

**LADUE INVITATIONAL
SPRING TOURNAMENT 2011**

Round 4

TOSS-UPS

1. This structure's eventual destruction was hastened by Riccardo Ehrman's questioning and a misreading of a note by Gunter Schabowski, which occurred soon after the Alexanderplatz demonstration. Willy Brandt was mayor during its creation, and (*) Erich Honecker claimed that it would stand for "a hundred more years." One crossing here was known as Checkpoint Charlie and it aimed to prevent "Republikflucht." Ronald Reagan told Gorbachev to tear down, for ten points, what structure, which, from 1961 to 1989 split the capital of Germany in half?

ANSWER: **Berlin Wall** (accept **Berliner Mauer**)

<MS>

2. The first one of these entities was isolated from the Haemophilus influenza in 1968, a compound that recognizes the double-stranded sequence GTYRAC and cleaves after Y-3. These compounds are used by bacteria and archaea as defense against viruses, and can also be used in a namesake (*) fragment length polymorphism to digest the sample DNA, the pieces of which are later separated by gel electrophoresis. HindII and EcoRI are examples of, for ten points, what class of proteins, used to cut DNA at specific locations, which allows for DNA fingerprinting as well as the development of recombinant DNA?

ANSWER: **restriction enzymes** (also accept **restriction endonuclease** or **restriction nuclease**; prompt on enzyme)

<HX>

3. The geometric patterns of the tile floor in this painting borrows its design from Westminster Abbey, and scientific instruments including a torquetum, a sundial, and a globe are on an oriental carpet on the upper shelf, flanked by two figures. One figure in this work wears the (*) Order of St. Michael and holds a dagger, while the other one is theorized to be Jean de Dinteville. For ten points, name this oil painting with a famous skewed skull at the bottom center, intended as a memento mori by its painter, Hans Holbein the Younger.

ANSWER: The **Ambassadors**

<HX>

4. One generalization of this theorem to three dimensions is known as de Gua's Theorem, and when Hippasus of Metapontum applied this he was drowned at sea, for he had discovered irrational numbers. It is a special case of the law of cosines, and (*) triples of this kind include (48, 55, 73), (20, 21, 29), and (5, 12, 13). Generalizing into the distance formula, for ten points, what is this famed geometrical theorem, stating that a squared plus b squared equals c squared?

ANSWER: **Pythagorean** Theorem or **Pythagorean** Triples

<MS>

5. One of this man's short stories describes a bet between two men about whether one can spend 15 years in solitary confinement, and in one of his plays, a pistol is fired at Serebryakov from close range by the title character. In addition to (*) *Uncle Vanya*, this man wrote a play about Trigorin, Nina, Irina, and Konstantin, who shoots himself not long after shooting the title bird, and his last and most famous play sees Lopakhin buy the title estate from Ranevskaya. For ten points, name this Russian author of *The Seagull* and *The Cherry Orchard*.

ANSWER: Anton Chekhov

<MS>

6. This entity's creation led to William Borah leading the "Irreconcilables", but the chief opposition to this body was led by Henry Cabot Lodge. This organization failed to prevent the Chaco War or the Abyssinian crisis, and refused to take action against Japan after the Mukden Incident. Its main proponent outlined his goals in the (*) Fourteen Points speech, and it was the brainchild of Woodrow Wilson. Ultimately failing to stop the rise of the Axis powers and World War Two, for ten points, what is this intergovernmental organization created after World War One, the precursor to the United Nations?

ANSWER: The League of Nations

<SA>

7. A recently discovered play by this man tells the tale of a painter faking his own death to make his art more valuable. In addition to *Is He Dead?*, this man wrote about the cranberry farmer Sandy McWilliams, who is met on *Captain Stormfield's Visit to Heaven*. In one of his novels, a man drops off a sack containing lead, though he claims it contains gold, and another of his novels sees (*) Tom Canty confused with Edward, the son of Henry VIII. For ten points, name this author of *The Man That Corrupted Hadleyberg* and *The Prince and the Pauper*, who is more famous for his stories about Tom Sawyer and Huckleberry Finn.

ANSWER: Mark Twain or Samuel Clemens

<MS>

8. One of this man's works maintains that the opposite of pure being is pure nothing and introduces the concepts of "Being-For-Self" and "Being-For-One" to explore the idea of infinity, while another ends with a section about Absolute Knowledge. That work also includes a famous passage in which two self-conscious beings engage in a (*) "struggle to the death" to dominate the other, a key element in this man's philosophy called the Master-Slave dialectic. For ten points, name this author of *Science of Logic*, who discussed the levels of consciousness in *The Phenomenology of Spirit*.

ANSWER: Georg Wilhelm Friedrich Hegel

<HX>

9. North of this city lies the former summer residence of the Sheremetev family, Ostankino Palace, and its largest amusement park is named after Maxim Gorky. This city's roads radiate out from its center and intersect with various circular roads, which include Garden Ring and Boulevard Ring. The Cathedral of Christ the Savior lies on the (*) Yauza River in this city, while its main river is the Moskva. The Seven Sisters and a famous cathedral with onion-shaped domes, St. Basil's, all lie in this city. For ten points, name this city which contains the Kremlin and is the capital of Russia.

ANSWER: Moscow

<JD>

10. This is the only fundamental force whose mediating boson is yet to be discovered, and measuring the effects of this force is a way to locate dark matter. Einstein visualized this force by imagining curved space-time, and the universal law of this force states that F equals (*) $G M_1 M_2$ divided by r squared. On Earth, the magnitude of acceleration due to this force is approximately 9.8 meters per second squared, and this force is what keeps planets in orbit around the sun. Apocryphally discovered when Newton was hit in the head by an apple, for ten points, what is this force, which causes us to fall back to Earth when we jump up in the air?

ANSWER: Gravity (accept equivalents)

<MS>

HALFTIME

11. One chapter of this work is left blank, supposedly implying the death of the title character, and that character's child Reizei winds up becoming emperor. The protagonist of this work has many love affairs, including with his step-mother (*) Fujitsubo, much to the dismay of his wife Lady Aoi. After Aoi's death, he marries Fujitsubo's niece, whose name is the same as that of this work's author. Considered by many to be the first novel ever written, for ten points, name this work by Lady Murasaki.

ANSWER: The Tale of Genji

<MS>

12. This man collaborated with Anna Schwartz to produce one his most famous works, which blamed the Federal Reserve for the Great Depression. This man's namesake "rule" advocated setting the interest rate at zero, and the idea that the percentage of money in circulation should be increased at a constant rate is his (*) "k-percent rule". In the 1970s, this man noted that current theories did not predict stagflation, causing him to question the Phillips curve. The main proponent of monetarism, for ten points, name this Chicago school economist and author of *Capitalism and Freedom*.

ANSWER: Milton Friedman

<MS>

13. The only symphony by this man is often compared with Beethoven's *Symphony No. 7 in A major*, and the last part of another work sees Hagen waiting with his father near the Rhine. One of his works begins with a long A, played by a solo trumpet, and an unfinished opera of this man sees Cadolt killed by Ada. Composer of the *The Wedding* and (*) *Götterdämmerung*, for ten points, name this German composer of *The Fairies*, *Rienzi*, and a cycle of four epic operas based on Norse mythology, *Der Ring des Nibelungen*.

ANSWER: Wilhelm Richard Wagner

<HX>

14. Double layers of this substance are found in Birkeland currents, and Hannes Alfvén claimed that if enough of it was present, a galaxy-wide magnetic field could be created. One type of this substance is called "quark-gluon soup", and the solar wind is a stream of it. (*) St. Elmo's Fire and Ball Lightning are made up of this state of matter, which also causes the aurora borealis. Consisting mainly of ionized gas is, for ten points, what "fourth state" of matter?

ANSWER: Plasma

<MS>

15. McDonald's man Ray Kroc hailed from this state, and this state was Ronald Reagan's birthplace. Patrick Fitzgerald charged one governor of this state with corruption after he tried to sell a Senate seat, causing (*) Pat Quinn to become governor. The mayor-elect of one city in this state took the seat of a member of the Daley clan; that man is Rahm Emanuel. The home to disgraced Rod Blagojevich, this is, for ten points, what state, which Obama was the senator from, and that has capital at Springfield?

ANSWER: Illinois

<MS>

16. This man was made major general of the army during the Quasi-War, and, along with John Jay and James Madison, wrote the Federalist Papers. Despite their political rivalry, he claimed "at least Jefferson was honest" when he (*) swung the vote to Jefferson's side in the 1800 election, a decision which hastened the end of his life. For ten points, name this first secretary of the treasury, who was killed in a duel by Aaron Burr.

ANSWER: Alexander Hamilton

<KT>

17. One response to this poem written forty years later tells how “They had neither food nor money, they had neither service nor trade,” and was written by Rudyard Kipling. This poem asks “When can their glory fade?” despite the fact that (*) “someone had blunder’d”, causing the death of “the six hundred.” Commemorating an event during the Battle of Balaclava, for ten points, name this work which sees the title group ride “into the valley of Death”, a poem by Alfred Tennyson.

ANSWER: **“The Charge of the Light Brigade”**

<MS>

18. This people’s moon goddess is known as Awilix, and these people believe that Vucub-Caquix and the lords of Xibalba were defeated by Hunahpu and Xbalanque, who are also referred to as the Hero Twins. Most of this people’s mythology is collected in the (*) Popol Vuh and was the most famous culture to use the Long Count Calendar. For ten points, name this Mesoamerican culture, which is erroneously believed to have predicted the end of the world occurring on December 21, 2012.

ANSWER: **Maya** (accept **K’iche**)

<MS>

19. This animal’s “severed head” is one of the most valuable hats in Team Fortress 2; that animal is Sam’s partner Max. The vorpal variety of this animal hails from Caerbannong, and one of these animals escaped after being betrayed by Pigma Dengar; that animal named (*) Peppy tells Star Fox of his father’s capture. A tattoo of this animal appears on a woman’s shoulder in *The Matrix*, and another was defeated by the Holy Hand Grenade. For ten points, name this animal, the killer variety of which appeared in *Monty Python and the Holy Grail*, as well as one hunted by Elmer Fudd who asks “What’s up doc?”

ANSWER: **Bunny** or **Rabbit** or **Hare** (accept equivalents, also accept **Max** before mentioned)

<MS>

20. This idea was first discussed by the Belgian priest Georges Lemaître, who called it the “hypothesis of the primeval atom,” but was given its current name by Fred Hoyle. The Planck epoch occurred immediately after it, and less than a (*) second had gone by before hadrons were formed. CMBR is a remnant of this event, which has also been verified by Hubble’s observations. Occurring a little over 13 billion years ago, for ten points, what is this theory, which posits that the universe began from a single point and rapidly expanded?

ANSWER: **Big Bang**

<MS>

BONUSES

1. Bonus: Name these themed orchestral suites. For ten points each:

[10] This work is composed of a theme and fourteen variations, each representing a different person in the composer's life with the final variation depicting Elgar himself.

ANSWER: Variations on an Original Theme for orchestra (also accept: Enigma variations; prompt on Op. 36)

[10] This fifteen-movement work by Britten features the different instruments of the orchestra in each variation. It was originally commissioned for a film titled *The Instruments of the Orchestra*, and is one of the most commonly used scores in children's music education.

ANSWER: The Young Person's Guide to the Orchestra (prompt on Op. 34)

[10] This suite portrays different animals, including hens and roosters, a tortoise, and pianists. The composer, Saint-Saëns, thought it was too frivolous, only allowing one movement, *Le Cygne*, to be published during his lifetime.

ANSWER: The Carnival of the Animals (also accept: Le carnaval des animaux)

<HX>

2. Bonus: He died while acting the part of Argan in his *The Imaginary Invalid*. For ten points each:

[10] Name this French playwright, who wrote about Arnolphe's attempts to marry Agnes in *The School For Wives*, but is more famous for a play about a certain religious hypocrite.

ANSWER: Moliere or Jean Baptiste Poquelin

[10] This is Moliere's most famous play. In it, the title character deceives Orgon by pretending to be a pious man and attempts to seduce Elmire, resulting in the temporary banishment of Orgon's son Damis.

ANSWER: Tartuffe, or the Imposter

[10] This other Moliere play is about the title moneylender, Harpagon, and his penny-pinching ways.

ANSWER: *The* Miser or L'Avare

<MS>

3. Bonus: For ten points each, name some important Chinese capitals:

[10] This city that lies on the Yangtze River Delta was the capital of the Ming Dynasty before Yongle's reign. It also served as the capital of the Republic of China before the Chinese Civil War in 1949.

ANSWER: Nanjing or Nanking

[10] Yongle moved the capital to this city, which now houses Tiananmen Square and the Forbidden City.

ANSWER: Beijing or Peking

[10] This city was the capital of the Qin, Sui, and Tang Dynasties. It is home to the Terracotta Army and was the eastern terminus of the Silk Road.

ANSWER: Xi'an or Chang'an

<JD>

4. Bonus: These particles are found in the atom. For ten points each:

[10] Name this particle, made up of two up quarks and one down quark, which has a charge of positive one and a mass close to that of a neutron.

ANSWER: **Protons**

[10] Protons and neutrons are examples of this class of composite particles which are made of three quarks. Its name comes from the Greek word for “heavy,” and it belongs to the hadron family.

ANSWER: **Baryons**

[10] Baryons and other fermions experience strong nuclear force governed by this set of equations, which apply to particles that obey the Pauli Exclusion Principle. They were used in 1926 by Fowler to describe the formation of a white dwarf and are named after the two physicists who discovered them.

ANSWER: **Fermi-Dirac** statistics (prompt if only one part is given)

<HX>

5. Bonus: Bob Saget narrates Ted Mosby’s quest to find his soul-mate in this CBS sitcom. For ten points each:

[10] What Emmy-nominated comedy features Jason Segel as Marshall Eriksen?

ANSWER: **How I Met Your Mother**

[10] Although the pilot episode introduces this ex-Canadian pop star as Ted’s love interest, she confesses her feelings for Barney in the Season 4 Finale and is played by Cobie Smulders.

ANSWER: **Robin** Charles Scherbatsky Jr.

[10] This man plays Barney Stinson on “How I Met Your Mother” and played the title role on “Doogie Howser, M.D.” In another role, he stole Harold and Kumar’s car.

ANSWER: Neil Patrick **Harris** or **NPH**

<SA>

6. Bonus: Although a group of Catholic noblemen tried to prevent this conflict, Philip II of Spain immediately invaded when violent Protestant riots took place nationwide. For ten points each:

[10] In what 16th century rebellion did the Seventeen Provinces of the defunct Duchy of Burgundy successfully resist the rule of Spain and form the United Provinces, creating a namesake country with capital at The Hague?

ANSWER: **Dutch** Revolt or Revolt of the **Netherlands** (also accept **80 Years** War)

[10] This Catholic nobleman led a group of like-minded politiques to ask Philip II to tolerate Protestantism in the Netherlands.

ANSWER: **William of Orange** (accept **William the Silent**, prompt on **William**)

[10] This Spanish nobleman, whose troops were nicknamed the Council of Blood for their violent control tactics, presided over the Netherlands during the Spanish occupation.

ANSWER: Third **Duke of Alba** or **Duke of Alva** (accept **Fernando Álvarez de Toledo** y Pimentel)

<SA>

7. Bonus: For ten points each, name these South American Rivers:

[10] This river has its source in southern Peru and its mouth in northeastern Brazil. It's one of the world's longest rivers.

ANSWER: **Amazon** River

[10] This river joins with the Pilcomayo at Asuncion. It later joins with the Uruguay to form the Rio de la Plata.

ANSWER: **Paraguay** River

[10] This river has its source in Colombia and is connected to the Orinoco by the Casiquiare Canal. Manaus lies on the confluence of the Amazon and this river.

ANSWER: Rio **Negro** (accept **Negro** River)

<JD>

8. Bonus: He co-invented vector analysis, but is more famous for his work in thermodynamics. For ten points each:

[10] Identify this American whose namesake phase rule states that the number of degrees of a freedom of a system is equal to the number of components minus the number of phases plus two.

ANSWER: Josiah Willard **Gibbs**

[10] Gibbs discovered a type of this, which is the measure of the amount of work that can be utilized by a thermodynamical system.

ANSWER: **free energy**

[10] In a closed system with a constant temperature and volume, this type of free energy measures the amount of work that can be used.

ANSWER: **Helmholtz** free energy

<KT>

9. Bonus: Hers was the face that launched a thousand ships. For ten points each:

[10] Name this wife of Menelaus who was abducted by Paris, starting the Trojan War.

ANSWER: **Helen**

[10] Helen was a character in this epic, written by Homer, in which Agamemnon kidnaps Briseis, Achilles kills Hector, and the Greeks attack the Trojans.

ANSWER: *The* **Iliad**

[10] In *The Iliad*, Zeus goes to this Trojan mountain to watch the war after ordering the gods not to interfere with it. It is also the place from which he abducts Ganymede, and it was where Paris was raised.

ANSWER: Mount **Ida**

<SS>

10. Bonus: After being abused by her mother's boyfriend, she remained mute for five years. For ten points each:

[10] Name this black female poet who was nominated for the Pulitzer after *writing Just Give Me a Cool Drink of Water 'Fore I Diiiie*. She is more famous for an autobiography titled after a line from a Paul Laurence Dunbar poem.

ANSWER: Maya Angelou

[10] This is the title of the first book of Maya Angelou's autobiography; in Dunbar's poem, it comes before the line: "When his wing is bruised and his bosom sore."

ANSWER: *I Know why the Caged Bird Sings*

[10] On January 20, 1993, with Bill Clinton by her side, Maya Angelou became the second poet in history to perform this action when she read "On the Pulse of Morning". The first person to do this was Robert Frost, when he read "The Gift Outright" in 1961.

ANSWER: Reading a poem at a presidential inauguration (accept equivalents, prompt on partial)
<MS>

11. Bonus: Members of this phylum are distinguished by the presence of the water vascular system and contain stereom. For ten points each:

[10] Name this phylum, whose members include starfish and sand dollars and possess pentaradial symmetry, and whose name means "spiny skin".

ANSWER: Echinodermata

[10] These echinoderms have spiny shells called tests and are preyed upon by sea otters.

ANSWER: Sea Urchins (accept Echinoidea)

[10] Echinodermata are a member of this superphylum, in which the blastophore becomes the anus during embryonic development.

ANSWER: Deuterostome (accept Enterocoelomate)
<BZ>

12. Bonus: He wrote “You’re a better man than I” in “Gunga Din”. For ten points each:

[10] Name this author of *Barrack-Room Ballads* whose collection of short stories about Mowgli is called *The Jungle Book*.

ANSWER: Rudyard **Kipling**

[10] This Kipling poem concludes by telling the reader that “you’ll be a man, my son!” Kipling claims that it was inspired by the Jameson Raid, and its first line advises to “keep your head when/ All about you are losing theirs”.

ANSWER: **If**—

[10] This Kipling short story first appeared in *The Phantom Rickshaw*. It sees Dravot and Carnehan become the divine leaders of Kafiristan, but their hopes are dashed when Dravot bleeds, proving his mortality.

ANSWER: *The* **Man Who Would Be King**

<MS>

13. Bonus: It begins 1,1,2,3,5,8. For ten points each:

[10] What is this famous sequence, whose next term is found by adding the two previous terms?

ANSWER: **Fibonacci** Sequence

[10] The ratio between consecutive terms in the Fibonacci sequence approaches this number, usually denoted by the Greek letter phi.

ANSWER: **Golden** ratio or **Golden** mean (accept also $(1+\sqrt{5})/2$)

[10] Terms in the Fibonacci sequence can be found with a closed-form expression named for this man. He is also recognized as the first man to describe how to multiply matrices.

ANSWER: Jacques Philippe Marie **Binet**

<MS>

14. Bonus: Answer the following about a certain Neoclassical French painter, for ten points each:

[10] On the left of this painting, three men raise their hands to their swords held by an elderly man., pledging to defend Rome to the death.

ANSWER: **Oath of the Horatii** or **Le Serment des Horaces**

[10] In addition to *Oath of the Horatii*, this artist depicted a Greek philosopher consuming hemlock in *The Death of Socrates* and painted quite a few portraits of Napoleon.

ANSWER: Jacques-Louis **David**

[10] David is best known for this work that shows a man bleeding with a letter in one hand and a quill in another. This painting has been called “the *Pieta* of the French Revolution” and depicts the aftermath of an assassination.

ANSWER: **The Death of Marat** or **La Mort de Marat** (accept either underlined)

<RU>

15. Bonus: The Union victory at this battle divided the Confederacy in half. For ten points each:

[10] Name this Civil War battle for control of a stronghold on the Mississippi, in which Confederate forces surrendered to Grant after a 40-day siege.

ANSWER: Siege of **Vicksburg** [accept Battle of **Vicksburg**]

[10] This man commanded the Confederate garrison at Vicksburg. His nephew of the same name invented Coca-Cola.

ANSWER: John C. **Pemberton**

[10] Vicksburg surrendered on this day, in hopes that the lightened mood of the Union armies would result in more lenient surrender terms. Vicksburg refused to celebrate this holiday for 80 years afterwards.

ANSWER: **Fourth of July** [accept reasonable equivalents mentioning "4" and "July"]

<BZ>

16. Bonus: The RMS Titanic met a watery demise when she struck one of these objects on her maiden voyage. For ten points each:

[10] Identify these formations, large bodies of ice floating in open water typically having less than one ninth of its total volume above water.

ANSWER: **Icebergs**

[10] These other icy bodies originate on land and flow slowly due to a combination of the slope of the surface and pressure from their mass. These entities transform V-shaped valleys into U-shaped valleys, and are also responsible for the creation of fjords.

ANSWER: **Glaciers**

[10] These formations are deposits of glacial debris and are classified by origin or shape. Types of these include "lateral," "ground," "terminal," and "Rogen."

ANSWER: **Moraines**

<HX>

17. Bonus: Along with his brother Wilhelm, he wrote a pretty famous collection of fairy tales. For ten points each:

[10] Name this German, whose namesake "law" describes how sounds in words change over time.

ANSWER: Jacob **Grimm** (accept **Grimm**'s Law)

[10] Grimm's Law especially deals with how this language became the Proto-Germanic language.

ANSWER: **Proto-Indo-European** Language

[10] Studies of Indo-European language families began when William Jones noticed the similarities between Latin, Greek, and this language, which was spoken a lot in India.

ANSWER: **Sanskrit**

<MS>

18. Bonus: This man was made famous for winning the Battle of Tours. For ten points each:

[10] Name this Frankish military leader, also known as “The Hammer”

ANSWER: Charles **Martel** (accept: Carolus **Martellus**)

[10] This grandson of Charles Martel was crowned Holy Roman Emperor in 800 AD.

ANSWER: **Charlemagne** (accept **Carolus Magnus** or **Charles the Great**)

[10] Charlemagne’s three grandsons Lothair, Louis the German, and Charles the Bald divided up his land in this 843 treaty, occurring after Louis the Pious’s death.

ANSWER: Battle of **Verdun**

<KT>

19. Bonus: Protests in this state started on February 15, 2011. For ten points each:

[10] Name the state in which protests have been ongoing at the State Capitol in Madison, in response to the Budget Repair Bill.

ANSWER: **Wisconsin**

[10] Passing the bill would weaken these rights of union members, which allows them to negotiate with employers to reach agreements about their working conditions.

ANSWER: **Collective bargaining** rights

[10] This Republican created the Budget Repair Bill and is the current governor of Wisconsin.

ANSWER: Scott **Walker**

<JD>

20. Bonus: One character in this work is called “Poor Fool.” For ten points each:

[10] Name this novel, which sees Wang Lung earn a ton of money through looting, more than enough to buy the land of his old rivals, the House of Hwang.

ANSWER: **The Good Earth**

[10] *The Good Earth* opens with Wang Lung’s marriage to this woman. She was originally a slave of the Hwangs, and is not very happy when Wang Lung buys a concubine.

ANSWER: **O-Lan**

[10] *The Good Earth* is a work by this author, the first American woman to win the Nobel Prize.

Alongside with *Sons* and *A House Divided*, *A Good Earth* makes up her *The House of the Earth* trilogy.

ANSWER: Pearl **Buck**

<MS>