[10] This is the name given to a pair of numbers whose proper factors add up to each other. The smallest such pair is 220 and 284, and they are a special case of sociable numbers.

ANSWER: **Amicable** Numbers (DO NOT accept Friendly Number)

<MS>

15. Bonus: Her rise to fame began in the parking lot of a Casas Adobes Safeway supermarket. For ten points each:

[10] Name this U.S. Representative, who was shot in the head and miraculously not killed on January 8, 2011.

ANSWER: Gabriel **Giffords** (accept Gabby **Giffords**)

[10] This crazed gunman fired shots into a crowd meeting with Giffords, killing six.

ANSWER: Jared Lee **Loughner**

[10] Giffords is a representative from this state, whose current senators include Jon Kyl and John McCain.

ANSWER: **Arizona**

<KT>

16. Bonus: Scales to measure this property were developed by Mulliken and Allred-Rochow. For ten points each,

[10] Name this property that describes the tendency of an atom to attract electrons towards itself.

Answer: **electronegativity**

[10] Electronegativity of atoms is most commonly measured in this scale ranging from 0.7 to 3.98. Its namesake won Nobel prizes in both Chemistry and Peace.

Answer: **Pauling** scale (accept Linus **Pauling**)

[10] This atom has the highest electronegativity when measured on the Pauling scale. Along with xenon, it was part of the first discovered binary compound containing a noble gas.

Answer: **Fluorine**

<EnzeC>

17. Bonus: Midway through, Dr. Yueh is revealed to be a traitor working for Baron Harkonnen. For ten points each:

[10] Name this science fiction novel, which sees Paul Atreides become the Muad'dib and use the help of the local Fremen to avenge his fathers death and take control of the desert planet Arrakis, the best-selling science fiction novel of all time.

ANSWER: *Dune*

[10] *Dune* is a work by this author. He wrote five more books as sequels to *Dune*, and his first novel was *The Dragon in the Sea*.

ANSWER: Frank **Herbert**

[10] In 1966, *Dune* was the first novel to win this award, which is given to the best fantasy or science fiction work in a year, in addition to winning the Hugo award.

ANSWER: **Nebula** Award

<MS>

18. Bonus: It spans nine time zones, and is the largest country on the planet. For ten points each:

[10] Name this country, stretching from the Kuril Islands in the east beyond the Urals into Europe, with its capital Moscow lying in its western half.

ANSWER: **Russia**n Federation

[10] Russia is separated from Alaska by this body of water, named for a Danish explorer. It is theorized that a former land bridge here allowed early humans to migrate to North America.

ANSWER: **Bering** Strait (or **Bering** Sea)

[10] The only non-contiguous part of Russia, this exclave is located in Eastern Europe, bordering Lithuania and Poland. It contains what was once the Prussian city of Königsberg.

ANSWER: **Kaliningrad** Oblast

<MS>

19. Bonus: Types of it include allopatric and sympatric. For ten points each:

[10] Name this process through which a group of organisms become distinct and are no longer able to mate.

Answer: **Speciation**

[10] Speciation can often be facilitated by this process, which is a shift in allele frequency. Examples of it include Founder's effect and bottlenecks.

Answer: **Genetic Drift**

[10] Another type of speciation is this one, where an incomplete buffer zone allows for partial interaction.

Answer: **Parapatric** speciation

<AZ>

20. Bonus: He once made his horse a senator. For ten points each:

[10] Name this crazy Roman emperor, whose name means Little Boots. He came after Tiberius, and upon his assassination, was succeeded by Claudius.

ANSWER: **Caligula**

[10] Before Tiberius came this first Roman Emperor. Along with Lepidus and Marc Antony, he was part of the Second Triumvirate, and he was victorious at the Battle of Actium.

ANSWER: **Octavian** or Gaius Julius Caesar **Augustus** or Gaius **Octavius** Thurinus

[10] During much of the reign of Tiberius, this was the second most powerful man in Rome. A close friend of the emperor, he rose to commander of the Praetorian Guard, before his sudden downfall and execution for treason.

ANSWER: Lucius Aelius **Sejanus**

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