

# **LADUE INVITATIONAL SPRING TOURNAMENT 2012**

Round 16

## TOSS-UPS

**1. In one of this author's works, a black worker named Jacobus tells Mehring of a dead black man on his farm. In another work, one character exclaims "I'm not your Bassie" after being frustrated that Lionel's daughter Rosa does not know his real name. The most famous work by this author of *The (\*) Conservationist* sees the title character and Daniel ride a bakkie and a character kill two warthogs. In that work of hers, Maureen and Bam Smales grant freedom to the title character after a Black Revolution. For ten points, name this South African author of *Burger's Daughter* and *July's People*.**

ANSWER: Nadine Gordimer

<KT>

**2. This statement was used by Newton and Laplace to derive the speed of sound, and a McLeod gauge applies this law, although it was first discovered using a manometer designed by Robert Hooke. Daniel Bernoulli used Newton's laws of motion to derive this statement, which he explained using his kinetic theory of gases. Also named for (\*) Mariotte, this law explains why ears pop at high altitudes, and is featured in the combined gas law with Charles's law and Gay-Lussac's law. For ten points, identify this gas law that states for constant temperature, pressure and volume are inversely related.**

ANSWER: Boyle-Mariotte law (prompt on ideal gas law)

<EnzeC>

**3. After he lost a gubernatorial election to Pat Brown, this man told reporters they wouldn't have him to "kick around anymore." His presidency saw the establishment of the Environmental Protection Agency, and he was elevated to national prominence by his role in the Alger Hiss case. His Secretary of State (\*) Henry Kissinger initiated Détente (day-TAHNT) and he signed the Anti-Ballistic Missile and first SALT treaties with the Soviet Union. His visit to the People's Republic of China opened diplomatic relations between it and the United States. For ten points, name this 37th President of the United States who resigned in the wake of the Watergate Scandal.**

ANSWER: Richard Nixon

<LC>

**4. The blood of this deity created a plant that could be turned into an ointment that gave its wearer invincibility. This son of Iapetus prophesized that Io would become an ancestor of Hercules, and instructed his son Deucalion to hide in a chest in order to survive a flood. This Titan warned Zeus that Thetis would produce a son greater than his father, and a dying (\*) Chiron offered to take his place after Hercules freed him from his bonds. This figure is said to have been left with only clay to use for his creations after his brother used all the good traits for his own. For ten points, name this Titan, the brother of Epimetheus whom Zeus bound to a rock for giving humanity fire.**

ANSWER: Prometheus

<BZ>

**5. In one of this man's paintings, rebel angels are thrown out and Eve is chased out into the dark forest, and Jesus emerges from a bright cloud. In addition to his *The Last Judgement*, he painted a work in which a nun attempts to balance a red book on her head on the right, and a man in pink pokes at another figure's skull, *The (\*) Cure of Folly*. In this man's most famous work, an abnormally large strawberry is visible, and people are crucified on musical instruments on the right, while Adam and Even appear in the Garden of Eden on the left. For ten points, name this artist who painted the triptych *The Garden of Earthly Delights*.**

ANSWER: Hieronymous Bosch

<KT>

**6. Conan O'Brien used to utilize a lever that displayed video clips of this man when pulled, and in one TV show, he marries Alex Cahill and works with Jimmy Trivette. One commercial claims that this man is a hunter, but he does not hunt, because hunting implies the possibility of failure, and that there are ten million players in the World of Warcraft because he (\*) allows them to live. When you and this man both have five dollars, he has more money than you, and he has counted to infinity twice and can divide by zero. For ten points, name this man to whom impossible feats are ascribed in an internet meme, the roundhouse-kick-delivering former star of *Walker, Texas Ranger*.**

ANSWER: Carlos Ray "Chuck" Norris (prompt on Walker, Texas Ranger)

<MS>

7. This process follows the Langevin equation, which can be evaluated using the Fokker-Planck equation. A thought experiment proposed by Marian Smoluchowski could extract energy from this process, but Richard Feynman shot down that idea by noting that this process would also apply to the pawl. This process roughly approaches the (\*) Wiener process, like random walks, and Einstein's model of this process can be used to derive Avogadro's number. The namesake of a hypothetical ratchet is, for ten points, what phenomenon in which particles in a fluid move randomly, named after the Scottish biologist who first observed it with grains of pollen suspended in water?

ANSWER: Brownian Motion

<MS>

8. This author dispels the "vain deluding joys" before describing the "pleasures Melancholy give", which the author "choose[s] to live" with in one work. In another work, the title character admits to God that he does not own his power, and lost it with a wanting for Dalila. This author demands "the liberty ... to argue freely according to conscience" in a work that argues against (\*) censorship. This author of *Il Penseroso*, *Samson Agonistes*, and *Areopagitica* is most famous for a work in which Mulciber is directed to build the Pandemonium, and the main character states, "Better to reign in Hell than to serve in Heaven." For ten points, name this blind British author of *Paradise Lost*.

ANSWER: John Milton

<KT>

9. The kernel of a linear transformation  $T$  is the set of all vectors  $v$  such that  $T$  sends  $v$  to this value. This many odd perfect numbers have currently been discovered, and it is the value of the determinant of a singular matrix. This is the probability of two mutually exclusive events occurring. This number is its own (\*) additive inverse, but it has no multiplicative inverse, because it is impossible to divide by this number. This number is contained in the set of whole numbers but not in the set of natural numbers. For ten points, what is this neither positive nor negative number which is equal to four minus four?

ANSWER: zero (or additive identity before mention)

<MS>

10. This ruler introduced the daric coin, and he rose to power with help from Gobrayes and Intaphernes. His murder of Gaumata was recorded in the Behistun Inscription, and this victor against the Scythians claimed the throne after the death of Cambyses II. He divided his empire into twenty strictly defined (\*) satraps, and he suppressed the Ionian Revolt in 499 B.C.E. He began construction projects at his capitals of Susa and Persepolis. Miltiades defeated this man's general, Datis, during the first Persian Invasion in Greece. For ten points, name this father of Xerxes I, who led the Persian Empire at its peak.

ANSWER: Darius the Great (or Darius I)

<KT>

## HALFTIME

11. In one work by this author, Northeastern America faces extinction due to an advancing wall of ice, while in another work, a Franciscan monk witnesses the collapse of the title structure created by the Incans. This author who wrote about the Antrobus family in *The* (\*) *Skin of Our Teeth* is perhaps most famous for writing a play which is narrated by the Stage Manager and takes place in Grover's Corners. For ten points, name this American author who wrote about Brother Juniper in *The Bridge of San Luis Ray* and about George Gibbs and Emily Webb in *Our Town*.

ANSWER: Thornton Niven Wilder

<KT>

12. Some people involved in this event met in the lobby of Deutsche Bank, and the Adbusters started this event with a hashtag urging people to get involved before having enough people to do the human microphone. They have been endorsed by Julian Assange and Ben & Jerry's, and the group Anonymous told their readers to join this group and set up kitchens and peaceful (\*) barricades. Anthony Bologna pepper sprayed some of their peaceful protesters back in October, and on November 15th they were forcibly evicted from their encampment in Zuccotti Park in New York City. For ten points, name this activist group that claims "we are the 99%."

ANSWER: Occupy Wall Street (or Occupy Movement or OWS)

<DA>

**13. During this battle, Charles Mangin made a failed attempt to reoccupy Fort Vaux and Fort Douaumont. The *Voie Sacrée*, or Sacred Way, served as a supply line for one side during the battle, and the other side in this battle was led by Erich von Falkenhayn. During this battle, Robert Nivelle proclaimed that “they shall not pass.” The leader of the victorious side in this battle became a national hero and went on to head (\*) Vichy France. For ten points, identify this bloody World War I battle which resulted in the promotion of Philippe Pétain and was fought from February to December 1916 in northeastern France.**

ANSWER: Battle of Verdun

<JD>

**14. This man described world-flying mysticism as one of the three ideal types of religious activity in *Economy and Society*, and included wealth, prestige, and power in his three-component theory of stratification. This thinker claimed that political authority could be legitimized by law, tradition, or charisma and also defined the “state” as a (\*) “monopoly on the legitimate use of physical force.” This author of *Politics as a Vocation* described the “iron cage of rationality” and criticized the excessive power of the bureaucracy in the social order. He also argued that Calvinism influenced the development of market economies. For ten points, name this German sociologist who wrote *The Protestant Ethic and The Spirit of Capitalism*?**

ANSWER: Maximilian Carl Emil Weber

<HX>

**15. The Morrison formation is composed of sedimentary rock from this period, which is named for a mountain range on the Swiss-French border. The Nevadan Orogeny occurred during this period, and coralline algae first appeared during this time. The Tethys Sea was formed during this period when Pangaea (\*) divided into Laurasia and Gondwana, and its Tithonian stage preceded the Cretaceous period. This period saw the evolution of flying birds, like the archeopteryx [ar - kee - OP - ter - iks], as well as sauropods such as the apatosaurus and the brachiosaurus. For ten points, identify this period of the Mesozoic era following the Triassic which is known for the proliferation of dinosaurs.**

ANSWER: Jurassic period

<HX>

**16. Protrusions of this substance in the spine are called Schmorl’s nodes, and Tietze syndrome occurs when this is inflamed. Its fibro type can be found in symphyses, while the pinna is composed of its elastic type. The hyaline type of this substance is covered by the perichondrium. (\*) Intervertebral discs are made of this substance, which heals slowly due to its lack of blood vessels. Chondrocytes are cells found in this substance, and during endochondral ossification, it is replaced with bone. Patients with osteoarthritis have a loss of this substance, which normally helps lubricate joints. For ten points, name this connective tissue which makes up the human nose and ear.**

ANSWER: cartilage

<HX>

**17. This country’s Mount Rāpehu serves as the source of the Waikato River, which drains into Lake Taupo. This country is home to the Fox and Franz Josef Glaciers, and it controls the Chatham Islands, Tokelau, and Stewart Island. This country’s Antipodes Islands are notable for lying near the opposite side of the earth from London, and its (\*) Canterbury Plains are located south of Christchurch. This country’s highest point, Aoraki, lies in its Southern Alps, and it borders the Tasman Sea to the northwest. Its two parts are separated by the Cook Strait and are known as North and South Island. For ten points, name this Pacific Island country with largest city at Auckland and a capital of Wellington.**

ANSWER: New Zealand

<JD>

**18. This composer’s one-act opera, *Blue Monday*, was renamed *135th Street*, and he included part of his “Novelette in Fourths” in his *Short Story* for violin and piano. Another of his works, which includes parts for maracas, gourd, and bongo, was originally titled *Rumba* and was inspired by a trip to Havana. This composer used (\*) taxi horns in his orchestration of a ballet portraying the French capital in the 1920s, and was also inspired by a train journey to Boston to compose the penultimate piece of a concert titled “An Experiment in Modern Music.” That work by this composer of *Cuban Overture* and *An American in Paris* begins with a famous clarinet trill and glissando. For ten points, name this American composer of *Rhapsody in Blue*.**

ANSWER: George Gershwin

<HX>

**19. One empire in this country was preceded by the Chenla Kingdom, and was later succeeded by Longvek after it was conquered by Thailand's Ayutthaya. Jayavarman and Suryavarman were ancient rulers of this country, which was occupied by UNTAC peacekeepers in the early 1990's. This country's ruler Norodom Sihanouk was overthrown in a 1970 coup by Brother Number 2, (\*) Lon Nol. This country, which was invaded by ARVN and US forces during the Vietnam War, is home to Angkor Wat and was once ruled by an organization led by Pol Pot. For ten points, identify this Southeast Asian country once home to the Khmer Rouge, with capital at Phnom Penh.**

ANSWER: Kingdom of Cambodia (accept Kampuchea)

<JD>

**20. This author wrote a work in which Valere Marneffe works with the title character to torment Adeline's husband Baron Hector Hulot, and also another work in which Felix refuses to repair his worn-down house and des Grassins desires his son Adolphe to marry the title character. In addition to *Cousin Bette* and (\*) *Eugenie Grandet*, this author wrote a story in which Raphael Volentin owns the title object which shrinks whenever it grants him a wish. He also authored a story in which Eugene de Rastignac becomes friends with the title character. For ten points, name this French author who included *The Wild Ass's Skin* and *Pere Goriot* in his collection, *The Human Comedy*.**

ANSWER: Honoré de Balzac

<KT>

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

**21. In this religion, the last step a devotee needs to perform to reach a union with God is known as Sach Khand. Practitioners of this religion engage in meditation called *simran*. One of the leaders of this religion emphasized that metal bracelets and curved swords are two of the five key requisites for an ideal devotee. Gobind created the five (\*) "K"s for the Khalsa branch of this religion. Devotees often travel to the Golden Temple in Amritsar to pay their respects. For ten points, name this Indian religion, practiced mainly by Punjabis and founded by Guru Nanak.**

ANSWER: Sikhism

<MukS>

**22. This ruler celebrated 14 sed festivals during his lengthy reign, and inscriptions at Gerf Hussein commemorate his conquest of Nubia. He defeated the Sherden pirates and built his capital on the remains of the city of Avaris. This husband of Nefertari and successor to Seti I signed the known first peace treaty in history. This ruler's many sons were buried at KV5, and this ruler built memorials to himself at (\*) Karnak and Abu Simbel to commemorate his victory at the largest chariot battle ever fought. For ten points, name this New Kingdom Egyptian pharaoh, who was sometimes known as Ozymandias and who fought the Hittites at the Battle of Kadesh.**

ANSWER: Ramesses II (accept Ramesses the Great or Ozymandias before mention; prompt on "Ramesses")

<MukS>

## BONUSES

1. Bonus: The grandmother in this story would like to go to Tennessee, but the family goes to Florida instead. For ten points each:

[10] Identify this short story in which Bailey crashes a car, allowing the Misfit to kill him and his family.

ANSWER: “A Good Man is Hard to Find”

[10] This Southern Gothic author wrote “The Life You Save May Be Your Own” and *The Violent Bear it Away* in addition to “A Good Man is Hard to Find.”

ANSWER: Mary Flannery O’Connor

[10] This first O’Connor novel tells the story of Hazel Motes and his friend Enoch Emery, the proponent of the title concept.

ANSWER: Wise Blood

<MS>

2. Bonus: The founder of this empire was guided by Kautilya, who wrote a treatise on government titled *Arthashastra*. For ten points each:

[10] Name this empire with capital at Pataliputra, which was founded by Chandragupta after he overthrew the Nanda dynasty in 322 BCE.

ANSWER: Mauryan Empire

[10] Chandragupta defeated an invasion led by this man, after which this man ceded a portion of his territory in exchange for 500 war elephants. This member of the Diadochi also founded a namesake empire in Mesopotamia.

ANSWER: Seleucus I Nicator (prompt on “Seleucus”)

[10] This ruler of the Mauryan Empire carved his edicts onto 33 pillars and dispersed them throughout his empire. He also converted to Buddhism after realizing the brutality of his conquest of Kalinga.

ANSWER: Ashoka Maurya (or Asoka)

<JD>

3. Bonus: They are often called mercaptans since they bond strongly with mercury compounds. For ten points each:

[10] Identify these compounds present in grapefruit, garlic and skunk spray that give them their distinctive odor.

ANSWER: thiols

[10] Thiols are similar to alcohols except the oxygen in the hydroxyl group has been replaced by this element, which at room temperature is a crystalline solid. It is notoriously odorous.

ANSWER: sulfur (accept S)

[10] This property applies to elements like sulfur, which results in the same element existing in different spatial structures. Buckyballs are these of carbon, as are carbon nanotubes.

ANSWER: allotropy (accept word forms like allotropes; prompt on “polymorphism”)

<EnzeC>

4. Bonus: This artist painted the title figure standing on a balcony, then falling through the clouds, and finally lying dead on the sidewalk in her work *The Suicide of Dorothy Hale*. For ten points each:

[10] Identify this female Mexican artist who created many unusual self-portraits depicting her unibrow, such as *Self-Portrait with Small Monkey* and *Self-Portrait with Thorn Necklace and Hummingbird*.

ANSWER: Frida Kahlo de Rivera (or Magdalena Carmen Frieda Kahlo y Calderón)

[10] This Mexican muralist and husband of Frida Kahlo depicted a man in white with a large basket strapped to his back in *The Flower Carrier*, and also painted workers at the River Rouge plant in his work *Detroit Industry*.

ANSWER: Diego María de la Concepción Juan Nepomuceno Estanislao de la Rivera y Barrientos Acosta y Rodríguez

[10] This most famous mural by Diego Rivera was forcibly removed from its place in the Rockefeller Center because of its controversial depiction of Vladimir Lenin.

ANSWER: Man at the Crossroads

<JD>

5. Bonus: Identify some Judeo-Christian prophets, for ten points each:

[10] This prophet became leader of the Israelites after the death of Moses. He was one of the twelve spies who were sent to explore Canaan and he led the destruction of Jericho.

ANSWER: Joshua (or Yehoshu'a; or Hoshe'a)

[10] Fire fell from the sky and consumed this prophet's offerings on Mount Carmel, which disproved the existence of the false god Asherah and invoked the wrath of Ahab and Jezebel.

ANSWER: Elijah (or Elias; or Eliyahu; do not accept "Elisha")

[10] This prophetess and only female Judge defeated Sisera and gave advice from under a palm tree.

ANSWER: Deborah (or Dvorah)

<JD>

6. Bonus: This statement is false. For ten points each:

[10] Name these seemingly logical statements that lead to contradictions. Olbers' one asks why the night sky is not infinitely bright if the universe is infinitely large, and Zeno of Elea also formulated three of them.

ANSWER: paradoxes

[10] This philosopher's namesake paradox asks whether a set containing all sets that are not members of themselves contains itself. He also collaborated with Alfred Whitehead on *Principia Mathematica*.

ANSWER: Bertrand Russell

[10] Russell used the analogy of this object orbiting the Sun between Mars and Jupiter to argue that the burden of proof lies with a person who makes a scientifically unfalsifiable claim.

ANSWER: Russell's teapot

<HX>

7. Bonus: There are so many tiny countries in the world that it's hard to keep track of all of them. Name some, for ten points each:

[10] This smallest country in the world is located completely inside the city of Rome. It was established by the Lateran Treaty of 1929 and it is home to the papacy.

ANSWER: Vatican City (or Holy See)

[10] This most densely-populated country in the world is surrounded on three sides by France. This country boasts the world's highest per capita GDP, the world's highest life expectancy, and 0% unemployment.

ANSWER: Principality of Monaco

[10] This doubly-landlocked country with capital at Vaduz is the world's largest producer of false teeth. It is squeezed in between Switzerland and Austria.

ANSWER: Principality of Liechtenstein

<JD>

8. Bonus: Thomas Nast depicted this event in a cartoon featuring Uncle Sam looking at some wooden barrels while a statement from Benjamin Bristow hovers above. For ten points each:

[10] Name this scandal that began in St. Louis, Missouri and was headed by John McDonald, in which distillers defrauded the government of tax-revenues.

ANSWER: Whiskey Ring

[10] In addition to the Black Friday Gold Panic, the Whiskey Ring scandal occurred during this president's administration. He was more famously the commanding general of the Union Army at the end of the Civil War.

ANSWER: Ulysses S. Grant (or Hiram Ulysses Grant)

[10] This other scandal, which saw Congressman Oakes Ames selling shares of the namesake railroad company to political figures like Vice President Schuyler Colfax, was revealed during the Grant administration.

ANSWER: Crédit-Mobilier of America scandal

<EnzeC>

9. Bonus: Its magnitude is equal to mass times velocity-squared divided by radius. For ten points each:

[10] Identify this force which makes an object follow a circular path. It should not be confused with a similarly named “fictitious force.”

ANSWER: centripetal force (do not accept centrifugal force)

[10] For an object following a circular path, this quantity is equal to velocity squared divided by radius. It is equal to the centripetal force divided by the object’s mass.

ANSWER: centripetal acceleration (accept linear acceleration; do not accept “angular acceleration”)

[10] The fictitious centrifugal force arises when a body is examined from one of these reference frames. Reference frames of this type are often rotating, necessitating correcting for the centrifugal force and Coriolis Effect.

ANSWER: non-inertial rotating reference frames (obviously do not accept inertial reference frame)

<MS>

10. Bonus: Mosca convinces Corvino to sacrifice his wife, Celia, to satisfy the title character’s desires. For ten points each:

[10] Name this 1607 comedy in which Voltore, Corbaccio, and Corvino all want to inherit the title character’s fortune.

ANSWER: Volpone

[10] *Volpone* is a work by this English dramatist and contemporary of Shakespeare. He also wrote about Clement judging all characters on a basis of their past grievances in *Every Man in His Humour*.

ANSWER: Benjamin “Ben” Jonson

[10] Ben Jonson also wrote this play in which Subtle, a man who turns metals into gold, is aided by Dol Common. Other characters in the play include Lovewit, who escapes into the country, and Jeremy the Butler.

ANSWER: *The* Alchemist

<KT>

11. Bonus: This man’s Minister of Education, Adalbert Falk, enacted the May Laws. For ten points each:

[10] Name this “Iron Chancellor” who unified Germany under Wilhelm I. He authored the Ems Dispatch and gave the “Iron and Blood” speech.

ANSWER: Otto Eduard Leopold, Prince of Bismarck, Duke of Lauenburg [or Otto von Bismarck]

[10] Bismarck also enacted this “culture struggle” from 1871 to 1878 which reduced the political and social influence of the Catholic Church.

ANSWER: Kulturkampf

[10] Bismarck also fought the Second Schleswig War against this country for possession of the territory of Schleswig-Holstein.

ANSWER: Denmark [accept Danmark]

<BZ>

12. Bonus: Rosalind Franklin’s Photo 51 was instrumental in its elucidation, but the credit for it was stolen by Watson and Crick. For ten points each:

[10] Name this structure of DNA in which its two strands are intertwined. This structure forms major and minor grooves and can be described by its twist.

ANSWER: double helix

[10] DNA can be packaged into units called nucleosomes using this class of proteins, which acts as a “spool” for the DNA to wrap around.

ANSWER: histones

[10] Histones provide the foundation for these masses of genetic material that condense to form chromosomes during mitosis. Its hetero- type is very densely packed, while its eu- type forms a “beads on a string” structure.

ANSWER: chromatin

<HX>



13. Bonus: Identify some Republican politicians, for ten points each:

[10] This former governor of Massachusetts is the current front-runner in the presidential primary. He won the New Hampshire primary, but narrowly lost the Iowa caucuses after a recount.

ANSWER: Mitt Romney

[10] Dan Savage started an Internet movement after this Republican presidential candidate, a Senator from Pennsylvania, made the comment that gay marriage was equal to bestiality in 2003.

ANSWER: Rick Santorum

[10] This politician was the first African-American to serve as chairman of the Republican National Committee, and was replaced in 2011 by Reince Priebus.

ANSWER: Michael Steele

<DA>

14. Bonus: His mother Semele died after seeing the true form of Zeus. For ten points each:

[10] Name this Greek god of wine who was followed by the Maenads. He was once abducted by pirates but turned his captors into dolphins after they realized his divinity.

ANSWER: Dionysus (don't accept Bacchus)

[10] This king refused to worship Dionysus as the twelfth Olympian god despite the advice of Tiresias. Dionysus intoxicated his mother Agave and had her rip this man apart.

ANSWER: Pentheus

[10] Pentheus was a king of this city, founded by Cadmus. Zethus and Amphion built the walls around this city, and Polynices led the "Seven" against this city.

ANSWER: Thebes

<BZ>

15. Bonus: Though the doors eventually open, none of the characters choose to leave. For ten points each:

[10] Identify this work in which Garcin, Estelle, and Ines are forever trapped in a room, leading Ines to declare that "hell is other people."

ANSWER: No Exit (or Huis Clos)

[10] *No Exit* is the most famous work of this existentialist French author and lover of Simone de Beauvoir. He also wrote works like *Dirty Hands* and *The Respectful Prostitute*.

ANSWER: Jean-Paul Sartre

[10] In this Sartre adaption of the Electra myth, the title creatures chase around Orestes while Electra surrenders to the Furies.

ANSWER: *The Flies* (or *Les Mouches*)

<MS>

16. Bonus: Identify some companies and corporations, given descriptions from their TV commercials, for ten points each:

[10] One of this insurance company's commercials features a pig named Maxwell who cries "weeeee" all the way home.

ANSWER: Geico

[10] This insurance company's commercials feature people who "do the jingle" to make their agents appear. Their slogan is "Like a good neighbor, [this company] is there."

ANSWER: State Farm

[10] One commercial for this company's product features a sea captain whose house quickly fills with money. Other commercials for this product describe the man your man could smell like.

ANSWER: Old Spice

<JD>

17. Bonus: He paved the way for the future success of Vasco de Gama. For ten points each:

[10] Name this Portuguese explorer who sponsored trips to discover the Azores and passed Cape Bojador.

ANSWER: Prince Henry the Navigator (accept Henry the Seafarer; Duke of Viseau, Infante Henrique; Lord of Covilha)

[10] Prince Henry the Navigator donated houses to combine all the sciences, which would later be called the University of this city. Vasco da Gama used a port in this city as a starting point for his first expedition.

ANSWER: Lisbon, Portugal

[10] In 1488, this other Portuguese explorer was the first European to travel around the southern tip of Africa. His ship was the São Cristóvão, and was driven by Pero de Alenquer.

ANSWER: Bartolomeu Dias

<KT>

18. Bonus: Its composer described it as “a piece for orchestra without music.” For ten points each:

[10] Name this single-movement orchestral work, initially composed as a ballet for Ida Rubinstein, which features a prominent snare drum ostinato.

ANSWER: Boléro

[10] *Boléro* is a work by this French composer of *Mirrors*, *Gaspard de la nuit*, and *Pavane for a Dead Princess*. He also composed a piano suite commemorating his friends who died in World War I, *Le tombeau de Couperin*.

ANSWER: Maurice Ravel

[10] Ravel composed the music for this impressionistic ballet about the love between the title goatherd and shepherdess on the island of Lesbos. It is Ravel’s longest work and contains the popular “danse generale”.

ANSWER: Daphnis et Chloé (accept Daphnis and Chloe)

<HX>

19. Bonus: He wrote about Hurtle Duffield in *The Vivisector*. For ten points each:

[10] Identify this author, who wrote about Mary Hare and Mordechai Zimmelfarb in *Riders in the Chariot* and about the title explorer of the Outback in *Voss*.

ANSWER: Patrick Victor Martindale White

[10] Patrick White hails from this country, also the home of authors Thomas Keneally and Colleen McCullough. In *Great Expectations*, Abel Magwitch was exiled to here after being convicted of a crime in Britain.

ANSWER: Australia

[10] Patrick White was the only Australian to have won the Nobel Prize in Literature until this South African got Australian citizenship. His works include *The Life & Times of Michael K.*, *Disgrace*, and *Waiting for the Barbarians*.

ANSWER: John Maxwell Coetzee

<MS>

20. Bonus: This man promoted the electric chair as part of his competition against Westinghouse to show that AC was more lethal than DC. For ten points each:

[10] Identify this “Wizard of Menlo Park” who held 1,093 patents and is most famous for inventing the first commercially successful incandescent lamp.

ANSWER: Thomas Alva Edison

[10] In addition to Westinghouse, Edison feuded with this physicist in the “War of Currents,” as he favored alternating current. He was known as the “Wizard of the West” and unit of magnetic field strength is named for him.

ANSWER: Nikola Tesla

[10] Modern-day light bulb filaments contain this element, symbolized by W, which has the highest melting point out of all pure metals.

ANSWER: tungsten (prompt on wolfram)

<EnzeC>

21. Bonus: Examples of these objects include dragon curves and the Menger Sponge. For ten points each:

[10] Identify these infinitely self-similar shapes, such as the Mandelbrot set and the Koch snowflake.

ANSWER: **fractals**

[10] The Mandelbrot set's boundary has a value of two for the Hausdorff measure of this quantity. Spheres and cubes have a value of three, while circles and squares have a value of two.

ANSWER: **dimension**

[10] Another famous fractal is this one, which can be seen when the odd numbers in Pascal's triangle are colored in. It consists of infinitely many triangles, and is named after its Polish creator.

ANSWER: **Sierpinski** Triangle (or **Sierpinski** gasket/sieve)

<MS>

22. Bonus: He depicted his wife with an abnormally colored nose in *The Green Stripe*. For ten points each:

[10] Name this artist who painted five nudes holding hands in a circle in *The Dance*. He also created a number of famous cutouts.

ANSWER: Henri **Matisse**

[10] Matisse is most notable for founding this movement along with Andre Derain. It emphasizes strong colors over representative characteristics, and its name comes from the French for "wild beasts."

ANSWER: **Fauvism**

[10] Matisse created a work entitled *Harmony in this color*. This primary color can be found in a vineyard by Van Gogh, and, in one version of *The Dance*, the figures are this color.

ANSWER: **Red**

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