**VHSL Regular Season 2016-2017 - Round 14 - First Period, Fifteen Tossups**

1. This institution was targeted by a set of laws authored by Adalbert Falk. In Germany, Franz von Papen belonged to a "Centre Party" named for this institution that helped pass Adolf Hitler's Enabling Act. The May Laws were part of Otto von Bismarck's Kulturkampf (KULL-shur-KAMPF) against this organization, which resulted in the expulsion of the Jesuits from Germany. For 10 points, name this religious organization led from the Vatican.
ANSWER: Roman **Catholic** Church

2. This man contrasted voting with violence in a speech called "The Ballot or the Bullet." He was shot to death in Manhattan's Audubon Ballroom in 1965. This man's widow, Betty Shabazz, suggested that Louis Farrakhan (FAIR-uh-conn) was involved in his death. He joined a religion led by Elijah Muhammad, who encouraged him to drop his "slave master" last name. For 10 points, what former Nation of Islam member was born Malcolm Little?
ANSWER: **Malcolm X** [or el-Hajj Malik el-**Shabazz** until it is read; or Malcolm **Little** until it is read]

3. A special case of this law is Toricelli's law. A statement of this law is that velocity squared over two plus g times elevation plus pressure over density is constant. This law is a statement of the conservation of energy for fluids. Hydrodynamic lift, which pushed airplane wings up, is a result of this principle. For 10 points, what principle states that an increase in fluid velocity results in a decrease in pressure and is named for a prolific Swiss polymath?
ANSWER: **Bernoulli**'s principle [or **Bernoulli's** equation; or **Bernoulli's** law; or **Bernoulli's** theorem]

4. After consuming one of these things, the fisherman Glaucus transformed into a merman who became the god of fishermen. To avoid being turned into a pig, Odysseus used one of these things called moly. Odysseus's men became indolent after they ate some of this stuff on an island. Persephone (PER-seff-UH-NEE) was collecting these things when she was abducted by Hades. For 10 points, name these things, some of which blossomed after Adonis' death.
ANSWER: **plant**s [or **herb**s; or **flower**s; or **lotus**; or **anemone**; or **moly** before it is mentioned]

5. This author wrote about Lambert Strether's trip to Europe to bring back Chad Newsome in one of his novels. In another of his novels, the odious Gilbert Osmond succeeds in marrying the rich American girl Isabel Archer. This author of *The Ambassadors* and *The Portrait of a Lady* also wrote a novella in which a governess tries to protect Miles from the ghost of Peter Quint. For 10 points, name this author of *The Turn of the Screw.*
ANSWER: Henry **James**

6. Glutamate (GLU-tuh-mate) receptor activation in these cells modulates long-term potentiation. The afferent (AA-fare-ent) type of them have their somas in the dorsal root ganglia. These cells are nourished by astrocytes (ASS-tro-sites) and other glia. These cells receive signals through their dendrites and transmit impulses along their axons by forming synapses (SIN-ap-sez). For 10 points, name these cells of the nervous system.
ANSWER: **neurons** [or **nerve** cells]

7. This performer sang "This Romeo is bleeding, but you can't see his blood" in the song "Always." This singer promoted the "power to turn back time" in a DirecTV commercial. A 2000 hit by this performer mentions Tommy and Gina, a couple he sang about fourteen years earlier. Richie Sambora plays guitar for this singer, who launched his career with the album *Slippery When Wet*. For 10 points, name this performer who sang "Livin' on a Prayer" and "It's My Life."
ANSWER: Jon **Bon Jovi** [or John Francis **Bongiovi**, Jr.]

8. Several of these objects achieved the goals of 1975's Operation Frequent Wind. A haboob complicated the use of these objects during Operation Eagle Claw. Two of these objects were surprisingly rendered ineffective during a 1993 intervention in Mogadishu, Somalia. SEAL Team Six merely covered debris belonging to one of these objects at Osama bin Laden's compound. For 10 points, name these vehicles exemplified by Blackhawks and Apaches.
ANSWER: **helicopter**s [or **copters**]

9. In this story, a "blazing white light blazes all about" the protagonist "with the shock of a cannon" just as he is about to embrace his wife. In this story with a twist ending, an Alabama planter captured by Union soldiers fantasizes about escaping his execution just before he dies. For 10 points, name this story by Ambrose Bierce about the hanging of Peyton Farquhar (FARR-kwar) at the title structure.
ANSWER: "An **Occurrence at Owl Creek Bridge**"

10. This man sandwiched the song "Peaceful" between two songs titled "Shhh" on his first fusion album, *In a Silent Way.* He led drummer Jimmy Cobb, bassist Paul Chambers, pianist Bill Evans, and saxophonists Cannonball Adderley and John Coltrane in a quintet that recorded songs like "Freddie Freeloader" and "So What." He helped pioneer cool jazz with his album *Birth of the Cool.* For 10 points, name this jazz trumpeter who recorded *Kind of Blue.*
ANSWER: Miles **Davis** [or Miles Dewey **Davis** III]

11. This philosophical position was defended in numerous speeches by the American orator Robert Ingersoll. Evolutionary biologist Thomas Huxley coined the name of this stance, whose "strong" form holds that questions about existence will never be able to be answered. This position's name comes from the Greek for "without knowledge." For 10 points, name this position distinguished from atheism, which argues that God's existence is truly unknowable.
ANSWER: **agnostic**ism

12. The reactance of these devices is inversely proportional to angular frequency. For spherical examples of these devices, their characteristic parameter is four pi epsilon-naught over the difference between the reciprocals of the inner and outer radii. The most common type of these devices consists of a dielectric between two parallel plates, which store electric charge. For 10 points, name these devices whose strength is measured in farads.
ANSWER: **capacitor**s [or **condenser**s]

13. This composer's third symphony begins with a motif that represents the idea "free but happy." The finale of his first symphony includes a theme so similar to Beethoven's "Ode to Joy" that the piece was nicknamed "Beethoven's Tenth." This composer of the *Hungarian Dances* also wrote the song "Wiegenlied" (VEE-gehn-LEET), which translates as "Cradle Song." For 10 points, name this composer of a namesake lullaby.
ANSWER: Johannes **Brahms**

14. Manuel Moroun controls one of the few privately-owned bridges between these two countries. The proposed country of Cascadia would carve out territory from these two countries, which share the Strait of Juan de Fuca and the Lake of the Woods. Much of the border between these two countries is set at the 49th Parallel. For 10 points, name these two large North American countries that both speak English.
ANSWER: **Canada** and the **U**nited **S**tates of America [or the **U**nited **S**tates of America and **Canada**]

15. Two winners of this specific award, Max van Laue and James Franck, once had their medals dissolved in aqua regia to hide them from the Nazis. For discovering X-rays, Wilhelm Rontgen (ROENT-gen) became the first winner of this prize. One of its 2015 winners was Takaaki (TAH-kock-EE) Kajita, who worked with a Japanese particle accelerator. For 10 points, name this award given by the Swedish academy, and whose recipients have included Albert Einstein.
ANSWER: **Nobel** Prize in **Physics** [prompt on partial answers]

 **VHSL Regular Season 2016-2017 - Round 14 - Directed Period**

1A. What Thomas Paine written pamphlet argued for American independence by saying a continent should not be ruled by an island?
ANSWER: ***Common Sense***

1B. Bathsheba Everdene is the heroine of what Thomas Hardy novel?
ANSWER: ***Far from the Madding Crowd***

2A. What type of formula for a mathematical sequence defines the sequence using its previous terms, as opposed to an explicit formula?
ANSWER: **recursive** formula

2B. The tricuspid (try-CUS-pid) valve controls blood flow into the right ventricle from which chamber of the heart?
ANSWER: **right atrium** [or **right atria**; prompt on partial answers]

3A. This is a 20-second calculation question. Lindsay has two angles that are complementary. One of her angles measures 50 degrees. If Lindsay bisects the other angle into two angles A and B, what will be the measure in degrees of angle A?
ANSWER: **20** degrees

3B. This is a 20-second calculation question. In a class of students, four people have blue eyes, seven people have brown eyes, and nine people have green eyes. If a student is selected at random, what is the probability the student has blue eyes or green eyes?
ANSWER: **13/20** [or **0.65**]

4A. What mountain range in South Dakota is home to Mount Rushmore and the unfinished Crazy Horse Memorial?
ANSWER: **Black Hills**

4B. What 19th-century laws imposed high tariffs on imported grains in the United Kingdom and faced intense campaigns calling for their repeal?
ANSWER: **Corn** Laws

5A. What kind of paint is often held together by egg yolks?
ANSWER: **tempera**

5B. What Greek hero of the Trojan war returned home, only to be murdered by the lover of his wife Clytemnestra (KLY-tem-NESS-tra)?
ANSWER: **Agamemnon** (AGG-uh-MEM-non)

6A. Emperor Theodosius I made what religion the official state faith of the Roman Empire, going so far as to end the Olympic rituals and dissolve the Vestal Virgins?
ANSWER: **Christianity** [or Nicene **Christianity**; do not accept "Catholicism"]

6B. What female American poet, who was close friends with Robert Lowell, wrote "The Fish" and the villanelle "One Art"?
ANSWER: Elizabeth **Bishop**

7A. What San Francisco based company employed Jason Dalton, who killed six people during a shooting rampage in Kalamazoo, Michigan?
ANSWER: **Uber** Technologies Inc.

7B. What French word, literally "cold blood," refers to calmness and composure under intense pressure?
ANSWER: **sangfroid** (song-FWAH)

8A. This is a 30-second calculation question. Find the value of f inverse of eight if f of x equals the square root of the quantity two x.
ANSWER: x equals **thirty-two**

8B. This is a 30-second calculation question. In triangle ABC, angle A is thirty degrees, the length of side BC is four meters, and the length of side AC is four times the square root of two meters. If angle B is less than ninety degrees, what is the degree measure of angle B?
ANSWER: **45 degrees**

9A. The Latin word for "ring" gives its name to what kind of eclipse, formed when the Sun, Earth, and Moon are exactly aligned?
ANSWER: **annular** eclipse

9B. Eyelashes are often thickened using what cosmetic, whose name may come from a Catalan word for "black smear?"
ANSWER: **mascara**

10A. What French poet included poems such as "The Albatross" and "To the Reader" in his collection *Les Fleurs du Mal* (lay FLUR doo MAHL)?
ANSWER: Charles **Baudelaire**

10B. What NFL team's players in the 1970's included "Mean" Joe Greene and Terry Bradshaw, and whose current players include Ben Roethlisberger (ROTH-lis-burger)?
ANSWER: **Pittsburgh** Steelers [or Pittsburgh **Steelers**]

 **VHSL Regular Season 2016-2017 - Round 14 - Third Period, Fifteen Tossups**

1. After this man released Lindsey Graham's phone number, Graham filmed himself destroying his phone. He was mocked for pronouncing a biblical book's name as "Two," rather than "Second," Corinthians. This man recently dismissed Corey Lewandowski, reportedly at the insistence of his children. In an interview about his feud with Judge Gonzalo Curiel, he repeatedly said "I'm building a wall." For 10 points, name this 2016 Republican presidential nominee.
ANSWER: Donald John **Trump**

2. Rebirth Island was once located in this body of water. More than half of the water drained out of it is wasted by leaks in the Karakum Canal. The Amu Darya and Syr (SEER) Darya were diverted away from this body of water to make Uzbekistan a top exporter of cotton. That decision reduced this body of water, once the fourth-largest lake in the world, to around ten percent of its original size. For 10 points, name this mostly dried-up lake in central Asia.
ANSWER: **Aral** Sea

3. Richard Feynman spoke about confirmation biases surrounding this experiment, which used an incorrect air viscosity. Its setup consisted of a chamber atop two metal plates between which a potential difference was applied. The electric force was set equal to the weight of the namesake object in order to calculate the quantity of interest in this experiment. For 10 points, what experiment measured the charge of an electron and was performed by Robert Millikan?
ANSWER: Millikan **oil drop** experiment [or **Millikan**'s experiment until "Millikan" is read]

4. The speaker of this poem claims "we loved with a love that was more than love" that was envied by the angels, "not half so happy in heaven," who sent a wind "out of the cloud by night, chilling and killing" the title maiden. This poem is set "many and many a year ago, in a kingdom by the sea." For 10 points, name this poem about a dead beloved written by Edgar Allan Poe.
ANSWER: "**Annabel Lee**"

5. A 1969 occupation of this island was justified using the Treaty of Fort Laramie by the American Indian Movement. Robert Stroud, an ornithologist from Leavenworth, Kansas, became this island's "Birdman." In 1962, Frank Morris and the Anglin brothers organized a complicated escape from this island, which once housed Machine Gun Kelly and Al Capone. For 10 points, name this island in San Francisco Bay, once home to a notorious prison.
ANSWER: **Alcatraz** Island

6. This author wrote a series of novels including *World's End* and *Dragon's Teeth* about his recurring character Lanny Budd. This author's novel *Oil!* was the inspiration for the film *There Will Be Blood.* His novel about Jurgis Rudkus exposed the disgusting conditions in Chicago's meatpacking facilities. For 10 points, name this muckraker and novelist who wrote *The Jungle.*
ANSWER: Upton **Sinclair**

7. The value of a good partly determines the base of this kind of policy in the *ad valorem* type of it. Setting the rate of this kind of policy to either 0% or 100% will generate no revenue according to the Laffer Curve. Revenue generated from selling stocks and bonds may subject one to the "capital gains" type of this policy. For 10 points, name this financial policy that allows the government to collect money, which may be applied to income or sales.
ANSWER: **tax**es [or income **tax**; or sales **tax**; or capital gains **tax**]

8. After this man's death, the Prime Minister of his country said "the light has gone out of our lives." He was shot to death by Nathuram (NAH-thoo-RAM) Godse (GOHD-see) while on his way to a 1948 prayer meeting. This man, who was dedicated to the principle of ahimsa, led the 1930 Salt March and carried out various hunger strikes to protest British rule of his country. For 10 points, what Indian nationalist was known as the "Mahatma"?
ANSWER: Mohandas **Gandhi** [or Mahatma **Gandhi**; or **Gandhiji**; or **Mahatma** until it is mentioned; prompt on Bapu]

9. This poet wrote a poem addressed "to him who in the love of nature holds communion with her visible forms," advising him to accept death "like one who…lies down to pleasant dreams." He also wrote a short lyric asking the title bird "whither…dost thou pursue thy solitary way?" For 10 points, name this 19th-century American poet of "Thanatopsis" and "To a Waterfowl."
ANSWER: William Cullen **Bryant**

10. In order to contribute to this phenomenon, an action must be undertaken with "cetanā" or intention. The "phala" or "fruit" of this phenomenon are its material consequences. Understanding the workings of this phenomenon is the foundation of "right view" within the Eightfold Path. This phenomenon governs the operation of "samsara" or rebirth. For 10 points, name this Buddhist concept of good or bad actions influencing future lives.
ANSWER: **karma**

11. The four components of this structure develop as a series of whorls and are controlled by three genes according to the ABC hypothesis. Those parts of these structures are usually found in multiples of three in monocots, and their presence defines angiosperms (AN-jee-oh-sperms). They may be white or purple in pea plants. For 10 points, name these plant structures that often have colorful petals.
ANSWER: **flower**s [prompt on petals before it is read]

12. Over 500 pieces in this genre were written by Domenico Scarlatti. Their first movements often have an exposition, development, and recapitulation, such as in Beethoven pieces titled *Tempest* and *Pathétique* (pah-tay-TEEK). A Mozart piece in this genre ends with a "Rondo alla Turca"; another, by Beethoven, is said to evoke the reflection of the title object on a lake at night. For 10 points, name this genre of solo keyboard music which includes Beethoven's *Moonlight*.
ANSWER: **piano sonata** [or **harpsichord sonata**; prompt on sonata]

13. A man in this position was killed by embittered merchant John Bellingham. This was the highest position held by the man who was honored with the nickname "bobbies" for police officers. It was held four times by a Liberal known as the "Grand Old Man," the rival of a Tory who was born of Jewish parentage. For 10 points, William Gladstone and Benjamin Disraeli held what high-ranking political office in the United Kingdom?
ANSWER: **Prime Minister** of the United Kingdom of Great Britain and Northern Ireland [or British **Prime Minister**; or English **Prime Minister**; or **PM**]

14. A terror attack in this country inspired a song that states "It's the same old team since 1916." A band from this country wrote a song in honor of Martin Luther King that repeats the line "In the name of love." This country is home to The Cranberries and a band who wrote "Sunday Bloody Sunday" about a 1972 incident during The Troubles. For 10 points, name this country where the band U2 is from.
ANSWER: **Ireland** [or Republic of **Ireland**; or **Eire**]

15. "Fields" that assign one of these objects to each point can have the curl and divergence operations applied to them. A plane can be defined by a point on the plane and a normal one of these objects. The angle between two of these objects can be calculated using their dot product. The distance from the head to the tail is the length of one of these objects. For 10 points, name these mathematical objects with both a magnitude and a direction, as opposed to a scalar.
ANSWER: **vector**s

 **VHSL Regular Season 2016-2017 - Round 14 - Tiebreaker Questions**

1. In a poem about this man, his cry is described as "a cry of defiance and not of fear, a voice in the darkness, a knock at the door, and a word that shall echo forevermore." That poem about this man begins with the line, "Listen, my children, and you shall hear." For 10 points, name this American hero, the subject of a Henry Wadsworth Longfellow poem about his "midnight ride."
ANSWER: Paul **Revere**

2. Using vector operations or using this operation are the two ways to formulate Maxwell's equations. A path-dependent variety of this operation applied to the electric field yields voltage, applied to the force yields work, and is the "line" type. Applying the time variety of this operation to acceleration yields the change velocity. For 10 points, what operation from calculus is the opposite of differentiation?
ANSWER: **integral** [or **integration**; or **integrating**; or time **integral**; or line **integral**]

3. Members of this movement read collections such as *The Blue Cliff Record* and *The Gateless Gate*. Dogen taught that sitting in certain positions was the key to this movement, which seeks a moment known as "satori." This movement uses unanswerable questions known as "koans" (KOE-anns) in its quest for sudden enlightenment. For 10 points, name this Japanese-dominated school of Buddhism known for its anti-rational approach and use of meditation.
ANSWER: **Zen** Buddhism [or **Chan** Buddhism; prompt on Mayahana Buddhism until "Buddhism" is read; prompt on Buddhism until it is read]

4. This country's August Coup (KOO) featured a politician climbing a tank to address a crowd. A disastrous nine-year war featured it fighting an insurgent group called the Mujahideen (MOO-hah-DEEN) after supporting a coup in Afghanistan. A leader of this country in the 1980's embraced such reform policies as perestroika (PAIR-uh-STROY-ka) and glasnost. For 10 points, Mikhail Gorbachev was the final leader of what country?
ANSWER: **Soviet Union** [or **USSR**; or **CCP**; or **SSSR**; or **Union of Soviet Socialist Republics**; prompt on Russia]

5. Contempt for this artist inspired a namesake movement founded by John Everett Millais and Dante Gabriel Rossetti. Jerome and Mary Magdalene kneel in front of the cross in this man's *Mond Crucifixion*. Diogenes lounges on the steps while Plato and Aristotle, who is modeled on Leonardo da Vinci, converse in one of this man's paintings. For 10 points, name this artist of *The School of Athens*.
ANSWER: **Raphael** [or Raffaello **Sanzio** da Urbino]

At which angles in radians between zero and two pi does sine of theta equal cosine of theta?
ANSWER: **pi/4** and **5pi/4** radians

The perpendicular bisectors of a triangle intersect at what point, which is also the center of the circle that passes through all of the triangle's vertices?
ANSWER: **circumcenter**