

NEW TRIER VARSITY 2008

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Round 5: Seventy-Eight Page Indictments. Or Is That Just the Length of Tossup One? Bonuses

1. (JG) In 2005, the good old food pyramid we all know and love was dumped. For 10 points each:
[10] This is the name of the new guide that was instituted as a replacement. Its icon features a guy walking up some stairs to represent physical activity, and it comes in several different types for different people based on such factors as age group.

ANSWER: **MyPyramid**

[10] The MyPyramid initiative is a joint program between two government agencies. Name either of them.

ANSWER: the **United States Department of Agriculture** or the Department of **Health and Human Services**

[10] MyPyramid accounts for this type of consumption, such as that of candy and alcohol or the addition of condiments, with the tips of the six colored bands. This is compared to the use of extra money in a budget.

ANSWER: **discretionary calories**

2. (MS) Name each of the following French composers of twentieth-century ballets for 10 points each:

[10] This composer's *Jeux* is about a love triangle on a tennis court, while his *The Afternoon of a Faun* was inspired by Stephane Mallarmé and written contemporaneously with his opera *Pelléas et Mélisande*.

ANSWER: Achille-Claude **Debussy**

[10] This composer of *Daphnis et Chloé* is perhaps best remembered for the music to his ballet *Boléro*.

ANSWER: Maurice **Ravel**

[10] *Relâche*, *Monotones*, and *Parade* are late ballets by this quasi-Impressionist, who was instrumental in founding Les Six.

ANSWER: Erik-Alfred-Leslie **Satie**

3. (DR) Computational — pencil and paper ready. Randolph flips two coins and Mortimer flips three. Find the probabilities of the following outcomes, giving your answers as fractions in lowest terms.

1. [10] Each person tosses exactly one head.

2. [10] Each person tosses at least one head.

3. [10] Mortimer has at least as many heads as Randolph. Thirty seconds.

ANSWER 1: **3/16**

ANSWER 2: **21/32**

ANSWER 3: **13/16**

4. (JG) Answer the following questions about people named Dvořák [de VOHR zhak] for 10 points each

[10] This Romantic composer wrote five symphonic poems including "The Noon Witch", along with a ninth symphony "From the New World" and the *Slavonic Dances*.

ANSWER: **Antonín** Leopold Dvořák (prompt on **Dvořák**, I guess)

[10] Antonin's distant cousin August developed a form of this device, whose new design would hopefully increase the efficiency of data input.

ANSWER: computer/typewriter **keyboard** layout (accept reasonable equivalents that include **keyboard**)

[10] The surname Dvořák is from this group of Slavic people. Other famous people of this ethnic group include Václav Havel and Max Wertheimer [VERT hi mer].

ANSWER: **Czech** people (accept **Czech** Republic; prompt on **Bohemians** or word forms thereof)

5. (JG) In the 1880s, the Republican Party was pretty screwed up. Sound familiar? Identify some people and groups of that era for 10 points each:

[10] Charles Guiteau assassinated this president in hopes of receiving a government job. It epic failed, although the government did feed him for a brief while, in prison.

ANSWER: James Abram **Garfield**

[10] Guiteau counted himself among this faction, whose other members included Roscoe Conkling and Chester Arthur. Its members opposed civil service reform.

ANSWER: **Stalwarts**

[10] James Garfield was part of this group, which espoused giving out government jobs by merit rather than the spoils system. James Blaine was another member of it.

ANSWER: **Half-Breeds**

6. (JG) As World War II drew to a close, lots of stuff needed to be figured out. This required conferences! For 10 points each, name some of them.

[10] Codenamed the Argonaut Conference, this February 1945 gathering discussed German reparations and dealt with various questions of Poland's fate in the post-war world. It took place in its namesake city of the Ukraine.

ANSWER: **Yalta** conference

[10] The Yalta conference immediately followed this conference where FDR and Churchill planned the endgame of the war against Germany and also began figuring out what to do about the people who had been displaced by the Holocaust.

ANSWER: **Malta** conference of 1945

[10] After the war with Germany was over, Stalin, Churchill, Truman, and Clement Attlee met at this conference to figure out how to put Nazi war criminals on trial, keep down the German standard of living, and divide Germany and Austria. This conference was named for its site at the capital of Brandenburg.

ANSWER: **Potsdam** conference

7. (JG) The son of Everes and Chariclo, Zeus struck him blind in anger after he confirmed Hera's argument that women enjoy sex more than men. For 10 points each:

[10] Name this figure in Greek mythology, a blind prophet who was turned into a woman after he hit two snakes engaged in coitus.

ANSWER: **Teiresias** [ti REES ee uhs]

[10] Teiresias appears in this Sophocles play, in which he is asked to tell the title character as to who killed Laius [LAY us].

ANSWER: **Oedipus Rex** [ED uh puss REX] or **Oedipus the King**

[10] Teiresias also appears in this play that follows *Seven Against Thebes*, warning a king that he will lose a child.

ANSWER: **Antigone** [an TI gun ee]

8. (DR) Identify these Herman Melville characters:

[10] This captain of the San Dominick is always with Babo, who seems to be his servant. He is the title character in a novella that some people think is a comment on the depravity of slaves, while others think it is a comment on the depravity of slaveowners.

ANSWER: **Benito Cereno** (accept either or both parts)

[10] This title character gets into trouble with Claggart and Captain Vere. His story was turned into an opera by Benjamin Britten.

ANSWER: **Billy Budd** (accept either or both parts)

[10] This *Moby-Dick* character owns the Pequod along with Ahab and Bildad.

ANSWER: **Peleg**

9. (JG) Answer some things about an artist and some of his sculptures for 10 each

[10] This sculpture depicts Eustache de Saint-Pierre and five other local big kahunas turning over their titular city to Edward III during the Hundred Years' War. It now sits in the town square of that city.

ANSWER: *The **Burghers of Calais*** or *Le **Bourgeois de Calais***

[10] This sculptor whose other works include *The Age of Bronze*, *The Walking Man*, and *The Kiss* is responsible for *The Burghers of Calais*.

ANSWER: Auguste **Rodin** or François-Auguste-René **Rodin**

[10] This other Rodin work features nearly two hundred figures, taken from a scene of *The Divine Comedy*. It was commissioned by the Musée des Arts Décoratifs, which never was built. Rodin's arguably most famous sculpture, *The Thinker*, is based on one of those figures.

ANSWER: *The **Gates of Hell*** or *La **Porte de l'Enfer***

10. (JP) Answer the following regarding functions of the U.S. Government.

[10] This is the investigative arm of Congress charged with examining matters relating to the receipt and payment of public funds.

ANSWER: **G**overnment **A**ccountability **O**ffice

[10] After the assassination of President McKinley, this government agency's duties were expanded to include presidential security, as well as security for any visiting heads of state.

ANSWER: **S**ecret **S**ervice

[10] The Secret Service is a federal agency under the jurisdiction of the Department of Homeland Security. Prior to 2003, however, it was under this department.

ANSWER: Department of the **T**reasury

11. (CA) Identify the following data structures from computer science, for 10 points each.

[10] Also known as a vector, this indexed data structure is stored in a contiguous block of memory, can be statically or dynamically allocated, and has atomic random access.

ANSWER: **a**rray

[10] This data structure has a node for each element, consisting of a value and a pointer to the next node. Unlike arrays, the only atomic operations are car and cdr.

ANSWER: singly-**l**inked **l**ist (accept **s**list)

[10] This structure consists of a set of linked nodes, each of which has zero or more child nodes, and zero or one parent node.

ANSWER: **t**ree

12. (DT) Answer the following about the ten avatars of Vishnu.

[10] Vishnu takes the form of this animal in his first incarnation, Matsya. Found by Manu, it ordered Manu to gather the seeds of all existing things, and during the Great Flood, Manu's ship was bound to Matsya's horn.

ANSWER: **f**ish

[10] Vishnu's seventh avatar is this epic hero, husband of Sita and slayer of Ravana who is crowned king of Ayodhya.

ANSWER: **R**ama [accept **R**amayana]

[10] Vishnu's ninth avatar is said to be this religious figure, the son of King Suddhodana and the target of several attacks by Mara.

ANSWER: **B**uddha [prompt on **S**iddhartha or **G**autama or **S**iddhartha **G**autama]

13. (JG) In 2006, FOX sadly canceled one of the best sitcoms of all time at the end of its third season. For 10 points each

[10] Name this television show about the Bluth family, whose questionable running of a housing company results in the incarceration of the patriarch.

ANSWER: **Arrested Development**

[10] The series' protagonist is this comedic straight man, played by Jason Bateman.

ANSWER: **Michael** Bluth (accept **Nichael** Bluth; prompt on **Bluth**)

[10] Michael Bluth's son George Michael is played by this actor, who went on to star in *Superbad* and *Juno*.

ANSWER: Michael Austin **Cera**

14. (JG) Answer some questions about plant physiology for 10 points each:

[10] This process occurs through the stomata and involves water evaporating from plants, particularly through the leaves.

ANSWER: **transpiration**

[10] Plants have this structure in their roots. It is nonporous, so salts and nutrients cannot escape into the vascular tissue.

ANSWER: **Casparian** strip

[10] This type of vascular tissue carries sugary nutrient-rich sap through plants and is often contrasted with xylem [ZI luhm].

ANSWER: **phloem** [FLOH uhm]

15. (JG) Name these works of Oscar Wilde, with due gratefulness for the fact that I didn't make the obvious pun, for 10 each.

[10] This punnily-titled play — probably Wilde's most popular — features Algernon, who discovers that his best friend has been using a false name with him. Other characters also use fake identities in this work that, like many of Wilde's, satirizes late Victorian society.

ANSWER: *The **Importance of Being Earnest***

[10] The title character of this 1892 play named after an English lake worries that her husband is having an affair. In a supremely sensitive move, he invites his mistress Mrs. Erlynne to his wife's birthday party. But ultimately, Mrs. Erlynne scandalously reveals that she is the protagonist's mother.

ANSWER: ***Lady Windermere's Fan: A Play About a Good Woman***

[10] This was Wilde's only published novel. Its protagonist falls deeply into his friend Lord Henry's views of hedonism, but fortunately he is immune to the aging effects of his sins. He ultimately dies in front of the title object.

ANSWER: *The **Picture of Dorian Gray***

16. (JG) Identify some experiments that measured constants of nature for 10 points each.

[10] This doubly-eponymous experiment used an interferometer to measure the speed of light.

ANSWER: **Michelson-Morley** experiment (prompt on partial answer)

[10] This 1909 experiment by a Caltech physicist and Harvey Fletcher balanced gravitational and electric forces on small amounts of liquid to measure the charge of an electron.

ANSWER: **Millikan oil-drop** experiment (either **Millikan** or **oil-drop** is sufficient)

[10] Millikan's oil-drop experiment gave a value that was off by about one percent because he used an incorrect value for this property of air in his calculations.

ANSWER: **viscosity** of air

17. (JG) Water is pretty unusual as molecules go. Answer these questions about some things that make it special:

[10] Water exhibits this property that causes it to bead up on certain surfaces, an intermolecular attractive property. Mercury also exhibits a high degree of this.

ANSWER: **surface tension**

[10] This effect is observed most notably when water is put in a narrow tube. It is due to capillary action and, generally, can be either concave or convex, but water's is almost always concave.

ANSWER: **meniscus**

[10] Most natural ice has this crystal shape, lattices of which also appear in small amounts in liquid water. It is due in part to the strength of hydrogen bonds.

ANSWER: **hexagonal** crystal shape

18. (SS/DR) Computational — pencil and paper ready. Trig identity time!

1. [10] Give the equation that is the most common way of expressing the Pythagorean Identity. Use theta as your variable.

2. [10] This simple expression equals two tangent theta over the quantity one minus tangent squared theta.

3. [10] This product is equal to the sine of the quantity A plus B , end quantity, plus the sine of the quantity A minus B . Thirty seconds.

ANSWER 1: the **sine squared** of **theta plus** the **cosine squared** of **theta equals one** (accept equivalents in equally simplified form)

ANSWER 2: the **tangent** of **two** times **theta**

ANSWER 3: **2** times the **sine** of **A** times the **cosine** of **B**

19. (DR) Computational — pencil and paper ready. The regular process of integration assumes that functions are continuous, so we're not allowed to tell you to integrate these functions. Just find the signed area between the graph of the function and the x -axis, which is practically the same thing.

1. [10] The floor function of x from x equals zero to x equals five.

2. [10] The function defined as f of x equals negative three when x equals one and, when x does not equal one, as the quantity x squared minus five x plus four, end quantity, divided by the quantity x minus one, from x equals zero to x equals two.

3. [10] The function one over the square root of x from x equals zero to x equals one. You have thirty seconds.

ANSWER 1: **ten**

ANSWER 2: **negative six**

ANSWER 3: **two**

20. (RS) Name these Japanese cities:

[10] This city was the imperial capital of Japan before Edo.

ANSWER: **Kyoto**

[10] This city is the third largest city in Japan. It forms a megalopolis with Kobe and Kyoto.

ANSWER: **Osaka**

[10] This city is the oldest port on the island of Kyushu. It is more noted for an event on August 9, 1945.

ANSWER: **Nagasaki**