

# **LADUE INVITATIONAL SPRING TOURNAMENT 2013**

Round 16

## TOSS-UPS

**1. A white one of these animals named Uchchaihshravas was produced during the Churning of the Ocean and owned by Indra. The Celtic goddess Epona was worshipped as one of these animals. Hrungnir bet that one of these animals named Gullfaxi was better than another one who was the son of Svadilfari. Several particularly aggressive ones killed Diomedes of Thrace before Heracles took them. An (\*) eight-legged one of these that belonged to Odin was Sleipnir. Zeus sent a gadfly to sting one of these animals, which resulted in Bellerophon falling to the ground even though he had tamed it with a golden bridle. For 10 points, name these animals, a winged one of which is Pegasus.**

ANSWER: horses (accept stallions or mares)

<BZ>

**2. One form of this quantity is on the horizontal axis of the IS/LM model, which plots interest rate on the other axis. The velocity of money is equal to one type of this quantity over the total money supply, and, in *The Affluent Society*, Galbraith attacked this measure for not taking into account social considerations. A 1% increase in unemployment leads to a 2% decrease in this quantity, according to (\*) Okun's Law. It can be calculated via the income approach or the expenditure approach. For ten points, identify this economic measure of the value of all goods and services produced in a country.**

ANSWER: Gross Domestic Product (or Gross National Product)

<DA>

**3. In one of this author's novels, a non-functioning vacuum is given to Sweets Ramirez by Danny, the friend of Pilon. Another of his characters is based on marine biologist Ed Ricketts, and that novel sees Lee Chong, Dora Flood, and Mack help throw a party for Doc. In addition to *Tortilla Flat* and (\*) *Cannery Row*, this author wrote a novel in which Curley's wife is accidentally killed by the giant, dimwitted Lennie, and in another of his works, the Joads travel west due to the Dust Bowl. For ten points, name this American author of *Of Mice and Men* and *The Grapes of Wrath*.**

ANSWER: John Steinbeck

<MiP>

**4. A certain quantity for spherical objects of this type is inversely proportional to the difference in reciprocals of the radii. These objects stop working when the breakdown voltage is reached. The time constant in systems with one of these objects and a resistor is equal to the resistance times a namesake quantity. That quantity is equal to permittivity times area divided by distance for a (\*) parallel-plate one, is measured in farads, and can be increased by inserting a dielectric. For ten points, identify these circuit elements whose namesake unit equals charge over voltage, which store energy in an electric field.**

ANSWER: capacitors

<MS>

**5. Casey's Theorem applies to this number of circles who are all tangent to another circle. Only primes that leave a remainder of 1 when divided by this number can be expressed as the sum of two perfect squares, and all natural numbers can be expressed as the sum of at most this many perfect squares. In a cyclic polygon with this many sides, opposite angles sum to (\*) one hundred eighty degrees. A two-element set has this many subsets, and this is the fewest number of faces possessed by a Platonic solid. For ten points, name this smallest composite number, the number of sides in a quadrilateral.**

ANSWER: four

<YL>

**6. During this period, Christians were driven into hiding after the failure of the Shimabara Rebellion, and this period saw the enactment of the *sakoku* policy. This period was preceded by a time of unrest called the Sengoku Period. One ruler of this period hosted the Convention of Kanagawa, and after a successful siege of Osaka Castle, its first ruler defeated the Toyotomi clan. It began after the Battle of (\*) Sekigahara, and the port of Nagasaki was the only entry point for foreigners during this period, which Matthew Perry once visited. For ten points, identify this Japanese shogunate succeeded by the Meiji Restoration and founded in 1600 by Ieyasu.**

ANSWER: Tokugawa Shogunate (or Tokugawa bakufu; or Edo Period)

<JD>

7. At the beginning of this film, Chrissie Watkins is killed during a party, but Mayor Larry Vaughan overrules attempts to prevent further loss of life. Another character in this film destroys the radio to prevent contact with the Coast Guard, and that same character later relates his story from his time aboard the *USS Indianapolis* while on the (\*) *Orca*. Brody later fails to save that character, Captain Quint, and this film is best known for its theme, composed by John Williams, which consists of a simple alternating two-note pattern. For ten points, name this Steven Spielberg classic about a great white shark terrorizing a New Jersey town.

Answer: Jaws

<CC>

8. One character in this play mentions that a lion is not really a lion nor is a sword really a sword, and it sees one character pretend to be a wall and another the moonlight. This play's Peter Quince leads the "six mechanicals" in a production of *Pyramus and Thisbe* at the wedding of (\*) Theseus and Hippolyta. This play's character Nick Bottom is given a donkey's head by Puck, the mischievous servant of the fairy monarchs Titania and Oberon. For ten points, identify this Shakespeare play which sees a double wedding of Lysander and Hermia and Helena and Demetrius.

ANSWER: A Midsummer Night's Dream

<MS>

9. The cell walls of some of these organisms cannot be degraded by lysozymes because they are composed of pseudomurein. Their cell membranes contain branched hydrocarbons and are primarily composed of ether-linked lipids instead of ester-linked lipids. Those that use carbon dioxide to oxidize methane are called methanogens, and, like many of these organisms, are poisoned by (\*) oxygen since they are obligate anaerobes. Many halophiles, thermophiles and other extremophiles belong to this class of organisms. For 10 points, name these prokaryotes named after the fact that they are much older than other forms of life.

ANSWER: archaeans (accept archaeobacteria; do not accept or prompt on "bacteria")

<BZ>

10. A half-male, half-female crucified figure looks down at a Nazi officer in this artist's *Apocalypse in Lilac, Capriccio*, and a massive chandelier is located at the center of this artist's colorful paintings on the ceiling of the Paris Opera House. The Lithuanian flag flaps while a synagogue burns in one of his paintings, while the Eiffel Tower can be seen through a window in another of his works. In addition to (\*) *White Crucifixion* and *Self-Portrait with Seven Fingers*, this man is most famous for a painting in which a woman stands upside-down playing violin while a green man is face-to-face with a goat. For ten points, identify this Russian-born artist of *I and the Village*.

ANSWER: Marc Chagall

<MS>

## HALFTIME

11. Hermann Kolbe used carbon disulfide to inorganically synthesize this substance. This compound is used as a solvent in the production of terephthalic acid, but it's mostly used to produce VAM in paints and adhesives. An iridium catalyst is used in the Cativa process of producing this substance, which replaced the less efficient Monsanto process. This compound can be formed from the carbonylation of methanol, and its anhydrous form is its (\*) "glacial" variety. For ten points, identify this second-simplest carboxylic acid with formula CH<sub>3</sub>COOH, the main component of vinegar.

ANSWER: acetic acid (or ethanoic acid or methanecarboxylic acid or CH<sub>3</sub>COOH before mentioned)

<EnC>

12. This island's Cibao Region contains the Samaná Peninsula. The Tiburon Peninsula is a part of this island, which contains Lake Enriquillo in its Cul-de-Sac Depression. The Mona Passage lies to this island's east, while the Windward Passage lies to its west. The Gulf of Gonâve lies on the western coast of this island, and its highest point is Pico Duarte. Along with (\*) Puerto Rico, Jamaica, and Cuba, this island forms the Greater Antilles, and it contains the cities of Santo Domingo and Port-au-Prince. For ten points, name this Caribbean island shared between Haiti and the Dominican Republic.

ANSWER: Hispaniola

<JD>

**13. This president endorsed the Federal Elections Bill to help blacks in the South vote, though it was filibustered by Congress. During his presidency, he oversaw the implementation of the Dependent and Disability Pension Act, and he worked with a Congress that passed the McKinley tariff and was criticized for spending a billion dollars. Under this man's administration, John Sherman's namesake Silver Purchase Act and (\*) Antitrust Act were both signed into law, but this president lost the 1892 race for his re-election to a previous president. For ten points, name this 23rd president of the United States, who served between Grover Cleveland's two terms.**

ANSWER: Benjamin Harrison (prompt on "Harrison")  
<MiP>

**14. This man wrote a fictional biography of Flora Tristan and her grandson Paul Gauguin in *The Way to Paradise*. In another of this author's works, Urania Cabral is raped by a Dominican dictator, and he told of the Counselor's fortification of Canudos in *The War of the End of the World*. Porfirio Cava steals a chemistry exam in his novel set at the Leoncio Prado (\*) Military Academy, and Pedro Camacho writes radio soap operas in another work which also includes the marriage of Varguitas to the first title character. For ten points, identify this Peruvian Nobel Laureate, author of *The Time of the Hero* and *Aunt Julia and the Scriptwriter*.**

ANSWER: Mario Vargas Llosa  
<MS>

**15. The premiere of this work omitted the title character from the final scene, which occurs after its protagonist breaks an egg. Its choreographer Michel Fokine played a character that falls in love with Vasilisa at its premiere. A descending chromatic motif in the strings represents a king in this work, while one scherzo from it depicts a dance by thirteen princesses playing a game with (\*) golden apples. Its antagonist performs the "Infernal Dance" after being bewitched by the title creature. Kashchei the Immortal is defeated by Prince Ivan with the help of the title avian in, for ten points, what ballet, whose music was composed by Igor Stravinsky?**

ANSWER: *The Firebird* (accept *L'oiseau de feu*)  
<HX>

**16. Chromium and ferric oxides are used in a flame fusion process to create one form of this mineral in a technique named after Verneuil. Rutile silk cause a notable asterism in one form of it, and Gaudin's synthetic creation of it was the first for any gemstone. An orange form of this substance is known as padparadscha, and it is comprised of (\*) aluminum oxide. This gemstone can get a red color due to chromium impurities, and its forms include emery, sapphire, and ruby. For ten points, identify this mineral which has a hardness of 9 on the Mohs scale.**

ANSWER: corundum (accept aluminum oxide or Al<sub>2</sub>O<sub>3</sub> before mention; accept ruby until "padparadscha")  
<EnC>

**17. One character in this novel wears a "shabby green coat" and is the wildflower-searching Heinrich, who was fired from his job after loving this novel's central female character. This novel's protagonist is snubbed by the aristocratic members of society when he visits his employer, Count C, on the same day they do. One character in this novel recites Ossian on his final visit to his love, and after leaving Wahlheim, its protagonist befriends (\*) Fraulein von B. This novel's protagonist ultimately shoots himself after Albert ends up with Lotte, inspiring numerous copycat suicides. For ten points, identify this epistolary novel by Johann Wolfgang von Goethe.**

ANSWER: *The Sorrows of Young Werther* (or *Die Lieden des jungen Werthers*)  
<MS>

**18. This man was nominated as the Bishop of Luçon by Henry IV. This man defeated the Duke of Buckingham's relief force at the siege of La Rochelle. This man's enemies mistakenly believed he had been ousted in the Day of the Dupes, which partially resulted from Marie d'Medici's dislike of him. This man appointed *intendants* as tax collectors to increase funding for his efforts in the (\*) Thirty Year's War, which prevented his country from being encircled by Habsburgs. After his death, this man was replaced by Mazarin, and he was known as the "Red Eminence". For 10 points, name this advisor to Louis XIII who was also a French cardinal.**

ANSWER: Cardinal Richelieu (or Armand-Jean du Plessis, duc de Richelieu)  
<BZ>

**19. This country's company ARMZ bid to take over the Canadian company Uranium One, and South Sudan refuses to return one of this country's helicopters after it was shot down. This country's Illegals Program included Vicky Pelaez and Anna Chapman, who were accused of espionage against the United States, and this country is the primary shareholder of (\*) Gazprom. Its president recently signed a bill preventing the US from adopting orphans from here, and this country's Communist Party holds the second-most seats in its Duma. For ten points, identify this country home to Dmitri Medvedev and Vladimir Putin.**

ANSWER: Russian Federation

<MS>

**20. Muhammad convinced Addas to convert to Islam by mentioning this man, whose namesake book alternates between calling a certain figure the male *dag* and female *dagah*. A worm causes a plant that this son of Amittai was sheltering under to wither, and this figure's namesake book is sometimes read on Yom Kippur. In *Matthew*, Jesus compares his resurrection after three days to an exploit of this figure, who tried to (\*) flee to Tarshish instead of preaching God's word to Nineveh. For ten points, identify this figure who, after being thrown overboard by sailors in a great storm, was swallowed by a giant fish.**

ANSWER: Jonah (accept Yunah or Yunis)

<MS>

### **End of regulation, only proceed if tied**

**21. The prefect Sextus Afranius Burrus was an early advisor to this man, who sent his general Corbulo to fight the Parthians, poisoned his stepbrother Britannicus, and built the Domus Aurea. His reign was marked by a rebellion of the Iceni, as well as an assassination plot that led to the suicide of Seneca the Younger. This ruler suppressed the Pisonian Conspiracy and (\*) Boudica's Rebellion, and he had earlier murdered his mother Agrippina the Younger, who helped him become the successor to Claudius. His overthrow by Galba began the Year of the Four Emperors. For ten points, identify this Roman emperor whose reign saw a fire that devastated Rome.**

ANSWER: Nero Claudius Caesar Augustus Germanicus

<JD>

**22. This composer dedicated to King Edward VII "the passionate pilgrimage of [his] soul", his E-flat major 2nd Symphony. This composer included "But hark! upon my sense comes a fierce hubbub" and "I go before my judge" in a choral setting of a Cardinal Newman poem. This composer of *The Dream of Gerontius* included the movements (\*) "Ysobel" and "Nimrod" in a work dedicated to his "friends pictured within," and his tune for "The Land of Hope and Glory" is often played at graduations. For ten points, name this English composer of *The Enigma Variations* and *Pomp and Circumstance*.**

ANSWER: Edward Elgar

<HG+MS>

## **BONUSES**

1. Bonus: This character invents the game of “blitzball.” For ten points each:

[10] Identify this student at Devon Prep, who dies when doctors try to fix his broken leg, an injury he had originally suffered when he was jumping out of a tree.

ANSWER: **Phineas** (or **Finny**)

[10] Phineas is the best friend of Gene Forrester in this 1959 John Knowles novel, whose other characters include Brinker Hadley.

ANSWER: A **Separate Peace**

[10] In *A Separate Peace*, Elwin Lepellier enlists in army to fight in the conflict, also the focus of *Catch-22* and *The Naked and the Dead*.

ANSWER: **World War II**

<MS>

2. Bonus: This architect’s Imperial Hotel survived the 1923 Tokyo Earthquake with little damage. For ten points each:

[10] Identify this architect, who spent much time in his studio at Taliesin and led the Prairie School. Other buildings of his include the Johnson Wax Headquarters and the New York Guggenheim.

ANSWER: Frank Lloyd **Wright**

[10] Wright is perhaps most famous for this cantilevered house built for the Kaufmanns, which straddles a waterfall on the Bear Run river.

ANSWER: **Fallingwater**

[10] Wright also designed this building in Hyde Park, which was almost destroyed by the Chicago Theological Seminary in 1941. It is usually considered one of the greatest works of the Prairie style.

ANSWER: **Robie** House

<MS>

3. Bonus: One country is believed to have lost 90 percent of its male population in this war. For ten points each:

[10] Identify this 1864-1870 war in which Paraguay was defeated by a coalition of South American countries.

ANSWER: War of the **Triple Alliance** (prompt on “Paraguayan” War)

[10] This nation, along with Argentina and Uruguay, comprised the Triple Alliance and was led during the war by the Portuguese Pedro II. Modern leaders of this country include Getúlio Vargas and Dilma Rousseff.

ANSWER: Empire of **Brazil** (or Federative Republic of **Brazil**)

[10] This man led Paraguay into the War of the Triple Alliance but was killed at the Battle of Cerro Corá, thus bringing an end to the war.

ANSWER: Francisco Solano **López**

<JD>

4. Bonus: One work titled after it claims that “Philosophy begins *in medias res*.” For ten points each:

[10] Name this philosophical school of thought which sought ataraxia, or “freedom from worry”, and argued against absolute certainty in belief. One philosopher refuted it in a work titled [this] *and Animal Faith*.

ANSWER: **skepticism**

[10] This Spanish-American philosopher discussed the title concept “in religion” and “in common sense” in *The Sense of Beauty* and wrote *Scepticism and Animal Faith* as well as *The Life of Reason*.

ANSWER: George **Santayana**

[10] Santayana famously wrote that “only the dead have seen the end of” this concept. Thomas Aquinas formulated criteria which make them just, and Kant’s *Perpetual Peace* posited that they wouldn’t happen between democracies.

ANSWER: **wars**

<HX>

5. Bonus: Answer the following about lenses, for ten points each:

[10] Lenses of this type cause light to converge, since they bend outward. They are contrasted with concave lenses.

ANSWER: **convex** lenses

[10] According to the lensmaker's equation, one over the focal length equals the sum of three terms dependent on radius of curvature times the index of refraction minus this number, usually the lowest possible value of a refractive index.

ANSWER: **one**

[10] Imperfect lenses can cause these appearances of distortion. The spherical variety causes a blurring of the image.

ANSWER: **aberrations**

<MS>

6. Bonus: This event began after Richard Heyser's U-2 plane found evidence of SS-4's construction. For ten points each:

[10] Identify this 1962 Cold War standoff that took place during the Kennedy administration, in which the USSR set up nuclear weapons on an island ruled by Fidel Castro.

ANSWER: **Cuban Missile Crisis**

[10] This Soviet leader and successor to Josef Stalin was Premier during the Cuban Missile Crisis.

ANSWER: Nikita **Khrushchev**

[10] During the Cuban Missile Crisis, this US Ambassador to the UN smacked down Valerian Zorin with his famous "until hell freezes over" remark. A decade earlier, he had lost twice as the Democratic nominee for President.

ANSWER: Adlai Ewing **Stevenson II**

<MS>

7. Bonus: The negative value of this quantity is divided by the product of Boltzmann constant and temperature in the power of  $e$  in the Arrhenius equation. For ten points each:

[10] Identify this potential barrier that must be overcome for a reaction to proceed. It is usually represented by a "hump" in a reaction diagram.

ANSWER: **activation energy**

[10] These compounds speed up a reaction by lowering the activation energy, but are not affected by the reaction themselves.

ANSWER: **catalysts**

[10] This equation relates the reaction rate to temperature and differs from the Arrhenius equation because it depends on Gibbs free energy instead of activation energy.

ANSWER: **Eyring**-Polanyi equation

<EnC>

8. Bonus: Damis is thrown out of the house due to the trickery of the title character. For ten points each:

[10] Name this play, whose title antagonist gains the trust of Orgon all while making advances on his wife Elmire.

ANSWER: **Tartuffe**, or *The Imposter*

[10] This author, who died while acting in his own play *The Imaginary Invalid*, wrote *Tartuffe*. He also penned *The Miser* and *The Misanthrope*.

ANSWER: **Moliere** (or Jean-Baptiste **Poquelin**)

[10] In this other Moliere play, Arnolphe wishes to marry his young ward Agnes, who ultimately ends up marrying Horace after discovering she is Enrique's daughter.

ANSWER: *The School for Wives* (or *L'ecole des femmes*)

<MS>

9. Bonus: Answer some questions about a popular series of books made into an HBO television series, for ten points each:

[10] This first novel in “A Song of Ice and Fire” details the reign and death of King Robert I Baratheon.

ANSWER: A **Game of Thrones**

[10] Lord Eddard Stark is stabbed non-fatally by this Lord Commander of the Kingsguard, the eldest son of Tywin and incestuous lover of Cersei.

ANSWER: **Jaime** Lannister (prompt on Lannister)

[10] Jaime Lannister is often called “Kingslayer” for his brutal murder and betrayal of this “Mad King”.

ANSWER: **Aerys** II Targaryen (prompt on Targaryen)

<CC>

10. Bonus: While creating animals with his brother, he forgot to leave good traits for humans. For ten points each:

[10] Name this son of Iapetus whose name means “afterthought”. He was warned by his wiser brother to never accept any gift from Zeus.

ANSWER: **Epimetheus**

[10] Unfortunately, Epimetheus didn’t listen and accepted this woman as a bride. As a wedding present, she received a box that later released various evils and illnesses to humanity when she opened it.

ANSWER: **Pandora**

[10] Pandora’s daughter Pyrrha married this man, who was told by his father Prometheus to build a shelter to hide in during a great flood. After they survived it, he and Pyrrha repopulated the world by throwing stones behind them.

ANSWER: **Deucalion**

<BZ>

11. Bonus: Answer some questions about protests in a certain country. For ten points each:

[10] Massive protests began in this country after the recent rape of a woman on a bus in New Delhi.

ANSWER: **India**

[10] This current Prime Minister of India repeatedly called for the protests to calm down, with little effect.

ANSWER: Manmohan **Singh**

[10] Responsibility for handling the protests falls to Sushilkumar Shinde, who holds this post in India’s government, commanding the police forces and maintaining internal security.

ANSWER: **Home Minister** (or Union **Minister of Home Affairs**)

<DA>

12. Bonus: It begins after the chlorophyll in photosystem II is excited by light energy. For ten points each:

[10] Name this light reaction pathway in which carrier proteins shuttle a certain negatively charged particle from photosystem II to photosystem I and finally to NADP+.

ANSWER: **electron transport chain** (or **ETC**)

[10] The electron transport chain is the first step in this process that produces sugars from carbon dioxide and water. Plants that contain chlorophyll engage in this process, which requires sunlight.

ANSWER: **photosynthesis**

[10] One of the carrier proteins in the electron transport chain is a complex of the b6 and f types of these proteins. In mitochondria, one of these denoted c is responsible for triggering the release of caspases that cause apoptosis.

ANSWER: **cytochromes** (accept **cytochrome c** or **cytochrome b6f**)

<BZ>



13. Bonus: Name some presidents of France, for ten points each:

[10] This first President of the Fifth Republic was this general, who had led the Free French during World War II. His Presidency saw the resolution of the Algerian Civil War through the Evian Accords.

ANSWER: Charles de Gaulle

[10] de Gaulle resigned soon after the May 1968 protests, allowing this man to succeed him. He defeated Alain Poher in an election to retain his seat, but died in office in 1974.

ANSWER: Georges Pompidou

[10] This longest-serving President of France was also the first Socialist to hold the post. The left's frequent failure at the polls made him stuck in co-habitation with Chirac and later Balladur.

ANSWER: Francois Mitterrand

<MS>

14. Bonus: Why are conductors' hearts so coveted for transplants? Because they've had so little use. For ten points each:

[10] Soviet authorities banned this Austrian from conducting because of his Nazi Party membership. He also feuded over German politics with William Furtwängler, whom he succeeded as conductor of the Berlin Philharmonic.

ANSWER: Herbert von Karajan

[10] The notoriously critical tyrant conductor Arturo Toscanini conducted the premiere of this American composer's *Adagio for Strings*. His other works include the opera *Vanessa* as well as *Knoxville: Summer of 1915*.

ANSWER: Samuel Barber

[10] In contrast with those two scary conductors, this long-time American conductor of the New York Philharmonic was much nicer. He is perhaps better known for composing *West Side Story* and *Candide*.

ANSWER: Leonard Bernstein

<HX>

15. Bonus: This character is executed at Winchester Prison after killing Alec. For ten points each:

[10] Name this title character of a certain novel, whose father John is very excited to hear he is of noble blood. She wishes to marry Angel Clare, but he won't marry her upon discovery of her rape.

ANSWER: Tess of the D'ubervilles

[10] *Tess of the D'Ubervilles* was written by this British author of *Far from the Madding Crowd*.

ANSWER: Thomas Hardy

[10] Thomas Hardy also wrote this novel which follows a stonemason's dream of becoming a scholar at Christminster. Sue Bridehead, his cousin, is his main love interest after he divorces Arabella Donn.

ANSWER: Jude the Obscure

<MiP>

16. Bonus: "Poodle" is a subclass of "Dog", which means "Dog" is a parent class of "Poodle". For ten points each:

[10] Classes are key to object-oriented programming, the most common language of which is this language, developed by Sun Microsystems. It shares a lot of syntax with C and C++ and runs on a virtual machine.

ANSWER: Java (do not accept "JavaScript")

[10] The method "Bark" in "Dog" can be called by an instance of "Poodle" because of this feature of object-oriented programming, which allows subclasses to take on methods and properties of their parent classes.

ANSWER: inheritance

[10] A "Dog" invokes "Bark" and outputs "woof", but a "Poodle" invokes "Bark" and outputs "meow". This exemplifies what feature of OOP, whereby subclasses can have different versions of a method with the same name as a method of its parent class?

ANSWER: method overriding

<HX>

17. Bonus: Cleisthenes introduced the practice of ostracism to this city. For ten points each:

[10] Identify this ancient Greek city whose statesmen included the harsh lawgiver Draco and which often fought with Sparta.

ANSWER: Athens

[10] This Athenian statesman repealed much of Draco's law code, established the Council of 400, and is credited with establishing democracy in Athens.

ANSWER: Solon

[10] This successor to Solon proclaimed himself tyrant of Athens on three separate occasions in the 6th century BCE. His sons Hippias and Hipparchus succeeded him upon his death.

ANSWER: Pisistratus

<JD>

18. Bonus: One figure in this book calls himself "the Alpha and the Omega." For ten points each:

[10] Identify this text written by John of Patmos, which details the Second Coming of Christ and is generally agreed to be the last book of the Bible.

ANSWER: Book of Revelation (or Revelation of St. John; or Apocalypse of John; do not accept "Revelations" in place of "Revelation")

[10] Revelation begins by addressing this number of churches in Asia and then details the opening of this many seals, the sounding of this many trumpets, and the rising of a beast with this many heads.

ANSWER: seven

[10] According to Revelation, Satan, the Beast, the False Prophet, and all those whose names are not written in the book of life will eventually be thrown into this entity in the Judgement of the Dead.

ANSWER: lake of fire (or lake of burning sulphur; do not accept or prompt on hell)

<JD>

19. Bonus: A narrow strip of land separates this country's Lake Assal from the Gulf of Tadjoura. For ten points each:

[10] Name this small country that lies across the Bab-el-Mandeb from Yemen.

ANSWER: Republic of Djibouti

[10] The Bab-el-Mandeb connects the Gulf of Aden to this sea, which is in turn connected to the Mediterranean Sea by the Suez Canal.

ANSWER: Red Sea

[10] This peninsula which contains Egypt's highest point, Mount Catherine, lies at the opposite end of the Red Sea from the Bab-el-Mandeb and connects Africa to Asia.

ANSWER: Sinai Peninsula

<JD>

20. Bonus: The fundamental theorem of calculus shows that this concept is the reverse of the integral. For ten points each:

[10] Identify this measure that denotes the instantaneous rate of change at a point on a function. The product rule, quotient rule, and power rule can be used to find this measure.

ANSWER: taking a derivative (accept word forms)

[10] In differential calculus, this theorem states that the derivative at some point in a closed interval must be equal to the average rate of change over the entire interval.

ANSWER: mean value theorem (do NOT accept "intermediate value theorem")

[10] In the rectangular coordinate system, this operation on a scalar field  $f$  gives the vector field whose components are the partial derivatives of  $f$ . It can be used to find the greatest rate of increase.

ANSWER: gradient (prompt on "∇" or "del")

<MiP>

21. Bonus: This novel is attributed to author Shi Nai'an. For ten points each:

[10] Identify this novel, in which Chao Gai leads a force of 108 criminals before they are recruited to fight on behalf of the Song Dynasty.

ANSWER: Water Margin (accept Shuihu Zhuan, Outlaws of the Marsh, Tales of the Marshes, All Men Are Brothers, Men of the Marshes, or The Marshes of Mount Liang)

[10] This East Asian country that produced works such as *Dream of the Red Chamber* and *Water Margin*, two of its "great classics."

ANSWER: China

[10] Zhuge Liang supports the empire of Shu in this Chinese classic. Other characters include Liu Bei, Cao Cao, and Sun Quan. It begins with the Yellow Turban rebellion and features the Battle of the Red Cliffs.

ANSWER: Romance of the Three Kingdoms (accept San Guo Yan Yi)

<EnC>

22. Bonus: It listed twelve rights of the sovereign in a section titled "Of Commonwealth". For ten points each:

[10] Name this work which describes life without a central government as a "war of all against all". Its "Of Man" section describes the fear of violent death as the greatest evil.

ANSWER: Leviathan

[10] This English philosopher and social contract theorist wrote that life in the state of nature was "nasty, brutish, and short" in *Leviathan*. He also argued that an effective government must have absolute authority.

ANSWER: Thomas Hobbes

[10] Hobbes rejected this philosophical movement originating with Aristotle and including such members as Peter Abelard, Thomas Aquinas, and William of Ockham.

ANSWER: scholasticism

<MiP+HX>