

LADUE INVITATIONAL SPRING TOURNAMENT 2012

Round 9

TOSS-UPS

1. This empire first became an independent state after fighting against the Chu-state leader Xiang Yu in the Battle of Gaixia, and the Vietnamese Trưng sisters revolted against its rule. Another revolt in this dynasty was led by the Red Eyebrows, and Sima Qian completed *The Records of the Grand Historian* under this dynasty. It was divided into (*) “Western” and “Eastern” portions after an interruption from the Xin Dynasty led by Wang Mang, and Liu Bang founded this empire after the conclusion of the Qin Dynasty. For ten points, name this 208 B.C.E. to 220 C.E. Chinese Dynasty which also names the dominant ethnic group of China.

ANSWER: Han Dynasty (or Han Chao)

<KT>

2. Nazi Germany claimed a portion of this region and called it New Swabia. This region also contains Enderby Land and the Ellsworth Mountains. Its Lake Vanda serves as the mouth of the Onyx River, and its Palmer Land borders the Belingshausen Sea. This region’s Ross Island is home to McMurdo (*) Station and Mount Erebus. This region’s highest point, Vinson Massif, lies on the Ronne Ice Shelf, which borders the Weddell Sea. Lake Vostok lies in this region, parts of which are claimed by seven different countries and which borders all the oceans except the Arctic. For ten points, name this southernmost continent where one can find penguins and the South Pole.

ANSWER: Antarctica

<JD>

3. A magnetic analogue of this phenomenon has been recently discovered by Oliveira and Rand. Philipp Lenard discovered that it can cause a sheet of zinc to gain a positive charge, and the minimum value of a certain quantity in order for this phenomenon to occur can be found by dividing the work function by Planck’s constant. This phenomenon was first discovered when (*) ultraviolet light was shined on a spark gap by Heinrich Hertz, and Einstein won a Nobel Prize by explaining that it is due to the particle nature of light. For ten points, identify this effect in which objects emit electrons as they absorb high-energy photons.

ANSWER: photoelectric effect (or Hertz effect before mentioned)

<MS>

4. One of this author’s works describes a narrator who feels the Milky Way flow “down inside him with a roar”. In yet another work of this author, one character’s mistresses include Chikako Kurimoto and Mrs. Ota, who commits suicide after having an affair with Kikuji Mitani. This author also wrote a novel in which Otake makes a controversial sealed play to (*) win the title game, while his most famous novel describes Yuko, who is saved by Komako while Shimamura watches. For ten points, identify this Japanese author of *Thousand Cranes*, *The Master of Go*, and *Snow Country*.

ANSWER: Yasunari Kawabata (accept either)

<MS>

5. Jensen’s inequality can be used on functions of this type, and this adjective describes the minimal “hull” which entirely contains a set of points. All continuous functions $f(x)$ (“ f of x ”) have this property if and only if $f((a+b)/2)$ (“ f of a plus b over two”) is less than or equal to one-half $f(a)+f(b)$ (“ f of a plus f of b ”). This adjective is used to describe functions all of whose secants lie above their graph, and thus have a positive (*) second derivative. In geometry, this adjective describes shapes whose diagonals lie entirely within them and polygons that have interior angles less than 180 degrees. For ten points, give this mathematical adjective, the opposite of concave.

ANSWER: convexity (accept word forms)

<MS>

6. Finding several methods to obtain this quantity earned Jean Perrin the 1926 Nobel Prize, and a modern method of finding this value is by using X-ray crystallography on silicon spheres. This quantity is equal to the Faraday constant divided by elementary charge, and the Loschmidt constant, found by taking pressure divided by the product of the Boltzmann constant and temperature, was an early approximation for this value. Multiplying this quantity by the Boltzmann constant yields the (*) ideal gas constant, while the atomic mass unit is equivalent to the molar mass constant divided by this number. For ten points, identify this constant named after an Italian scientist which is approximately 6.02×10^{23} and is equal to the number of atoms in a mole.

ANSWER: Avogadro constant (accept Avogadro’s number; prompt on “ 6.02×10^{23} ” before read)

<EnzeC>

7. This man is said to have cursed his sons when they served him with a silver table and golden goblet belonging to his great-great grandfather. This figure was rescued from Mount Cithaeron by Polybus of Corinth, and in his old age, this man came under the protection of Theseus and the Erinyes. This man's son Polyneices was killed by his brother in a duel for the throne, and he himself killed a king at the Phocis (*) crossroads. As a reward for causing the sphinx to commit suicide after he correctly answered her riddle, this man replaced King Laius as the husband of Jocasta. For ten points, name this Theban king, who, as Tiresias predicted, married his mother and killed his father.

ANSWER: Oedipus

<BZ>

8. Extensions of this conflict included the War of the Two Peters and the Castilian Civil War. The first portion of this conflict was ended by the Treaty of Bretigny, and cannons were used during the Battle of Castillon. This conflict saw the ransom of John II, and its first major battle was a naval conflict at Sluys. Edward the Black Prince won the Battle of Poitiers and the Battle of Crecy during this war. This war's Siege of (*) Orleans was relieved by a French peasant girl who claimed to have been instructed by God, and English longbowmen triumphed in the Battle of Agincourt. For ten points, identify this medieval war fought between England and France which featured Joan of Arc and lasted from 1337 to 1453.

ANSWER: Hundred Years' War

<JD>

9. In this work, one character becomes angry after seeing *Three Weeks in a Helicopter*, a film which reminds him of his mother's various affairs with Pope. That mother, Linda, was abandoned in a site in New Mexico after having a child with the Director of Hatcheries, and later dies after being returned. In this novel, one character sends (*) Helmholtz Watson to the Falkland Islands where he can freely express himself after being "corrupted" by the sciences and arts. Another character, Bernard Marx, is also exiled by Mustapha Mond after associating with a character that begs for the right to be unhappy, John the Savage. Set in the year of Our Ford 632, for ten points, name this dystopian novel written by Aldous Huxley.

ANSWER: Brave New World

<KT>

10. Aram Khachaturian's third symphony includes 15 solo ones of these instruments, and the first movement of Gustav Mahler's first symphony calls for these instruments playing offstage. This instrument poses the title inquiry of Charles Ives's *The Unanswered Question*, while Joseph Haydn's only work for the chromatic type of this instrument was a concerto dedicated to Anton (*) Weidinger. The "piccolo" type of this instrument is pitched an octave higher than the standard B-flat type of this three-valved instrument, which is a close relative of the cornet. For ten points, name this brass instrument with the highest register, notably played by Miles Davis and Louis Armstrong.

ANSWER: trumpet

<HX>

HALFTIME

11. This celestial object is the largest in a namesake class of bodies that have 2:3 mean motion resonance with a certain larger body. Nix and Hydra are two satellites of this body, the presence of which was originally predicted by Percival Lowell. The *New Horizons* probe is en route to this celestial object. The discovery of Eris raised controversy regarding this object, which was discovered by Clyde (*) Tombaugh. It and its largest satellite are sometimes referred to as a binary planet system, although Charon is still officially classified as a moon of this body. This body's highly eccentric orbit occasionally brings it closer to the Sun than Neptune. For ten points, identify this celestial object that was stripped of its "planet" status in 2006.

ANSWER: 134340 Pluto (sadly accept 134340; prompt on Nix, Hydra, or Charon until Nix and Hydra are mentioned)

<HX>

12. This man described imagination as "nothing but decaying sense" while passions are "interior beginnings of voluntary notions" in a work that claimed covenants formed with God are meaningless. This man's best known work expands on concepts first proposed in his *On the Citizen*, and uses his ideas of imagination, or the "decaying sense," to analyze human motivation. This thinker described the (*) "Kingdom of Darkness" as a "Confederacy of Deceivers" and described chaos as the war of all against all. He also claimed that life in the state of nature is "solitary, poor, nasty, brutish, and short." For ten points, name this English social contract theorist and author of *Leviathan*.

ANSWER: Thomas Hobbes

<HX>

13. Barry St. Leger was unable to reach this battle after a failed siege of Fort Stanwix. One side in this battle was fresh off a victory at Fort Ticonderoga, but had lost most of its Iroquois support in the Battle of Bennington. Timothy Murthy killed Simon Fraser in this battle, which was part of an attempt to divide New England in two. Parts of this battle were fought at (*) Freeman's Farm and Bemis Heights. The eventual loser at this battle was unable to receive reinforcements from Henry Clinton and William Howe and was defeated after the arrival of Benedict Arnold. For ten points, identify this 1777 battle in which British forces under John Burgoyne were defeated by Americans under Horatio Gates in upstate New York, which turned the tide in the American Revolution.

ANSWER: Battle of Saratoga

<JD>

14. One of this author's works sees d'Arrast carry a burden all the way to Iguape Church. That story, "The Growing Stone," is part of his collection, *Exile and the Kingdom*, and this man wrote a novella in which the attorney Clamence regrets letting a girl drown. This author of *The (*) Fall* wrote a novel in which Dr. Bernard Rieux narrates an epidemic sweeping through Oran. This author of *The Myth of Sisyphus* and *The Plague* is best known for writing a work in which the main character is sentenced to death after senselessly killing an Arab. For ten points, name this French existentialist who wrote about Mersault in *The Stranger*.

ANSWER: Albert Camus

<KT>

15. This singer hosted the first annual October's Very Own festival in which he brought out the VIP list of rap stars including Jay-Z and Eminem. In 2006 he released his first mix tape, "Room For Improvement," followed a year later by another mix tape, "Comeback Season." His first acting role was the physically disabled basketball star Jimmy Brooks in (*) *Degrassi*, and in 2009 this man performed with an injured knee and fell on stage when singing his hit song "Best I Ever Had." In another song, he states that he "floated way too long,/[he's] floating in and out of consciousness." For 10 points, name this Canadian rapper whose recent hit singles include "Every Girl" and "Headlines."

ANSWER: Aubrey Drake Graham

<BJ>

16. Some Muslims fast for this many days during the month of Shawwal, and there are this number of orders in the Mishnah. There are this many items in a collection including *maror* and *charoset*, the foods on a traditional (*) Passover seder plate. On this day in the Genesis creation myth, God ordered some beings to "be fruitful and multiply," and created all the beasts of the land and created in his image the first humans. This digit is repeated three times in the number of the Beast. For ten points, how many points are there in a Jewish Star of David?

ANSWER: six

<MS>

17. One process named after these molecules can be initiated by morpholinos and sees Dicer cleave the ds type of these to form a RISC. Puromycin imitates one type of these molecules, which sometimes contain pseudouridine or inosine. They can form snRNPs ["snurps"] with proteins, and ones that catalyze reactions are called ribozymes. (*) Wobble base pairs can be found on one type of these molecules, which is typically depicted as a clover leaf and contains an anticodon. Another type of these molecules can be translated by ribosomes into proteins. For ten points, name this nucleic acid with messenger and transfer types which contains uracil and is typically single-stranded, unlike DNA.

ANSWER: ribonucleic acid or RNA (accept RNA interference; prompt on nucleic acid but do not accept or prompt on "deoxyribonucleic acid" or "DNA" at any time)

<HX>

18. This poet wrote how the "scenes/ and seasons" were "changeless since the day" his wife died in one of his poems, while another of this man's works details the title character with "His hair...crisp, and black, and long" and how he is "toiling,--rejoicing,--sorrowing" as life continues. In addition to "The Cross of Snow" and "The (*) Village Blacksmith", this author also wrote a work in which John Alden gets married with Prisca Mullins despite the title Puritan's broken heart. This author of *The Courtship of Miles Standish* also wrote about Minehaha's love for the title character on the shores of Gitche Gumee. For ten points, name this author of "Paul Revere's Ride" and "The Song of Hiawatha".

ANSWER: Henry Wadsworth Longfellow

<KT>

19. One man's fleet was captured by Isaac Komnenos while en route to this event, and a conflict within this event involved Conrad of Monferrat's claim to the throne. After sacking the Sultanate of Rum, one leader of this event was replaced by Leopold V. This event was preceded by Baldwin IV's victory at the Battle of Montgisard and the defeat of Raynald of Chatillon and Guy of Lusignan at the Battle of Hattin. Philip II helped capture (*) Acre in this event, and another leader won the Battle of Arsuf with help from the Knights Templar. For ten points, identify this 1189-1192 AD attempt to recapture the Holy Land which saw the drowning of Frederick Barbarossa and many battles between Saladin and Richard the Lionheart.

ANSWER: Third Crusade (or Kings' Crusade; prompt on "Crusade")

<JD>

20. Economist Simon Johnson has called this man "Metternich with a Blackberry," and he lost to Segolene Royal in a primary race to be the Socialist candidate for his country's presidential election. This man defeated the Czech Josef Tosovsky in a race for one position, and in 1997, Prime Minister Lionel Jospin appointed this man his country's Minister of Economics. This man succeeded Rodrigo Rato in his most famous position in 2007, and was himself succeeded by Christine (*) Lagarde as director of the IMF, a position he resigned from in May 2011. For ten points, name this Frenchman who was accused of sexual assault by a New York City maid.

ANSWER: Dominique Strauss-Kahn (or DSK)

<DA>

End of regulation, only proceed if tied

21. This man painted a woman dressed in black sitting in one of the nine viewable green sofas in his work, *Chair Car*. Another of his works depicts a blue-clad secretary opening a black filing cabinet and a blond man reading some papers in his *Office at Night*. This artist of (*) *Early Sunday Morning* created a work in which a woman wearing green converses with another person at a white table. In addition to *Chop Suey*, this man's most famous work has an advertisement selling Phillies cigars for five cents. For ten points, name this American artist who painted people at a diner in *Nighthawks*.

ANSWER: Edward Hopper

<KT>

22. One work about this concept claims that it can lead to a preoccupation with material goods and stifle literary development, and was written while its author and Gustave de Beaumont were studying the penitentiary system in the United States. The concept of creative destruction was proposed by Joseph Schumpeter in a work titled *Capitalism, Socialism, and this*, and another work with this in its title attempts to use the philosophies of Plato and Rousseau to improve American (*) schooling. Aristotle described this concept as a perversion of a polity. Alexis de Tocqueville warned of a tyranny of the majority in a work titled this *in America*, while John Dewey wrote about this *and Education*. For ten points, name this concept often described as a government by the people.

ANSWER: democracy

<HX>

BONUSES

1. Bonus: One character in this play, Kristin, is cooking up a potion for a recently impregnated dog. For ten points each:
[10] Identify this play in which the title character commits suicide with a razor after a brief love affair with the servant Jean.

ANSWER: Miss Julie (or Froken Julie)

[10] This author of *Miss Julie* wrote about idealistic journalist Arvid Falk in his novel *The Red Room*.

ANSWER: John August Strindberg

[10] August Strindberg is from this Scandanavian country, the home to Par Lagerkvist. Another author from this country, Astrid Lingren, wrote about the incredibly strong Pippi Longstocking.

ANSWER: Kingdom of Sweden

<MS>

2. Bonus: The anti-diuretic one of these causes the kidneys to conserve water, and cholesterol is the precursor to many of their steroid types. For ten points each:

[10] Name these organic chemicals which affect certain cell function through a signal transduction mechanism. Other examples of them include estrogen and testosterone.

ANSWER: hormones

[10] A surge of this hormone triggers ovulation in females and cause Leydig cells to produce testosterone in males. It is a gonadotropin along with FSH.

ANSWER: luteinizing hormone (accept LH)

[10] The anterior lobe of this endocrine gland, located at the bottom of the hypothalamus, produces LH and FSH, while its posterior lobe secretes oxytocin. It is sometimes referred to as the “master” gland.

ANSWER: pituitary gland

<HX>

3. Bonus: This figure’s volume is five-twelfths times three plus the square root of five times side-length cubed. For ten points each:

[10] Identify this 3-dimensional solid which has twenty faces, each of which is an equilateral triangle.

ANSWER: icosahedron

[10] An icosahedron is one of these polyhedra, in which every face is a regular polygon. There are only five of them, including the regular tetrahedron, octahedron and dodecahedron.

ANSWER: Platonic solids (prompt on regular solids)

[10] This other Platonic solid has 12 edges and 8 vertices, and each of its faces is a square.

ANSWER: cube (or regular hexahedron)

<MS>

4. Bonus: Crispus Attucks was the first to die at this event. For ten points each:

[10] Identify this 1770 event in which British troops under Thomas Preston opened fire on American colonials outside the Old State House in a certain New England city. Paul Revere made a famous engraving of this event.

ANSWER: Boston Massacre

[10] The unrest which led to the Boston Massacre was sparked in part by these acts, which were named after the British Chancellor of the Exchequer. They placed taxes on various commodities, similar to the Stamp and Sugar Acts.

ANSWER: Townshend Acts

[10] The Continental Congress drafted this petition in 1775 and sent it to George III. It pled for Parliament to stop abusing the Colonies, but when it was rejected, Americans decided they’d had enough and declared war on Britain.

ANSWER: Olive Branch Petition

<JD>

5. Bonus: It features a chromatic slide in the woodwinds to depict a huge wave and was dedicated to Frederick William IV of Prussia. For ten points each:

[10] Name this work, originally titled “The Lonely Island,” which was inspired by a visit to Fingal’s Cave.

ANSWER: Hebrides Overture, op. 26

[10] This German composer wrote *Italian* and *Reformation* symphonies, as well as the *Hebrides Overture*.

ANSWER: Felix Mendelssohn

[10] Mendelssohn also composed the incidental music for this Shakespeare play, which includes a famous *Wedding March* and characters such as Lysander and Hermia.

ANSWER: A Midsummer Night’s Dream

<HX>

6. Bonus: Julius Beaufort pursues one character until his business fails. For ten points each:

[10] Identify this novel in which Newland Archer marries May Welland, but has a long affair with her cousin Ellen Olenska.

ANSWER: *The* Age of Innocence

[10] *The Age of Innocence* is a novel by this author. She also wrote about Undine Spragg in *The Custom of the Country* and Lily Bart in *The House of Mirth*.

ANSWER: Edith Wharton (or Edith Newbold Jones)

[10] The title character of this Wharton novel tries to commit suicide in a sled with Mattie, but fails and has to be taken care of by his wife Zeena.

ANSWER: Ethan Frome

<MS>

7. Bonus: Answer some questions about Canadian geography, for ten points each:

[10] This provincial capital of Ontario lies on Lake Ontario. The most recognizable feature of this largest city in Canada is its 1800-foot tall CN Tower.

ANSWER: Toronto

[10] Queen Charlotte Island is a part of this Canadian province, which also features the Fraser River and the Hecate Strait. Its capital is Victoria and its largest city lies across the border from the state of Washington.

ANSWER: British Columbia (accept la Colombie-Britannique or BC)

[10] This geological area covers most of the land surrounding Hudson Bay and is composed of rock dating to the Precambrian Era. It has poor soil due to post-glacial rebound, but is a hot-spot for mining.

ANSWER: Canadian Shield (accept Laurentian Plateau or Bouclier Canadien)

<JD>

8. Bonus: During this war, Count Tilly won the Battle of White Mountain and sacked Madgeburg. For ten points each:

[10] Identify this 17th century war between Protestants and Catholics which featured generals like Albrecht von Wallenstein and was ended by the Peace of Westphalia.

ANSWER: Thirty Years’ War

[10] The Thirty Years’ War began after this event, in which two Catholic regents and a secretary were thrown out a window in a certain Central European city and landed in a pile of manure.

ANSWER: Second Defenestration of Prague (prompt on descriptions like “assassinations by throwing out a window in Prague”)

[10] This Thirty Years’ War battle took place in 1632 near Leipzig, Germany. Even though Gustavus Adolphus died at this battle, the Protestant army managed to defeat Catholic forces under Pappenheim and Wallenstein.

ANSWER: Battle of Lützen

<JD>

9. Bonus: Identify some elementary particles, for ten points each:

[10] These elementary particles that come in six flavors, including top, bottom, and charm. Protons are composed of two up ones and a down one.

ANSWER: quarks

[10] While most of these particles are composite, the six elementary types of them include photons and gluons. They mediate the fundamental forces but do not obey Fermi-Dirac statistics.

ANSWER: bosons

[10] W and Z bosons carry this one of the four fundamental forces, which Glashow, Salam, and Weinberg unified with electromagnetism.

ANSWER: weak nuclear force

<LC>

10. Bonus: Name some Jewish holidays, for ten points each:

[10] This holiday celebrates the foiling of the evil Haman's plot by Esther and Mordechai.

ANSWER: Purim

[10] This wintertime Jewish "festival of lights" begins on the 25th of Kislev and commemorates the Maccabees' defeat of Antiochus and the re-dedication of the Temple. It sees the lighting of a nine-branched menorah.

ANSWER: Hannukah (or Chanukah)

[10] The ninth day of this Jewish calendar month is a fast day commemorating the destruction of both the First and Second Temples in Jerusalem.

ANSWER: Av (or Ninth of Av; or Tisha B'Av)

<MS>

11. Bonus: Answer some questions regarding the periodic table, for ten points each.

[10] While horizontal rows are known as periods, the columns in a periodic table are denoted by this term.

ANSWER: families or groups

[10] This man is credited with creating the first periodic table, which he used to predict the elements gallium and germanium.

ANSWER: Dmitri Ivanovich Mendeleev

[10] This quantity generally decreases along a period due to increasing nuclear charge from additional electrons. Atomic shielding causes this value to increase down a column, and bond length equals the sum of the values of this for the two bonded atoms.

ANSWER: atomic radius

<EnzeC>

12. Bonus: One experiment investigating it had participants filling out a questionnaire while a room filled with smoke, while another used recordings of a screaming woman. For ten points each:

[10] Name this effect in which the presence of others makes people less likely to react in emergency situations.

ANSWER: bystander effect (accept Kitty Genovese effect, but do not reveal if not given)

[10] This phenomenon is thought to magnify the bystander effect in large groups. It maintains that people are discouraged from action by the inaction of others around them.

ANSWER: diffusion of responsibility

[10] The murder of this New York bartender is often incorrectly cited as an example of the bystander effect. She was raped and stabbed to death in the presence of over 30 witnesses, none of whom tried to help.

ANSWER: Kitty Genovese

<HX>

13. Bonus: One character in this work thinks it must be spring, because a tree has sprouted leaves overnight. For ten points each:

[10] Identify this play in which Vladimir and Estragon meet Lucky and Pozzo while indefinitely anticipating the arrival of the title character.

ANSWER: Waiting for Godot (or En Attendant Godot)

[10] *Waiting for Godot* is a play by this Irish author, who wrote about Hamm who cannot stand up and Clov who cannot sit down in *Endgame*.

ANSWER: Samuel Beckett

[10] Beckett also wrote this play in which the title character celebrates his 69th birthday by listening to a recording he made of himself 30 years earlier.

ANSWER: Krapp's Last Tape

<MS>

14. Bonus: She oversaw her country's first nuclear test, Operation Smiling Buddha. For ten points each:

[10] Identify this only female prime minister of India, who was assassinated by two of her Sikh bodyguards after ordering a raid on the Golden Temple at Amritsar. Her son Rajiv took office after she was assassinated.

ANSWER: Indira Gandhi (prompt on "Gandhi")

[10] This father of Indira Gandhi served as the first prime minister of India. He gave the "Tryst with Destiny" speech and co-founded the Non-Aligned Movement with Tito and Sukarno.

ANSWER: Jawaharlal Nehru

[10] Nehru was opposed by the Muslim League, which was led by this country's president Muhammad Ali Jinnah. This country had previously split from India in 1947 and has capital at Islamabad.

ANSWER: Islamic Republic of Pakistan

<JD>

15. Bonus: He beheaded his sister Coyolxauhqui and placed her head in the sky as the Moon. For ten points each:

[10] Name this hummingbird god of war who required human sacrifices every 52 years. His mother was impregnated by a ball of feathers, leading to his birth.

ANSWER: Huitzilopochtli [accept Uitzilopochtli, prompt on some combination of "Hummingbird" and "left"]

[10] Huitzilopochtli, whose Nahuatl name meant "hummingbird on the left", was the war god of these Mesoamerican people. Ometeotl was their creator god, and Tezcatlipoca served as their sorcerer.

ANSWER: Aztecs

[10] The Aztec god Tlaloc was responsible for this phenomenon, the coming of which required child sacrifices. Along with the sea, this was also controlled by the Japanese god Raijin.

ANSWER: rain [accept storms, showers, precipitation or other specific types of rain, prompt on "weather", do not accept "thunder" or "lightning"]

<BZ>

16. Bonus: This man was Public Enemy Number 1 until he was assassinated by Seal Team Six. For ten points each:

[10] Name this man who, before his death in Abbottabad, Pakistan, was the leader of al-Qaeda.

ANSWER: Osama bin Mohammed bin Awad bin Laden (accept any reasonable combination of correct names)

[10] The bin Laden family disowned Osama to maintain their connections with the rulers of this Arab State, which borders Yemen and Oman.

ANSWER: Kingdom of Saudi Arabia

[10] Osama bin Laden was the head of al-Qaeda during the bombing of this US ship which was masterminded by Abd al-Nashiri and occurred in the Yemeni port of Aden.

ANSWER: USS Cole

<DA>

17. Bonus: Identify some civilizations of ancient Mesopotamia, for ten points each:

[10] One of this civilization's rulers, Ashurbanipal, constructed a large library at its capital of Nineveh. Other rulers of this empire included Tiglath-Pileser and Sennacherib.

ANSWER: Assyrian Empire (or Assyrians)

[10] This civilization established its capital at Hattusa, in central Anatolia. They were the first to use iron tools, and their army under Muwatalli II fought at Kadesh.

ANSWER: Hittite Empire (or Hittites)

[10] These ancient Iranian people collaborated with the Neo-Babylonians to capture Nineveh but they were later conquered by the Achaemenids under Cyrus the Great.

ANSWER: Medes (or Median empire)

<JD>

18. Bonus: This measurement, symbolized as rho, can be calculated for an ideal gas by MP/RT ("em-pee-over-are-tee"). For ten points each:

[10] Name this measurement defined as mass per unit volume, which for water is about one gram per cubic centimeter.

ANSWER: density

[10] This value is a ratio of the density of a substance to the density of a reference substance, which is usually water.

ANSWER: specific gravity (do not accept "specific weight")

[10] Found mostly in platinum ores, this silvery metal is the densest natural element.

ANSWER: osmium (accept Os)

<EnzeC>

19. Bonus: A red cross can be seen on a black-haired painter holding a canvas towards the back of this painting. For ten points each:

[10] Name this painting depicting a dwarf, a dog, and other figures crowded around Philip IV's daughter, the Infanta Margarita.

ANSWER: Las Meninas (Accept The Maids of Honor)

[10] In addition to *Las Meninas*, this artist painted a nude *Rokeby Venus* and a portrait of Innocent X.

ANSWER: Diego Rodríguez de Silva y Velázquez

[10] Velazquez also painted this work, in which Justin Nasseau gives up his keys to Ambrosio de Spinola in the central agreement.

ANSWER: The Surrender of Breda (Accept La rendición de Breda)

<KT>

20. Bonus: He included "The Earth's Name is Juan" and "The Heights of Macchu Picchu" in his *Canto General*. For ten points each:

[10] Identify this poet who claimed "Tonight I can write the saddest lines" in *Twenty Love Poems and a Song of Despair*. His *Elementary Odes* are to such interesting things as artichokes and a large tuna in the market.

ANSWER: Pablo Neruda (or Ricardo Eliecer Neftali Reyes Basoalto)

[10] This woman was the school director in Neruda's hometown of Temuco, but is better known for her poetry collections, like *Sonnets of Death* and *Despair*.

ANSWER: Gabriela Mistral (or Lucila de Maria del Perpetuo Socorro Godoy Alcayaga)

[10] Both Neruda and Mistral hailed from this South American country. The novelist Isabel Allende also comes from here.

ANSWER: Republic of Chile

<MS>

21. Bonus: The music video for this song begins with a featured singer standing in front of a burning house claiming she “likes the way it hurts.” For ten points each:

[10] Name this song in which the main artist claims that their crazy relationship is “what happens when a tornado meets a volcano,” but never seems to tell the truth.

ANSWER: “Love the Way You Lie”

[10] This rapper collaborated with Rihanna on “Love the Way You Lie.” His latest album, *Recovery*, features hit singles such as “Not Afraid,” and one of his most successful albums was 1999’s *The Slim Shady LP*.

ANSWER: Eminem (accept Marshall Bruce Mathers III)

[10] Eminem began his acting career with this 2002 hip hop drama, where he stars as an aspiring rapper named “B-Rabbit.” Eminem won an Academy Award for singing “Lose Yourself” in this movie.

ANSWER: 8 Mile

<EnzeC>

22. Bonus: The Czochralski process creates a cylindrical type of this material known as a boule. For ten points each:

[10] Identify this solid material, examples of which include snowflakes, table salt, and diamond, whose constituent atoms and molecules are arranged in an orderly, repeating pattern.

ANSWER: crystalline solid

[10] This type of crystal arrangement comes in simple, face-centered, and body-centered varieties. A prime example of this structure is the crystal pyrite.

ANSWER: cubic (accept isometric)

[10] For an ionic solid, this quantity is defined as the energy required to completely separate one mole of the compound into its gaseous ionic constituents.

ANSWER: lattice energy

<EnC>