**LADUE INVITATIONAL SPRING TOURNAMENT 2012**

Round 13

**TOSS-UPS**

**1. Upon taking office, this man declared Aslan Maskhadov’s Chechen government illegitimate, and he later gave medals to the soldiers who “accidentally” killed Maskhadov. This man was recently booed at a boxing match and said that a diplomat gave a “good signal” to his opponents. The owner of the New Jersey Nets recently announced he would run in an election against this man, who, after (\*)** Boris Yelstin resigned, became acting president of his country. In 2008, he declined to run for a third term as president, but in December 2011, he announced he would once again run. For ten points, name this Russian politician who is the current prime minister of Russia.
ANSWER: Vladamir **Putin**
<DA>

**2. Coumarin derivatives, such as phenprocoumon, can inhibit this process by blocking the enzyme VKORC, and the aPTT and PT tests can be used to measure the efficiency of proteins involved in this process. Hageman and von Willebrand name factors involved in this process, and the absence of another of its factors can cause Christmas disease. Fibrinogen is converted into fibrin during this process by (\*)** thrombin, the proteolytical cleavage of which begins this process’s namesake “cascade.” Thrombosis refers to when this process occurs inside an uninjured blood vessel, and this process is impaired in patients with hemophilia. Platelets aggregate during this process, which typically results in a scab. For ten points, name this process by which blood congeals after an injury.
ANSWER: **coagulation** or **clotting**
<HX>

**3. One text in this religion advocates its followers to “cleanse themselves of all that is earthly” for those who seek truth and faith, and this religion’s only guardian, Shoghi Effendi, is credited to translating another text in this religion, the *Epistle to the Son of the Wolf*. Its calendar consists of 19 months, each consisting of 19 days, and it advocates all men to observe a 19-day fast. This religion’s (\*)** Universal House of Justice can be found in Haifa, Israel, and its *Book of Certitude* claims religion grew through a series of divine messengers including Buddha, Jesus, and Muhammad. For ten points, identify this religion founded by the Baha’u’llah.
ANSWER: **Baha’i** Faith (or **Baha’i**sm)
<KT>

**4. One scene from this work sees a main character fend off an army of 150,000 by opening all the city gates and faking an ambush. Earlier, that same character is able to produce 100,000 arrows in one night by sailing ships filled with straw into enemy territory under the cover of fog. This novel begins with three men swearing an oath of brotherhood in the peach garden, and sees warlord Dong Zhuo assassinated by his foster son (\*)** Lu Bu. After the Battle of Xiapi, Lu Bu is hanged by general Cao Cao (“tzow-tzow”), who later faces a major setback when his chained ships are burned at the Battle of Red Cliffs. For ten points, identify this historical novel about the tumultuous title era in Chinese history, a work by Luo Guanzhong.
ANSWER: ***Romance of the Three Kingdoms*** (accept ***San Guo Yan Yi***)
<EnzeC>

**5. This state contains Singer Island and Anna Maria Island, and its Big Talbot Island is a state park. This state’s highest point is Britton Hill, and it is home to the Rim Canal and the Seven Mile Bridge. Dry Tortugas National Park lies in this state, which shares (\*)** Okefenokee Swamp with its northern neighbor and contains the Kissimmee River. This state’s Cape Canaveral is home to the Kennedy Space Center. Big Cypress Swamp, Fort Lauderdale, Tampa Bay, Epcot, and the Everglades all lie within this state. For ten points, name this Sunshine State home to Key West, with capital at Tallahassee.
ANSWER: **Florida**
<DA>

**6. An angel in this work etches the letter “P” into the narrator’s head, and in another section, those who die bravely for Christianity are sent to Mars. Beginning with the line, "Nel mezzo del cammin di nostra vita”, this work sees Caselia play music as others enter and another scene shows a character grind Ruggeiri’s head. The narrator of this work meets Count Ugolino and Montefeltro, and describes the fate of Francesca. Seeing an icy area named (\*)** Cocytus, this work includes the line, "Abandon all hope, ye who enter here." The narrator is guided through Heaven by his love Beatrice and led through Purgatory and Hell by Vergil in, for ten points, what epic by Dante Alighieri?
ANSWER: *The* ***Divine Comedy* (**or ***Divina Commedia***; accept ***Purgatoria*** or ***Purgatory*** before “Mars” is read, afterwards prompt on specific sections like *Inferno, Purgatoria, or Paradiso*)
<KT>

**7. This god was worshipped with Vulcan at the trumpet-cleaning ceremony known as the Tubilustria. In the time of Numa Pompilius, he purportedly made eleven shields rain down from the sky. Flora helped this fatherless deity’s mother give birth. Augustus named one temple after this god, who also names the field the Pantheon is located on,  and worshipped him as the avenger Ultor.  One of this god’s sacred birds was the (\*)** woodpecker, and the Vestal Virgin Rhea Silvia was raped by this father of Romulus and Remus. This god was caught in bed with Venus by her husband Vulcan. For ten points, name this son of Juno, the Roman god of war and counterpart of Ares.
ANSWER: **Mars** [do not accept “Ares” at any point”]
<BZ>

**8. In air it is equal to the square root of the adiabatic index times the gas law constant times temperature divided by molar mass, and Prandtl and Glauert suggested that approaching this quantity would lead to infinite pressure. This quantity for a gas is not dependent on pressure or density, but rather on temperature, which is why it is generally lower as one gets higher in the atmosphere. This quantity is equal to about (\*)** 340 meters per second in room temperature air, and the ratio of an object’s speed to this quantity is its Mach number. For ten points, what is this quantity, the measure of how fast a certain type of wave can reach our ears?
ANSWER: **speed** of **sound** (accept equivalents, accept **Mach 1** before mentioned)
<MS>

**9. The composer of this work intended for a minor setting of its opening theme to depict pale light radiating from skulls, and its penultimate movement includes continuous 16th note triplet tremolos in its andante section as well as series of rising octaves in its allegro sections, which depict a witch’s flight. Staccato grace notes represent unhatched chickens in this work’s fifth movement, and its “Promenade” theme features alternating bars of  5/4 and 6/4 time. This work was notably orchestrated by (\*)** Maurice Ravel, and includes movements such as “The Hut on Fowl’s Legs” and “The Great Gates of Kiev.” Viktor Hartmann’s paintings inspired, for ten points, which piano suite composed by Modest Mussorgsky?
ANSWER: ***Pictures at an Exhibition*** (accept “of” or “from” instead of “at”)
<HX>

**10. This ruler’s ambassador Nabonidus was successful in negotiating conflicts between the Medes and Lydians. This man was succeeded by his son Awil-Marduk, and he constructed the Esagila and the Ishtar Gate to restore his empire’s glory. This ruler’s victory at the Battle of Carchemish ended the Assyrian Empire. This son of (\*)** Nabopolassar captured King Jehoikim and destroyed the First Temple during his conquest of Judah and Jerusalem, after which he forced the Jews into exile. For ten points, name this Neo-Babylonian king, most famous for his construction of the Hanging Gardens of Babylon.
ANSWER: **Nebuchadnezzar** II (or **Nebuchadrezzar** II or **Nabû-kudurri-uṣur**)
<KT>

**HALFTIME**

**11. This man argued that the human mind is immortal because it acts without a bodily organ in *On the Soul,* and included the spectacle, or opsis, in the six elements of tragedy in another work*.* Francis Bacon wrote a notable response to this man’s collection of six works on logic, his *Organon*, and this thinkerargued that society forms for the sake of noble actions. This author of (\*)** *Poetics* and *Politics* described the prime-mover God in his *Metaphysics* and stated that the highest aim of humans is happiness in his *Nicomachean Ethics*. The Lyceum was founded by, for ten points, which ancient Greek philosopher, a student of Plato and a tutor of Alexander the Great?
ANSWER: **Aristotle**
<HX>

**12. In one movie, this actor had a bitter jedi rivalry with Larry Cooper because he was interested in the dark side. Earlier in that movie, Jeff Bridges comes back from a spiritual journey with a ponytail and gets this actor to join his New Earth Army. He directed *Good Night, and Good Luck*, and starred opposite Meryl Streep in a movie about foxes.  He got his first big break as Doug Ross on *ER,* and took on Frank Sinatra’s former role in a movie about a (\*)** heist. In that film, he played a recently paroled crook looking to rob three casinos, and starred alongside Brad Pitt, Matt Damon, and Julia Roberts. For ten points, name this actor who is known for his roles in *Men Who Stare at Goats*, *Fantastic Mr. Fox, Michael Clayton,* and *Ocean’s Eleven*.
ANSWER: George **Clooney**
<DA>

**13. This author wrote a novel in which Dr. Archi takes care of Thea, who later falls in love with Fred Ottenberg. In another work by this author, Joseph Valliant and Jean Latour travel from Ohio to New Mexico. In addition to *The Song of the Lark* and (\*)** *Death Comes for the Archbishop*, this author wrote a work in which the Nebraskan Jim Burden falls in love and has an affair with the title character, and another work in which Frank Shabata murders Mary and Carl Lindstrum marries Alexandra Bergson. For ten points, name this author of *My Antonia* and *O Pioneers!*
ANSWER: Willa Sibert **Cather**
<KT>

**14. This compound reacts with sodium chloride in the Mannheim process, and this substance is used in the Beckmann rearrangement to produce caprolactam, the precursor to Nylon 6. This compound is used to protonate nitric acid, and is produced after a vanadium(V) oxide (“va - NAY - dee - um five oxide”) catalyst facilitates the central oxidation step in the contact process. Also called (\*)** “oil of vitriol,” a dilute form of this substance is created by the atmospheric oxidation of sulfur dioxide by water, producing acid rain. Lead-acid batteries contain a lot of, for ten points, what highly corrosive substance with chemical formula H2SO4?
ANSWER: **sulfuric acid** (accept “oil of vitriol” and “H2SO4” before read)
<EnzeC>

**15. Lester Pearson criticized this man for shouting “*Vive le Quebec libre!*” at Expo 67. He issued the *Appeal of 18 June* and opposed Britain’s entry into the European Economic Community. This man criticized his country’s lack of an effective army in *The Army of the Future*. The (\*)** OAS attempted to assassinate him after he signed the Evian Accords with the FLN in 1962, which resulted in the independence of Algeria. He opposed Andre Petain’s rule of Vichy France. For ten points, identify this leader of the Free French during World War II, who later served as the first President of the Fifth Republic.
ANSWER: Charles André Joseph Marie **de Gaulle**
<JD>

**16. These entities generally form inside the Roche limit, and bodies inside that limit will become one of these unless they are being held together by tensile strength. Rhea was the first satellite discovered to have these features. One of these entities named after John Couch Adams can be found near Neptune, and Phobos is predicted to form one of these in 50 million years. One designated (\*)** “F” is “shepherded” by Prometheus and Pandora, while one of these entities named Phoebe is tilted at an angle of 27 degrees relative to the other ones of Saturn. They are generally thought to form from the material of the protoplanetary accretion disc that do not coalesce to form moons. For ten points, name these flat, disk-shaped collections of small particles orbiting a planet.
ANSWER: planetary **ring**s
<HX>

**17. In William-Adolphe Bougereau’s depiction of this scene, the central figure brushes fingers through her hair. In Cabanel’s version, the title figure reclines on her left side while five cherubs fly above her, two of which are blowing conch shells. In the best-known painting of this event, Chloris clings to (\*)** Zephyrus while a woman on the right throws a cloth over the naked title figure, who stands impossibly on a half-shell. For ten points, name this scene depicting the emergence of a certain goddess of love from a body of water, the most famous one of which was painted by Botticelli.
ANSWER: The **Birth of Venus** (Accept anything suggesting Venus being born)
<KT>

**18. Generalizations of this problem include the Hadwiger Conjecture, and Apollonian networks have a unique solution to this problem. The 15-node Poussin graph exhibited a flaw in a supposed proof of this statement by “tangling” Kempe chains, but Heawood used Kempe’s work to prove a 25% weaker bound on this problem. The proof of this conjecture required verifying (\*)** 1,936 separate cases. It was finally proven in 1976 by Wolfgang Haken and Kenneth Appel with the aid of a computer. For ten points, identify this mathematical problem, which states that any map with contiguous regions can be colored with less than five colors.
ANSWER: **Four Color** Theorem
<MS>

**19. Ambrose Bierce witnessed this man’s victory at the Battle of Tierra Blanca over the forces of Salazar, and he also commissioned the first horse ambulances as head of the Division of the North. This man joined forces with Pascual Orozco to win the First Battle of Ciudad Juárez, and strongly supported Fransisco Madero in his attempts to oust Porifio Díaz from power. He joined the rebellion against (\*)** Victoriano Huerta, but felt betrayed by president Wilson’s decision to support Carranza, resulting in his attacks on the towns of Santa Isabel and Chihuahua.General Pershing was unable to capture, for ten points, what Mexican bandit who led a raid on the American town of Columbus, New Mexico?
ANSWER: Pancho **Villa** (accept José Doroteo **Arango** Arámbula or Francisco **Villa**)
<EnzeC>

**20. In one of this author’s novels, the ironclad *HMS Thunder Child* is destroyed after providing a safe passage from Essex, while in another, the Ape Man leads the protagonist through a jungle where they find half-animal and half-human creatures. This author who wrote about Edward Prendick in *The (\*)*** *Island of Doctor Moreau* wrote a work in which the protagonist encounters the child-like Eloi and the savage Morlock and begins by discussing the fourth dimension, and he authored another work in which Martians invade London. For ten points, name this this English author of *The Invisible Man, The Time Machine,* and *The War of the Worlds*.
ANSWER: Herbert George "H.G." **Wells**
<LC>

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

**21. Holders of this position are responsible for receiving written communication from the President when he resigns, and the second one presented the Virginia Plan. Madeleine Albright was the first woman to hold this post, and George Marshall created his namesake plan after World War II while holding this position. The first holder of this position, (\*)** Thomas Jefferson, was appointed by Washington and notably opposed the views of the Treasury Secretary Alexander Hamilton, while others who were given this title include Colin Powell and Condoleezza Rice. For ten points, identify this cabinet position in charge of conducting foreign affairs for the United States, a post currently held by Hillary Clinton.
ANSWER: United States **Secretary of State**
<EnzeC>

**22. Darwinian tubules are vestigial muscles found on this structure. This structure is affected by Ménière’s disease, and can also be damaged by ototoxins.  Signals from this structure are sent through the eighth cranial nerve by its organ of Corti. A waxy substance called cerumen forms in this organ, and sensory information from this organ is processed by the (\*)** temporal lobe. Vertigo is caused by problems in a snail-shaped part of it, and bones in this organ include the malleus and stapes, the latter of which moves fluid within this structure’s cochlea. Its tympanic membrane, also known as this organ’s “drum,” is vibrated by sound waves. For ten points, name this auditory organ.
ANSWER: **ear**s (prompt on specific parts of the ear like “cochlea” or “eardrum”)
<HX>

**BONUSES**

1. Bonus: In a strong dissenting opinion, Justice Hugo Black wrote that “when pupils... can defy and flout orders of school officials... it is the beginning of a new revolutionary era of permissiveness.” For ten points each:
[10] Identify this Supreme Court case that began when three students violated a school policy by wearing black armbands in protest of the Vietnam War.
ANSWER: **Tinker** v. Des Moines
[10] The Supreme Court ruled in favor of Tinker, holding that this constitutional amendment applied to public schools and that students did not shed their  rights to freedom of speech or expression at the schoolhouse gate.
ANSWER: **First** Amendment
[10] In this other Supreme Court case, the Court upheld the Espionage Act of 1917 and limited the freedom of speech in the case of a “clear and present danger,” such as “shouting fire in a crowded theater.”
ANSWER: **Schenck** v. US
<EnzeC>

2. Bonus: A farmer in the foreground of this painting plows the field without noticing the title action occurring below. For ten points each:
[10] Identify this 16th century painting which depicts the drowning of the title son of Daedalus.
ANSWER: *Landscape with the* ***Fall of Icarus***
[10] This Flemish painter painted *Netherlandish Proverbs*, *The Peasant Wedding*, and *The Triumph of Death* in addition to *Landscape with the Fall of Icarus*.
ANSWER: Pieter **Bruegel** the Elder
[10] This Bruegel work, part of his Labors of the Months series, depicts a wintry scene in which the title figures return to a village with their dogs while other figures ice skate on a frozen lake in the distance.
ANSWER: *The* ***Hunters in the Snow*** (or *The* ***Return of the Hunters***; or **Jagers in de Sneeuw**)
<JD>

3. Bonus: The narrator of this work decides to employ the title character as foreman of his mine. For ten points each:
[10] Identify this novel in which the title character seduces Madame Hortense before the narrator leaves Crete.
ANSWER: ***Zorba the Greek***
[10] *Zorba the Greek* is the most famous work of this Greek author of *The Last Temptation of Christ* and *The Greek Passion*.
ANSWER: Nikos **Kazantzakis**
[10] Kazantzakis also wrote a *Modern Sequel* to this work, an epic written by Homer about a ten-year journey after the events of the *Iliad*.
ANSWER: *The* ***Odyssey***
<MS>

4. Bonus: Identify the following about graphs, for ten points each:
[10] Reflecting the graph of a given function about the line *y* equals *x* will yield this curve. For a one-to-one function *f*, this is the function *g* such that *f* of *g* of *x* is *x*.
ANSWER: **inverse** of *f*
[10] If *a* is a root of *f* of *x*, then *a* is one of these points for *f*’s inverse, the intersection of a curve and the vertical axis of a graph.
ANSWER: ***y*-intercept** (or **value when 0 is plugged in** or equivalents)
[10] Polynomials with odd degree have no global maximum, so intrepid calculus students often find these points instead, points on the graph which are slightly higher than those to their right and left.
ANSWER: **local** maximum or **relative** maximum
<MS>

5. Bonus: He famously stated that Spider pig does whatever a Spider pig does. For ten points each:
[10] Name this food-loving main character of *The Simpsons* who has three children, named Bart, Lisa, and Maggie, with his wife Marge.
ANSWER: **Homer** Jay Simpson (prompt on “Simpson”)
[10] This Springfield Elementary School bully has unevenly cut hair and can speak in Swahili, Esperanto, and Klingon. He falsely claims that he’s not attended a bar mitzvah, and in one episode, he appears with a lip plate.
ANSWER: **Dolph** Starbeam
[10] This owner of the Springfield Kwik-E-Mart has a wife named Manjula and is known for saying, “thank you, come again”.
ANSWER: **Apu** Nahasapeemapetilon
<KT>

6. Bonus: Answer these questions about contemporary classical musicians of Asian descent, for ten points each:
[10] This cellist’s instrument is nicknamed Petunia, and he made a video appearance at the debut of the YouTube Symphony Orchestra. He also played at Obama’s 2009 inauguration ceremony, along with Itzhak Perlman and others.
ANSWER: Yo-Yo **Ma**
[10] This Chinese pianist, the first YouTube Symphony Orchestra Global Ambassador, is featured on the score of *The Painted Veil*. He famously played at the opening ceremony for the 2008 Summer Olympics in Beijing.
ANSWER: Lang **Lang**
[10] Kyung-wha Chung and Sarah Chang both play this instrument. Vanessa Mae famously played the *Devil’s Trill Sonata* on this instrument, and Midori Goto broke her e-string twice while playing Mendelssohn’s concerto for it.
ANSWER: **violin**
<HX>

7. Bonus: The title character of this work is exiled after getting caught with the concubine of his half-brother. For ten points each:
[10] Identify this work about the title figure in the imperial court, who has an affair with Lady Fujitsubo. One chapter of this work is left blank, implying the protagonist’s death. It is often considered the first novel.
ANSWER: *The* ***Tale of Genji*** (or ***Genji Monogatari***)
[10] This Heian period Japanese author wrote *The Tale of Genji*, as well as writing of her time as a lady-in-waiting of the Japanese court in her diary.
ANSWER: Lady **Murasaki** Shikibu (prompt on either name of **Fujiwara** **Takako**)
[10] Mursaki was not a huge fan of Sei Shonagon, who is best known for this collection of observations of court life, part of which was accidentally revealed to the court before completion.
ANSWER: *The* ***Pillow Book***(or ***Makura no Soshi***)
<MS>

8. Bonus: One of these states that every action causes an equal and opposite reaction. For ten points each:
[10] Identify this collection of three laws of motion, the second of which states that force equals mass times acceleration. They were formulated by a man who discovered a law of universal gravitation after an apple hit him.
ANSWER: **Newton**’s Laws of Motion (accept basically anything with “Newton”)
[10] Another formulation of Newton’s Second Law states that force is the derivative with respect to time of this quantity, equal to mass times velocity.
ANSWER: linear **momentum**
[10] Newton’s third law follows from Noether’s Theorem, which roughly states that there is a law of this type for most physical processes. One of these laws for kinetic energy only applies in the case of elastic collisions.
ANSWER: **conserv**ation laws (accept equivalents)
<MS>

9. Bonus: This figure had a widely disapproved affair with Aspasia of Miletus. For ten points each:
[10] Identify this 5th century BC politician who oversaw the construction of the Parthenon and championed democracy, leading Thucydides to call him the “first citizen of Athens.”
ANSWER: **Pericles**
[10] Pericles led Athens in several wars against this rival city-state located on the Peloponnesian Peninsula. Famous inhabitants of this city-state include Lysander and Leonidas, who fought the Persians at Thermopylae.
ANSWER: **Sparta**
[10] Another famous Greek lawgiver was this Spartan king who lived in the 8th century BC. He reformed Spartan society by making it significantly more more militaristic.
ANSWER: **Lycurgus**
<JD>

10. Bonus: His rib was used to create his companion near the beginning of Genesis. For ten points each:
[10] Identify this first human who ate a forbidden apple from the tree of knowledge after he and his wife Eve were tricked by a serpent.
ANSWER: **Adam**
[10] Later in the Book of Genesis, God decided to destroy these two cities with “fire and brimstone.” Lot managed to escape, but unfortunately his wife was turned into a pillar of salt for looking back.
ANSWER: **Sodom** and **Gommorah** (accept in either order, prompt if only one is given)
[10] After escaping from Sodom and Gomorrah, Lot conceived this man through incestuous relations with his elder daughter. His namesake kingdom warred with the Israelites to the west.
ANSWER: **Moab** (or **Moav**)
<JD>

11. Bonus: This body’s Treaty of Lisbon was initially rejected by an Irish referendum. For ten points each:
[10] Identify this organization, many of whose member states, such as France and Germany, use the euro.
ANSWER: **E**uropean **U**nion
[10] The European Union was formally created by this February 7, 1992 treaty, which also created the euro.
ANSWER: Treaty of **Maastricht**
[10] In 2009, Herman Van Rompuy, the former Prime Minister of this country, was elected president of the European Council. He was then replaced by Yves Leterme.
ANSWER: **Belgium**
<MS>

12. Bonus: Identify some cities from their landmarks, for ten points each:
[10] Westminster Abbey and Big Ben lie along the Thames River in this major European city. Other landmarks in this city include St. Paul’s Cathedral, Piccadilly Circus, and Trafalgar Square.
ANSWER: **London**
[10] The Maiden’s Tower, the Blue Mosque, and the Hagia Sophia all lie near the Bosporus in this city connecting Europe to Asia.
ANSWER: **Istanbul**
[10] This Asian city is famous for pictures of its skyline, which contains buildings such as the International Commerce Center, the HSBC Headquarters Building, and a certain tower built by I.M. Pei.
ANSWER: **Hong Kong**
<JD>

13. Bonus: Answer some questions about economics, for ten points each:
[10] This curve plots revenue to taxation rates and claims that at 0% and 100% taxation rates, the government gains no revenue. Its namesake first drew this curve on a cocktail napkin.
ANSWER: **Laffer** Curve
[10] This curve claims that inflation rises when unemployment drops, and vice-versa. This curve came under attack when many countries experienced both high inflation and high unemployment in the 1970’s.
ANSWER: **Phillips** Curve
[10] Okun’s Law states that increases in unemployment result in decreases of this quantity, which is equal to the total value of the goods and services produced within a country in a given period of time.
ANSWER: **GDP** (or **G**ross **D**omestic **P**roduct)
<JD>

14. Bonus: Though the author did not fight himself, it is thought he based this novel’s events off of Chancellorsville. For ten points each:
[10] Identify this novel in which Civil War soldier Henry Fleming does indeed flee from battle like he feared, but returns after receiving the title wound.
ANSWER: *The* ***Red Badge of Courage***
[10] *The Red Badge of Courage* is the most famous novel of this author, who also wrote *Maggie: A Girl of the Streets*.
ANSWER: Stephen **Crane**
[10] Crane also wrote this short story in which Scratchy Wilson decides not to attack Sheriff Jack Potter when he sees him with his new wife.
ANSWER: “The **Bride Comes to Yellow Sky**”
<MS>

15. Bonus: The kinetic theory is best applied to these particles at low pressures and high temperatures. For ten points each:
[10] Identify this state of matter which is achieved when a substance is heated past its boiling point.
ANSWER: **gas**
[10] Heating a gas can cause its molecules to ionize, changing it into this similar state of matter which can be found in fluorescent lamps.
ANSWER: **plasma**
[10] This other state of matter was first produced by cooling gaseous rubidium atoms to temperatures near absolute zero.
ANSWER: **B**ose–**E**instein **C**ondensate (prompt on partial)
<EnzeC>

16. Bonus: The third one of cholera was investigated by John Snow. For ten points each:
[10] Name these health related events in which diseases spread to populations across multiple continents. Current ones include HIV and AIDS, while 2003 saw worries of bird flu becoming one of them.
ANSWER: **pandemic** (prompt on **epidemic**)
[10] The World Health Organization declared this disease to be a pandemic in 2009. It is not actually caused by pigs.
ANSWER: **H1N1** or **swine flu**
[10] This term, coined by Hippocrates, refer to diseases that, unlike pandemics, have a high prevalence but low incidence within a population. Malaria is often considered one of these in South-East Asia and India.
ANSWER: **endemic**
<HX>

17.Bonus: This wireless carrier was denied its merger with T-Mobile USA because it would “discourage competition.” For ten points each:
[10] Name the second largest wireless carrier in the US and the first carrier to offer the iPhone.
ANSWER: **AT&T**
[10] This agency of the US government regulates the transfer of electronic data across the airwaves and prevented the AT&T-T-Mobile merger to “preserve a competitive market.”
ANSWER: **F**ederal **C**ommunications **C**ommission
[10] This world’s largest manufacturer of mobile phones is based in Finland, and announced in 2011 that all of its smartphones would be powered by the Windows phone operating system.
ANSWER: **Nokia** Corporation
<DA>

18. Bonus: He owns a spear named the Gae Bulg and takes part in the Cattle Raid of Cooley. For ten points each:
[10] Name this hero who killed Culann’s guard dog and fought the armies of Queen Medb. He is killed by Lugaid, who had forged three magical spears that kill this man’s charioteer, his horse, and finally this man.
ANSWER: **Cu Chulainn** [prompt on **Culann**’s **Dog**]
[10] Cu Culainn was a hero in the Ulster Cycle of these people, whose tales were recorded in Gaelic and contained heroes like Finn MacCool.
ANSWER: the **Irish** [accept equivalents like the people of **Ireland**]
[10] This Irish goddess of battle and strife appeared in the form of a crow flying over the battle, and appears as an eel, wolf, and cow to hinder Cuchulainn in the Cattle Raid of Cooley.
ANSWER: the **Morrigan**
<BZ>

19. Bonus: The largest land battle during this war occurred at Mukden, a city which is now known as Shenyang. For ten points each:
[10] Identify this 1904 to 1905 war which saw Admiral Heihachiro Togo defeat the navy of Tsar Nicholas II at Port Arthur.
ANSWER: **Russo-Japanese** War
[10] This naval battle of the Russo-Japanese War saw Admiral Togo defeat Zinovy Rozhestvensky in the namesake strait between Korea and Japan.
ANSWER: Battle of **Tsushima** Strait
[10] Theodore Roosevelt won a Nobel Prize for arbitrating this treaty which ended the Russo-Japanese War. It was named after a New Hampshire city.
ANSWER: Treaty of **Portsmouth**
<JD>

20. Bonus: One poem’s speaker remarks, “I shall but love thee better after death.” For ten points each:
[10] Name this poetry collection which includes a poem that asks, “How do I love thee? Let me count the ways.”
ANSWER: ***Sonnets from the Portuguese***
[10] *Sonnets from the Portuguese* was written a Victorian poet with this last name. Another poet with this last name wrote “Porphyria’s Lover” and the collection *Men and Women*.
ANSWER: **Browning** (accept Elizabeth Barrett **Browning** or Robert **Browning**)
[10] Robert Browning is best-known for writing this poem, which begins with the spotting of the title character “painted on the wall” by Fra Pandolf, and describes the Duke of Ferra’s inanimate wife.
ANSWER: ***My Last Duchess***
<KT>

21. Bonus: It makes up 97% of the dry content of red blood cells. For ten points each:
[10] Name this giant protein that carries oxygen and provides it throughout the body. Abnormalities in the structure of this protein may lead to sickle-cell anemia.
ANSWER: **hemoglobin**
[10] Heme groups within a protein of hemoglobin consist of a porphyrin with this element at the center. It is the essential carrier of oxygen, and explains why blood is red.
ANSWER: **iron**
[10] Each hemoglobin molecule is composed of this many subunits, each containing a heme group and a protein chain.
ANSWER: **four**
<KT>

22. Bonus: The protagonists leave Miss Pinkerton’s Academy for Young Ladies to go to Russel Square after completing their studies. For ten points each:
[10] Name this satirical “novel without a hero” in which Rawden Crawley marries Becky Sharp and William Dobbin leaves Amelia Sedley after courting her for years.
ANSWER: ***Vanity Fair***
[10] This British novelist of *Vanity Fair* also wrote about the Latin-failing Redmond Barry in *The Luck of Barry Lyndon*.
ANSWER: William Makepeace **Thackeray**
[10] This *Vanity Fair* character marries Amelia Sedley before William Dobbin, but he provides little money for Amelia and flirts with Becky. He later dies in the Battle of Waterloo.
ANSWER: **George** **Osborne** (accept either)
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