

NEW TRIER VARSITY 2008

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Round 6: Food Coma

Bonuses

1. (JG) His work as a student led to the laryngeal [luh RINJ ee ul] theory, and he emphasized synchronics over diachronics. For 10 points each:

[10] Name this Swiss linguist who gave a course at the University of Geneva emphasizing language as a formal system. His notes were compiled into the book *Course in General Linguistics*.

ANSWER: Ferdinand de **Saussure**

[10] Saussure argued that this linguistic topic should be divided along syntagmatic and associative aspects instead of being separated into morphology and syntax.

ANSWER: **grammar**

[10] *Course in General Linguistics* calls unimportant these types of words whose sound reflects their meaning. Examples include "buzz", "crash", and "boom".

ANSWER: **onomatopoeias**

2. (AS) Answer the following about early European exploits in the Americas:

[10] Francisco Pizarro accompanied this fellow Spaniard on his crossing of the Isthmus of Panama in 1513. Pizarro arrested this man six years later and brought him to stand trial, an act of loyalty towards then-Governor Pedrarias D'Avila that drove Pizarro to prominence in the Spanish New World.

ANSWER: Vasco Nunez de **Balboa**

[10] A year after executing the Incan ruler Atahualpa [ah tah WHAHL pah] in 1533, Pizarro led a band of Spaniards supplemented by native troops to conquer this Incan capital.

ANSWER: **Cuzco**

[10] After the fall of Cuzco resistance continued from remnants of Incan troops led first by Manco Inca Yupanqui, and then by his son, this last Incan emperor.

ANSWER: **Tupac Amaru** (accept either or both parts)

3. (DR) Computational — pencil and paper ready. Give the following about the shape given by the equation $4x^2 + y^2 - 16x + 2y + 1 = 0$:

1. [10] The shape is this type of conic section.

2. [10] This point is its center.

3. [10] This is the value of its eccentricity. Thirty seconds.

ANSWER 1: **ellipse**

ANSWER 2: $(x,y) = (2, -1)$

ANSWER 3: the square **root** of **three over two** or **one-half** times the square **root** of **three** or equivalent

4. (JG) Answer the following about a six-book 1866 work by Fyodor Dostoevsky:

[10] This is the novel, in which a poor student murders his landlord because he believes he is an "extraordinary man" and thus above the law.

ANSWER: ***Crime and Punishment***

[10] This protagonist of *Crime and Punishment* eventually confesses to the murder and is sent to Siberia to do hard labor.

ANSWER: **Rodion** Romanovitch **Raskolnikov** (accept either or both)

[10] Raskolnikov chases after this woman, the daughter of a drunkard whose life he saves. She fits the archetype of the pious prostitute.

ANSWER: **Sonya** Semyonovna Marmeladova (prompt on **Marmeladova**)

5. (JG) Geometry is pretty good in two dimensions. Obviously three dimensions adds to the fun, and this generalizes: the more dimensions, the more awesome. Answer the following about some stuff in more than three dimensions:

[10] This is the term for the generalization of a polyhedron to arbitrarily many dimensions. It comes from the Greek for "many" and "place".

ANSWER: **polytope**

[10] The most basic polytope is this. In two dimensions, it is called a triangle, and in three dimensions, it's a tetrahedron.

ANSWER: **n-simplex**

[10] This term refers to the four-dimensional analogue of a square or cube, and is also known as a hypercube. The same term was used for the mode of time travel in *A Wrinkle in Time*.

ANSWER: **tesseract** (accept **octachoron**)

6. (JG) Identify these functional groups of organic chemistry for 10 points each:

[10] This group consists of a covalently-bonded oxygen and hydrogen atom. Molecules with them are known as alcohols.

ANSWER: **hydroxyl** group

[10] This functional group always has a nitrogen atom. It also often has one or two hydrogen atoms covalently bonded to the nitrogen.

ANSWER: **amine** group

[10] This has a hydroxyl group single-bonded to it plus a double-bonded oxygen atom. Because it has three bonds, it must occur at the end of a carbon chain, and it is present in its namesake acids.

ANSWER: **carboxyl** group

7. (JG) After he died of tuberculosis, his heart was buried separately from the rest of him. The son of a Polish woman and a French expat, this Romantic composer almost never made public appearances. He composed almost exclusively for a solo piano. For 10 points each:

[10] Name this composer, known for mazurkas, polonaises, a set of twenty-four preludes arranged in the circle of fifths, and the "Funeral March" prelude.

ANSWER: Frédéric François **Chopin** or Fryderyk Franciszek **Szopen**

[10] Chopin also wrote many pieces in this three-four-time form, whose name comes from the German for "revolve". They initially scandalized society before becoming very popular in the nineteenth century. His most famous is popularly called the "Minute" this.

ANSWER: **waltz** or **valse**

[10] Chopin's compositions are often performed with this technique, in which note values are interpreted liberally for maximum expressiveness. Its name is Italian for "stolen".

ANSWER: **rubato**

8. (DR) This character boasts about a reindeer hunt, loves Solveig, becomes a Bedouin chief, and meets a Button-Moulder. For 10 points each:

[10] Name this title character from a 19th century play.

ANSWER: **Peer Gynt**

[10] This composer wrote "In The Hall of the Mountain King" for Ibsen's *Peer Gynt*.

ANSWER: Edvard **Grieg**

[10] This philosopher's work *Either/Or* was studied by Ibsen before he wrote *Peer Gynt*.

ANSWER: Søren **Kierkegaard**

9. (CA) Identify the following programming languages, for 10 points each.

[10] This popular scripting language parsed by the Zend Engine is currently at version 5.2.8, and serves as a platform for Wikipedia, Facebook, and many other web applications.

ANSWER: **PHP**

[10] PHP was originally a set of extensions for this scripting language designed by Larry Wall, currently at version 5.10, known for its flexible syntax and powerful regular expressions.

ANSWER: **Perl**

[10] Like PHP and Perl, this language developed by Sun Microsystems sometimes appears in web browsers, but runs as bytecode in a virtual machine on the client computer. Related to C, this object-oriented language is designed to run on any computer architecture.

ANSWER: **Java**

10. (SS) Elia Kazan directed this 1951 film after also directing the stage production. For 10 points each:

[10] Name this film adapted from a Tennessee Williams play featuring Marlon Brando, in which Stanley Kowalski and Blanche DuBois continually butt heads.

ANSWER: A **Streetcar Named Desire**

[10] Brando also starred in this film, in which Terry Malloy goes against the dock boss Johnny Friendly in this classic

ANSWER: **On the Waterfront**

[10] This film with Brando updated Joseph Conrad's novel *Heart of Darkness* to the Vietnam era. It has Colonel Kurtz being butchered like a cow.

ANSWER: **Apocalypse Now**

11. (JG) Give the following terms associated with cell reproduction for 10 points each:

[10] This is the name for the process of nuclear division found in most cells. It results in two daughter nuclei that are genetically identical to the parent.

ANSWER: **mitosis** [mi TOH sis] or **mitotic** division (accept clear knowledge equivalents like "reproduction" for "division")

[10] Mitosis is often followed by this process, in which the cell separates into two distinct cells. In plant cells, it includes the formation of a cell plate.

ANSWER: **cytokinesis**

[10] Among the very few cells that don't split via cytokinesis are egg cells. Instead, they are created by this process, which after meiosis [mi OH sihs] produces three polar bodies and one ovum.

ANSWER: **oogenesis**

12. (DR) From a country named after Venice, one might expect some interesting water features. Venezuela does not disappoint. For 10 points each:

[10] This is the largest waterfall in the world, named after a pilot from the United States.

ANSWER: **Angel Falls**

[10] Now connected to the Gulf of Venezuela, this was the largest lake in South America, but it is not really a lake any more.

ANSWER: Lake **Maracaibo**

[10] This river exists mainly in Venezuela and has over two hundred tributaries. It is the third longest river in South America and was discovered by Christopher Columbus.

ANSWER: **Orinoco** River or **Orinoquia** River (accept "Río" for "River" in either case, and allow it to be put before the name)

13. (TB) Identify the following Ernest Hemingway works for 10 points each:

[10] This novel takes its name from a bible verse and chronicles travels across France and Spain. The characters, including the narrator Jake Barnes, are greatly influenced by World War I.

ANSWER: *The Sun Also Rises*

[10] Hemingway wrote this work about bullfighting while living in Key West. It explores the history and traditions of the sport.

ANSWER: *Death in the Afternoon*

[10] This posthumously-published book describes Paris. It contains Hemingway's memoirs, and includes appearances by other notable authors including Ezra Pound, John Dos Passos, and James Joyce.

ANSWER: *A Moveable Feast*

14. (SS) Answer these questions about radioactive decay:

[10] These particles are formed when radium-226 decays into radon-222.

ANSWER: alpha particles or helium nucleus/ei

[10] These particles are released when Lead-214 becomes Thallium-214. They have the opposite charge of an electron.

ANSWER: positrons (prompt on antielectrons)

[10] These particles are released in nuclear fission. They are also released when beryllium is bombarded by helium nuclei and were discovered by James Chadwick.

ANSWER: neutrons

15. (JG) Identify these words sometimes used as insults:

[10] In the bible, this group was often the enemy of the Hebrews. The word for them now often refers to somebody who dislikes learning or art.

ANSWER: Philistine

[10] This term originated in late 19th-century England or Ireland. It generally refers to young people who cause mischief and is still used commonly by British papers.

ANSWER: hooligan

[10] This term refers to traitors who serves in puppet governments. It is derived from the name of the Prime Minister of Norway during World War II.

ANSWER: quisling

16. (JG) It depicts the French village of Saint-Rémy, which the painter saw out of his asylum window. For 10 points each:

[10] Identify this Vincent van Gogh painting that features a huge cypress dominating the left side, along with the titular balls of fiery gas.

ANSWER: *The Starry Night* or *De Sterrennacht*

[10] Van Gogh intentionally chose ugly models for this other painting, in which he depicts the peasant life. In it, five people sit around a dimly-lit table consuming a particular food with, as the artist pointed out, the same hands they use to work the land.

ANSWER: *The Potato Eaters* or *De Aardappeleters*

[10] Van Gogh depicted a French restaurant in this painting, which features a pool table in the center, three chandeliers, and a bunch of haphazardly placed chairs. Van Gogh intentionally used the clashing colors of red, yellow, and green in order to evoke "the terrible passions of humanity".

ANSWER: *The Night Café* or *Le Café de nuit*

17. (JG) Its major setting was based on Tobago, and it is sometimes considered the first English novel.

For 10 points each:

[10] Name this work about a man stranded on an island off Chile, presented as an autobiography. The title character spends twenty-eight years on that island before being rescued.

ANSWER: *The Life and Strange Surprising Adventures of **Robinson Crusoe**, of York, Mariner*

[10] *Robinson Crusoe* is based loosely on the story of this Scottish man who was a castaway for the comparatively little four years. His camp was recently discovered on the island of Aguas Buenas.

ANSWER: Alexander **Selkirk** or Alexander **Selcraig**

[10] *Robinson Crusoe* is by this author of *Moll Flanders*, whose other works include *A Journal of the Plague Year* and "The Shortest Way with the Dissenters", which resulted in his imprisonment.

ANSWER: Daniel **Defoe** or Daniel **Foe**

18. (JG) Identify the following terms related to the death of very massive stars.

[10] After a supernova, this type of extremely dense star may remain. These stars are composed almost totally of their namesake subatomic particles.

ANSWER: **neutron** star

[10] Neutron stars that rotate rapidly, are strongly magnetized, and emit radio waves are called this.

ANSWER: **pulsar**

[10] That spinning motion is due to the conservation during a supernova of this quantity, formed by the product of moment of inertia and angular velocity.

ANSWER: **angular momentum**

19. (DR) Computational — pencil and paper ready. Using radians, answer the following questions about the graph of y equals the square root of three plus the tangent of x .

1. [10] The smallest positive x -coordinate of a vertical asymptote.

2. [10] The smallest positive x -intercept.

3. [10] The distance between successive vertical asymptotes. Thirty seconds.

ANSWER 1: **$\frac{\pi}{2}$** or **one-half** times **π**

ANSWER 2: (**two** times **$\frac{\pi}{3}$** , 0) or (**two-thirds** times **π** , 0)

ANSWER 3: **π**

20. (JG) An aide might have warned David Lilienthal that a certain river was losing water uncontrollably, in which case he would have replied "Dam it!" For 10 points each, answer these questions relating to Lilienthal's most noted accomplishments:

[10] Lilienthal led this 1930s organization, responsible for modernizing its namesake region of the upper South including improving methods of crop production.

ANSWER: **Tennessee Valley Authority** (prompt on **TVA**)

[10] The TVA was part of this 1930's program spearheaded by Franklin Delano Roosevelt.

ANSWER: the **New Deal**

[10] As World War I broke out, Wilson Dam was built at this site in Alabama, and there was a debate over its ownership until the TVA took over the dam.

ANSWER: **Muscle Shoals**, Alabama