**VHSL Regular Season 2016-2017 - Round 12 - First Period, Fifteen Tossups**

1. After burning the ancient version of this city, attackers were defeated at the Battle of Watling Street. Its ancient precursor was destroyed by Boudica, who was rebelling against the Romans. Much later, Simon Sudbury and the Lord Chancellor were killed in this city by Wat Tyler's rebels during the Peasants Revolt. For 10 points, Edward the Confessor ordered the building of Westminster Abbey in what city, the site where English kings are crowned?
ANSWER: **London** [or **Londinium**]

2. This gas produces a squeaky pop in the burning splint test. A platinized platinum electrode called the standard electrode of this element is assigned a reduction potential of zero. This gas is produced when a magnesium ribbon is placed into hydrochloric acid. This is the lighter of two gases produced by the electrolysis of water. For 10 points, what diatomic molecule, a flammable gas used by the *Hindenburg*, is composed of two atoms of the lightest element?
ANSWER: **hydrogen** gas [or **H2**; or molecular **hydrogen**; or diatomic **hydrogen**]

3. Though it is not made of quarks, these structures are held together by a residual effect of the strong force. When heavy examples of these structures contain a "magic number" of constituents, they are predicted to form an "island of stability" for heavy isotopes. J.J. Thomson's plum pudding model lacked this structure, which is surrounded by electron clouds. For 10 points, what structure is at the center of an atom and contains protons and neutrons?
ANSWER: atomic **nucleus**

4. This character tells another, "You'll always let people step all over you! You're just like stairs!" Trying to escape, he smashes into the solid concrete behind a movie theater screen in an episode in which he is taught a song beginning, "F is for friends who do stuff together." This character owns an unpopular restaurant called the Chum Bucket. For 10 points, name this character from *SpongeBob SquarePants* who repeatedly tries to steal the Krabby Patty secret formula.
ANSWER: **Plankton** [or **Sheldon** J. Plankton]

5. Jeff Flake declined to come to this city, saying "I've got to mow my lawn." In 2014, the twelve-year-old Tamir Rice was shot to death by cops in this city who did not realize his Airsoft rifle was a fake. Governor John Kasich (KAY-sick) said despite large crowds in this city, he could not suspend his state's open carry policy for firearms. For 10 points, what Ohio city was the site of the 2016 Republican National Convention?
ANSWER: **Cleveland**

6. This author wrote a memoir divided into the sections "Southern Night" and "The Horror and the Glory." He included "The Ethics of Living Jim Crow" in his collection *Uncle Tom's Children.* The Communist lawyer Boris Max unsuccessfully defends the protagonist in this man's novel about Bigger Thomas. For 10 points, name this African-American author of *Black Boy* and *Native Son.*
ANSWER: Richard **Wright**

7. This country was named by Amerigo Vespucci, who compared its stilt houses to an European city. A waterfall in this country's Canaima (kah-NYE-mah) National Park is named after the American aviator who first spotted it. This country is covered by plains called *llanos* (YA-noes) and the Orinoco River basin. Landmarks in this country include the world's tallest waterfall, Angel Falls. For 10 points, name this country that contains the city of Caracas.
ANSWER: **Venezuela** [or Bolivarian Republic of **Venezuela**; or República Bolivariana de **Venezuela**]

8. A central axis on which two generators intersect defines the double-napped type of this figure. The ellipse and hyperbola are among the namesake "sections" created by the intersection of this figure and a plane. The volume of the right circular type of this figure is one-third that of a right circular cylinder, being one-third pi times base radius squared times height. For 10 points, name this three-dimensional figure that narrows from a circular base to an apex point.
ANSWER: right circular **cone**

9. This country's ruler was overthrown after the Free Officers Movement staged a coup (KOO) in the 1950's. A President of this country was assassinated soon after winning the Nobel Peace Prize with Menachem (MEN-ah-KEM) Begin. It briefly formed a union with Syria as the United Arab Republic. This country was once led by both Anwar Sadat (SUH-datt) and Gamal Nasser. For 10 points, what country nationalized the Suez (SOO-ezz) Canal in 1956?
ANSWER: Arab Republic of **Egypt**

10. In ancient Judaism, an animal of this kind, the "para aduma," (PAH-rah ah-doo-MAH) was red in color and was used to purify a person who touched a corpse. This animal is the namesake of a chapter containing the Throne Verse, known as "al-Baqarah," (bah-KAH-rah) which is the longest sura in the Quran. This animal is the source of ghee in another religion, which prohibits violence towards it. For 10 points, name this animal which is "sacred" in Hinduism.
ANSWER: **cow** [or **cattle**; or other synonyms such as **bovine** or **heifer**]

11. This character is told that the word "Doom" is written on the brow of a malnourished child named Ignorance, the companion of Want. As a youth, this character is apprenticed to Mr. Fezziwig. Later, he becomes partners with Jacob Marley and employs Bob Cratchit. For 10 points, name this Charles Dickens character, a miser who is visited by three ghosts at Christmas.
ANSWER: Ebenezer **Scrooge** [or **Ebenezer** Scrooge]

12. This composer's aria "Glitter and Be Gay" is sung by Cunegonde ("CUE"-nay-GAHND) in his operetta *Candide* (cahn-DEED). He spearheaded the *Young People's Concerts* program during his lengthy directorship of the New York Philharmonic Orchestra. This composer wrote a musical that modernizes the story of *Romeo and Juliet* in the context of two rival gangs, the Jets and the Sharks. For 10 points, name this composer of *West Side Story*.
ANSWER: Leonard **Bernstein** [or Louis **Bernstein**]

13. Many ruling families of this city used the name Hamilcar. A strategy used against its army emphasized avoiding major battles and was named for Fabius. Cato the Elder proclaimed that this city must be destroyed. Its forces lost a battle in which Scipio (SIP-ee-oh) Africanus used loud horns to confuse the war elephants used by this city. For 10 points, Hannibal fought for what city, the center of a civilization that fought the Punic Wars with Rome?
ANSWER: **Carthage** [or **Carthaginian**]

14. The stainless steel exterior of a building designed by this man had to be sanded as they focused glare and heat on adjacent sidewalks. This man included a concert venue called the Sky Church in his design for the Experience Music Project in Seattle. The Los Angeles Philharmonic regularly performs at a building designed by this architect. For 10 points, name this Canadian-American architect of the Walt Disney Concert Hall, and a Guggenheim Museum in Bilbao.
ANSWER: Frank **Gehry** [or Frank Owen **Gehry**; or Frank Owen **Goldberg**]

15. An episode in this novel formed the basis for William Shakespeare's lost play *Cardenio* (car-DEN-ee-oh). This novel's protagonist defeats the Knight of the Mirrors before losing to the same man as the Knight of the White Moon. The title character of this novel rides the horse Rocinante (roh-sih-NON-tay) and is accompanied by Sancho Panza (PON-zuh). For 10 points, name this novel about a delusional knight written by Miguel Cervantes (sur-VON-tays).
ANSWER: ***Don Quixote*** *(KEY-oh-TAY)* [or *The Ingenious Gentleman* ***Don Quixote*** *of La Mancha*; or *El Ingenioso Hidalgo* ***Don Quijote*** *de la Mancha*]

 **VHSL Regular Season 2016-2017 - Round 12 - Directed Period**

1A. The massacre at Chios (KEE-ohz) occurred during what European country's war for independence against the Ottomans during the 1820's?
ANSWER: **Greece** [or **Hellenic** Republic; or **Hellas**]

1B. What President of Syria has used social media campaigns and fashion magazine layouts to boost public perception of his country?
ANSWER: Bashar al-**Assad**

2A. What modernist American poet wrote "Sunday Morning" and "The Emperor of Ice-Cream"?
ANSWER: Wallace **Stevens**

2B. Minimal music was born in what country home to the composer of the completely silent piece *4'33"* ("four minutes, thirty-three seconds")?
ANSWER: **United States** of America [or **America**; or **U.S.**A.]

3A. "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**

3B. This is a 20-second calculation question. Jamie draws a regular hexagon. If the distance from any vertex to its centroid is one, what is its perimeter?
ANSWER: **6**

4A. What wars in modern-day South Africa featured the British fighting Dutch-speaking republics?
ANSWER: **Boer** Wars

4B. In May 2016, Chance the Rapper released what heavily gospel-influenced mixtape that included songs like "How Great" and "Blessings"?
ANSWER: ***Coloring Book***

5A. What hormone released by the posterior pituitary (pih-TU-uh-tair-ee) is responsible for milk letdown and forms a positive feedback loop during labor contractions?
ANSWER: **oxytocin**

5B. What line that runs through the Rockies separates rivers by whether they flow to the Pacific or the Atlantic?
ANSWER: **Continental Divide** [or **Great Divide**]

6A. What neuro-transmitter that functions in the reward pathway is depleted in Parkinson's disease?
ANSWER: **dopamine**

6B. "The pen is mightier than the sword" is an example of what rhetorical device, in which an associated thing, such as a pen, stands in for another thing, such as all of writing?
ANSWER: **metonymy**

7A. In an inauguration speech, Franklin Roosevelt said the only thing Americans had to fear was what thing?
ANSWER: **fear** itself

7B. What past tense in Spanish refers to actions that are not completed and is contrasted with the preterite tense?
ANSWER: **imperfect** tense [or **imperfecto**]

8A. This is a 30-second calculation question. What is the greatest prime factor of the sum: 2 to the power of 2016 plus 2 to the power of 2017 plus 2 to the power of 2018?
ANSWER: **7**

8B. This is a 30-second calculation question. Consider a list of three numbers. If the only mode of the list is two, and the mean of the list is three, what are the three numbers?
ANSWER: **2**, **2**, **5**

9A. What pluri-potent cells can be collected from embryos and are able to differentiate into many different tissue types?
ANSWER: **stem** cells [or embryonic **stem** cells; or induced pluripotent **stem** cells; or **iPSC**s]

9B. What Virginia Woolf novel centers on the Ramsay family, who visit the title building?
ANSWER: ***To the Lighthouse***

10A. Reynard the Fox, Kokopelli, and Coyote are all what type of mythological characters known for their cunning?
ANSWER: **trickster**s

10B. In what Edward Albee play do George and Martha play "Get the Guests" with Nick and Honey?
ANSWER: ***Who's Afraid of Virginia Woolf?***

 **VHSL Regular Season 2016-2017 - Round 12 - Third Period, Fifteen Tossups**

1. This country's Defense Minister resigned after the revelation that it had bombed the ship *Rainbow Warrior*, which was being used by Greenpeace to protest this country's nuclear tests. It gave up colonial possessions at the Geneva Conference after losing the 1954 Battle of Dien Bien Phu (FOO). That loss forced this country to give up its Indochina colony in Southeast Asia. For 10 points, what European country once colonized Vietnam?
ANSWER: **France** [or **French Fourth Republic**; or **French Fifth Republic**]

2. While giving a best man's speech, this show's title character learns that Major Sholto has been stabbed with a stiletto. This show's most recent episode depicts the "rampage" of the suffragette Emelia Ricoletti; that episode took place in the protagonist's "mind palace." In this show's first episode, Martin Freeman's character returns from Afghanistan, and moves to 221 B Baker Street. For 10 points, name this show in which Benedict Cumberbatch plays the title detective.
ANSWER: ***Sherlock***

3. An experimental setup devised by, and named for, this physicist yields the equation separation times sine of theta equals the order times wavelength. The ratio of stress to strain is the elastic modulus, which is sometimes named for this physicist. In a famous experiment devised by physicist, he directed light through two narrows gaps and observed their interference pattern. For 10 points, which physicist demonstrated the wave nature of light in his double-slit experiment?
ANSWER: Thomas **Young**

4. This book's fourth section warns that misinterpreting scripture can lead to a "Kingdom of Darkness." Part two of this philosophical text states that the only three types of government are monarchy, aristocracy, and democracy. This philosophical text warns of a "war of all against all," and calls the state of nature "solitary, poor, nasty, brutish, and short." For 10 points, name this book written during the English Civil War by Thomas Hobbes.
ANSWER: ***Leviathan*** *or the Matter, Forme, and Power of a Common Wealth Ecclesiasticall and Civil*

5. The basin surrounding this river contains terra preta, a type of charcoal-rich soil. An island in this river's delta was completely unaffected by the 1918 Spanish flu; that island is Marajó (mah-RAH-joe). This river's muddy water and the Rio Negro's dark water can be seen side-by-side at Manaus (mah-NAWS). This is the largest river inhabited by the piranha. For 10 points, name this longest South American river.
ANSWER: **Amazon** River

6. A novel by this author provoked responses like Caroline Lee Hentz's *The Planter's Northern Bride.* According to an apocryphal story recounted by this writer's son, Abraham Lincoln greeted her by crediting her with starting the Civil War. She wrote a novel in which the title slave is beaten to death on the orders of Simon Legree. For 10 points, name this abolitionist writer who wrote *Uncle Tom's Cabin*.
ANSWER: Harriet Beecher **Stowe**

7. In a creation myth from this country, problems arose when a woman spoke first after two people agreed to meet each other on the other side of a column. An underworld from this country's mythology is called Yomi. Two of its three sacred treasures are a mirror and the sword Kusanagi (KOOS-uh-NOG-ee). For 10 points, name this country that venerates Kami (KAH-mee) and whose creation myth involves the formation of its four main islands.
ANSWER: **Japan** [or **Nippon**]

8. In an opera by this composer, a group of gypsies strike the title objects during the "Anvil Chorus." The courtesan Violetta (vee-oh-LET-uh) dies of tuberculosis at the end of another opera by this composer. This composer of *Il Trovatore* (ill TROH-vuh-TOR-ay) also composed an opera about an Ethiopian princess. For 10 points, name this Italian composer of *La Traviata* (lah TRAH-vee-AH-tuh) and *Aida* ("eye"-EE-duh).
ANSWER: Giuseppe **Verdi**

9. In some organisms, this structure contains a molecule that stains with crystal violet and is prevented from assembling by penicillin. That molecule in this structure is called peptidoglycan (pep-tid-oh-GLY-can) and can be detected with a Gram stain. In fungi it is made of chitin (KYE-tin), and in plants it is made of cellulose (CELL-yu-loce). For 10 points, name this structure that forms a protective layer outside the cell membranes of plants and bacteria.
ANSWER: **cell wall**

10. This poet wrote a poem consisting of a single elegiac (el-uh-JIE-ik) couplet beginning, "Odi et amo" (OH-dee et AH-mo), or "I hate and I love." One of his poems in hendecasyllabics (hen-DEK-uh-sih-LAB-iks) rants at Asinius Marrucinus (uh-SIN-ee-us mar-oo-"SIGN"-us) for stealing a napkin given to him by his friends. For 10 points, name this Roman poet who addressed love poems to a woman named Lesbia.
ANSWER: Gaius Valerius **Catullus** (kuh-TULL-us)

11. The velocity crossed with the B field is added to this quantity in the Lorentz force law. A material's ability to resist this vector quantity is characterized by the permittivity. This quantity can be defined as the negative gradient of the electric potential. Because this quantity equals the force divided by charge, it can be measured in units of Newtons per Coulombs or Volts per meter. For 10 points, what quantity exerts a force on charged particles and is denoted by an E?
ANSWER: **electric field** [or **E** until it is read]

12. After the sailor-led Kronstadt rebellion, this man introduced an economic policy he dubbed "state capitalism." He issued the April Theses shortly after arriving at Finland Station. During this man's leadership of his country, the Treaty of Brest-Litovsk (LUH-toff) established peace with Germany. After returning from exile during World War I, he led the Bolsheviks during the October Revolution. For 10 points, name this first head of the Soviet Union.
ANSWER: Vladimir **Lenin** [or Vladimir Ilyich **Ulyanov**]

13. A side in this agreement was pressured into accepting it after his allies lost the Battle of Bouvines. It was drafted thanks to the mediation of Stephen Langton, the Archbishop of Canterbury, and its 61st clause allowed a 25-man council to monitor royal activities. This agreement was first presented at Runnymede on June 10, 1215. For 10 points, what agreement was King John's promise to protect the liberties of his rebellious barons?
ANSWER: **Magna Carta** [or The "**Great Charter**"; or **Magna Carta Libertatum**; or The "**Great Charter of the Liberties**"]

14. Some children from this country are afflicted with Little Emperor Syndrome, since they received too much attention as a youth. A woman born in America of Philippine and this country's descent described her childhood in the book *The Battle Hymn of the Tiger Mother*. Women from this country practice birth tourism in an attempt to get around a law limiting family size. For 10 points, name this Asian country that used to implement the "One Child" policy.
ANSWER: People's Republic of **China**

15. Cells in this organ release intrinsic factor to help absorb vitamin B12. *H. pylori* (H-pye-LOHR-ee) usually infects this organ. Parietal (puh-RYE-ih-tull) cells in this organ secrete a substance that activate pepsin. This organ empties into the duodenum (du-AW-dih-num) through the pyloric (pye-LOHR-ic) sphincter. In ruminants like cows, this organ has four compartments. For 10 points, name this organ that receives chewed food from the esophagus.
ANSWER: **stomach**

 **VHSL Regular Season 2016-2017 - Round 12 - Tiebreaker Questions**

1. A sculpture depicting this man is believed to have been modeled after a young Leonardo da Vinci and was created by Verrocchio (vair-O-key-O). This man wears just a pair of boots and a hat in the first freestanding nude male sculpture made since antiquity. A third sculpture of this man cast in marble shows him bearing his sling over his shoulder. For 10 points, name this Biblical hero who was sculpted by Donatello and Michelangelo, the slayer of Goliath.
ANSWER: **David**

2. This ruler's destructive attack on rebels was called the Harrying of the North. This monarch took power shortly after defeating an opponent who had just fought the Battle of Stamford Bridge. The results of surveys of his landholdings appeared in the Domesday Book. The Bayeux (BYE-yoo) Tapestry commemorates this man's 1066 defeat of Harold Godwinson. For 10 points, name this victor at the Battle of Hastings, the first Norman king of England.
ANSWER: **William the Conqueror** [or **William I**; or **William the Bastard**]

3. This religion's "three treasures" include the principles of compassion, frugality, and modesty. Its possibly mythical founder wrote that the journey of a thousand miles starts with a single step. This religion's leading principle is "wu-wei" (WAY), which means non-action. Its fundamental text is frequently attributed to Lao-Tzu (LOWW-zoo). For 10 points, what Chinese religion believes people should work in harmony with a universal force translated as "the way"?
ANSWER: **Tao**ism (DOWW-ism)

4. When bound to a methyl group—but not an ethyl group—this element will bioaccumulate. This element's filled six s orbital and lack of a six p orbital lead to its unusual properties, differing from its neighbors gold and thallium. The main ore of this element is cinnabar, or vermillion. This transition metal is a liquid at standard temperature and pressure. For 10 points, what toxic metal element has the chemical symbol Hg?
ANSWER: **mercury** [or **Hg** until it is read]

5. The 1981 assassination of a president of this country is the subject of the novel *The Day the Leader Was Killed.* A writer from this country allegorized the Abrahamic religions in *Children of Gebelawi* (geh-buh-LAH-wee). This country's capital is the setting of *Sugar Street*, *Palace of Desire*, and *Palace Walk*, a trilogy by Naguib Mahfouz (nah-GEEB mah-FOOZ). For 10 points, name this country whose ancient literature was written in hieroglyphics.
ANSWER: **Egypt**

What is the period of the function "cotangent of three theta?"
ANSWER: **pi/3**

What French writer described a coal miners' strike in *Germinal* (zhair-mee-NAHL) and wrote the open letter *J'accuse* (zhah-KYOOS) in support of Alfred Dreyfus?
ANSWER: Emile **Zola**