

# **LADUE INVITATIONAL SPRING TOURNAMENT 2012**

Round 11

## TOSS-UPS

**1. This man exiled his daughter Julia for her licentious behavior, and refused to allow her to be buried in the family mausoleum. This man claimed to be *divi filius*, or “son of god,” and was elected consul alongside Marcus Agrippa.**

**This man established the Praetorian Guard and ordered the death of Caesarion, and this man’s reign marks the beginning of a (\*) *pax* sometimes named for him. He wrote of his accomplishments in the *Res Gestae*, and he was part of the second triumvirate along with Lepidus and Antony. For ten points, name this general and politician, succeeded by Tiberius, the first Roman Emperor.**

ANSWER: Gaius Julius Caesar Augustus (or Octavian or Gaius Octavius Thurinus)

<CC>

**2. This author wrote a work in which Pollo Phoibe and Celstina fall in love after discussing the construction of the El Escorial, and wrote another work in which Felipe Montero dreams of eloping with Consuelo’s 109-year-old niece. In addition to *Terra Nostra* and *Aura*, this author wrote a more recognized work that describes (\*) Harriet Winslow, the General, and the title character in love triangle. In his most famous work, a corrupt politician has an affair with Laura and desires to inherit Don Gamaliel's fortune, while the title event occurs after his traveling to Hermosillo. For ten points, name this Mexican author who fictionalized the last days of Ambrose Bierce in *The Old Gringo* and wrote *The Death of Artemio Cruz*.**

ANSWER: Carlos Fuentes Macías

<KT>

**3. It’s not a sphere, but a non-intersecting graph cannot be drawn on one of these objects if and only if it has subgraphs homeomorphic to either  $K$ -sub 3 comma 3 or  $K$ -sub 5, a result known as Kuratowski’s Theorem. These entities can be defined by a point and a normal vector, and their equations can be of the form (\*)  $ax+by+cz=d$  (“ay ex plus bee why plus see zee equals dee”). The intersection of two of these forms a line if they are not parallel, and three non-collinear points determine one. Two lines are skew if they do not lie on the same one of, for ten points, what construct from mathematics, a flat two-dimensional surface?**

ANSWER: plane (accept word forms like planarity)

<MS>

**4. Paal Enger was accused of the 1994 theft of this painting housed in its home country’s National Gallery and another version of this painting was stolen from the museum named after its artist in 2004. Two shadowy figures stand together in the left background of this painting, and in the center stands a (\*) bald, sexless figure dressed all in black. The landscape in the background of this painting is the Oslofjord viewed under a blood-red sky. The center figure holds its hands up to its face with eyes and mouth wide open, letting out the title sound. For ten points, name this Expressionist painting by Norwegian artist Edvard Munch.**

ANSWER: *The* Scream (or Skrik)

<LC>

**5. For a wire suspended in a magnetic field, the magnitude of this quantity is equal to the magnitude of the current times the length times the field strength, and when a charge is in an electric field, this quantity is the product of the charge and the field strength. This quantity is generally equal to the derivative of momentum with respect to time. This quantity is proportional to (\*) displacement in a spring by Hooke’s Law and, in the case of its electromagnetism, varies inversely with distance squared. The “normal” type of this always acts perpendicularly to an inclined plane an object rests on. For ten points, what is this vector quantity from physics, which is equal to mass times acceleration and is often measured in Newtons?**

ANSWER: force

<MS>

6. Sects of this religious movement include the Niyabinghi Order and the Bobo Ashanti, and the holy city of this religion is Lalibela. Robert Rogers wrote one of this religion's texts, the *Holy Piby*, which identifies Marcus Garvey as a prophet of this religion. Members of this religion use words like "upfulness" and "overstanding" and reject (\*) "-isms." Believers of this monotheistic religion worship the deity "Jah," and ceremonies in this religion include Reasonings and Groundations, both of which require the use of ritual marijuana, or "ganja." For ten points, identify this religion which is most commonly associated with reggae music and dreadlocked Jamaicans like Bob Marley.

ANSWER: Rastafarianism (or Rastafari Movement)

<MS>

7. This element is bonded to sodium and aluminum in cryolite, and it can be found naturally in minerals such as topaz and apatite. It was first isolated in the lab by Henri Moissan, and a compound containing six atoms of this element is used during the uranium enrichment process. Neil Bartlett created the first known noble gas compound using (\*) xenon and this element. This element is found in the polymer Teflon and is also bonded to carbon and chlorine in Freon. It is an extremely strong oxidizing agent, since it has the highest electronegativity out of all the elements. For ten points, identify this lightest halogen with atomic number 9 and chemical symbol F.

ANSWER: fluorine (accept F before read)

<EnzeC>

8. Inland ones of these features are demonstrated near Marajó in Brazil and by the Okavango in Botswana. The Gilbert type of these are formed by coarse sediments, while erosion controls the shape of the wave-dominated type of these. These features come in arcuate, cusped, and bird foot varieties, and their slopes are shallower than (\*) alluvial fans. Belém lies near one of these, as do Rotterdam, Nanjing, Ho Chi Minh City, New Orleans, and Cairo. For ten points, name this geographic feature where rivers form a roughly triangular shape as they meet the sea, named after the fourth letter of the Greek alphabet.

ANSWER: Deltas (prompt on descriptions like "mouth of a river" after "Gilbert"; accept descriptions like "mouth of a river" before "Gilbert")

<JD>

9. One character in this work, David Gamut, tries to teach beavers to sing psalms. Two characters in this work are escorted to Fort William Henry from Fort Edward, and another scene shows Heyward admit his love for Alice and receive permission from a Colonel to court her. Invited to a parley by the French General Montcalm, the (\*) Munro sisters are saved by Hawkeye after they are captured by the Magua. The title characters of this work are Uncas and his father Chingachook. For ten points, name this novel about Natty Bumppo, the second work of the *Leatherstocking Tales* by James Fenimore Cooper.

ANSWER: The Last of the Mohicans

<KT>

10. Cavalry under General Stoneman were sent to destroy railroad supply lines at the start of this battle, and forces under Anderson convened at Zoan Church prior to this conflict. Despite facing an army twice his size, the winning commander at this battle divided his troops and forced the Union army led by (\*) Joseph Hooker to retreat across the Rappahannock. Lee claimed that he had "lost his right hand" after a Confederate general in this battle was killed by friendly fire. For ten points, identify this 1863 Confederate victory, known as Lee's "perfect battle," which saw the death of Thomas "Stonewall" Jackson.

ANSWER: Battle of Chancellorsville

<EnzeC>

## HALFTIME

11. This author was inspired by Mozart's *Don Giovanni* to write a work included in his *The Little Tragedies* collection, and another work sees Parasha die in a flood of the river Neva and Evgenii killed by a statue of Peter the Great. This author of *The Stone Guest* and *The (\*) Bronze Horseman* also wrote a work in which the protagonist dances with Olga at a ball. That character is not stopped by Zaretsky from dueling and killing Vladimir Lensky after he flirts with and later spurns the love of Tatiana Larina. For ten points, name this Russian author of *Eugene Onegin*.

ANSWER: Alexander Sergeyevich Pushkin

<KT>

**12. The appearance of one of this city's kings prompted three princesses to go insane and jump off a cliff. That king was the son of Gaia and Hephaestus and was named Erichthonius. Another king of this city offered amnesty to Heracles for the murder of his wife and children and agreed to help Adrastus topple the rule of Eteocles. The first king of this city was supposedly (\*) half-man and half-serpent and judged the patronship contest for this city. That king, Cecrops II, determined that the olive tree was more useful than the salt spring and therefore awarded patronship to the goddess of wisdom. For ten points, name this city that, under the rule of Theseus, was the first to institute democracy.**

ANSWER: Athens

<BZ>

**13. This man was warned of an attempted coup when Dick Armey realized he did not want Bill Paxon to take over, and this man claimed that "right-wing social engineering" was not better than left-wing socialism. Last May, he was showered with glitter by a protester in Minneapolis, and his wives have included (\*) Jackie Battley and Callista Bisek. This man took the lead in primary polls three weeks after sexual harassment allegations were made against Herman Cain, but only got 13% of the primary vote in Iowa. For ten points, name this man whose help authoring the "Contract with America" allowed him to become Speaker of the House in 1994.**

ANSWER: Newt Gingrich

<DA>

**14. Molecule movement within this structure is aided by enzymes like flippases. Integrins and sphingolipids are found within this structure, and cholesterol is a factor in determining its fluidity. Sodium-potassium pumps are embedded in this structure, which can be considered to act as a two-dimensional liquid with solid components in the (\*) fluid-mosaic model. Multiple ion channels are located in this structure, which is primarily composed of a phospholipid bilayer. For ten points, name this semi-permeable structure that surrounds and encloses cells.**

ANSWER: cell membrane (or plasma membrane)

<KT>

**15. This leader attempted to regain lost territory in the War of Attrition and supported the rebels during the North Yemen Civil War. Along with Muhammad Naguib, this figure founded the Free Officers Movement and deposed King Farouk, and he combined his country with Syria to form the short-lived United Arab Republic. This co-founder of the (\*) Non-Aligned Movement supported the construction of the Aswan High Dam and nationalized the Suez Canal, though he later lost the Six Days War. For ten points, identify this predecessor of Anwar Sadat who served as the second President of Egypt from 1956 to 1970.**

ANSWER: Gamal Abdel Nasser Hussein

<JD>

**16. One work by this man claims that a stationary state is preferable to perpetual economic growth because the latter destroys the environment and leads to a lower quality of life, while he argues that individual liberty leads to moral development in another of his works which advocates for equality of the sexes. Though not Malthus, this author of *Principles of Political Economy* and *The (\*) Subjection of Women* supported free speech in a work which also proposes that individual are free to act as long as others are not hurt according to his "harm principle." This author of *On Liberty* advocated for the "rule" form of a consequentialist idea pioneered by Jeremy Bentham which strives to achieve the greatest good for the greatest number. For ten points, name this proponent of utilitarianism.**

ANSWER: John Stuart Mill

<HX>

**17. The man was awarded the "Hope" Award during Glenn Beck's Restoring Honor Rally due to his charity work, because previously in 2005, he and his wife Deidre launched their namesake Family Foundation to raise awareness of Down Syndrome and aid poor families in his home country. At the end of the 2011 season, he ranked 37th in number of home runs in MLB history, after joining Babe Ruth and (\*) Reggie Jackson as the only players to have hit 3 home runs in a World Series Game. For ten points, name this first baseman who signed a \$254 million dollar contract with the Los Angeles Angels after obtaining his second World Series ring with the St. Louis Cardinals.**

ANSWER: Albert Pujols (accept José Alberto Pujols Alcántara)

<EnzeC>

18. The “obicular” type of this rock has concentrically layered, spheroidal structures and is mostly found in Finland. The I-type and S-type of these rocks are much more common than their M-type, which form through fractional crystallization, and Chappell and White developed a notable classification system for them. This rock is found in the upper left of the plutonic QAPF diagram, and like pegmatite, this rock can metamorphose into (\*) greisen. This coarse-grained rock is mainly composed of feldspars and quartz, and the extrusive variant of this rock is rhyolite. It is less dense than basalt, which explains why oceanic plates sink beneath continental plates at subduction zones. For ten points, name this intrusive igneous rock that is often used in countertops.

ANSWER: granite

<HX>

19. This event was triggered after Robert Belknap was attacked at Brentwood. The passage of the Statute of Labourers led to this event, during which Robert Hales and Simon of Sudbury were executed. One side in this event was assisted by Jack Straw and John Ball, and during this event, the palace of (\*) John of Gaunt was destroyed. The leader of this event was tricked into a meeting at Miles End, where he was murdered by John Cavendish and William Walworth, the mayor of London. This event was caused by a poll tax levied by Richard II. For ten points, identify this English revolt of 1381 which was led by Wat Tyler.

ANSWER: Peasants’ Revolt (accept Wat Tyler’s Rebellion before mention; accept logical equivalents of “revolt”)

<JD>

20. One character in this work tours Pemberley while residing in the Gardiner’s residence, and later, Lady Catherine attempts to dissuade that character from marrying her nephew. Charlotte Lucas marries the ostentatious Mr. Collins after he is previously rejected by the protagonist of this novel, while another character marries a disappointed Mr. (\*) Wickham. That character is a sister of the protagonist, Lydia, while another sister, Jane, finally receives a marriage proposal from Mr. Bingley. For ten points, name this novel in which Fitzwilliam Darcy finally marries Elizabeth Bennet, the most famous work of Jane Austen.

ANSWER: Pride and Prejudice

<KT>

## End of regulation, only proceed if tied

21. The composer of this work used material from his abandoned opera *The Voyevoda* for its *Grand adage* and *Valse des fiancées*, and he regretted writing it after listening to Léo Delibes’s ballet, *Sylvia*. The title location of this work was formed by the tears of the female lead’s parents after she was abducted, and is visited by the protagonist on a hunting trip with his best friend, Benno. That character, Prince (\*) Siegfried, is later tricked by the bird-sorcerer Von Rothbart into mistakenly swearing his love for his daughter Odile. For ten points, name this ballet composed by Pyotr Ilyich Tchaikovsky, in which Odette is turned into the title white bird.

ANSWER: Swan Lake

<HX>

22. This man found that tetratomic oxygen is formed in solutions of oxygen in liquid nitrogen, and collaborated with Merle Randall in a work titled “*Thermodynamics and the Free Energy of Chemical Substances*.” His photochemical experiments led him to coin the term “photons,” and he was the first person to produce a pure sample of (\*) deuterium oxide. In 1916, this man wrote a paper titled “*The Atom and the Molecule*,” in which he presented his theories about free radicals and the covalent bond. For ten points, name this American chemist who described compounds accepting or donating electron pairs in his namesake acid-base theory and created his namesake dot structures.

ANSWER: Gilbert Newton Lewis

<EnC>

## BONUSES

1. Bonus: Though Fred Hoyle gave it its name, this idea was first proposed by Georges Lemaitre. For ten points each:  
[10] Identify this theory explaining the origin of the universe, which posits that it was created by the rapid expansion of a very hot, dense point.

ANSWER: **Big Bang** theory

[10] One very strong piece of evidence for the Big Bang is the existence of this persistent radiation, discovered by Robert Wilson and Arno Penzias.

ANSWER: **Cosmic Microwave Background** Radiation (or **CMBR**)

[10] Another key piece of evidence for the Big Bang was this man's discovery that the universe was expanding. His namesake constant is about 70 kilometers per second.

ANSWER: Edwin **Hubble**

<MS>

2. Bonus: The title character "passed the school, where children Strove." For ten points each:

[10] Identify this poem, in which the title character "kindly stopped for me" in a carriage that "held but Ourselves / and Immortality."

ANSWER: **"Because I could not stop for Death"**

[10] "Because I could not stop for Death" is the most famous poem by this author, who also wrote "I taste a liquor never brewed" and "I heard a fly buzz when I died."

ANSWER: Emily Elizabeth **Dickinson**

[10] This Dickinson poem asks the title question before claiming "Then there's a pair of us! Don't Tell!" and noting "How dreary to be somebody!"

ANSWER: **"I'm Nobody! Who are You?"**

<MS>

3. Bonus: This man's empire fell a mere four years after his death due to the incompetent rule of his son. For ten points each:

[10] Identify this 3rd century BC unifier and ruler of China who practiced Legalism and was buried with an army of terracotta soldiers.

ANSWER: Qin **Shi Huangdi** (or **Ying Zheng**)

[10] Shi Huangdi's generals constructed this series of fortifications in northern China which were meant to keep out barbarians. Later dynasties extended this structure to its present-day 5500-mile length.

ANSWER: **Great Wall** of China

[10] One of the threats that the Great Wall meant to keep out was this nomadic confederacy based in modern-day Mongolia. They rose under the leadership of Maodun but disappeared by the 5th century AD.

ANSWER: **Xiongnu**

<JD>

4. Bonus: Its fourth movement uses pizzicato to depict a severed head, while col legno strings represent dancing skeletons in its final movement. For ten points each:

[10] Name this five part work that depicts "An Episode in the Day of an Artist," which features sections titled "March to the Scaffold" and "Dream of a Witches' Sabbath."

ANSWER: **Symphonie Fantastique**: *An Episode in the Life of an Artist, in Five Parts* (prompt on **Op. 14**)

[10] This French composer of *Symphonie Fantastique* included the "Rakoczi March" in his *The Damnation of Faust*.

ANSWER: Hector **Berlioz**

[10] Berlioz was commissioned by Niccolò Paganini to compose this work, titled after a Lord Byron poem. Its extensive viola solo represents the title character.

ANSWER: **Harold in Italy** (accept **Harold en Italie**)

<HX>

5. Bonus: The title character of this game is given the Poltergust 3000 and the Game Boy Horror. For ten points each:

[10] Identify this GameCube game, in which the player must battle a number of ghosts and a giant Bowser while working his way through a large haunted house.

ANSWER: Luigi's Mansion (or Ruiji Manshon)

[10] Midway through the game, Luigi learns that the mansion was a fabrication of King Boo designed to trap him and this red-hatted brother of his.

ANSWER: Mario

[10] At the beginning of the game, this little old man rescues Luigi and gives him the Poltergust 3000. He owns a machine which can turn captured ghosts into portraits.

ANSWER: Professor Elvin Gadd (or Dr. E. Gadd)

<MS>

6. Bonus: This law can be used to derive Coulomb's Law by considering a spherical surface. For ten points each:

[10] Identify this law from physics which states that the flux through a surface is proportional to the enclosed charge.

ANSWER: Gauss's Law (do not accept Gauss's Law of Magnetism)

[10] Gauss's Law is one of these four laws of electromagnetism. Their namesake added a displacement current correction to Ampere's Law.

ANSWER: Maxwell's equations (accept basically anything with Maxwell in it)

[10] Another flux-related law is this one, which states that the direction of an induced current is such that it produces a magnetic field which opposes a change in flux.

ANSWER: Lenz's Law

<MS>

7. Bonus: This figure engaged in a series of political debates with Stephen Douglas in 1858. For ten points each:

[10] Identify this tall politician who gave the Emancipation Proclamation and the Gettysburg Address and led the Union through the Civil War, the 16th president of the United States.

ANSWER: Abraham Lincoln (or Abe Lincoln)

[10] Lincoln gave this 1858 speech upon accepting the Illinois nomination for senator. In this speech, Lincoln claimed that the Union "cannot endure... half slave and half free" and that the title structure "cannot stand."

ANSWER: Lincoln's "House Divided" speech (or "A house divided against itself cannot stand;" prompt on partial answer)

[10] In 1864, two Radical Republicans who were unhappy with Lincoln's Ten Percent Plan proposed this bill, which required a majority of a state's population to take the Ironclad Oath in order to be readmitted into the Union.

ANSWER: Wade-Davis Bill (or Davis-Wade Bill)

<JD>

8. Bonus: Identify some deserts, for ten points each:

[10] This driest desert in the world lies in northern Chile and contains many rich deposits of copper.

ANSWER: Atacama Desert

[10] This oil-rich desert covers up most of the southern Arabian Peninsula. Its name comes from the fact that very few people live there.

ANSWER: Empty Quarter (or Rub' al Khali)

[10] This desert contains the Tibesti and Ahaggar Mountains, as well as the Qattara Depression and Lake Chad. It is located in northern Africa and is the largest desert in the world.

ANSWER: Sahara Desert

<JD>

9. Bonus: It describes the opening of seven seals. For ten points each:

[10] Name this text that features the Four Horsemen of the Apocalypse, explains Jesus' second coming, and affirms the end of the world with a conflict between Satan and God.

ANSWER: The Book of **Revelation** (or Book of the **Revelation** of Saint John the Divine; or **Apocalypse of John**; or Book of the **Revelation** of Jesus Christ; do not accept "Revelations")

[10] The Book of Revelation is attributed to this figure, who wrote the text on the Greek island of Patmos.

ANSWER: **John** of Patmos

[10] In the Book of Revelation, this figure, the "Mother of Prostitutes and Abominations of the Earth," is prophesied to fall at the hands of the beast with seven heads and ten horns.

ANSWER: **Whore of Babylon** (accept equivalents of "Whore" such as "Harlot;" prompt on "Babylon the Great")

<KT>

10. Bonus: The title character gives birth to a child named "Sorrow" after being raped. For ten points each:

[10] Identify this novel in which the title character loves Angel Clare but is executed after slaying Alec.

ANSWER: **Tess of the D'Urbervilles**

[10] This author of *Jude the Obscure* and *The Mayor of Casterbridge* wrote *Tess of the D'Urbervilles*. He also wrote *The Return of the Native*, and his poems include "Channel Firing" and "The Convergence of the Twain."

ANSWER: Thomas **Hardy**

[10] Hardy also wrote this novel, in which Gabriel Oak finally ends up with Bathsheba Everdene, despite her brief affairs with Farmer Boldwood and Sergeant Troy. Its title comes from a line in a Thomas Gray poem.

ANSWER: **Far From the Madding Crowd**

<MS>

11. Bonus: This bank just made the largest settlement over fair lending practices in history at \$335 million. For ten points each:

[10] Name this bank that is the second largest in the US by assets and calls itself the "Bank of Opportunity." WikiLeaks claimed to have a cache of secrets about it, which were never released.

ANSWER: **Bank of America** (or **B of A**)

[10] Bank of America took on the mortgages and the possibility of a lawsuit when they acquired this company back in 2008 when it was the largest sub-prime lender.

ANSWER: **Countrywide** Financial Corporation

[10] Bank of America also acquired this corporation in 2008, and it now exists as Bank of America's wealth management division. Before the takeover, this company authorized 3.6 billion dollars in bonuses.

ANSWER: **Merrill Lynch**

<DA>

12. Bonus: Faint outlines of ships can be seen in the distance in this work. For ten points each:

[10] Name this painting in which the title event illuminates the sky above Le Havre, giving the upper portion of the painting an orange tint. It gave its name to the movement of which its artist was a part.

ANSWER: **Impression, Sunrise** (accept **Impression, soleil levant**)

[10] This artist of *Impression, Sunrise* also painted the Rouen Cathedral and many water lilies.

ANSWER: Claude Oscar **Monet**

[10] This twenty-five part series by Monet depicts the title objects in different weather conditions over the course of a year.

ANSWER: **Haystacks**

<KT>



13. Bonus: They occur between DNA base pairs and are responsible for the three-dimensional structure of proteins. For ten points each:

[10] Identify these intermolecular forces of attraction that give water its high surface tension and explains why solid ice is less dense than liquid water.

ANSWER: hydrogen bonds

[10] Hydrogen bonds give rise to this property, where similar molecules stick together through electrostatic attraction.

ANSWER: cohesion (accept cohesive force and equivalents)

[10] This metal exhibits strong cohesive forces, which allows its liquid form to roll around in glass and gives it its nickname of “quicksilver.”

ANSWER: mercury (accept Hg)

<EnzeC>

14. Bonus: This group engaged in the Round Table Talks with the government of Wojciech Jaruzelski (Vwoy-check Ya-ru-zel-ski). For ten points each:

[10] Identify this Polish trade union federation which was formed in 1980 in the Lenin Shipyards of Gdansk by a disgruntled electrician.

ANSWER: Independent Self-governing Trade Union "Solidarity" (accept Niezależny Samorządny Związek Zawodowy "Solidarność")

[10] This aforementioned electrician replaced the Jaruzelski regime and served as the first president of post-communist Poland.

ANSWER: Lech Walesa

[10] During the Cold War, Poland was a part of this mutual defense treaty signed between the various Communist countries of eastern Europe. It shares its name with Poland's capital.

ANSWER: Warsaw Pact (or Warsaw Treaty Organization of Friendship, Cooperation, and Mutual Assistance)

<JD>

15. Bonus: He develops an infection after an apple thrown by his father becomes lodged in his back. For ten points each:

[10] Name this character, the brother of Grete, whose life as a traveling salesman is disrupted by the title event of the story in which he appears.

ANSWER: Gregor Samsa (accept either)

[10] Gregor Samsa is the protagonist of this German novella, which sees him frighten off his family's guests after turning into a cockroach.

ANSWER: *The* Metamorphosis (or *Die* Verwandlung)

[10] *The Metamorphosis* was written by this author *The Castle* and the unfinished *Amerika*. He also wrote about Joseph K.'s execution in *The Trial*.

ANSWER: Franz Kafka

<KT>

16. Bonus: Its sections include “Of the Origin and Use of Money,” “Of Systems of Political Economy,” and “Of the Division of Labour.” For ten points each:

[10] Identify this 18th century treatise which uses the example of a pin factory to advocate laissez-faire economics.

ANSWER: *An Inquiry into the Nature and Causes of the* Wealth of Nations

[10] *The Wealth of Nations* was written by this Scottish economist whose other works include *Lectures on Jurisprudence* and *The Theory of Moral Sentiments*.

ANSWER: Adam Smith

[10] This two-word term coined by Adam Smith in *The Wealth of Nations* describes the self-regulating nature of laissez-faire economics.

ANSWER: invisible hand

<JD>

17. Bonus: This figure is commonly depicted as a green mummy wearing the Atef crown. For ten points each:

[10] Name this Egyptian god of the underworld who was tricked into entering a coffin by his brother and was subsequently ripped into fourteen parts, thirteen of which were recovered by his wife.

ANSWER: Osiris

[10] This wife of Osiris recovered and reincarnated her murdered husband. She sought the help of Thoth to learn the skills required for his reincarnation and later became an important goddess of magic.

ANSWER: Isis [accept Aset]

[10] Hearts that were heavier than Ma'at's feather were eaten by this monster, who had the head of a crocodile, body of a lion, and end of a hippopotamus. She was sometimes depicted nearby a lake of fire.

ANSWER: Ammit [accept Ahemait]

<BZ>

18. Bonus: The "nearest neighbor" method, a greedy algorithm, finds a near-optimal solution quickly. For ten points each:

[10] Identify this mathematical problem, in which the namesake vendor tries to find the shortest path through a number of cities.

ANSWER: travelling salesman problem (or finding a Hamiltonian cycle of least weight, prompt on partial answers)

[10] The travelling salesman problem can only be solved in polynomial time if this relation between complexity classes is answered in the affirmative. It is one of the Millennium Prize problems.

ANSWER: P vs. NP (or P equals NP, or really anything mentioning both P and NP)

[10] If P is not NP, then this adjective describes the worst-case runtime of a traveling salesman algorithm. Functions of this type consist of a constant raised to the power of  $x$ .

ANSWER: exponential

<MS>

19. Bonus: This man's Popular Unity party faced opposition from the Fatherland and Liberty party, who were supported by the Nixon administration. For ten points each:

[10] Identify this former South American president who died in La Moneda Palace after being overthrown in a coup in August of 1973.

ANSWER: Salvador Allende Gossens

[10] This man led the coup that overthrew Allende and with CIA backing he served as dictator of his country until 1990. He continued to be Commander-in-Chief of his country's army until he was arrested in 1998.

ANSWER: Augusto José Ramón Pinochet Ugarte

[10] Salvador Allende and Augusto Pinochet both served as presidents of this narrow South American country with capital at Santiago.

ANSWER: Republic of Chile

<JD>

20. Bonus: Some of his greatest adventures were chronicled in the Hound of the Baskervilles and the Sign of the Four. For ten points each:

[10] Name this famous detective, the namesake of a series of novels and short stories by Arthur Conan Doyle.

ANSWER: Sherlock Holmes (accept either)

[10] In this Sherlock Holmes tale, the king of the namesake country visits Sherlock Holmes in a mask in order to ask him to retrieve a photo of Irene Adler.

ANSWER: *The Scandal in Bohemia*

[10] Holmes' greatest enemy is this London crimelord, whom Holmes kills by throwing him down Reichenbach Falls in the story, "The Final Problem."

ANSWER: Professor James Moriarty

<MukS>

21. Bonus: The Meselson-Stahl experiment showed it to be semi-conservative. For ten points each:

[10] Name this process by which a copy of a DNA molecules is produced. It occurs in the S phase of interphase in the cell cycle.

ANSWER: DNA **replication**

[10] This scientific technique artificially replicates DNA using its namesake enzyme. It includes steps such as annealing and denaturation.

ANSWER: **P**olymerase **C**hain **R**eaction

[10] PCR uses this type of heat-resistant polymerase that is extracted from the bacterium *Thermus aquaticus*.

ANSWER: **Taq** (pronounced “tack”) polymerase (or **Taq pol**ymerase)

<KT>

22. Bonus: Doc, a Texan veterinarian, marries the main character as a teenager. For ten points each:

[10] Name this work in which the unnamed narrator tells the story of the New York protagonist Holly Golightly, who associates with a variety of men, like Sally and O.J. Berman.

ANSWER: **Breakfast at Tiffany's**

[10] This author of *Breakfast at Tiffany's* created a “non-fiction novel” in which Perry Smith and Dick Hickock are executed, *In Cold Blood*.

ANSWER: Truman **Capote** (Accept Truman Streckfus **Persons**)

[10] Capote's *In Cold Blood* is set in this American state. Playwright William Inge was a native of this state, and set his *Bus Stop* twenty miles west of its border with Missouri.

ANSWER: **Kansas**

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