**VHSL Regular Season 2016-2017 - Round 28 - First Period, Fifteen Tossups**

1. A man from this country leads a movement which has founded numerous American charter schools, such as Utah's Beehive Science and Tech Academy. The Gulen movement, which is led by a man living in Pennsylvania, was linked by this country to terrorism and subversion. A July 2016 coup (KOO) attempt in this country led by the armed forces failed to overthrow the President. For 10 points, what country is currently led by President Recep Erdogan?
ANSWER: Republic of **Turkey**

2. A player of the cornet in this city would often perform his offensive song "Funky Butt;" that man, Buddy Bolden, is sometimes credited with inventing a genre of music in this city. Local legend holds that after this city's Storyville district closed, jazz started to flourish in it. Zydeco music in this American city is part of the culture of its French-speaking Creoles. For 10 points, name this city in Louisiana, whose other musical festivities become popular during Mardi Gras.
ANSWER: **New Orleans**

3. Teff is used to make an Ethiopian variety of this food called injera. This food is filled and steamed to create baozi (BOW-zuh) in Chinese cuisine. Two Indian types of this food, roti and naan, are differentiated by whether or not they are baked. A type of this food traditionally eaten on Passover is matzo. For 10 points, name this staple food made from flour, exemplified by the French baguette (bah-GETT).
ANSWER: **bread**

4. In this novel, a windmill is blown up by the protagonists' neighbor Mr. Frederick, to whom they had sold timber. A stupid but dedicated character in this novel repeats the motto "I will work harder" and is eventually sold to a glue maker. In this novel, the pigs lead a rebellion against their owner, Mr. Jones, and establish the title community. For 10 points, name this allegorical novel by George Orwell.
ANSWER: ***Animal Farm***

5. The mass of these structures is approximated by the Weizsäcker formula. It is predicted that very large ones will demonstrate an "island of stability." These structures demonstrate increased stability when they have a "magic number" of parts. J.J. Thomson's plum pudding model of the atom lacked this essential structure. An alpha particle is equivalent to this structure for a helium atom. For 10 points, name this center of an atom that consists of protons and neutrons.
ANSWER: **nucleus**

6. "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

7. A star player for this team once memorably shrugged after making his record sixth three-pointer in the first half of a Finals game. This team had an early playoff exit the year after a star player temporarily retired because of the murder of his father and an ultimately failed decision to play professional baseball instead. This team won six championships behind Hall of Famers Scottie Pippen and Michael Jordan. For 10 points, name this Illinois based NBA team.
ANSWER: **Chicago** Bulls [or **Bulls**]

8. The Gnostic gospel named for this person asserts that he was the only member of the "holy generation." According to one text, he committed suicide at Akeldama. This man questioned Mary's use of the ointment used to anoint Jesus's feet. Matthias replaced him after his death. This man received thirty pieces of silver for his best known action, in which he identified the man he followed by kissing him. For 10 points, name this apostle who betrayed Jesus.
ANSWER: **Judas** Iscariot

9. The popliteal (pop-LIT-ee-ull) fossa lies behind this structure. This structure is the site of the largest sesamoid (SESS-uh-moyd) bone in the body. The medial and lateral collateral ligaments are found in this joint, which is also stabilized by the posterior and anterior cruciate (CRU-she-ate) ligaments. This joint connects the tibia to the femur. For 10 points, the patella is the namesake "cap" of what leg joint?
ANSWER: **knee**

10. A member of this family proposed a domestic program called the "New Frontier." This family included a New York Senator and Attorney General who was killed by Palestinian radical Sirhan Sirhan. The death of one of its members was investigated by the Warren Commission. That member of this family was killed on November 22, 1963, by Lee Harvey Oswald. For 10 points, what family's members include an assassinated U.S. President named John?
ANSWER: **Kennedy** [or John Fitzgerald **Kennedy**; or Robert **Kennedy**; prompt on JFK; prompt on RFK]

11. Many English-speaking foreigners fought for this war's losing side in the Abraham Lincoln Brigade. The term "fifth column" was first used to describe civilian saboteurs by its winning side, which also employed the German Condor Legion. The pro-Republic and Popular Front forces lost this war, which featured the devastating bombing of Guernica. For 10 points, what 1930's war led to Francisco Franco becoming the fascist leader of an Iberian country?
ANSWER: **Spanish Civil** War [or Guerra **Civil Espanola**]

12. This man gifted cheese to Antonio Gutiérrez after losing to his forces near Tenerife, where he lost his arm. This man deliberately used a telescope with his blind eye to ignore an order to stand down before the Battle of Copenhagen. This winner of the Battle of the Nile in 1798 faced a combined Franco-Spanish army seven years later, but his forces led by the *HMS Victory* emerged unscathed. For 10 points, name this English admiral who was killed at the Battle of Trafalgar.
ANSWER: Horatio **Nelson**

13. This artist depicted a man leaning back in a chair in his *Office in a Small City*. Another of this artist's paintings shows a woman in a pink dress staring out of a window. This painter of *Morning Sun* depicted two women facing each other in a restaurant in *Chop Suey* and another of his paintings shows an advertisement for five cent Phillies cigars above a diner with no visible door. For 10 points, name this American artist of *Nighthawks*.
ANSWER: Edward **Hopper**

14. The easiest way to produce this particle is gluon fusion. This particle was created during the dominance of a "Mexican-hat" potential created via symmetry breaking. It has even parity and zero spin and was detected to have a mass of about 125 GeV. The detection of this particle responsible for mass completed the Standard Model. For 10 points, name this particle that was discovered at the LHC in 2012 and has been called the "God particle."
ANSWER: **Higgs** boson [or **Higgs** particle]

15. A character created by this author is raped in a forest called The Chase, after which she gives birth to a child she names Sorrow, who dies in infancy. He also created a stonemason who scandalously has children out of wedlock with Sue Bridehead. The title character of one of his novels murders her supposed cousin Alec and is abandoned by Angel Clare. For 10 points, name this Victorian novelist of *Jude the Obscure* and *Tess of the d'Urbervilles.*
ANSWER: Thomas **Hardy**

 **VHSL Regular Season 2016-2017 - Round 28 - Directed Period**

1A. What island country in Asia featured a long civil war pitting its army against a group called the Tamil Tigers?
ANSWER: Democratic Socialist Republic of **Sri Lanka** [or **Ceylon**]

1B. What type of accent mark is frequently placed over French loanwords, such as café (CAH-fay) or exposé (ex-POH-zay)?
ANSWER: **acute** accent

2A. Link plays the "Song of Storms" and the "Serenade of Water" on what title instrument of a 1998 game?
ANSWER: **Ocarina of Time** [prompt on ocarina]

2B. What protein consisting of a triple helix is abundant in the extra-cellular matrix of connective tissue?
ANSWER: **collagen**

3A. What cornerstone operation of calculus gives the slope of the tangent line for another function at a given point?
ANSWER: **derivative**

3B. What American novelist wrote *The Naked and the Dead* and *The Executioner's Song*?
ANSWER: Norman **Mailer**

4A. "This is a 20-second calculation question. What is the absolute value of the difference between the maximum value and the minimum value of the function "cosine of theta?"
ANSWER: **2**

4B. This is a 20-second calculation question. A farm raises only ducks and goats. If there are 15 animals on the farm, and the total number of legs is 56, how many ducks are on the farm?
ANSWER: **2**

5A. What work of philosophical fiction by Thomas More originated the term for an ideal or perfect society?
ANSWER: ***Utopia***

5B. Robert Lowell wrote a poem about the Robert Gould Shaw Memorial commemorating soldiers who died in what war?
ANSWER: the American **Civil War**

6A. What author of the *Institutes of the Christian Religion* is best known for leading Geneva during the Reformation?
ANSWER: John **Calvin**

6B. Stories about Bran and Rhiannon (REE-ann-UN) are from what country, whose myths are compiled in the *Mabinogion* (MABB-in-oh-JEE-on)?
ANSWER: **Wales** [prompt on the United Kingdom; prompt on UK]

7A. Merrick Garland has been nominated to become a member of what institution but is unlikely to be the subject of a vote?
ANSWER: the **Supreme Court** of the United States

7B. What Latin word is used to designate either the 13th or 15th day of the month on a calendar?
ANSWER: **ides**

8A. J.S. Bach used the key of B minor to write what type of large liturgical piece with movements such as "Kyrie" (KEE-ree-AY) and "Gloria"?
ANSWER: **mass** [or **Messe**]

8B. What law of fluid dynamics, named after a French mathematician, states that the pressure change in an ideal fluid is transmitted everywhere throughout the fluid?
ANSWER: **Pascal**'s principle

9A. This is a 30-second calculation question. Arnold's triangle has two coordinates at 5,0 and 5,10. If the triangle has an area 50, and the third coordinate's y value is 0, what are the two possibilities for the x-value of the third coordinate of Arnold's triangle?
ANSWER: **15** and **-5** [do not prompt on partial answer]

9B. This is a 30-second calculation question. Consider a normally distributed data set whose mean is 70. If 58 has a z-score of -2, find the value for which the z-score is 3.
ANSWER: **88**

10A. What Holy Roman Emperor died during the Third Crusade and had a nickname meaning "Red Beard"?
ANSWER: **Frederick I** [or Frederick **Barbarossa**; prompt on Frederick]

10B. Unlike most of Asia, the majority of the Philippines and East Timor practice what religion?
ANSWER: **Christian**ity [or **Catholic**ism]

 **VHSL Regular Season 2016-2017 - Round 28 - Third Period, Fifteen Tossups**

1. This series' first game lasted 14 innings after Alex Gordon hit a game-tying home run in the 9th. The losing team's closer, Jeurys (hay-OR-ees) Familia, blew three saves in this series and catcher Salvador Pérez was named series MVP. The winning team in this series had lost to the San Francisco Giants the previous year. For 10 points, name this baseball series which the New York Mets lost to the Kansas City Royals.
ANSWER: **2015 World Series** [prompt on World Series]

2. Alvin Hansen is often held to be the American version of this man, who advocated higher taxation to fund World War II in his 1940 text *How to Pay for the War*. This man called for increased deficit spending in times of economic distress in a book challenging neoclassical ideas published during the Great Depression. For 10 points, name this economist who wrote the *General Theory of Employment, Interest and Money*.
ANSWER: John Maynard **Keynes** (CAINS)

3. In a play about these two characters, one of them flips a coin with the same result 92 times in a row. In another play, these two characters are told, "When the wind is southerly, I know a hawk from a handsaw." These two characters "Are Dead" according to the title of a play by Tom Stoppard. For 10 points, name these two inept characters told by Gertrude and Claudius to spy on Hamlet.
ANSWER: **Rosencrantz** and **Guildenstern** [or **Guildenstern** and **Rosencrantz**]

4. In this country, the Canadian Caper involved the fictitious filming of a movie called *Argo*. The sale of arms to this Asian country was a plan by Oliver North to fund the Contras during the Reagan presidency. Religious conservatives in this country were angry at American support of its former leader, the Shah. For 10 points, 52 Americans were held hostage beginning in 1979 in what country after the embassy at Tehran was attacked?
ANSWER: Islamic Republic of **Iran** [prompt on Persia]

5. A section of this treaty proved impractical to implement, leading to the Dawes and Young Plans being created years later. Some of its provisions, such as Article 231's "War Guilt Clause," were attacked by John Maynard Keynes as too harsh. This treaty came about after six months of negotiations at the Paris Peace Conference, whose attendees included Woodrow Wilson. For 10 points, what June 1919 treaty between the Allied Powers and Germany ended World War One?
ANSWER: Treaty of **Versailles** (ver-SIGH)

6. The most devoted members of this faith are part of the "Sea Org," which requires members to sign billion year contracts. David Miscavige (MISS-cah-VIHJ) leads this faith, whose attacks on the U.S. government were documented in the book *Going Clear*. The tenets of this faith were documented in the book *Dianetics*. For 10 points, what religion was founded by science fiction author L. Ron Hubbard and is popular among Hollywood celebrities?
ANSWER: **Scientology**

7. In a novel by this author, Eliot Rosewater stays in a mental institution where he is visited by his favorite writer, Kilgore Trout. In another novel by this author, Felix Hoenikker's children divide a substance that causes the world to freeze called "ice-nine." This author also wrote about Billy Pilgrim becoming "unstuck in time." For 10 points, name this American author of *Cat's Cradle* and *Slaughterhouse-Five*.
ANSWER: Kurt **Vonnegut**

8. Theravada followers in this status obey the code of Patimokkha. These people, who comprise the "bhikku" population, wear a "tricivara" that is either ochre or saffron-colored. Some people in this status developed a flamboyant martial art at Shaolin. At times, up to a quarter of the population of Tibet belonged to this status. For 10 points, name this kind of Buddhist who becomes celibate and lives communally in a religious institution.
ANSWER: Buddhist **monk**s [or **nun**s; or **monastic**ism; or **bhikku**ni until "bhikku" is read]

9. A painter from this country used heavily diluted oil paint in her "soak stain" technique. That painter, Helen Frankenthaler, was part of the Color Field movement in this country, which also included Mark Rothko. This country's landscape is featured in many paintings of flowers and animal skulls by the wife of Alfred Stieglitz. For 10 points, name this country home to Georgia O'Keeffe and the Art Institute of Chicago.
ANSWER: **United States** of America [or **US**A]

10. A large underground lake lies beneath this desert in the Dragon's Breath Cave. The Etosha and Makgadikgadi (mock-GAH-deek-GAH-dee) salt pans lie within this desert, which is inhabited by the San Bushmen. The Okavango River never reaches the sea because it stops in this desert. Like the Namib Desert to its west, this desert provides a home for meerkats. For 10 points, name this desert that occupies most of Botswana in southern Africa.
ANSWER: **Kalahari** Desert

11. This operation applied to the Lagrangian gives the action. Voltage is given as this operation applied to the electric field and work is given as this operation applied to force; both of those examples are the "line" variety of it. This operation applied to force with respect to time gives impulse. Applying it to acceleration yields change in velocity, and to velocity yields change in position. For 10 points, name this operation from calculus that reverses the derivative.
ANSWER: **integral** [or **integration**; or **integrating**; or time **integral**; or line **integral**]

12. While speaking at Galesburg, this man said the government was "made by our fathers on the white basis." He proposed the Freeport Doctrine in saying that slavery could be blocked in territories. Southerners refused to support this man's presidential campaign and nominated John Breckinridge instead. Known as the "Little Giant," he was the failed nominee of the northern Democrats in 1860. For 10 points, what Illinois Senator debated Abraham Lincoln in 1858?
ANSWER: Stephen Arnold **Douglas**

13. This author's collection *In Our Time* concludes with the story "Big Two-Hearted River," one of many featuring his recurring character Nick Adams. Catherine Barkley dies after giving birth to a stillborn son in his novel about World War I ambulance driver Frederic Henry. He depicted other members of the Lost Generation in his novel about Jake Barnes. For 10 points, name this American author of *A Farewell to Arms* and *The Sun Also Rises.*
ANSWER: Ernest **Hemingway**

14. Interaction with these entities causes a difference in the energy of the 2s and 2p orbitals known as the Lamb shift. Fluctuations of electromagnetic fields within these entities between two uncharged plates results in the Casimir effect. The permeability and permittivity of free space are values measured with respect to these places. For 10 points, name these environments characterized by the lack of matter, such as outer space.
ANSWER: **vacuum**s

15. Generations of this company's products include those codenamed "Ivy" and "Sandy" Bridge. While still at Fairchild, a founder of this company, Gordon Moore, predicted that the number of transistors per square inch would double each year. Its value went up after IBM decided to use its 8088 chip in their PCs. This competitor to AMD introduced dual-core technology in 2006. For 10 points, name this manufacturer of the Pentium processor and the i5 and i7 line of CPUs.
ANSWER: **Intel** Corporation

 **VHSL Regular Season 2016-2017 - Round 28 - Tiebreaker Questions**

1. In 1971, this country's leader gave the July Theses speech advocating such things as improved Party education systems. Its leader and his wife, Elena, were executed on Christmas Day. In the revolutions of 1989, this was the only Communist government to be violently overthrown. For 10 points, what Eastern European country was led for over thirty years by Nicolae Ceausescu (CHOW-chess-KOO), who was killed after fleeing Bucharest (BEWK-uh-REST)?
ANSWER: **Romania**

2. One of these objects named Koh-i-Noor (CO-ee-noor) was taken during the Persian invasion of Delhi. Many of these objects are produced at Kimberley in South Africa. A curse supposedly befell the "Hope" one of these objects until it was displayed in the Smithsonian. De Beers sells these objects, which were controversially mined by child soldiers in Sierra Leone. For 10 points, name these precious jewels that are nicknamed "blood" if they fund warlords.
ANSWER: **diamond**s [prompt on jewels]

3. Sections titled "The Open Prairie" begin and end this composer's ballet about a Western outlaw. His clarinet concerto was written for the "king of swing," Benny Goodman. He wrote a ballet featuring variations on the hymn "Simple Gifts," and celebrated the rise of the middle class with his *Fanfare for the Common Man*. In one of his ballets, a group of pioneers settles in the title mountain range. For 10 points, name this composer of *Appalachian Spring*.
ANSWER: Aaron **Copland**

4. The ratio of this quantity's real to apparent types in an AC circuit defines its namesake "factor." In fluids, it is equal to pressure times volumetric flow rate. This quantity's electrical type is equal to voltage squared divided by resistance and to the product of current and voltage. It is equal to the dot product of torque and angular velocity and to the dot product of force and velocity. For 10 points, name this quantity equal to work done per unit time, measured in watts.
ANSWER: **power**

5. This character states, "I had been happy…had I nothing known" before bidding farewell to the "pride, pomp and circumstance of glorious war." After stabbing himself, this character says, "I kissed thee ere I killed thee." This character smothers his wife Desdemona (dez-deh-MO-nuh) after being persuaded of her infidelity by Iago. For 10 points, name this title Moor of Venice of a Shakespeare tragedy.
ANSWER: **Othello**

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

Tenzing Norgay was a member of what ethnic group, known for guiding climbers on Mount Everest?
ANSWER: **Sherpa**