## CATEGORY ROUND

## American Literature: Literary Hunts

Team A: What author of the novels The Trial and The Castle wrote the short story "The Hunter Gracchus?"
ANSWER: Franz Kafka

Team B: What recurring James Fenimore Cooper character appears in The Deerslayer?
ANSWER: Nathaniel "Natty" Bumppo [or Natty Bumppo; or Hawkeye]

Tossup: The protagonist of this short story recalls sledding into town with a boy who had shot his abusive master from the Forks, only for the boy to be arrested. A boy named Molo changes the dressings of this story's protagonist, the lover of a rich woman named Helen he calls the "Memsahib." In this story, Harry thinks of "all the stories that he meant to write" as he dies of gangrene contracted during a safari. Name this short story by Ernest Hemingway set on a mountain in Africa.

ANSWER: "The Snows of Kilimanjaro"

## Mathematics: Cosine (All questions in this round are $\mathbf{3 0}$ seconds)

Team B: If cosine theta equals three-fourths, what is cosine of two theta?
ANSWER: $\mathbf{1 / 8}$ [ $\operatorname{or} \underline{\mathbf{0 . 1 2 5}}]$

Team A: What is sine theta times cosine theta when theta equals 75 degrees?
ANSWER: $\underline{1 / 4}$ [or $\mathbf{0 . 2 5}$ ]

Tossup: One example of this curve is the polar equation "r equals one over quantity one plus cosine theta." This curve is defined as the locus of points equidistant from a focus and a directrix. Neglecting air resistance, this curve can be used to model projectile motion. In rectangular coordinates, the equations of these curves are quadratic in either $x$ or $y$, but not both. It possesses a vertex and an axis of symmetry. Name this curve, exemplified by the equation "y equals $x$-squared."

ANSWER: parabola

## World History: Political Parties

Team A: Name the country where the three leading political parties are the Socialist Party, the Union for a Popular Movement, and the xenophobic National Front.

## ANSWER: France [or French Republic; or Republique Francaise]

Team B: Name the country where Victor Orban of the Fidesz party is the current prime minister and has been accused of adopting the radical positions of the third-largest party, Jobbik.

## ANSWER: Hungary [or Magyarorszag]

Tossup: A particularly out-of-touch manifesto issued by this party in 1983 was called "the longest suicide note in history" by Gerald Kaufman. During the 1950s, this party was split between supporters of Aneurin Bevan and Hugh Gaitskell. The Beveridge Report was influential in this party's post-war policies, including laws such as the National Health Service Act. Those laws were passed under this party's Clement Atlee. Name this British political party of Gordon Brown and Tony Blair.

## ANSWER: Labour Party

## Fine Arts: AMERICAN PHOTOGRAPHERS

Team B: Name the man whose exhibition "The Dead of Antietam" showcased some of his many pictures of the American Civil War.

## ANSWER: Mathew Brady

Team A: Identify the photographer whose work for the Farm Security Administration during the Great Depression led her to capture a despondent woman in Migrant Mother.

## ANSWER: Dorothea Lange

Tossup: While working at the Otis factory, this photographer set up white magnesium flares to overcome technical problems in showing steel production. She took a famous photograph of a line of relief-seekers in front of a mural depicting the "World's Highest Standard of Living," and she collaborated with her husband Erskine Caldwell on the Southern sharecropper volume You Have Seen Their Faces. Name this photographer of many World War II campaigns who depicted Mohandas Gandhi at his cotton-spinning wheel while working as the lead photographer for Life magazine.

ANSWER: Margaret Bourke-White

## Life Sciences: Cell Processes

Team A: What type of movement across the cell membrane requires ion pumps to move solutes from low concentrations to high ones?

## ANSWER: active transport

Team B: What type of cell division produces four gametes or spores and is necessary for sexual reproduction?

> ANSWER: meiosis [do not accept "mitosis"]

Tossup: A followup to this process may include an oxidative burst. This process follows opsonization, which can be carried out by antibodies. Antigen presentation in dendritic cells follows this process, which is also carried out by neutrophils. This process uses the creation of pseudopods to surround the target, and is followed by fusion of the resulting namesake organelle with a lysosome. Name this form of endocytosis in which a vesicle is formed from the intake of a pathogen.

ANSWER: phagocytosis [prompt on endocytosis until mention]

## World Literature: Comic Novels

Team B: What character decides her initial impressions of Mr. Darcy were wrong and agrees the marry him in Pride and Prejudice?

## ANSWER: Elizabeth Bennet

Team A: What author satirized the works of Samuel Richardson in Joseph Andrews and wrote the novel Tom Jones?

## ANSWER: Henry Fielding

Tossup: This author wrote a novel in which a teacher at a Welsh school called Llanabba becomes implicated in Margot Beste-Chetwynde's South American brothel empire and is sent to jail. This creator of that teacher, Paul Pennyfeather, also wrote a novel in which Aloysius is the teddy bear cared for by Sebastian Flyte. That novel by this author shows the Roman Catholic Marchmain family from the perspective of Charles Ryder. Name this British author of Decline and Fall and Brideshead Revisited.

ANSWER: Evelyn Waugh [or Evelyn Arthur St. John Waugh]

## US Government/Economics: The South

Team A: What former governor of New Mexico ran on the Libertarian ticket in 2012?
ANSWER: Gary Earl Johnson

Team B: What former Governor of Utah and Ambassador to China failed to win the Republican nomination?

## ANSWER: Jon Meade Huntsman, Jr.

Tossup: This state's 2012 Senate election was won by John Flake, who replaced retiring Minority Whip John Kyl. One law passed in this state had three of its provisions struck down by the Supreme Court in June 2012. That law in this state was signed by its governor Jan Brewer, and was called the Support Our Law Enforcement and Safe Neighborhoods Act, or SB 1070. Name this Southwestern state that passed a very strict anti-illegal immigration act in 2010.

ANSWER: Arizona

## Physical Sciences: Forces in Mechanics

Team B: This force opposes the relative motion of two surfaces. Its static and kinetic types have different coefficients.

ANSWER: friction

Team A: This law states that the force required to compress or stretch a spring is equal to a stiffness constant times distance displaced.

ANSWER: Hooke's law

Tossup: The strength of the electric field times this quantity over a constant equals the surface charge on a material exhibiting piezoelectricity. The maximum value of this quantity that a material can take before fracturing is known as its ultimate strength. The shear form of this quantity is equal to the shear rate times a viscosity constant. Young's Modulus equals the ratio of this quantity to strain, which is commonly graphed against this quantity. Name this quantity that represents the internal forces exerted on particles by their neighbors.

ANSWER: stress

## World Geography: Palaces

Team A: What palace and archaeological site was the center of the Minoan civilization?
ANSWER: Knossos

Team B: What city contains Topkapi Palace, as well as the Levent District?
ANSWER: Istanbul, Turkey

Tossup: This city is home to a sturdy bell tower that lost only a stone animal head during a 1976 earthquake. It isn't in Europe, but this city contains a beautiful lakeside Summer Palace. A landmark in this city contains the Gate of Divine Might and Meridian Gate at opposite ends and the Hall of Supreme Harmony inside. That landmark was not accessible to commoners without the emperor's permission. Name this Asian metropolis, home to the Forbidden City.

## ANSWER: Beijing [or Peking]

## American History: Taxing Questions

Team B: One thousand economists signed a petition opposing what 1930 tariff that exacerbated the effect of the Great Depression?

ANSWER: Hawley-Smoot Tariff [or Smoot-Hawley Tariff]

Team A: What President who oversaw the creation of the Federal Reserve System re-imposed the income tax by signing the Revenue Act of 1913?

ANSWER: Thomas Woodrow Wilson

Tossup: This man's henchmen killed optician Reinhardt Schwimmer. His power was eventually assumed by a triumvirate including "Joe Batters" and "The Enforcer," Frank Nitti. His organization merged with that of mentor Johnny Torio. He was investigated for violating the Volstead Act by Eliot Ness and the Untouchables. He was sent to prison on charges of federal tax evasion, not for masterminding the St. Valentine's Day Massacre. Name this Chicago-based mobster known as "Scarface."

ANSWER: Alphonse Gabriel Capone

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1. Timothy
2. tachyon
3. taxon
4. tiger
5. tryptophan
6. thyroid
7. Tom
8. Tetris
9. triangle
10. "Taps"
11. trout
12. Titus
13. Tantalus
14. Turkmenistan
15. Tojo
16. Taurus
17. trochee
18. tree
19. tadpole
20. Tatooine

## FINAL ROUND

1. This statue was continuously wiped with olive oil to prevent cracking. When this statue was completed for a temple designed by Libo of Elis, a lightning bolt hit the temple but did no damage. Strabo criticized this statue as being too large, as its head nearly touched the roof even though the statue is seated. This was the largest statue made of chryselephantine, a material combining gold and ivory. It was designed by Phidias in order to oversee ancient athletic games. Identify this ancient wonder of the world.
ANSWER: Statue of Zeus at Olympia
2. This country is the home of the aboriginal Tao people, who share space with the Lanyu nuclear waste facility on its Orchid Island. The Chelung-pu Fault that runs through this country caused the devastating Chi Chi earthquake here in 1999. This country controls the once-threatened islands of Quemoy and Matsu, as well as the Pescadores. In 1971, this country lost its seat at the United Nations to its larger rival. Once known as Formosa, this country competes in the Olympics under the name of its capital. Name this island country on the west of the Philippine Sea which is claimed by China.
ANSWER: Taiwan [or Republic of China; or Chung-hua Min-kuo; or Chinese Taipei; do not accept or prompt on "China" alone]
3. One unsuccessful assassin in this modern-day country tried to jump into a river near the Latin Bridge, only to find it was five inches deep. In this country, Dutch peacekeepers failed to protect a UN-designated safe haven from massacre at Srebrenica, a largely Muslim town. This modern-day nation is where Black Hand affiliate Gavrilo Princip took aim at the Austro-Hungarian empire's heir apparent. Name this former Yugoslav state attacked in the 1990s by Croats and Serbs, with capital at Sarajevo.
ANSWER: Bosnia and Herzegovina [or Bosna i Hercegovina]
104-13-81-13103
4. One of the key debates in this country's upcoming 2013 elections is over a childcare supplement provided to parents who keep their young children out of state-supported nurseries. A January 20th election in one of this country's states saw David McAllister's coalition fall one seat short of maintaining power. That election may be a sign that this country's incumbent leader will lose in a bid for a third term to Peer Steinbruck of the Social Democrats. Name this European country currently ruled by the Christian Democrats under chancellor Angela Merkel.
ANSWER: Federal Republic of Germany [or Bundesrepublik Deutschland]
023-13-81-13104
5. This composer wrote a despairing letter to his brothers called the Heiligenstadt (HI-luh-gunsh-tot) Testament. This man directed pianists to hold the pedal down for the entirety of the first movement of a sonata that Ludwig Rellstab nicknamed. That sonata by this man reminded Rellstab of night at Lake Lucerne. Another work for piano by this composer was titled "For Elise." Name this German composer who wrote the Moonlight Sonata and continued to conduct after going deaf.
ANSWER: Ludwig van Beethoven
023-13-81-13105
6. This creature killed residents of a city as punishment for the murder of Androgeus (an-dro-JAY-us). On his way home after killing this creature, one man forgot to change the color of his sails, leading to the death of his father. That hero slew this creature with assistance from Ariadne, who provided him with string. This beast was finally killed when Theseus entered the center of the Cretan labyrinth. Name this half-man, half-bull monster from Greek mythology
ANSWER: Minotaur
7. In 1984, Tak Wah Mak discovered these cells's receptors, which had a similar structure but totally different genetic origin than antibodies. They are let out from their organ of origin if they do not attack "self" macrophages, since, if they did, they would attack good cells. These cells with natural killer, cytotoxic, and helper varieties are differentiated by namesake receptors from NK cells and B-cells. Name this group of lymphocytes named for their place of origin, the thymus.
ANSWER: T-cells
153-13-81-13107
8. This state was predicted by a set of quantum mechanical statistics that differs from Fermi-Dirac statistics. This state is created by taking a collection of particles with integer spin and forcing them to occupy the lowest energy level. The first one was created by Cornell and Wieman, who used Doppler cooling on a collection of rubidium atoms. Name this ultra-cold state of degenerate matter named for two physicists.
ANSWER: Bose-Einstein condensates [or BECs]
048-13-81-13108
9. This President defended a newly-announced dam from accusations that it was a pork-barrel project by saying "a rising tide lifts all boats." Ted Sorensen wrote many speeches for this President, including one given at American University to announce the Nuclear Test Ban Treaty. At Rice University, he said some decisions were made "not because they are easy, but because they are hard." Many people mistakenly believed he called himself a jelly doughnut during a speech in Berlin. Name this President who, in his inaugural address, said "Ask not what your country can do for you, ask what you can do for your country." ANSWER: John Fitzgerald Kennedy [or Jack Kennedy; or JFK; prompt on Kennedy]

020-13-81-13109
10. This prime minister gave police better riot control equipment after the Brixton Riots. Controversial actions by this leader include letting Bobby Sands die in an IRA hunger strike and implementing a poll tax called the "community charge." Succeeded by John Major, this prime minister privatized state-owned companies like British Steel. This leader also won the Falklands War and worked closely with Ronald Reagan. Name this "Iron Lady," the only female prime minister of the UK.
ANSWER: Margaret Hilda Thatcher [or Margaret Hilda Roberts]
080-13-81-13110
11. This character seals her death with the line, "I will, my lord. I pray you pardon me." This character cries, "These words like daggers enter in my ears!" in another scene. Later, this character states, "The lady doth protest too much, methinks," during the performance of a play. In this character's bedroom, Polonius is stabbed while hiding behind an arras. She is the object of the statement "Frailty, thy name is woman!" because she married too soon after her husband's death. Name this wife of Claudius and mother of Hamlet. ANSWER: Queen Gertrude

080-13-81-13111
12. In this book, the protagonist is enraged when his group is compared to "mule drivers" and "mud diggers." Its main character meets a "tattered soldier" who makes the protagonist feel guilty by asking him about his wound. This book's main character witnesses the death of his friend, Jim Conklin. The protagonist is a member of the 304th New York Regiment, Henry Fleming, whose romantic vision of war is quickly shattered. Name this Stephen Crane novel about the Civil War.
ANSWER: The Red Badge of Courage
13. This author wrote a play in which Gooper attends a party honoring his father's release from the Ochsner Clinic. That character created by this man despises "mendacity" and tries to reunite with his son Brick. In another of his plays, a "gentleman caller" visits a crippled young woman who collects figurines. This author of The Glass Menagerie wrote a play featuring the brutal Stanley Kowalski and Blanche DuBois. Name this playwright of A Streetcar Named Desire.
ANSWER: Tennessee Williams [or Thomas Lanier Williams]
052-13-81-13113
14. Eleanora Gonzaga commissioned the baroque Schonbrunn palace in this city while married to the ruling Holy Roman Emperor, Ferdinand II, who lived in it. The Polish king Jan III Sobieski defended one attack on this city, which withstood 1683 and 1526 sieges by the Ottoman Empire. Castlereagh and Talleyrand met with Klemens von Metternich during an 1814 to 1815 Congress in this city. Name this Habsburg capital in Central Europe.
ANSWER: Vienna [or Wien]
104-13-81-13114
15. One religious leader in this country was executed by order of Amir Kabir after prophesying "the one who God shall make manifest." That man founded a religion in this country that venerates The Book of Certitude. This country was ruled for a millennium by followers of a religion that believes in the evil Angra Mainyu and the good god Ahura Mazda. Name this homeland of Bahai and Zoroastrianism, which is now the world's largest Shia Muslim country and is ruled by Shia ayatollahs.
ANSWER: Islamic Republic of Iran [or Jomhuri-ye Eslami-ye Iran; or Persian Empire]
16. One this artist's paintings depicts a man holding onto the sails during a miracle of Jesus. That work, The Storm on the Sea of Galilee, has not been recovered since its theft in 1990. Another of this artist's works shows several people looking on as a man shows off the arm muscle of a corpse. In another painting by this artist, a man holding a blue and yellow flag stands behind a man wearing a red sash. Name the Dutch artist who painted The Anatomy Lesson of Dr. Nicolaes Tulp and The Night Watch.
ANSWER: Rembrandt Harmenszoon van Rijn
140-13-81-13116
17. In ancient Greek, this type of sentence uses one of two conjunctions, "ei" or "ean." These constructions generally consist of a "protasis" and an "apodosis." Spanish has a special tense for verbs used in these constructions which is formed by adding "-ia" to the infinitive, as in "hablaria." In Latin, types of these constructions include "future more vivid" and "past contrary-to-fact." Name this type of sentence exemplified in English by the statement "If you build it, they will come."
ANSWER: conditional sentences [or if-then statements]
18. These objects gain their most notable property due to their outer layer of doubly ionized helium expanding, becoming less opaque, then collapsing due to gravity; that occurs in the kappa mechanism. While doing work on the Magellanic Cloud, Henrietta Leavitt discovered the intrinsic relationship between these objects' period and luminosity, which allows them to be used to determine distances. Name these variable stars that are often used as standard candles.
ANSWER: Cepheid variables [prompt on variables stars]
19. The title character of this play used to pull a classmate's hair in school and threaten to burn it off. At the end of this play, the title character shoots herself to avoid entrapment in an adulterous relationship with Judge Brack. The protagonist of this play burns a crucial manuscript and advises Eilert Lovborg to kill himself for the sake of her husband's advancement. Name this Henrik Ibsen play about the manipulative wife of George Tesman.
ANSWER: $\underline{\text { Hedda Gabler }}$
080-13-81-13119
20. This computer scientist created the concept of the arithmetic logic unit. With Stanislaw Ulam, this scientists developed, and named, Monte Carlo methods. He created an algorithm that divides a list of length n into n sublists, then concatenates them in an organized fashion to sort them. That algorithm is merge sort. The Harvard architecture is a rival scheme for computer organization to one this scientist devised. Identify this man who created an architecture in which instructions and memory access occur on the same bus.
ANSWER: John von Neumann

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