# LADUE INVITATIONAL SPRING TOURNAMENT 2012

Round 6

## **TOSS-UPS**

1. This author wrote a novel in which Albert Corde accompanies his wife Minna to Romania and finds out about her mother's death. Another of his works was based on this author's relationship with Delmore Schwartz and tells the tale of aspiring writer Charlie Citrine. In addition to *The Dean's December* and (\*) *Humboldt's Gift*, this author wrote a novel in which the title character divorces Madeleine after she has an affair with Valentine Gersbach but wants to regain custory of Junie, and another novel about the title character who is "an American, Chicago born." For ten points, name this Jewish-American author of *The Adventures of Augie March* and *Herzog*.

ANSWER: Saul Bellow

<KT>

2. This figure is known for wearing "Madiba shirts," and as president he supported the *Springboks* and lobbied for the Lockerbie trial to occur in his country. He gave the "I am Prepared to Die" speech during the Rivonia trial after he was arrested for leading the (\*) Spear of the Nation. This leader, who was succeeded in his highest position by Thabo Mbeki, wrote his autobiography *Long Walk to Freedom* while imprisoned at Robben Island, but was released in 1990 by F.W. de Klerk, with whom this man received the Nobel Peace Prize three years later for their efforts to end apartheid. For ten points, name this former South African president.

ANSWER: Nelson Rolihlahla Mandela

 $\langle JD \rangle$ 

3. This author defined the title concept as "relative to sacred things" that are set apart and forbidden and argued that emotional security leads to the development of religion in *The Elementary Forms of the Religious Life*. Another work by this thinker defines the field of sociology as one that analyzes "social facts", while another of his works differentiates (\*) mechanical and organic solidarity. In addition to writing *The Rules of the Sociological Method* and *Division of Labour in Society*, he concluded that a greater "social control" amongst Catholics decreased their chances of the title action. For ten points, name this French sociologist that divided the title phenomenon into altruistic, fatalistic, egoistic, and anomic types in *Suicide*.

ANSWER: David Émile Durkheim

<KT>

4. This quantity's namesake found its value after solving Wien's displacement law, and Heisenberg's Uncertainty Principle states that two times the product of uncertainty in position and momentum is greater than or equal to the reduced value of this constant. Its namesake solved the problem of the (\*) ultra-violet catastrophe, and this constant times frequency gives the energy of a photon, demonstrating that energy is quantized. This quantity is roughly equal to 6.62 times ten to the negative 34th Joule-seconds. For ten points, identify this constant named after a German mathematician, often symbolized h.

ANSWER: Planck's constant

<MS>

5. This organization's founder began it after being charged by the administrative board of his school for breaching Internet security, and Dustin Moskovitz took on coding responsibilities after being made senior vice president of programming for this organization. Eduardo (\*) Saverin was the first CFO and business manager of this organization before being replaced by Sean Parker, and it was initially built to be exclusively for Harvard students. In 2005, "the" was dropped from its domain name and it now has over 750 million active users. For ten points, name this website that uses the timeline feature to display users' profiles, a social networking website created by Mark Zuckerberg.

ANSWER: Facebook.com

 $\langle DA \rangle$ 

6. In one novel by this man, a dispute between Reverend Colley and Captain Anderson is resolved by the narrator Edmund Talbot. That novel is part of his *To the Ends of the Earth* trilogy and is entitled *Rites of Passage*. This man is more famous for a novel in which Sam and Eric discover a downed fighter pilot whom they mistake for a (\*) Beast, and that novel sees Simon and Piggy killed by the fighting between Jack and Ralph's tribes. For ten points, identify this author who wrote about some marooned English schoolboys in *Lord of the Flies*.

ANSWER: Sir William Gerald Golding

<MS>

7. Horace Greeley wrote that this event was "but the assertion of a natural right," and the ninth resolution presented at this event led one of its members to exclaim that "thee will make [them] ridiculous." At the urging of Garrison and Phillips, the two leaders of this event traveled to London to attend the first World's (\*) Anti-Slavery Convention, where they were only allowed to listen in the gallery. This event saw speeches given by Frederick Douglass and Elizabeth Cady Stanton, both of whom urged Lucretia Mott to include a call for suffrage in the Declaration of Sentiments. For ten points, identify this 1848 conference that took place in a namesake New York village and called for women's rights.

ANSWER: Seneca Falls Convention

<EnzeC>

8. Along with Fred Archer, this man analyzed values such as texture and tone in his innovative "Zone System." This man collected pictures of the Manzanar internment camp in his book, Born Free and Equal. Along with men like Willard van Dyke and Edward Weston, he was an active member of the Group (\*) f/64. One of his works shows a cemetery in a grassy field under a dark sky, titled "Moonrise, Hernandez, New Mexico". El Capitan and Moon and Half Dome are works of, for ten points, what American photographer most famous for his pictures of Yosemite National Park? ANSWER: Ansel Easton Adams

KT>

9. This event's tradition of *kaparot* involves swinging either money or a live chicken around one's head before giving it to charity. The *Ne'ila* concludes this holiday, and all services on this holiday begin with a prayer which has historically been incorrectly used as proof that Jews do not keep promises, the (\*) *Kol Nidre*. It is forbidden to bathe and to wear leather or perfume on this holiday. This holiday falls on the tenth of Tishrei, and is the second of its religion's "High Holy Days." For ten points, identify this holiday which occurs nine days after Rosh Hashanah, a fast day on which Jews repent for their sins.

ANSWER: <u>Yom Kippur</u> (or <u>Day of Atonement</u>) <MS>

10. Along with mice, one type of these organisms was used by Oswald Avery and Colin MacLeod to suggest that DNA was the main vehicle of heredity. They can exchange genetic material through a pilus in a process called conjugation, and can also incorporate exogenous DNA through transformation. Roots of legumes often have (\*) nitrogen-fixing types of these organisms. Ones with peptidoglycan in their cell wall appear violet after Gram staining, and their cyano- type was misidentified as blue-green algae. They do not have a nucleus, and contain circular chromosomes called plasmids. For ten points, name these prokaryotic micro-organisms, such as E. coli, which can also cause diseases like cholera. ANSWER: <a href="mailto:bacteria">bacteria</a> or <a href="mailto:bacteria">bacteria</a> (prompt on <a href="mailto:streptococcus">streptococcus</a> before "nitrogen")</a> <a href="mailto:HX"><a href="HX">HX</a>>

# **HALFTIME**

11. One king of this country won at the Battle of Breadfield with his Black Army, and this country lost most of its territory in the Treaty of Trianon. This country was defeated by Otto the Great at the Battle of Lechfeld, and it also saw a 1848 revolution led by Lajos (\*) Kossuth. Rulers of this country included Matthias Corvinus and John Hunyadi, as well as the Arpad founder of this country, Saint Stephen. This country was ruled by Janos Kadar after Soviet tanks crushed a 1956 revolution in it led by Imre Nagy (NAHJ). Before World War I, this country was part of a joint monarchy with Austria. For ten points, identify this home country of the Magyars with capital at Budapest.

ANSWER: **Hungary** 

 $\langle JD \rangle$ 

12. The Old Mission Peninsula divides this body of water's Grand Traverse Bay in two. This body of water contains the Manitou Islands and the Beaver Islands, and the Muskegon River flows into it. Lake Winnebago is connected to this body of water by the Fox River, and this body of water is drained by the Straits of (\*) Mackinac (MACK-kuh-naw). The Door Peninsula and the Upper Peninsula separate this lake from its largest inlet, Green Bay. Cities that lie on this lake include Milwaukee and Chicago. For ten points, identify this Great Lake which drains into Lake Huron and borders its namesake state to the east.

ANSWER: Lake Michigan

<JD>

13. The number of derangements of an *n*-element set is equal to the closest integer to *n*-factorial divided by this number. According to Stirling's formula, *n*-factorial approaches the square root of the quantity 2pi n ("two pie en") times the *n*th power of quantity *n* divided by this number. Hyperbolic cosine is equal to the average of a (\*) power of this number and its reciprocal, and this number to the power of *i* times pi is equal to negative one. This number is the infinite sum of the reciprocals of all the factorials, and this number to the power of *x* is its own derivative. For ten points, identify this number roughly equal to 2.718, the base for the natural logarithm.

ANSWER:  $\underline{e}$  (or  $\underline{\text{Euler}}$ 's number or  $\underline{\text{Napier}}$ 's constant, DO NOT ACCEPT Euler's constant, prompt on 2.71828...) <MS>

14. The van't Hoff equation applies this concept to thermodynamics, which explains why raising temperature will reduce the amount of product in the Haber process. This statement explains why dissociating sodium acetate along with acetic acid will suppress the ionization of acetic acid and increase the pH of the (\*) buffer solution, supporting the common-ion effect. According to this principle, adding a noble gas does not result in a shift, and this principle also explains why the addition of more reactant will tip a reaction towards the product side. For 10 points, identify this principle which states that an equilibrium will shift to accommodate any changes, named for a French chemist.

ANSWER: <u>Le Chatelier's</u> principle <EnzeC>

15. One scene from this work sees the main characters stop in front of a burning mountain, which can only be put out by a fan made from banana leaves. After eating sacred baby fruits, one character fights a skeletal demon and is later banished by his master. This work begins with the main character emerging out of a rock, who soon gains the ability to shift into 72 different forms and obtains a golden rod capable of changing size at will. Later on, that character tries to overthrow the (\*) Jade Emperor and pees in the Buddha's hand, only to be crushed under a mountain and rescued by Xuanzang. Accompanied by Friar Sand, Pig, and the Monkey King, for ten points, identify this Wu Cheng'en work about a monk making the title pilgrimage to retrieve Buddhist scriptures, one of China's Four Great Classics.

ANSWER: <u>Journey to the West</u> (accept <u>Xi You Ji</u>; accept <u>Monkey</u>) <EnzeC>

16. From 1966 to 1969, this man played basketball under Bob Knight at Army, a team he would later coach from 1975-1980 before switching to the school he is most commonly associated with. Along with Pat Summitt, *Sports Illustrated* named this man "2011 Sportsman of the Year." He has a 35-1 record with the US National Team, including gold medals at the 2008 Summer Olympics and 2010 FIBA World Championship. Upon defeating Michigan State in November 2011, he secured his (\*) 903rd career win as a head coach, surpassing the record previously held by Bob Knight. Known for winning four NCAA Championships coaching at Cameron Indoor Stadium, for ten points, name this head basketball coach of the Duke Blue Devils.

ANSWER: Mike  $\underline{Krzyzewski}$  (pronounced "kruh-SHEF-ski," be lenient, also accept Coach  $\underline{K}$ ) <EnzeC>

17. While ruled by Reccared I, these people converted from Arianism to Catholocism. This group collapsed after Roderic was killed at the Battle of Guadalete. Toulouse served as an early capital for these people, whose rulers often came from the Balti dynasty. Their kingdom in Gaul was defeated at the Battle of Vouille by Clovis I, after which this group moved their capital to Toledo and ruled over most of Hispania. One ruler of this group died at the (\*) Catalaunian Plains. For ten points, name this Germanic group, led at times by Theodoric I and Alaric I, that sacked Rome in 410 AD, often contrasted with the Ostrogoths.

ANSWER: <u>Visigoths</u> (prompt on "Goths" before "Ostrogoths") <SS>

18. This man composed a comic opera for Johann Joseph Felix Kurz titled *The Lame Devil*, and included the "How do you Do?" and "Joke" quartets in his "Russian" quartets. His "Quinten" quartet is one of his "Erdödy" quartets, and this composer of the "Sun" quartets also wrote an oratorio based on *Paradise Lost* and the Book of Genesis which depicts the beginning of the world, titled (\*) *The Creation*. His Symphony No. 45 was premiered by Prince Nikolaus Esterházy's orchestra, and ends with only two muted violinists on stage, while his Symphony No. 94, the symphony "with the kettledrum stroke," features an unexpected fortissimo chord. For ten points, name this Austrian composer whose *London Symphonies* include ones nicknamed *Farewell* and *Surprise*.

ANSWER: Franz Joseph <u>Haydn</u> <HX>

19. The Ancient Egyptians based their calendar on the heliacal rising of this body, which was known to them as Sothis. The existence of this body's dimmer companion, discovered by Alvan Clark, was predicted by Friedrich Bessel using observations of this body's "wobble"; that companion is a white dwarf which forms a (\*) binary star system with this star. This star forms the winter triangle along with Betelgeuse [BEE - tle - juice] and Procyon [PRO - see - on], and it is also the alpha star of the constellation Canis Major. For ten points, name this brightest star in the night sky, sometimes nicknamed the "Dog Star."

ANSWER: <u>Sirius</u> A (prompt on <u>Alpha Canis Major</u> or <u>Dog Star</u> before mention) <HX>

20. In this work, Magnon receives money from Gillenormand and is falsely accused of taking part in the Gorbeau Robbery. The protagonist of this work does not return a coin given to him by Petit Gervais, and this work sees Mabeauf join the Friends of the ABC. Eponine saves a character by sacrificing her own life, and Gavroche Thenardier dies when he attempts to retrieve cartridges in this novel. Marius falls in love with (\*) Fantine's daughter Cosette, and the antagonist of this work drowns himself in the Seine River after spending many years chasing a man who had stolen a loaf of bread. For ten points, name this novel about Inspector Javert and Jean Valjean, a work of Victor Hugo. ANSWER: Les <u>Miserables</u> (accept The <u>Miserable Ones</u>)

# End of regulation, only proceed if tied

21. One of this god's possessions changes from a Madjet to a Semektet daily, and this ancestor of all nine members of the Ennead was sometimes symbolized by the Bennu phoenix. This figure mixed some red beer and used it to pacify a bloodthirsty Sekhmet. This god was cured of a snakebite by Isis after he gave her the (\*) secret name hidden in his body. Akhenaten replaced this deity's syncretization with the worship of Aten, and one of his epithets, Horakhty, means "Horus of the Horizons". This god rides a solar barque each night and had a center of worship at Heliopolis. For ten points, name this falcon-headed Egyptian god of the Sun.

ANSWER: <u>Ra</u> (or Atum-<u>Ra</u>, or Amun-<u>Ra</u>, or <u>Ra</u>-Horakhty before mentioned, accept <u>Re</u> in place of "Ra" at all times, prompt on Atum, Amun, or Horakhty)

<BZ>

22. In genetics, this symbol is added after the main haplogroup to represent a paragroup. In chemistry, two of these symbols indicate when the polarization function is added to a basis set, while one of them can denote an antibonding molecular orbital. Though not a bar, this symbol can denote the complex conjugate of a matrix. In C and C++, this symbol is used to declare a pointer variable, while in Ruby and Python, two of these symbols are used to express (\*) exponents. It denotes a wildcard character in Unix, and this symbol can be used after a forward slash to begin block comments in most programming languages. On a normal keyboard, shift-8 yields, for ten points, which symbol that looks like a star and is often used as a multiplication sign?

ANSWER: <u>asterisk</u>s (prompt on <u>star</u> or similar) <HX>

## **BONUSES**

1. Bonus: In one of his poems, "The lights must never go out / The music must always play." For ten points each:

[10] Identify this author who wrote "we must love another or die" in "September 1, 1939", and "About suffering they were never wrong / The Old Masters" in "Musee des Beaux Arts."

ANSWER: Wystan Hugh Auden

[10] Auden's "September 1, 1939" is titled after the day which began the second of these conflicts. The threat of chemical weapons in the trenches in the first of these conflicts inspired Wilfred Owen's "Dulce et Decorum Est."

ANSWER: world wars (or Great war)

[10] This other Owen poem asks "what passing-bells for those who die as cattle?" before noting that "only the stuttering rifles' rapid rattle / can patter out their hasty orisons."

ANSWER: "Anthem for Doomed Youth"

<MS>

2. Bonus: Answer the following about the pseudo-science of time travel, for ten points each:

[10] A famous paradox regarding time travel was proposed by Rene Barjavel and asks what would happen if a person went back in time and killed this relative, thereby preventing one of their parents from being born.

ANSWER: grandfather (or equivalents)

[10] One suggested methodology of backwards time travel involves these hypothetical particles, which move faster than the speed of light.

ANSWER: tachyons

[10] A September 2011 experiment at a CERN lab supposedly measured the muon variety of this very light subatomic particle going faster than the speed of light.

ANSWER: neutrinos

<MS>

3. Bonus: Identify the following about the cosine function, for ten points each:

[10] Cosine is one of these functions, which have f(x)=f(-x) ("f of x equals f of negative x") and are symmetric across the y-axis.

ANSWER: even functions

[10] The law of cosines is a generalization of this other triangle formula, which states that in a right triangle with legs a and b and hypotenuse c, a-squared plus b-squared equals c-squared.

ANSWER: **Pythagorean** Theorem

[10] The law of cosines can also be used to derive this formula, a special case of Brahmagupta's formula, which can find the area of a triangle given only its side lengths.

ANSWER: Heron's Formula (accept Hero's Formula)

<MS>

4. Bonus: Tintoretto's version of this scene is most notable for its bright central diagonal. For ten points each:

[10] Name this event, the most famous depiction of which depicts Jesus wearing red and blue while the twelve apostles converse and eat.

ANSWER: The Last Supper (Accept equivalents like "Jesus' Passover meal before his crucifixion")

[10] This Italian artist of *The Last Supper* is best known for his depiction of a woman with an enigmatic smile in *Mona Lisa*. ANSWER: Leonardo de ser Piero <u>da Vinci</u>

[10] This title is given to two very similar Da Vinci paintings, which both depict Mary, a baby Jesus, John the Baptist, and an angel, and differ primarily in the lighting and size of the title objects.

ANSWER: Virgin of the Rocks (or Madonna of the Rocks)

 $\langle KT \rangle$ 

5. Bonus: He led the Long March and collected his quotations in the "Little Red Book." For 10 points each:

[10] Identify this man who became chairman of his country after founding the People's Republic of China on October 1st, 1949.

ANSWER: <u>Mao</u> Zedong (or <u>Mao</u> Tsetung)

[10] Mao's wife was part of this group of Communist Party officials that orchestrated the later stages of the Cultural Revolution and were subsequently charged with a series of treasonous crimes.

ANSWER: Gang of Four or Si Ren Bang

[10] This man advocated peaceful coexistence with the West during his time as the Chinese foreign minister. He also served as the first Premier of the People's Republic of China under Mao.

ANSWER: Chou Enlai (or Zhou Enlai)

<LC>

6. Bonus: One member of this group had a dog named Seaman. For ten points each:

[10] Name this 1804-1806 expedition, commissioned by Thomas Jefferson, which explored the Louisiana Purchase.

ANSWER: Meriwether <u>Lewis</u> and William <u>Clark</u> Expedition (accept in either order; accept <u>Corps of Discovery</u> Expedition, prompt on partial)

[10] A couple months into the expedition, this woman and her husband Toussaint Charbonneau joined Lewis and Clark. This Native American woman turned out to be crucial as a translator, negotiator, and guide.

ANSWER: Sacagawea (or Sakakawea)

[10] Sacagawea came from this Native American tribe, who lived in the northern Rockies and were sometimes known as the Snake Indians.

ANSWER: Lemhi Shoshone

 $\langle JD \rangle$ 

7. Bonus: Infants have over 270 of them, but some fuse together, leaving the average adult with 206. For ten points each:

[10] Name these structures which form the main structural support of the body. Eight of them can be found in the wrist, and long ones can be found in the arms and legs.

ANSWER: bones

[10] On average, the diaphysis of this longest bone in the body is around 48 cm long. It can support up to 30 times the weight of an adult, and forms the knee joint along with the tibia and fibula.

ANSWER: femur

[10] This sesamoid bone is found at the conjunction of the femur, tibia, and fibula. It is also known as the knee cap.

ANSWER: patella

 $\langle HX \rangle$ 

8. Bonus: It was compiled as a set of revelations Muhammad received from the angel Gabriel over a 3-year timespan. For ten points each:

[10] Name this chief religious text of Islam.

ANSWER: **Qu'ran** (accept **Koran** or **al-Quran**)

[10] The Qu'ran contains 114 of these "chapters", which vary in length -- from two ayat, or verses, to 286. Depending on the setting of each revelation, these can be classified as either Meccan or Medinan.

ANSWER: **Sura**s (or **Surat**)

[10] This is the moral and law code of Islam. Figh is an expansion of it which takes into account rules not mentioned in the Ou'ran.

ANSWER: Shar'ia

<MukS>

9. Bonus: This country's Palestinian settlements have been denounced by President Obama and European leaders at the UN. For ten points each:

[10] Name this country that is located between Lebanon and Egypt and is the world's only Jewish-Majority state.

ANSWER: Israel

[10] This current president of the Palestinian National Authority won on the Fatah ticket and then submitted a document to UN for recognition which he later recalled.

ANSWER: Mahmoud Abbas

[10] This prime minister of Israel was described as "a liar" by Nicolas Sarkozy at the G-20 summit, and describes Iran as the "greatest threat Israel has ever faced."

ANSWER: Benjamin "Bibi" Netanyahu

<DA>

10. Bonus: He was found on the streets of Liverpool and brought back to the moors by Mr. Earnshaw. For ten points:

[10] Identify this man who marries Isabella Linton to gain control of her brother Edgar's estate, Thrushcross Grange, despite still being in love with Catherine Earnshaw.

ANSWER: Heathcliff

[10] Heathcliff is the bitter protagonist of this 19th-century novel, narrated by the visitor Mr. Lockwood, as he is told the story of the family who lived on the title estate by Nelly Dean.

Answer: Wuthering Heights

[10] Wuthering Heights was written by this English novelist who wrote under the pseudonym Ellis Bell.

Answer: **E**mily **Brontë** (prompt on "Brontë")

<LC>

11. Bonus: This figure commissioned the construction of El Escorial, where he was later buried. For ten points each:

[10] Identify this son of Charles V who ruled over the Spanish Empire at its peak and organized the Spanish Armada.

ANSWER: **Philip II** (or **Philip the Prudent**; prompt on "Philip")

[10] Philip II's plans to conquer England were foiled when the Spanish Armada was defeated by this English privateer. He had previously circumnavigated the world in his ship, the Golden Hind.

ANSWER: Sir Francis **Drake** 

[10] Sir Francis Drake served under this English monarch, who was nicknamed the "Virgin Queen" and patronized playwrights like Christopher Marlowe and William Shakespeare.

ANSWER: <u>Elizabeth I</u> (or <u>Elizabeth Tudor</u>; or <u>Good Queen Bess</u>; or <u>Gloriana</u>; prompt on "Elizabeth") <JD>

12. Bonus: Along with some Plutarch and Milton, Frankenstein's monster finds a copy of this novel. For ten points each:

[10] Name this novel, in which the protagonist meets Fraulein von B. and shoots himself when he realizes Albert will end up with Lotte.

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

[10] This author of *The Sorrows of Young Werther* wrote a number of novels about Wilhelm Meister and told of a sick boy being attacked by the title monster in his creepy poem "Der Erlkonig."

ANSWER: Johann Wolfgang von Goethe

[10] In the first part of this most famous Goethe play, Mephistopheles helps the title scholar seduce the beautiful Gretchen.

ANSWER: Faust

<MS>

13. Bonus: Name some unconventional instruments, for ten points each:

[10] John Cage wrote twenty *Sonatas and Interludes* for this instrument, whose sound is altered by placing random objects, such as bolts, forks, and pieces of plastic.

ANSWER: prepared piano (prompt on piano)

[10] Cage's *Imaginary Landscape No. 1* is scored for twelve of these devices, each with two performers. One of the players alters its volume while the other changes its station.

ANSWER: radios

[10] György Ligeti composed a *Poème Symphonique* for 100 of these devices, patented by Johann Maelzel. They have a swinging pendulum which makes clicking noises, and are most commonly used to keep time in music.

ANSWER: metronomes

<HX>

14. Bonus: Identify these Roman deities, for ten points each:

[10] Though not Ceres, this Roman goddess of plenty is often depicted holding an apple and a paring knife and was seduced by Vertumnus in the guise of an old woman.

ANSWER: Pomona

[10] This two-headed god of doorways and beginnings had a namesake temple dedicated to him in the Roman Forum, whose doors would always remain closed in times of peace and open in times of war.

ANSWER: Janus

[10] This Roman goddess of beauty loved the youth Adonis, until he was gored to death by a boar. This goddess was the ancestor of Romulus and Remus through her son Aeneas.

ANSWER: **Venus** [do not accept "Aphrodite"]

 $\langle BZ \rangle$ 

15. Bonus: It was discovered in 1871 by Adolf von Baeyer, and can be synthesized by the condensation of phthalic anhydride under acidic conditions. For ten points each:

[10] Identify this chemical indicator that's colorless in acidic solutions with a pH less than 8.2 and also turns pink in basic solutions.

ANSWER: phenolphthalein (prompt on "Hln" and "phph;" do not accept "universal indicator")

[10] Phenolphthalein is commonly applied in this laboratory technique used to determine the concentration of a solution by adding incremental amounts of another known solution.

ANSWER: titration

[10] pH can be derived using this doubly eponymous equation which states that it is the sum of the acid disassociation constant and the logarithm of the concentration of a base over the concentration of its conjugate acid.

ANSWER: **Henderson-Hesselbalch** 

<EnzeC>

16. Bonus: One character on this TV show is physically unable to talk to girls unless he's drunk, or thinks he is. For ten points each:

[10] Identify this sitcom set in Pasadena, California which centers on the lives of Leonard, Sheldon, Howard, and Rajesh who work at Caltech.

ANSWER: The Big Bang Theory

[10] Leonard and Sheldon live across the hall from this not-so-smart blond waitress, who dreams of becoming an actress but hasn't been very successful.

ANSWER: Penny

[10] *The Big Bang Theory* is broadcast by this television network, which also is the home to *Two and a Half Men*, *The Late Show with David Letterman*, and the *CSI* series.

ANSWER: **CBS** Broadcasting Inc.

 $\langle JD \rangle$ 

17. Bonus: The Dalmatian Coast lies on this body of water, and Venice was once called the "Queen of this." For ten points each:

[10] Identify this subbranch of the Mediterranean Sea that lies north of the Ionian Sea and separates the Balkan Peninsula from Italy.

ANSWER: Adriatic Sea

[10] This island in the Mediterranean has its capital at Palermo and is separated from the Italian mainland by the Strait of Messina.

ANSWER: Sicily

[10] This Mediterranean archipelago is located off the east coast of Spain. Its islands include Majorca, Minorca, Ibiza, and Formentera, and it is located in its namesake sea.

ANSWER: Balearic Islands

 $\langle JD \rangle$ 

18. Bonus: One of the title characters experiences the "fear of death," leading him to submit to the other. For ten points each: [10] Name this narrative which describes two self-conscious beings struggling to gain power over each other. Its author observes that the power of the stronger one depends on the submission of the weaker.

ANSWER: master-slave dialectic (accept Herrschaft und Knechtschaft or lordship and bondage)

[10] This philosopher included the master-slave dialectic in the *Phenomenology of Spirit* and traced the development of German idealism in his *The Science of Logic*.

ANSWER: Georg Wilhelm Friedrich Hegel

[10] The "spirit" in the *Phenomenology of Spirit* refers to an "absolute" version of this concept, which is studied by epistemologists. It can come in a priori and a posteriori forms, and one gains this via learning.

ANSWER: knowledge

<HX>

19. Bonus: Minerals can be really pretty! For ten points each:

[10] This typically translucent mineral is prettier in its amethyst, rose, and smoky forms. It has a hardness of 7 on the Mohs scale, and is found at the bottom of Bowen's Reaction Series.

ANSWER: quartz

[10] This mineral has a hardness of 9 on the Mohs hardness scale. Its ruby variant was the first synthetically manufactured gem, and its other pretty forms include padmaraga and sapphire.

ANSWER: corundum

[10] The pure form of this mineral is not pretty, but its other forms include emerald and aquamarine, which are. The largest known crystal of any mineral is of this mineral, and it is the namesake of a certain alkaline earth metal.

ANSWER: **beryl** (do not accept "beryllium" or guesses like"beryite")

<HX>

20. Bonus: He won the Battle of Pharsalus against Pompey's large army. For ten points each:

[10] Name this Roman ruler who was assassinated on the Ides of March. He was part of the First Triumvirate with Crassus and Pompey.

ANSWER: Gaius Julius Caesar (prompt on Caesar)

[10] Julius Caesar conquered this group of people that lived in modern-day France at the Battle of Alesia, which ended when Vercingetorix and his group of rebels surrendered to the Roman army.

ANSWER: Gauls (or Mandubii)

[10] Julius Caesar's third and final wife was this woman, who tried to warn him of his death on the Ides of March. After Caesar's death, she gave all of his personal documents to Mark Antony.

ANSWER: Calpurnia Pisonis

<KT>

21. Bonus: The main character's son decides to be more involved in the sale of sporting goods with the "Florida Idea." For ten points each:

[10] Name this play in which Willy Loman kills himself in a car accident for the benefit of his sons Biff and Happy.

ANSWER: Death of a Salesman

[10] This American playwright of *Death of a Salesman* wrote about Abagail Williams and John Proctor's involvement in the Salem Witch Trials in *The Crucible*.

ANSWER: Arthur Miller

[10] In this Miller play, Joe Keller kills himself after it is revealed that he and his partner, Steve Deever, sold faulty airplane cylinders that led to the deaths of 21 World War II pilots.

ANSWER: All My Sons

 $\langle DA \rangle$ 

22. Bonus: One character in this novel drinks blood out of his own skull on Walpurgis Night. For ten points each: [10] Name this work in which one title character writes a novel about Pontius Pilate and the other becomes a witch after accepting an offer from Professor Woland, who enters Moscow with an entourage including the cat Behemoth.

ANSWER: The Master and Margarita

[10] This author of *The Master and Margarita* also wrote a work in which Professor Preobrazhensky gives the title animal a piece of sausage, *The Heart of a Dog*.

ANSWER: Mikhaíl Afanásyevich Bulgákov

[10] This character in *The Master and Margarita* visits Moscow disguised as Professor Woland. In *Paradise Regained*, this character tries to tempt Jesus with food, and in *Faust*, he goes by Mephistopheles.

ANSWER: **Devil** (or **Satan**)

<KT>