

NEW TRIER VARSITY 2008

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Round 2: Put My Wife on a Corporate Board If You Want Answers Now

Bonuses

1. (DR) For a big number of points, identify the following related words:

[10] This is the diacritical mark placed over a vowel in pronunciation guides to show that it has a long sound.

ANSWER: macron

[10] This nine-letter word comes from the Greek for "large world" and is used to represent the universe considered as a whole. It often is contrasted with another word that has only one letter different and that refers to individuals within the larger world that share the same structure.

ANSWER: macrocosm

[10] This is the study of national income, employment level, and overall consumption.

ANSWER: macroeconomics

2. (DR) Answer these questions about the NBA's most entertaining team off the court, the New York Knicks:

[10] This former star guard is supposed to earn \$199,000 per game, which is now the amount of money he gets fined every time he is suspended for a game

ANSWER: Stephon Marbury

[10] This player who grew up in Chicago and played for DePaul recently said of Marbury, "I don't consider him my teammate."

ANSWER: Quentin Richardson

[10] This former Bulls guard is leading the Knicks in minutes and assists this year

ANSWER: Chris Duhon

3. (JG) You're familiar with Word and Excel, but Microsoft Office is more extensive than word processing and spreadsheets. Name these other programs found in that suite for 10 points each.

[10] This program competes with Keynote on the Macintosh and is used to develop presentations.

ANSWER: Microsoft PowerPoint

[10] Another Office app is this information-gathering program that collects notebooks worth of handwritten or typed notes and is especially useful on tablets.

ANSWER: Microsoft OneNote

[10] Microsoft acquired this program from a separate corporation; it was first included in Office 2000. It is used to create flowcharts and diagrams using the UML specification.

ANSWER: Microsoft Visio

4. (JG) Computational — pencil and paper ready. Consider the function f of x equals five x to the fifth. For 10 points each:

1. [10] Find the slope of the line tangent to the graph of y equals f of x at x equals negative one.

2. [10] Find the integral of f of x with respect to x from x equals negative six to six.

3. [10] Express f of f of x . You may express integers in the form of their prime factorization. Thirty seconds.

ANSWER 1: twenty-five

ANSWER 2: zero

ANSWER 3: five to the sixth power times x to the twenty-fifth power or 15625 times x to the twenty-fifth power (accept [twenty-]five for "[twenty]-fifth (power)" in either case)

5. (JG) This term originated during World War II with William Temple, and contrasted England with Nazi Germany. For 10 points each:

[10] Give this two-word phrase that refers to government responsibility for the well-being of its citizens.

ANSWER: **welfare state**

[10] One form of the welfare state in America is this labor law that requires employers to permit up to twelve weeks maternity leave and other similar benefits. It was passed and signed in the early part of the Clinton administration.

ANSWER: **Family and Medical Leave Act** of 1993

[10] Another act of that nature was this 1990 law that mandates, among other things, wheelchair accessibility for certain public buildings. It also prohibits employment discrimination against its namesake group.

ANSWER: **Americans with Disabilities Act**

6. (RS) Identify these terms related to energy transfer.

[10] This is the transfer of heat through particle vibrations, usually occurring between very close bodies.

ANSWER: **conduction**

[10] Unlike conduction, this form of energy transfer is a macroscopic effect, and in fluids, relies on the fact that the warmer fluid is less dense, and thus rises.

ANSWER: **convection**

[10] Temperature usually increases linearly with added heat, but when a substance is changing states, heat is added without a temperature increase, instead contributing to this quantity, equal to eighty calories per gram for water.

ANSWER: **latent** heat of fusion

7. (HT) This biologically active stereoisomer is also known as dextrose monohydrate. For 10 points each:

[10] Name this sugar, the end product of photosynthesis and the traditional input for cellular respiration.

ANSWER: **glucose**

[10] Glucose can be produced from the breakdown of this polymer of it, which is stimulated by glucagon [GLOO kuh gahn]. It is highly branched, and its analogue in plants is starch.

ANSWER: **glycogen** [GLI koh jihn]

[10] Though their formulas are identical, cellulose passes through most organisms undigested while glycogen [GLI koh jihn] is quickly broken down and absorbed. The key reason for this is that in cellulose, glucose monomers are connected in this fashion.

ANSWER: **beta** 1-4 **linkage** (accept clear knowledge equivalents for "linkage")

8. (JG) Weeping by rivers has been a popular pastime since time immemorial. Given some peoples who might have wept by a North American river, name the river for 10 points each.

[10] The Comanche and Arapahoe tribes might have wept by this river as they were removed from its area, which includes much of the border between Texas and Oklahoma.

ANSWER: **Red** River

[10] The Miami tribe would have found this river's banks convenient for weeping. It flows through Indiana from northeast to southwest before joining the Ohio at the point where Illinois, Indiana, and Kentucky meet.

ANSWER: **Wabash** River

[10] The Chinook is the major tribe local to this river, which is probably filled with their tears in addition to the millions of salmon that pass through it. It flows over a thousand miles from British Columbia to the Pacific Ocean at the border between Washington and Oregon.

ANSWER: **Columbia** River

9. (JG) This American architect had a tumultuous personal life, including the time in 1915 when one of his servants murdered seven people in his studio and then set it on fire. For 10 points each:

[10] Name this man, who began as an apprentice to the firm of Adler and Sullivan. There he created the Prairie School of architecture, which reflected his Midwestern roots.

ANSWER: Frank Lloyd **Wright**

[10] This 1910 Wright design is located just off the campus of the University of Chicago. It is now owned by the University, which has converted it into a museum.

ANSWER: Frederick C. **Robie** House

[10] This house in Springfield, Illinois has many Japanese prints, reflecting its original owner's and Wright's shared interest in them. It was closed to visitors this month by the Very Honorable Governor Blagojevich.

ANSWER: Susan Lawrence **Dana**-Thomas House

10. (DT) He used a mixture of bone meal and his own blood to create the humans in the fifth world cycle. For 10 points each:

[10] Identify this sky god, a son of Coatlicue [koh AHT lee cue] whose heart became the morning star that is also known as the "feathered serpent."

ANSWER: **Quetzalcoatl** [keh tzul KWAH tul] (prompt on **Ehecatl**)

[10] Quetzalcoatl is the twin brother of this god, who introduced maize and guides the dead to Mictlan, often represented as a skeleton.

ANSWER: **Xolotl** [zo LAW tul]

[10] Quetzalcoatl [keh tzul KWA tul] and Xolotl [zo LAW tul] appear in the pantheon of this Meso-american culture, along with the war god Huitzlopochtli [WHEETZ loh POKT lee].

ANSWER: **Aztec** (do not accept Toltecs, as Huitzlopochtli is not in the Toltec pantheon)

11. (JG) The main action of this story takes place after a week of slow-going preparation, and the narrator's insanity is emphasized by his constant insistence that he is sane. For 10 points each:

[10] Name this short story, in which an unnamed narrator is "nervous—very, very dreadfully nervous" before he murders his neighbor. Though it is the "vulture eye" of the victim that incites the narrator to kill him, the murderer is eventually betrayed by a different organ.

ANSWER: "The **Tell-Tale Heart**"

[10] In this other Edgar Allen Poe story, a French woman and her daughter are found mysteriously murdered in a chimney, and witnesses say they heard the murderer yelling in a foreign language. Investigation reveals that an orangutan killed the two.

ANSWER: "The **Murders in the Rue Morgue**"

[10] This Poe short story features Montresor and his friend and murder victim Fortunato. After Fortunato insults him, Montresor lures Fortunato into his wine cellar under the pretense of having the title substance, and soon enjoys the sound of Fortunato struggling against the chains that bind him as he is buried alive.

ANSWER: "The **Casque of Amontillado**"

12. (DR) Computational — pencil and paper ready. Answer the following questions about grass maintenance for 10 points each.

1. [10] Fred can mow a lawn in three hours, and Ethel can mow a lawn in six hours. How many hours will it take them to mow a lawn if they work together?

2. [10] Thelma can mow a lawn in four hours, and Louise can mow a lawn in five hours. How many lawns can they mow if they work together for forty hours?

3. [10] Michelle can mow a lawn in twelve hours. Michelle and Barack working together can mow a lawn in nine hours. How many hours would it take Barack to mow a lawn working by himself? Thirty seconds.

ANSWER 1: **two** hours

ANSWER 2: **eighteen** lawns

ANSWER 3: **thirty-six** hours

13. (DR) This work begins "I met a traveler from an antique land." For 10 points each:

[10] Name this Romantic poem published in 1818 as part of a competition with Horace Smith.

ANSWER: "**Ozymandias**"

[10] This author of "Ozymandias" drowned at the age of 29. He was married to another noted writer who wrote a novel subtitled "The Modern Prometheus".

ANSWER: Percy Bysshe **Shelley**

[10] This other Shelley poem ends with the lines, "Teach me half the gladness/That thy brain must know,/Such harmonious madness/From my lips would flow/The world should listen then, as I am listening now!"

ANSWER: "**To a Skylark**"

14. (DR) Name these greenhouse gases:

[10] The most common greenhouse gas, it is created when humans use fossil fuels, and its concentration is increased through deforestation.

ANSWER: **carbon dioxide** or **CO2**

[10] This molecule can combine with oxygen to create carbon dioxide and water. It also absorbs infrared radiation. After water vapor and carbon dioxide, this is considered to be the most important greenhouse gas.

ANSWER: **methane** or **CH4**

[10] This octahedral molecule may be the most potent greenhouse gas. It sometimes is used in capacitors as a dielectric.

ANSWER: **sulfur hexafluoride** or **SF6**

15. (DR) One brother continued to import slaves after it was declared illegal, and the other became a vocal abolitionist. For 10 points each:

[10] Give the surnames of brothers John and Moses, one of whom is the namesake of a major university and the other of whom is the namesake of a Quaker prep school.

ANSWER: **Brown**

[10] Speaking of Brown, name the company whose construction subsidiary was Kellogg, Brown, and Root until 2007.

ANSWER: **Halliburton**

[10] Name the town at the border of Virginia, West Virginia, and Maryland, the site of a raid by a different John Brown in 1859.

ANSWER: **Harpers Ferry**, West Virginia

16. (JG) Name some things about a technique in musical pedagogy for 10 points each:

[10] This is the name for the do-re-mi system of sight-singing. Its name derives from two of those syllables used.

ANSWER: **solfège** (accept **solfeccio**)

[10] This musical by Rodgers and Hammerstein features the song "Do-Re-Mi", in which Maria teaches the von Trapp kids solfège.

ANSWER: *The **Sound of Music***

[10] In this song from *The Music Man*, Harold Hill's friend Marcellus Washburn sings about girls that're hard to get. The entire solfège diatonic scale is sung forwards and backwards in its chorus. Peter Griffin once celebrated a touchdown by singing this.

ANSWER: "**Shipoopi**"

17. (JG) Identify these 19th-century Americans who succeeded to the office of the presidency upon their predecessor's death:

[10] His ascension caused controversy over whether the vice president took on the title of President upon the previous president's death. This uncertainty was because he followed the first president to die in office, thus receiving the nickname "His Accidency".

ANSWER: John **Tyler**, Jr.

[10] This man was the last Whig president. He later ran as a Know-Nothing, but was never actually elected to the presidency.

ANSWER: Millard **Fillmore**

[10] Qualified for major leadership by his experience as a tailor (not to be confused with Zachary Taylor), this former governor of Tennessee nearly lost his job prematurely.

ANSWER: **Andrew Johnson** (prompt on **Johnson**)

18. (DR) Computational — pencil and paper ready. Simplify the following expressions:

1. [10] The quantity cosine squared of x , end quantity, times the quantity one plus tangent squared of x .

2. [10] The sine of the quantity x plus one-sixth pi, end quantity, plus the cosine of the quantity x plus one-third pi.

3. [10] Assuming sine of x is not zero, the quantity sine of $2x$, end quantity, divided by the sine of x .
Thirty seconds.

ANSWER 1: **1**

ANSWER 2: the **cosine** of **x**

ANSWER 3: **2** times the **cosine** of **x**

19. (JG) Sometimes called Gillespie-Nyholm theory, this model fails for strontium chloride and lithium oxide. For 10 points each:

[10] Name this theory used to predict the shape of many simple molecules that uses its namesake particle groups and steric numbers.

ANSWER: **valence shell electron pair repulsion** theory or **VSEPR** [VEHS purr] or [vee ess ee pee ahr] theory

[10] VSEPR [VEHS purr] theory predicts this shape for ammonia, which has three bonds about the central atom plus one lone pair.

ANSWER: **trigonal pyramidal**

[10] This alternative molecular shape-predicting model better recognizes delocalization. Its namesake entities are categorized as bonding, anti-bonding, and nonbonding.

ANSWER: **molecular orbital** theory (prompt on partial answer or on **MO** theory)

20. (AS) Answer the following about the Hellenistic period.

[10] As he lay dying in the palace of Nebuchadnezzar II in Babylon, this man set off a mortal struggle between his generals when he promised his empire to "the strongest". He had conquered almost all of the world known to him.

ANSWER: **Alexander the Great**

[10] This mother of Alexander played a significant role in the Hellenistic period by seeking to attain and hold power for Alexander's son, Alexander IV. She was an Epiran princess and the fourth wife of Philip II of Macedon.

ANSWER: **Olympias**

[10] A trusted general of Alexander, this man began a ruling dynasty in part of Alexander's empire that only ended with Octavian's defeat of Marc Antony and Cleopatra at Actium in 31 BCE.

ANSWER: **Ptolemy I** (prompt on partial answer)