

VHSL Districts 2010-2011 Round 5 First Period, Fifteen Tossups

1. He wrote of his travels through Asia with Arthur Koestler in his second autobiography, *I Wonder as I Wander*. As a poet, he wrote the repeated line "life for me ain't been no crystal stair" in "Mother to Son" and described a musician who droned a "drowsy syncopated tune" in "The Weary Blues." For 10 points, name this poet of "The Negro Speaks of Rivers," a leading figure of the Harlem Renaissance.

ANSWER: Langston **Hughes**

019-10-22-05101

2. In bimolecular enzyme-catalyzed reactions of this type, the product of an enzyme with one substrate leaves before reaction with the second substrate. Neutralization reactions are most often of this type. Multiple spectator ions are present when a precipitation reaction is this kind of reaction. This reaction is most common with ionic compounds. For 10 points, name this type of reaction in which two compounds exchange ions or elements to form new compounds.

ANSWER: double displacement reactions [or double replacement reactions; or metathesis reactions]

003-10-22-05102

3. This character claims that he chooses "not to run" when he is challenged to a race. He is called an "anti-dentite" after insulting his dentist Tim Whatley. He despises visits from his parents Helen and Morty and tries to pitch a show to NBC with his best friend, played by Jason Alexander. Most notably, he has a deep hatred for the postman Newman and often eats at Monk's Café with Elaine, George, and Kramer. For 10 points, name this character, the fictional version of a comedian who played him for nine years. ANSWER: Jerry Seinfeld [or Jerry Seinfeld]

083-10-22-05103

4. Richard Feynman's lectures give the example of a beautiful girl drowning to illustrate this equation, which he shows can be derived from the principle of least time. This equation can be used to derive both Brewster's angle and the critical angle. For 10 points, name this law that states that, at a boundary, the index of refraction of the medium being exited times the sine of the angle of incidence equals the index of refraction of the medium being entered times the sine of the angle of refraction.

ANSWER: **Snell**ius's Law

003-10-22-05104

5. At the end of William Faulkner's *Absalom, Absalom!*, Shreve asks Quentin Compson "why do you hate" this thing. In a short story by this name, Juan Dahlmann goes out to die in a knifefight. A genre of literature named for this place was the idiom for writers such as Carson McCullers and Flannery O'Connor. For 10 points, identify this American region, which names a kind of twentieth-century "gothic" literature. ANSWER: the **south** [or the **Southern** United States, etc.]

019-10-22-05105

6. The highest point of this city is the Hermannskogel. A 20-ton bell made from captured Turkish cannons can be found in this city's St. Stephen's Cathedral. This city's chief park, the Prater, is known for its giant Ferris wheel. This city is home to the Ringstrasse (RING-strah-suh), on which stands the Rathaus. This city is the headquarters for the International Atomic Energy Agency and OPEC, and this city is located on the Danube River. For 10 points, name this capital of Austria.

ANSWER: Vienna

7. Calvin Brides discovered mutant versions of this organism caused by gene duplication, and also found that the chromosomes on its salivary glands are abnormally large. The theory of sex-linked characteristics was first put forth to explain white eyes in this organism, which were being studied at Columbia by Thomas Hunt Morgan. For 10 points, name this common laboratory animal, the subject of many basic inheritance studies.

ANSWER: small <u>fruit fly</u> [or <u>vinegar fly</u>; or <u>pomace fly</u>; or <u>Drosophila</u> melanogaster; or <u>D.</u> <u>melanogaster</u>]

019-10-22-05107

8. This is the title poem of a collection which also includes "The *Boston Evening Transcript*" and "Portrait of a Lady". The title speaker of this poem has a "necktie rich and modest, but asserted by a simple pin", and has "measured out [his] life with coffee-spoons". Near the end of the poem, the speaker laments that the mermaids "will not sing to me," and earlier asks "Do I dare to eat a peach?" For 10 points, name this poem in which "the women come and go / Talking of Michelangelo," by T. S. Eliot.

ANSWER: "The Love Song of J. Alfred Prufrock"

082-10-22-05108

9. Pierre Guattari and Gilles Deleuze wrote a work titled for this concept "and schizophrenia." Frederic Jameson labeled postmodernism "the cultural logic" of its "late" form. Trotsky claimed that the USSR should orchestrate its "state" form, while Lenin labeled imperialism its "highest form." Joseph Schumpeter compared it to both socialism and democracy. For 10 points, name this form of economic organization which can be "laissez-faire" and designates private ownership of factors of production.

ANSWER: capitalism

019-10-22-05109

10. Neurofibromatosis (nur-ohf-eye-broh-mah-TOE-sis) and Marfan syndrome have this inheritance pattern. Another disease with this inheritance pattern is caused by a CAG repeat. Since negative selection is most effective if a disease causes a drop in fitness before the end of reproductive maturity, some disorders with this pattern don't manifest until later in life, such as Huntington's. For 10 points, name this genetic disease inheritance scheme where the disease is caused by one bad allele on a non X nor Y chromosome.

ANSWER: <u>autosomal dominant</u> [prompt on partial answer; or <u>non sex linked dominant</u>]

001-10-22-05110

11. During the Renaissance, this city was home to the printing press of Aldus Manutius, which printed the first European editions of major Greek classics. The majority of galleys for the Holy League at the Battle of Lepanto were provided by Spain and this city. Rulers of this city, such as Enrico Dandolo, annually threw a ring into the Adriatic to celebrate this city's symbolic marriage to the sea. For 10 points, name this northeast Italian city once ruled by doges, which is built on a series of canals.

ANSWER: Venice

004-10-22-05111

12. This word is the first name of a "finance corporation" that Herbert Hoover chartered during the Great Depression. This word also names the historical period planned by by the proposed Ten Percent Plan and the vetoed Wade-Davis Bill. This period ended because of the deal that elected Rutherford Hayes president. Radical Republicans passed the thirteenth, fourteenth, and fifteenth amendments during this period. For 10 points, name this period of Northern military control of the South after the Civil War.

ANSWER: Reconstruction

13. He proposed three "definitive articles", including republican government, as a basis on which to end intra-national hostilities in his *Perpetual Peace*. He stated that the answer to the title question is "man's emergence from his self-imposed immaturity" in "What is Enlightenment?" This philosopher based his system of ethics on a set of three maxims known as the categorical imperative. For 10 points, name this German philosopher of *Critique of Judgment* and *Critique of Pure Reason*.

ANSWER: Immanuel Kant

082-10-22-05113

14. This author concluded that Germany is the middle ground between East and West in his essay "Goethe (GUR-tuh) and Tolstoy." This creator of the fictional composer of *Apocalypsis cum figuris* also depicted a duel between the Jesuit priest Naphta and the humanist Settembrini. That occurs in his novel about Hans Castorp's stay at a tuberculosis santorium. For 10 points, name this author of *Doktor Faustus*, *The Magic Mountain*, and *Death in Venice*.

ANSWER: Thomas Mann

019-10-22-05114

15. In this game, items like heart boosts and the parrot Squawks are sold by a character named Cranky, and a pig with glasses marks the players' reaching of checkpoints in levels. This game's antagonists are the Tiki Tak Tribe, who stole the protagonist's bananas. For 10 points, name this game for the Wii, which sees the return of the title character and Diddy Kong.

ANSWER: **Donkey Kong Country Returns** [do not accept or prompt on incomplete answers]



1A. What name is given to an accent mark that slants down to the right, unlike an acute?

ANSWER: grave

1B. What city, forty miles away from Mount Ranier, is the namesake of a suspension bridge that collapsed in a windstorm in 1940 after exhibiting a "galloping" motion?

ANSWER: Tacoma, Washington

2A. Name the Chinese writer of short stories such as "A Madman's Diary" and "The True Story of Ah Q."

ANSWER: **Lu** Xun [or **Zhou** Shuren]

2B. CPUs contain what fast, on-die memory whose hierarchy contains L1, L2, and L3 levels?

ANSWER: cache

3A. This is a 10-second calculation question. What is the mean of the first 4 numbers of the Fibonacci sequence?

ANSWER: 7/4 [or 1.75]

3B. This is a 10-second calculation question. In terms of pi, what is the area of a circle with circumference 8pi?

ANSWER: 16 pi

4A. Name the monster slain by Beowulf in his namesake epic, leading the monster's mother to avenge his death.

ANSWER: Grendel

4B. Which album by Miles Davis contains renditions of Manuel de Falla's "Will o' the Wisp" and Joaquín Rodrigo's "Concierto de Aranjuez?" (ah-RAHN-hwez)

ANSWER: **Sketches of Spain**

5A. This is a 20-second calculation question. What is the solution to the system of equations x + y = 11 and 10x + 13y = 140?

ANSWER: $\underline{\mathbf{x}} = \underline{\mathbf{1}}$ and $\underline{\mathbf{v}} = \underline{\mathbf{10}}$

5B. This is a 20-second calculation question. What is the cosine squared of pi over 4, minus the sine of pi over 2?

ANSWER: <u>-0.5</u> [or <u>-1/2</u>]

6A. The first British settlers in their land signed the Treaty of Waitangi (wuh-TOHN-ghee) with them. Identify these indigenous people of New Zealand.

ANSWER: the **Maori**

6B. What French prison only contained seven inmates when it was stormed on July 14, 1789?

ANSWER: the Bastille

7A. This is a 30-second calculation question. What is quantity x - 1 end quantity squared divided by quantity x + 1 end quantity squared?

ANSWER: 1 - 4/x

7B. This is a 30-second calculation question. A set is formed by substituting the numbers 5 through 10, inclusive, into the series x^2 - 5. If you chose a number at random from that set, what is the probability that the number would be odd?

ANSWER: 1/2 [or 0.5]

8A. What religious obligations include the idea of alms giving, or zakat, and the hajj, or pilgrimage to Mecca?

ANSWER: Five **Pillars of Islam** [or **arkan** al-Islam; or **arkan** ad-din]

8B. What branch of chemistry deals with relations between amounts of elements and compounds involved in chemical reactions?

ANSWER: stoichiometry

9A. What Redskins quarterback, formerly of the Eagles, was recently benched in favor of Rex Grossman?

ANSWER: Donovan McNabb

9B. Which French artist is known for his paintings of water lilies and haystacks and also inspired the name of an art movement with his painting *Impression*, *Sunrise*?

ANSWER: Claude Monet (moh-nay) [do not accept "Manet"]

10A. What musical term refers to a moderately slow tempo, faster than largo but slower than moderato?

ANSWER: andante (ahn-DAHN-tay)

10B. Name the literary term that describes the use of exaggeration for emphasis.

ANSWER: hyperbole

VHSL Districts 2010-2011 Round 5 ird Period, Fifteen Tossups

Third Period, Fifteen Tossups

1. During this election, the Bourbon Democrats refused to support the mainstream Democratic nominee, who was supported by the pamphlet "Coin's Financial School," and lost to a carefully managed "front porch" campaign managed by Mark Hanna. The Democratic candidate became the nominee for this election after delivering the "Cross of Gold" speech. For 10 points, name this election in which William Jennings Bryan first ran for President, only to lose to William McKinley.

ANSWER: election of 1896

004-10-22-05117

2. This author included a discussion of television and fiction, "E Unibus Pluram", in a collection of essays headlined by his account of a week-long Carribean cruise, *A Supposedly Fun Thing I'll Never Do Again*. Ennet House and the Enfield Tennis Academy are featured in a novel by this man which centers on the Incandenza family and contains over one hundred pages of footnotes. For 10 points, name this author of *Infinite Jest*, who hanged himself in 2008.

ANSWER: David Foster Wallace

082-10-22-05118

3. This process's namesake coefficient is calculated using Fick's Second Law. Molecules undergo this process by Brownian motion. Like a related process, the rate of this process is proportional to one over the square root of molar mass by Graham's Law. A "facilitated" form of this process occurs across a cell membrane, and when water undergoes this process it is known as osmosis. For 10 points, name this movement of a substance down its concentration gradient.

ANSWER: diffusion

003-10-22-05119

4. These cells have outer dense fiber proteins used in structural elements. Histone variants used by these cells include hils1. Sertoli cells play an important role in the development of these cells which are created in the seminiferous tubules. The acrosomes of these cells break down an associated cell's zona pellucida. Their movement is enabled by flagella. These haploid cells develop and are stored in the testes. For 10 points, name these male gametes that fertilize eggs.

ANSWER: **sperm** cells [or **spermatozoa**; or **spermatozoan**]

001-10-22-05120

5. This group received help from the guide Old Toby, and was given horses by the chief Cameahwait (cah-MAY-uh-wait_. This group spent one winter in their own construction, Fort Mandan. At that location, this group hired a Hidatsa interpreter named Touissant Charbonneau, whose Shoshone wife was named Sacagawea. For 10 points, name this group that set out from St. Louis, Missouri, in 1804 to explore the lands to the west of the United States under the orders of Thomas Jefferson.

ANSWER: Lewis and Clark Expedition [or Corps of Discovery]

023-10-22-05121

6. Charles Addams's cartoons for this magazine featured a family of ghouls who poured boiling water on Christmas carolers and formed the basis for *The Addams Family*. George Lucas named a villain from his movie *Willow* "General Kael," after Pauline Kael, a longtime movie critic for this magazine. James Thurber's story "The Secret Life of Walter Mitty" was first published in this magazine. For 10 points, name this magazine whose mascot is the foppish Eustace Tilley and which is named after a city.

ANSWER: The New Yorker

7. At the end of *Oedipus at Colonus*, Oedipus blesses this city by dying at its outskirts. Aristophanes (ar-uhs-TAH-foe-neez) often attacked Cleon, a politician from this city, in his plays set here, such as *The Knights*. Another Aristophanes play set here, *The Clouds*, satirized Socrates as a Sophist, and may have helped spur Socrates' execution. For 10 points, name this Greek city where Euripides, Aeschylus, and Sophocles invented classical tragedy.

ANSWER: Athens

004-10-22-05123

8. The most recent meeting of the G-20 took place in this nation. Recently, this country was part of several international incidents, one of which involved the sinking of one of its corvettes by a torpedo from a midget submarine. Another was a November 2010 incident in which four citizens of this nation were killed by enemy artillery fire while on a disputed Yellow Sea island. For 10 points, name this Asian nation whose politics are dominated by tensions with its Communist neighbor to the north.

ANSWER: **South Korea** [or **Republic of Korea**; prompt on **Korea**]

064-10-22-05124

9. In one experiment, this psychologist showed that people are more likely to mail a lost letter to a socially acceptable recipient. He instructed people in Kansas and Nebraska to get a package to a stockbroker in Boston in his small world experiment. For 10 points, name this American psychologist who conducted an experiment in which people showed obedience to authority by administrating seemingly painful shocks to strangers.

ANSWER: Stanley Milgram

085-10-22-05125

10. For an RLC circuit, the frequency associated with this effect is where impedance is at a minimum. Substances can be analyzed through a technique that uses the nuclear magnetic form of this effect. That technique's commonly used medical variant is called MRI. This effect causes the amplitude of a system to hit a maximum. For a vibrating string, the frequencies of this are multiples of the fundamental. For 10 points, name this effect where the frequency of the input force equals the natural frequency of the system.

ANSWER: resonance

001-10-22-05126

11. One of these types of systems is defined as a "bomb" when the central pressure drops at least 24 millibars in a span of 24 hours. Tropical ones are warm-core, deriving energy from the latent heat released in condensation. Mid-latitude ones are known as "wave" ones when developing along the polar front. In the northern hemisphere, these systems rotate counter-clockwise around a central area of low pressure. For 10 points, name these systems whose tropical varieties are called hurricanes.

ANSWER: **cvclone** [or **low pressure** before it is read]

051-10-22-05127

12. One variant of this biological process employed by humans is the D-loop form. Some viruses use the rolling circle type. The ori site is a crucial component of this for plasmids. The Meselson-Stahl experiment confirmed that this process is semi-conservative. During this process, Okazaki fragments will be created and dealt with. This occurs during S-phase, and the enzyme central to this process is DNA polymerase (puh-LIM-er-aze). For 10 points, name this process where the genetic material of a cell is duplicated.

ANSWER: DNA replication

13. In this movie, Silas Lynch seeks vengeance for the death of Gus, who is killed for making Flora leap off a cliff. Criticism of this movie led its director to make *Intolerance* the next year. At its end, Elsie forgives Ben Cameron for founding the Ku Klux Klan. For 10 points, name this 1915 silent film by D.W. Griffith, remembered for its pro-Confederate message as much as its pioneering of many cinema techniques.

ANSWER: Birth of a Nation

019-10-22-05129

14. This force was first spotted by its enemies at Lizard Point. The Battle of Gravelines resulted in the defeat of this force. This force was led by the Duke of Medina-Sidonia after the death of its originally planned leader, the Marquis of Santa Cruz. The defeat of this force was attributed by some to the so-called Protestant Wind. Only sixty of the ships from this fleet were able to return to their country of origin. For 10 points, name this fleet of ships that Philip II sent in an attempt to take England in 1588.

ANSWER: Spanish **Armada** [or Invicible **Armada**; or **Armada** Espanola; or **Armada** Invencible]

023-10-22-05130

15. This figure successively wielded white shields with one, two, and three red bands to conquer Dolorous Guard. While staying with King Pelles, he was tricked into sleeping with Elaine, resulting in the birth of his son Galahad. He is sometimes nicknamed "of the lake" because he was raised by the Lady of the Lake, and in most sources, he is unable to find the Holy Grail because of his relationship with the wife of King Arthur. For 10 points, name this lover of Queen Guinevere, the strongest knight of the Round Table. ANSWER: Lancelot du Lac



1. This organization is led by John Pistole and publishes a blog, run by "Blogger Bob," that features articles denying that backscatter X-rays can tear DNA apart. One critic of this organization, John Tyner, taped a confrontation in which he declared "If you touch my junk I'm gonna have you arrested," fueling a grassroots movement advocating a national "opt-out" day. For 10 points, name this agency of the Department of Homeland Security which has been criticized for its full body scanners in airports.

ANSWER: Transportation Security Administration [or TSA]

015-10-22-05132

2. The speaker of one of this author's poems compares himself to "bare ruined choirs, where late the sweet birds sang." This author's fifty-fifth sonnet declares "Not marble, or the gilded monuments / Of princes shall outlive this powerful rhyme." Other of this poet's one hundred and fifty four sonnets admit that the speaker's mistress is "nothing like the sun" and ask "shall I compare thee to a summer's day?" For 10 points, name this English author of *A Midsummer Night's Dream*.

ANSWER: William **Shakespeare**

004-10-22-05133

- 3. One corollary of the Riemann Hypothesis is that the difference between the logarithmic integral and the prime counting function is upper bounded by the product of the square root function and this function. The first term of the Maclaurin series of this function is x minus 1, and the integral of this function is 1 over x. When this function is applied to a product, it may be written as the sum of this function applied to each term in the product. For 10 points, name this mathematical function, which specifically has base e.

 ANSWER: natural logarithm [or logarithm before "i pi" is read; prompt on logarithm after "i pi" is read]
- 4. One quantity typically denoted using the capital version of this Greek letter is a colligative property equal to molarity times the gas constant times temperature. That quantity is the osmotic pressure. This Greek letter also represents a type of chemical bond typically formed from the overlap of p orbitals found in double-bonded compounds, such as alkenes. For 10 points, name this Greek letter that symbolizes a mathematical constant roughly equal to 3.14.

ANSWER: pi

064-10-22-05135

5. This settlement elected, and shortly after removed, as its first president Edward-Maria Wingfield, who had arrived here with others on the *Godspeed*, *Discovery*, and *Susan Constant*, captained by Christopher Newport. One inhabitant of this location brought from the West Indies seeds of tobacco. That man, John Rolfe, who lived in this settlement, married the daughter of Powhatan, Pocahontas. For 10 points, name this first permanent English settlement in America led for a time by John Smith and located in Virginia.

ANSWER: **Jamestown** Settlement

023-10-22-05136

In 1993, the Booker Prize committee named this novel the best winner of the prior twenty-five years. Identify this Salman Rushdie work about the thousand people born at the moment of India's independence.

ANSWER: Midnight's Children

023-10-22-05137

This is a calculation question. What is the cube root of $8x^3 + 48x^2 + 96x + 64$?

ANSWER: 2x + 4