1. One application of this law sees errors in it accounted for by the Marder correction, and the "magnetic" form of this law asserts that magnetic monopoles do not exist. Unlike that application of this law, a more common application yields a result of charge over a constant, and states that the electric flux through any closed surface is proportional to the electric charge therein. For 10 points, name this one of Maxwell's equations named after a German scientist who also names the normal distribution.

ANSWER: Gauss's law

081-10-21-02101

Round 23

2. In 2009, the Kokang incident in this country caused the displacement of thousands of refugees. In 2010, it adopted a new flag, which replaced the socialist flag it had used since 1974. In 2008, it was ravaged by a storm named for the Urdu word for "daffodil," Cyclone Nargis. This country's November 2010 election was its first since the 1990 election, which elected a woman who has been under house arrest for most of the last two decades, Aung San Suu Kyi. For 10 points, name this country also known as Burma.

ANSWER: Republic of the Union of **Myanmar** [accept **Burma** before mention]

024-10-21-02102

3. In Hebrew, the word for this English adjective is "katom," and in Japanese, it is "daidaiiro." In Romance languages, the word for this color often begins with "n," though analogy to the French word for "gold" led to the dropping of that letter in English. This color term is the same word in German, French, and English, and is "naranja" in Spanish. For 10 points, identify this color which, in most languages, shares its name with a fruit.

ANSWER: orange

019-10-21-02103

4. One novel by this man features characters such as Hungry Joe and Lieutenant Mudd. In another of this man's novels, Bob Slocum accidentally smothers and kills his son. In one novel by this author of Good as Gold and Something Happened, the protagonist flees to Sweden to escape Colonel Cathcart after witnessing the death of Snowden. For 10 points, name this novelist who created Milo Minderbinder, Major Major Major Major, and Yossarian in *Catch-22*.

ANSWER: Joseph Heller

079-10-21-02104

5. In one episode, this character states that he knows everything about film, because he has seen over 240 of them. He also says that he tips his urologist because he is unable to pulverize his own kidney stones. He euthanizes a cat named Sprinkles, causing Angela to break up with him. In "The Deposition," he plays table tennis with his Amish cousin, Mose. He is frequently the target of pranks by Jim Halpert. For 10 points, name this beet farmer played by Rainn Wilson on The Office.

ANSWER: **<u>Dwight</u>** Kurt Schrute [or <u>**Schrute**</u>]

024-10-21-02105

6. The narrator of this poem asks its title character "what thy lordly name is on the Night's Plutonian shore." This poem is set in a room with a "sad uncertain rustling of each purple curtain" and with a "bust of Pallas" just above the door. The narrator of this poem asks for "balm in Gilead" and a "kind Nepenthe" from the title character, but is only told "Nevermore." For 10 points, name this poem in which a man mourning the death of Lenore encounters a black bird, a work of Edgar Allan Poe.

ANSWER: "The Raven"

7. This element has a characteristic D line at 589 nanometers and is produced in the electrolytic Castner process. The movement of this element is counteracted by the movement of potassium in a namesake "pump" based off of active transport. A strong base containing hydroxide and this metal is known as lye while baking soda consists of a compound containing this metal and bicarbonate. For 10 points, name this alkali metal found along with chlorine in table salt.

ANSWER: sodium [or Na]

064-10-21-02107

8. One character in this novel steals corpses' body parts to sell to scientists. That man, Jerry Cruncher, works at Tellson's Bank, the home of a girl who falls in love with a secret member of the Evremonde family. Madame DeFarge plans to kill that woman, Lucie Manette, and her lover, who is swapped with Sydney Carton just before he is scheduled to be guillotined. For 10 points, name this Charles Dickens novel about Charles Darnay that begins, "It was the best of times, it was the worst of times."

ANSWER: A Tale of Two Cities

079-10-21-02108

9. In addition to the respiratory and circulatory systems, this system obeys Murray's law. Cells found in this system include tracheids and vessel elements, the latter of which generally do not appear in gymnosperms. The flow of its namesake sap is driven primarily by transpirational pull, but also by root pressure. It is often contrasted with a type of tissue which transports sugars. For 10 points, name this plant tissue which transports water, contrasted with phloem.

ANSWER: xylem

024-10-21-02109

10. One story by this author explains that the crow became black after it told Phoebus that his wife was cheating on him. He wrote a story in which three men set out to kill death but are slain by their own greed. In another of his stories, Palamon and Arcite both fall in love with Emily while imprisoned. For 10 points, name this Middle English author who included the Manciple's, Pardoner's, and Knight's Tales in his *Canterbury Tales*.

ANSWER: Geoffrey Chaucer

015-10-21-02110

11. This artist created an exhibition of floating mylar balloons called *Silver Clouds*. In 1968, Valerie Solanas attempted to shoot this artist, who worked in a New York studio known as "The Factory." The originator of the phrase "Fifteen minutes of fame," he used the technique of silkscreens to depict many nearly-identical versions of figures like Mao Zedong, Elvis Presley, and Marilyn Monroe. For 10 points, name this American pop artist who also created many paintings of Campbell's soup cans.

ANSWER: Andy Warhol [or Andrew Warhola]

004-10-21-02111

12. This conflict saw a march led on John Neville's home before it was put down by the Watermelon Army. During this event, David Bradford escaped from from his would-be captors. After Governor Robert Mifflin refused to get involved, this event, which occurred in the Monongahela Valley, was put down by "Lighthorse" Harry Lee and Alexander Hamilton. For 10 points, name this 1794 rebellion in Pennsylvania in response to an excise tax on the namesake alcoholic beverage.

ANSWER: Whiskey Rebellion

13. Riccardo Drigo altered the score for the most popular staging of this work, which was co-choreographed by Lev Ivanov and Marius Petipa. That score kept the first-act "Dance with Goblets." In its second act, one main character puts down his loaded crossbow and learns about the father of Odile, the evil sorcerer Von Rothbart. Its ends as two characters kill themselves, breaking the spell that turned the princess Odette into the title animal. For 10 points, name this ballet by Pyotr Tchaikovsky.

ANSWER: Swan Lake [or Lebedinove Ózero]

020-10-21-02113

14. In Malagasy mythology, this distinction belongs to a man named Andriambahomanana. According to the Bhagavad Gita, this role is filled by Manu. In Norse mythology, this distinction belongs to two people who were created from trees by Odin and his brothers, Ask and Embla. More famously, this role is filled by a man whose first wife is Lilith according to Jewish tradition. For 10 points, name this role which, in Christianity, is filled by Adam and Eve.

ANSWER: **first human**s [accept equivalents]

024-10-21-02114

15. This country's first well known king was Eric the Victorious, who worshipped in its great temple at Uppsala. Napoleon's general Jean Bernadotte became Charles XIV of this country. The country's forces were led by Charles XII at the battles of Narva and Poltava against the Russians during the Great Northern War. This country came to prominence under the Vasa Line, which included Queen Christina and her father Gustavus Adolphus. For 10 points, name this Scandinavian country with capital at Stockholm.

ANSWER: Kingdom of **Sweden** [or Konungariket **Sverige**]



1A. What scientific principle states that any change in a system at equilibrium will result in a reacting change to establish a new equilibrium?

ANSWER: Le **Chatelier**'s Principle

1B. What leader established the rurales and saw his rule as the first indigenous President of Mexico interrupted by the invasion of Maximilian?

ANSWER: Benito Juárez

2A. What Platonic dialogue contains Socrates defense and sentencing during his trial?

ANSWER: Apology of Socrates

2B. Name this Roman emperor from C.E. 54 to 68 who had his mother Agrippina killed and legendarily "fiddled while Rome burned."

ANSWER: <u>Nero</u> Claudius Caesar Augustus Germanicus [or <u>Nero</u> Claudius Drusus Germanicus; or <u>Lucius</u> <u>Domitius Ahenobarbus</u>]

3A. This is a 30-second calculation question. What is 7^8 modulo 4?

ANSWER: 1

3B. This is a 30-second calculation question. The square root of what number plus the square root of 2 equals the square root of 18?

ANSWER: 8

4A. What author wrote about a visit to the Soviet Union by the Devil and his black cat Behemoth in his novel *The Master and Margarita*?

ANSWER: Mikhail Bulgakov

4B. What effect from physics explains the red shift and is the apparent difference in frequency at which waves leave a source and the frequency at which they reach an observer?

ANSWER: **Doppler** Effect

5A. This is a 20-second calculation question. How many ways is there to climb a stairway with 6 steps using one or two steps at a time?

ANSWER: 13

5B. This is a 20-second calculation question. What is the smallest positive radian value of theta such that sin(theta) times cos(theta) equals 1/2.

ANSWER: pi/4

6A. What protocol is used to send outgoing emails? It usually runs on ports 25 and 587.

ANSWER: **SMTP** [or **simple mail transfer protocol**]

6B. What event is prophesied in Norse myth to begin with Heimdall sounding his horn, a final battle in which the earth and gods are destroyed?

ANSWER: Ragnarok

7A. This is a 10-second calculation question. What is the median of 11,29,7,6,100,2,1?

ANSWER: 7

7B. This is a 10-second calculation question. What is the surface area of a cube with a side length of 3?

ANSWER: 54

8A. Name this Swiss psychologist whose four stages of cognitive development include the concrete operational and sensorimotor stages.

ANSWER: Jean **Piaget** (PEE-ah-jeh)

8B. What 1991 album by Nirvana introduced grunge to the American public with songs such as "Lithium" and "Smells Like Teen Spirit"?

ANSWER: Nevermind

9A. What cell particles are attached to the endoplasmic reticulum and use amino acids to produce proteins? ANSWER: **ribosome**s

9B. A solution to what degree polynomials were given by Tartaglia and Cardano?

ANSWER: third [or three]

10A. What simplest major key signature, whose relative minor is A minor, features no sharps or flats?

ANSWER: C major

10B. What Italian apocryphally dropped objects from the Leaning Tower of Pisa to show that weight does not affect the speed of a falling object?

ANSWER: Galileo Galilei [or Galileo Galilei]



VHSL Regular Season 2010-2011 Round 23 Third Period, Fifteen Tossups

1. This term was introduced by John Ruskin, who illustrated it with a quote from a poem by Shenstone in which Jessy is reproached by jasmine flowers. It may be mistaken for a derogatory term, although its name actually derives from the Greek for "suffering." Examples of this include the saying "Nature abhors a vacuum" and a description of an "angry sky." For 10 points, name this form of personification, a "fallacy" in which human emotions are ascribed to inanimate objects.

ANSWER: **pathetic fallacy** [prompt on **personification** before mention]

024-10-21-02117

2. During this president's administration, a group known as "the Plumbers" was created by Egil Krogh. His discomfort on camera is often said to have lost him the first televised presidential debate. Charles Colson included Paul Newman and Ted Kennedy on this man's "enemies list." He ordered the "aturday Night Massacre" after a legal battle over some tape recordings which would have actions carried out by CREEP. For 10 points, name this president who resigned in the wake of the Watergate scandal.

ANSWER: Richard Milhous Nixon

015-10-21-02118

3. This city's symphony orchestra plays in the Jesse Jones Hall, and the White Oak, Braes, Sims, and Buffalo Bayous pass through this city. Baytown and Sugar Land are some of this city's suburbs. Barnett Newman's sculpture *Broken Obelisk* is located outside of this city's Rothko Chapel. Its namesake ship canal links it to the Gulf Intercoastal Waterway in Galveston. This city is the home of Rice University and the Johnson Space Center. For 10 points, name this large city in Southeast Texas.

ANSWER: Houston

030-10-21-02119

4. Matthew Lewis's *The Monk* is a novel written in this genre of literature. Another novel in this genre begins with Conrad, son of lord Manfred, being crushed by a helmet. Iconic novels in this genre include Anne Radcliffe's *The Mysteries of Udolpho* and Horace Walpole's *The Castle of Otranto*, which share its characteristics of being set in castles with elements of the supernatural. For 10 points, name this genre of literature whose title refers to a genre of medieval architecture.

ANSWER: Gothic literature

064-10-21-02120

5. This term describes a polynomial such that the sum of each term has the same total degree and describes a catalyst that is in the same phase as the reactants. This term also describes a differential equation that does not contain any isolated constant term. Colloids like aerosols and emulsions are mixtures of this type in which the density remains constant even as the volume is varied. For 10 points, name this term which describes a mixture of uniform composition.

ANSWER: homogenous

064-10-21-02121

6. The world championships of this sport were dominated by Hungary in the 1930s. Notable players of this sport include Timo Boll, Jan-Ove Waldner, and Wang Liqin. Many players of this sport use speed glue, although it will be banned from the 2012 Olympics, since it has been banned by the ITTF. In this sport, the shakehand grip is also called the Western grip, and the penhold grip is popular in Asia. For 10 points, name this racket sport commonly known as ping-pong.

ANSWER: **table tennis** [or **ping-pong** before mentioned]

7. The charging of Erick Bollman with this crime lead to the Supreme Court Case Ex Parte Bollman. People charged with this include Tomoya Kawakita and Adam Yahiye Gadahn. In the United States, corruption of blood is a forbidden punishment for this crime. This crime is defined in article 3 section 3 of the Constitution. Sedition is a related crime. Benedict Arnold's name is associated with this crime. For 10 points, name this crime of betrayal against a nation.

ANSWER: treason

001-10-21-02123

8. One character in this novel visits a famous French psychic named Landau under the advice of the Countess Lydia Ivanovna. Another of its characters fatally injures his horse Frou-Frou during a race. This novel opens in the aftermath of Dolly's discovery that her husband Oblonsky has had an affair. This novel chronicles the title character's fall from society after her affair with Count Vronsky. For 10 points, name this Leo Tolstoy novel whose title character throws herself under a train.

ANSWER: Anna Karenina

015-10-21-02124

9. This city's Walls of Galata were demolished to accommodate its. growth in the 1870s. The historic core of this city is south of the natural harbor known as the Golden Horn. Architectural landmarks in this city include Topkapi Palace and a museum originally built as an Orthodox basilica, the Hagia Sophia. This city sits north of the Sea of Marmara and spans two continents, Europe and Asia. For 10 points, name this Turkish city on the Bosporous Strait whose previous names include Byzantium and Constantinople.

ANSWER: **Istanbul** [prompt on **Byzantium** or **Constantinople** before mention]

082-10-21-02125

10. Some participators in this conspiracy earlier took part in Essex's Rebellion; two of those men were the brothers Christopher and John Wright, who were both killed at the Holbeache House along with this event's organizer. That man, Robert Catesby, was angered at the lack of religious freedom granted to Catholics by James I, whom this conspiracy targeted. Ended on November 5, 1605, after the discovery of 36 barrels of a certain substance, this is, for 10 points, what plan to destroy the Houses of Parliament that featured the efforts of Guy Fawkes?

ANSWER: **Gunpowder** Plot

083-10-21-02126

11. This man pardoned John Fries after his namesake Pennsylvania rebellion. He noted that "facts are stubborn things" in his defense of the British soldiers implicated in the Boston Massacre. One of his last acts was appointing the "Midnight Judges," including John Marshall. This last Federalist president grew unpopular because of the Alien and Sedition Acts. For 10 points, name this husband of Abigail and father of John Quincy, the second president of the United States.

ANSWER: John Adams

015-10-21-02127

12. The density of this molecule is measured using the Dobson unit, and this respiratory irritant can be produced through the reaction of nitrogen oxides with air in the presence of sunlight. This molecule was the subject of the 1987 Montreal Protocol. It prevents most ultraviolet radiation from reaching the Earth's surface, but has been depleted by chloroflourocarbons, especially above Antarctica. For 10 points, name this molecule consisting of three oxygen atoms, whose namesake "layer" of the stratosphere has a hole in it. ANSWER: ozone [prompt on O3]

13. One poem by this author opens as a "long two-pointed ladder's sticking through a tree toward heaven still." Another of his poems notes "some say the world will end in fire; some say in ice." This poet of "After Apple Picking" wrote that "I shall be telling this with a sigh" because "two roads diverged in a wood" and "I took the one less traveled by." For 10 points, name this Massachusetts poet of "The Road Not Taken," who wrote about the adage "Good fences make good neighbors" in "The Mending Wall." ANSWER: Robert <u>Frost</u>

015-10-21-02129

14. One politician from this state was attacked for an article in which described himself as a bearded Marxist. Ralph Nader's *The Company State* describes the heavy influence Du Pont has in this state's politics. Mike Castle lost the Republican primary in this state to a woman who was revealed to have briefly dabbled in witchcraft in high school. For 10 points, name this state where Chris Coons recently defeated Christine O'Donnell in a senatorial election that was formerly represented by Joe Biden.

ANSWER: **Delaware**

064-10-21-02130

15. One character in this play claims "our little life is rounded with a sleep" after noting that "we are such stuff as dreams are made on." Another of its characters expresses shock at the "brave new world, that has such people in't!" A subplot in this play involves the drunken butler Stephano, who plots with Trinculo and Sycorax's son Caliban to overthrow Prospero, a sorcerer who has been exiled with his daughter Miranda. For 10 points, name this Shakespeare play in which Prospero has been blown to an island by the title storm.

ANSWER: The **Tempest**



1. One of this artist's paintings depicts a viola de gamba on the floor near a girl playing the virginal. In addition to painting *The Music Lesson*, this artist also may have used a camera obscura while creating a depiction of a waterway running through his hometown of Delft. One of his portraits depicts a woman in a Turkish turban wearing the title piece of jewelry. For 10 points, name this 17th century Dutch artist of *Girl with a Pearl Earring*.

ANSWER: Jan **Vermeer** [or Johannes **Vermeer**]

080-10-21-02132

2. One character in this play claims that her husband committed suicide after she confronted him about his sleeping with an older man. That character from this play fondly recalls her old admirer Shep Huntleigh and becomes engaged to Mitch, who leaves her after discovering her past life as a prostitute. In this play, Stella refuses to believe that her husband Stanley Kowalski raped Blanche Dubois, driving Blanche insane. For 10 points, name this play set in New Orleans, written by Tennessee Williams.

ANSWER: A Streetcar Named Desire

080-10-21-02133

3. A slave named Henry Box Brown mailed himself to Philadelphia from this city. The area around this city was the intended site of Gabriel Prosser's abortive slave rebellion. This city's Tredegar Iron Works was one of the main production centers of the Confederacy. At this city's St. John's Church, Patrick Henry allegedly shouted "Give me liberty or give me Death!" For 10 points, name this city which served as the capital of the Confederacy and still serves as the capital of Virginia.

ANSWER: Richmond

015-10-21-02134

4. This book features a character called Clopas, who encounters the risen Jesus. This book tells of a Pharisee who tells God how much more righteous he is than a nearby tax collector. This Gospel is addressed the Theophilus (thee-OF-uh-luhs) and contains the parables of the rich man Lazarus, the Prodigal Son, and the Good Samaritan. Attributed to the author of Acts of the Apostles, it and Matthew draw on the "Q Source" as well as Mark. For 10 points, name this synoptic gospel of the New Testament that precedes John.

ANSWER: Gospel According to **Luke**

079-10-21-02135

5. As this cellular structure separates from the cytoskeleton during apoptosis, it can form a bulge called a bleb. They are made of protein receptors that are rich in sphingomyelin and cholesterol called lipid rafts, which are more tightly packed than their surrounding lipid bilayer. Visualized by the fluid-mosaic model, they engulf and take in materials through endocytosis. For 10 points, name these selectively permeable structures that surround cells.

ANSWER: cell **membrane** [or plasma **membrane**]

079-10-21-02136

Name the Abstract Expressionist artist whose "action" paintings, such as *Blue Poles* and *Full Fathom Five*, were created by dripping paint onto the canvas.

ANSWER: Paul Jackson Pollock

This is a 10-second computation question. Solve for y in $1.1 = 2y - 0.9$ ANSWER: $y = \underline{1}$	
AND WER. $y = \underline{I}$	079-10-21-02137