

Round 5

First Half

(Tossup 1) **This type of climate is classified as BWh or BWk by the Koppen system. Deflation can cause the formation of rocky plateaus in these regions known as Hamadas. Mountains near these regions cause the (*)** rain shadow effect. Daytime temperatures in these regions average 38 degrees Celsius, but can drop below freezing at night. The Gobi and Sahara exemplify, for ten points, what arid biomes that receive little rain?

ANSWER: deserts

(Bonus 1) In 1997, the rover Sojourner became the first of its kind to study this planet, which was also studied through the NASA Viking program. For ten points each,

[Part A] Name this inner rocky planet whose rust on its surface have led it to be called the Red Planet.

ANSWER: Mars

[Part B] In 2012, this NASA rover, about the size of a car, landed on Mars, with the intent of studying signs of past life. It has found signatures of water once having been present throughout the surface of Mars.

ANSWER: Curiosity

[Part C] In 2004, two rovers landed on opposite sides of Mars and among other things tasked with also studying signs of water. Both rovers outlived their life expectancy, with one still active today. Name either.

ANSWER: Spirit or Opportunity (accept either answer)

(Tossup 2) **In 2005, the assassination of this country's Prime Minister, Rafik Hariri, was linked to a military group led by Hassan Nasrallah. In the wake of that assassination, this country underwent the Cedar Revolution, which ended a (*)** Syrian occupation that began during a 1976 civil war. A 1983 bombing of a US embassy in this country was carried out by the Shi'a group Hezbollah. For ten points, name this Middle Eastern country governed from Beirut.

ANSWER: Republic of Lebanon

(Bonus 2) Answer the following about people with the surname Clinton. For ten points each,

[Part A] Bill Clinton notably said "It depends on what the meaning of the word 'is' is" when discussing his affair with this White House intern.

ANSWER: Monica Lewinsky

[Part B] As Governor of New York, Dewitt Clinton advocated for the creation of this canal that connects the Hudson River to the City of Buffalo.

ANSWER: Erie Canal

[Part C] During the Revolutionary War, British general Henry Clinton led the amphibious landing at Kip's Bay on this island, which he approached from the East River.

ANSWER: Manhattan Island

(Tossup 3) **This literary character is sent for by Novinha to record the life of Pipo on the planet Lusitania. This fictional author of The Hegemon and The Hive Queen destroys a giant in a game while being trained by (*)** Hiram Graff. This Third is the brother of Peter and Valentine, and befriends Bean while training in Flight School to fight the alien Buggers. For ten points, name this title character of an Orson Scott Card book about this boy's "Game."

ANSWER: Andrew "Ender" Wiggin (accept either underlined name; prompt on "Wiggin")

(Bonus 3) This event was chronicled in a diary recovered from hidden rooms in the home of Miep Gies. For ten points each,

[Part A] Name this event, described in the diary of Anne Frank and in a book that describes a death march between Auschwitz and Buchenwald.

ANSWER: Holocaust

[Part B] In this memoir, the protagonist learns from Moshe the Beadle and is relocated with his father, Chlomo, from Auschwitz to Buchenwald after being removed from the ghetto in Sighet, Transylvania.

ANSWER: Night (accept Un di Velt Hot Geshvign or And the World Has Remained Silent)

[Part C] This author described the book Night as his "deposition" describing his real-life experiences in Nazi concentration camps.

ANSWER: Eliezer "Elie" Wiesel

(Tossup 4) **This man painted a low-angle view of an isolated building in House by the Railroad, and depicted a row of storefronts and a barber's pole in (*)** Early Sunday Morning. A woman stares into a cup of coffee in this man's painting Automat, and two women sit in a restaurant in Chop Suey. The Art Institute of Chicago holds a painting by this artist depicting patrons at a diner. For ten points, name this American artist of Nighthawks.

ANSWER: Edward Hopper

(Bonus 4) Answer the following about choral music for ten points each.

[Part A] In a four voice choir, this term is given to the higher male voice. Placido Domingo, Luciano Pavarotti, and Jose Carrera sang in this range as a trio in the 1990s.

ANSWER: tenor (accept the Three Tenors)

[Part B] This term describes a multi-movement choral work that uses religious texts as its lyrics. These works generally have five major sections: Kyrie, Gloria, Credo, Sanctus, and Agnus Dei.

ANSWER: Mass

[Part C] This composer wrote the cantata Carmina Burana, which opens with the famous excerpt "O Fortuna."

ANSWER: Carl Orff

(Tossup 5) **This ruler launched the Livonia War which forced the dissolution of the Union of Lublin. Fyodor the Bell Ringer succeed this ruler, his father, who had murdered his brother. This ruler called the first zemsky sobor, which asked him to dissolve the oprichniki. The (*)** Massacre of Novgorod was ordered by this man who may have blinded the architect of Saint Basil's Cathedral. For ten points, name this Tsar of Russia known for his cruelty.

ANSWER: Ivan the Terrible (accept Ivan IV; accept Ivan Grozny; accept Ivan the Awesome; prompt on Ivan)

(Bonus 5) This man led the Expedition of the Thousand which conquered the Kingdom of the Two Sicilies. For ten points each,

[Part A] Name this leader of the Red Shirts who was labeled the "Hero of the Two Worlds" for leading campaigns in both Europe and South America.

ANSWER: Giuseppe Garibaldi

[Part B] Garibaldi was instrumental in the unification of this nation, whose "Risorgimento" ended with the capture of Rome in 1870.

ANSWER: Italy

[Part C] Italian unification was supported by this French ruler, who defeated Austria at the Battle of Solferino. This man was forced to abdicate after being captured at the Battle of Sedan during the Franco-Prussian War.

ANSWER: Napoleon III (accept Louis-Napoleon, do not prompt on or accept "Napoleon" or "Napoleon Bonaparte")

(Tossup 6) **The Davisson-Germer experiment confirmed that this particle, like the photon, has a de Broglie wavelength. This particle was discovered in 1897 by J.J. Thomson, and these particles are the (*)** plums in his plum-pudding model. The theoretical charge of this particle was confirmed by Robert A. Millikan in his oil drop experiment. For ten points, name this negatively charged point particle that surrounds the atomic nucleus.

ANSWER: electron

(Bonus 6) This condition is caused by type III hypersensitivity of the immune system. For ten points each, [Part A] Name this condition in which the body negatively reacts to an environmental stimulus that is usually harmless, often involving itching or sneezing. Hay fever is an example of this conditions for which people often take medication.

ANSWER: **allergy** (accept word forms, like **allergic** reaction)

[Part B] Allergic reactions often involve this process in which an area swells, gets warmer, and turns red. This immune response can be activated by cytokines like TNF-alpha.

ANSWER: **inflammation** (accept word forms, like **inflammatory** response)

[Part C] These drugs oppose a certain inflammatory chemical that is released by basophils and mast cells to increase blood flow. This is the main class of drugs used for allergy medication.

ANSWER: **antihistamines**

(Tossup 7) **During one of these events, the capture of Cerynitis was permitted by Artemis. The centaur Pholus was poisoned during one of these events when a poisoned arrow fell on his foot, and during another, King (*) Eurystheus demanded the killing of the Amazonian Queen Hippolyta. The hero who carried out these events was forced to do so in penance for killing his children and his wife Megara. The Lernaean Hydra and the Nemean Lion were killed during, for ten points, what adventures performed by Heracles?**

ANSWER: Twelve **Labors of Hercules** (accept Twelve **Labors of Heracles**; accept **Labors** alone after Heracles is read)

(Bonus 7) This figure was exiled with his mother, an Egyptian handmaiden, to the desert of Paran. For ten points each,

[Part A] Name this son of Abraham and Hagar.

ANSWER: **Ishmael** (accept **Ismail**)

[Part B] In various Abrahamic religions, Abraham prepared to sacrifice either Ishmael or Isaac on this mountain as a demonstration of his faith, but was provided with an animal sacrifice at the last minute.

ANSWER: Mount **Moriah** (accept **Temple** Mount; accept **Marwa**)

[Part C] In his adulthood, Ishmael and his father built this cubic structure in Mecca, toward which Muslims turn to pray.

ANSWER: **Kaaba**

(Tossup 8) **In this novel, Kitty complains about not being invited to Brighton by Mrs Forster, who lets Kitty's sister run away with an army officer who is paid a bribe to marry Lydia. In this novel, Charlotte Lucas marries William (*) Collins, and Charles Bingley marries Jane despite the interference of a man who claims that his eventual wife is "not handsome enough to tempt" him at a party at Netherfield Hall. For ten points, name this novel by Jane Austen about the stubbornness of Elizabeth Bennett and Mr Darcy.**

ANSWER: **Pride and Prejudice**

(Bonus 8) JRR Tolkein created a rich history of the Quendi, or Elves, who populate his novels about Middle Earth. For ten points each,

[Part A] Name this Sindarin Elf, the son of Thranduil who joins the Fellowship of the Rings and uses his archery skill to fight alongside Frodo, Aragorn, and Gimli.

ANSWER: **Legolas**

[Part B] Although Legolas is a Sindarin Elf, his father rules over a group of Silvan Elves in this deep forest, which was called Greenwood the Great until it was darkened by the Necromancer.

ANSWER: **Mirkwood** (accept **Taur-nu-Fuin**; accept **Forest of Fear** or **Taur-e-Ndaedelos**; accept **Wood of Greenleaves** or **Eryn Lasgalen**)

[Part C] Legolas's traveling companion, Aragorn, falls in love with this Half-Elf daughter of Elrond and Celebrían, who rejects her immortality to die with him.

ANSWER: **Arwen Evenstar** (accept either underlined name; accept Arwen **Und'omiel**)

Sixty-Second Rounds

The categories are ...

1. An Adventure Novel by Robert Louis Stevenson
2. The Crusades
3. Astronomy

An Adventure Novel by Robert Louis Stevenson

Robert Louis Stevenson wrote a novel about a journey on the Hispaniola to find the location of a chest buried by the pirate Captain Flint. Name the...

(1) Title of the novel.

ANSWER: **Treasure Island**

(2) Peg-legged and parrot-toting pirate cook who leads the mutiny on the Hispaniola.

ANSWER: **Long John Silver** (accept either underlined name; accept John **Silver**)

(3) Novel's protagonist, a young boy who works at the Admiral Benbow Inn.

ANSWER: **Jim Hawkins** (accept either underlined name)

(4) Pirate who dies after receiving the Black Spot in the Admiral Benbow.

ANSWER: **Billy Bones** (accept either underlined name; accept William **Bones**)

(5) Captain of the Hispaniola.

ANSWER: Captain Alexander **Smollett**

(6) Wealthy man who hires a crew to find Captain Flint's chest.

ANSWER: Squire **Trelawney** (accept John **Trelawney**)

The Crusades

Name the...

(1) Holy city that was the destination and target of the First Crusade.

ANSWER: **Jerusalem**

(2) Religious position held by Urban II, who called the First Crusade at the Council of Clermont.

ANSWER: **Pope** (accept **Bishop of Rome**; prompt on descriptive answers related to leading the Roman Catholic Church)

(3) Muslim commander who won the Battle of the Horns of Hattin and founded the Ayyubid dynasty.

ANSWER: **Saladin** (accept An-Nasir **Salah ad-Din** Yusuf ibn Ayyub)

(4) Red bearded crusader who drowned in the Saleph River.

ANSWER: **Frederick Barbarossa** (accept **Frederick I**, Holy Roman Emperor)

(5) Organization that protected pilgrims in the Holy Land and was disbanded in the early 14th century.

ANSWER: Knights **Templar** (accept **Templars**; accept **Poor Fellow-Soldiers of Christ and of the Temple of Solomon**; accept **Order of Solomon's Temple**)

(6) Byzantine Emperor whose call for help sparked the First Crusade.

ANSWER: **Alexios I Komnenos** (accept **Alexios I**; prompt on Alexios)

Astronomy

What astronomical term is given to...

(1) The rocky objects found in a “belt” between Mars and Jupiter?

ANSWER: **asteroids** (prompt on “protoplanet remnants”)

(2) The eighty-eight officially recognized star patterns, as opposed to less official asterisms?

ANSWER: **constellations**

(3) Objects with a central nucleus and a tail made up of gases and dust?

ANSWER: **comets**

(4) Bodies like “hot Jupiters” that orbit a star other than our Sun?

ANSWER: **extra-solar planets** (accept **exoplanets**)

(5) An undetectable substance predicted by Fritz Zwicky that interacts with gravity in the forms of WIMPs or MACHOs?

ANSWER: **dark matter**

(6) A spherical region named for a Dutchman that marks the boundary of the Solar System?

ANSWER: Opik-**Oort** cloud

Second Half

(Tossup 9) **Dianne Feinstein became mayor of this city after Dan White was assassinated by George Moscone. This city's Haight-Ashbury district became a tourist destination for (*) hippies during the Summer of Love. The oldest Chinatown in North America is located in this city which was devastated by a 1906 earthquake. For ten points, name this California city that is home to the Golden Gate Bridge.**

ANSWER: San Francisco

(Bonus 9) This war began after one side invaded the Mato Grosso and Corrientes provinces. For ten points each,

[Part A] Name this war, which was named for the number of belligerents on one side. This war was a struggle for hegemony over the Rio de la Plata region.

ANSWER: War of the Triple Alliance (accept, but do not otherwise reveal, Paraguayan War)

[Part B] This nation allied with Argentina and Uruguay during the war. Led by Emperor Pedro II, this country committed the largest number of troops to the Triple Alliance.

ANSWER: Empire of Brazil

[Part C] This nation, led by Francisco Solano L'opez, was absolutely devastated by the war. This nation may have lost 40 percent of its adult male population as a result of the conflict.

ANSWER: Paraguay

(Tossup 10) **This work notes that "A revolution is not a dinner party, or writing an essay," an idea that had first been stated in a 1927 report. An international version of this work featured a 2nd edition preface by Lin (*) Biao, which was later torn out after his death and fall from grace. The idea that "Imperialism is a paper tiger" is the focus of one of this work's 33 chapters, and it includes 427 quotes that were to be learned during the Cultural Revolution. For ten points, name this collection of sayings of Mao Zedong.**

ANSWER: Quotations from Chairman Mao Zedong (accept The Little Red Book)

(Bonus 10) Answer the following about European flags.

[Part A] Many flags of Northern European countries have this figure on them. On the flag of Sweden, this figure is yellow, on top of a blue field.

ANSWER: Cross

[Part B] This country's national flag, known as the dannebrog, is regarded as the oldest national flag, dating back over 1000 years. It also has a cross on it.

ANSWER: Denmark

[Part C] The flags of Luxembourg and this other low country are very similar, as they consist of horizontal red, white, and blue stripes, though the shades of blue are slightly different.

ANSWER: The **Netherlands** (accept Holland)

(Tossup 11) **This man names a device that lifts water via the turning of a screw inside a pipe. The idea that the weight of a body in a fluid equals the upward buoyant force exerted by the fluid on the body is known as this man's principle, and was first written in his (*)** On Floating Bodies. On discovering a similar notion regarding the volumes of submerged objects and displaced water, this man legendarily exclaimed "Eureka!" For ten points, name this ancient Greek mathematician.

ANSWER: **Archimedes** of Syracuse

(Bonus 11) For ten points each, answer the following about derivatives.

[Part A] Derivatives are calculated in this branch of mathematics, which was first developed by Newton and Leibniz.

ANSWER: **calculus**

[Part B] The derivative was developed to help find this quantity for a curved graph. For a straight line, this quantity is often found by calculating the rise over the run.

ANSWER: **slope**

[Part C] Consider the equation y equals x squared plus $4x$ minus 12 . The graph of its derivative will take what shape?

ANSWER: straight **line**, moving up from left to right

(Tossup 12) **This man's son and successor, Rehoboam, faced a rebellion in 932 BCE from the ten northern tribes of Israel because of this man's sins. This man is traditionally said to have authored the Book of (*)** Proverbs, Ecclesiastes, and the Song of Songs. To resolve a dispute between two women, this man suggested splitting a baby in half to discover its real mother. For ten points, name this king during the construction of the First Temple, the son of David and Bathsheba.

ANSWER: **Solomon** (accept **Schlomo**; accept **Suleiman**; accept **Jedidiah** or **Yedidiah**)

(Bonus 12) This creature defeated the golden-maned Gullfaxi in a race. For ten points each,

[Part A] Name this eight-legged horse who served as Odin's steed.

ANSWER: **Sleipnir**

[Part B] Sleipnir was conceived when this trickster god turned himself into a mare to distract Svadilfari [ss-vah-deel-fah-ree] as he helped build walls around the realm of the gods.

ANSWER: **Loki**

[Part C] Loki also fathered this goddess, who rules over a realm of the same name guarded by the dog Gram.

ANSWER: Hel

(Tossup 13) **An underwater atoll that is disputed in this body of water is known as Macclesfield Bank. A particularly deep underwater sinkhole can be found in this body's Paracel Islands. The Red River and the (*)** Pearl River flow into this body of water, which is located north of Brunei. This sea is sometimes called the West Philippine Sea. For ten points, name this sea bounded by Vietnam, the Philippines, and a large namesake country to its north.

ANSWER: South China Sea

(Bonus 13) Christina Maslach, a graduate student at this university, put an end to a controversial study in which "guards" forced "inmates" to sleep naked on the floor. For ten points each,

[Part A] Name this California university, the site of an infamous 1971 experiment that replicated a prison.

ANSWER: Stanford University

[Part B] This man ran the Stanford Prison Experiment, and admitted that he became too involved in his own role in the experiment to understand its faults.

ANSWER: Philip Zimbardo

[Part C] During the experiment, the "guards" put one of the "inmates" in a closet, imitating this form of extreme punishment in which a prisoner is denied any human contact for the vast majority of the day.

ANSWER: solitary confinement

(Tossup 14) **This story's protagonist is shocked to see his father wearing a blue, gold-buttoned suit like a bank employee, and presses his body against a picture of a woman in furs to protect it from his mother and his sister, (*)** Grete. In this story, a rotting apple kills the protagonist, who frightens his mother by scuttling over the walls and ceiling of his room. For ten points, name this Franz Kafka short story about the transformation of Gregor Samsa into a giant, insect-like creature.

ANSWER: The Metamorphosis

(Bonus 14) In this novel, the lawyer Mr Carmichael takes Absalom's case pro deo, or, for God. For ten points each,

[Part A] Name this book, in which the Reverend Stephen travels to Johannesburg to find his sister Gertrude and son Absalom. Absalom is accused of murdering Arthur Jarvis in this novel.

ANSWER: Cry, the Beloved Country

[Part B] This is the surname of Stephen, Gertrude, and Absalom in Cry, the Beloved Country.

ANSWER: Kumalo

[Part C] This man wrote Cry, the Beloved Country as a critique of pre-apartheid South Africa.

ANSWER: Alan **Paton**

(Tossup 15) **These entities were classified into seven families based on replication methods by David Baltimore. Two glycoproteins called haemagglutinin and neuraminidase are used to classify one family of these entities. The first discovered one of these entities creates a (*) mosaic-like coloring on tobacco plants. Consisting of genetic material surrounded by a capsid shell, these entities can only replicate in living cells. For ten points, name these small infectious agents that cause diseases such as the flu.**

ANSWER: **viruses** (accept **flu viruses**)

(Bonus 15) In chemistry, a base can be defined in many different ways. For ten points each,

[Part A] A substance can be determined to be a base is if it has a reading over seven on this logarithmic scale.

ANSWER: **pH** scale (accept, but do not otherwise reveal, **power of Hydrogen** scale)

[Part B] One theory to describe acid-base reactions was developed by Bronsted and Lowry, who described bases as being acceptors of this particle.

ANSWER: **proton** (accept **hydrogen** ion; accept **H+**)

[Part C] Another theory of acid-base reactions was developed by this American chemist, who described bases as being electron pair donors.

ANSWER: Gilbert Newton **Lewis**

(Tossup 16) **One character in this opera has his mouth padlocked shut after he lies about killing a serpent and later sings the duet "Pa-pa-pa" with his lover. In this opera, the birdcatcher Papageno accompanies the protagonist, who is told to rescue (*) Tamina by a character who later sings "Die Holle Rache" [dee HUH-luh RAH-kheh]. The Queen of the Night appears in, for ten points, what opera by Wolfgang Amadeus Mozart in which Tamino rescues Pamina with the help of a musical instrument?**

ANSWER: The **Magic Flute** (accept **Die Zauberflote**)

(Bonus 16) The Franz Hals paintings Malle Babba and The Laughing Cavalier are "tronies," a subset of this style of painting that focuses on outlandish and exaggerated characters. For ten points each,

[Part A] Name this genre of painting, which focuses on the depiction of human beings. ANSWER:

portraits

[Part B] Like Hals, this Dutch painter specialized in tronies, including The Milkmaid, The Astronomer, The Geographer, and a painting of a young woman wearing a blue and yellow headscarf.

ANSWER: Jan **Vermeer** (accept Johan or Johannes instead of Jan)

[Part C] In this Vermeer painting, a young woman in a yellow and blue headwrap looks toward the viewer over her left shoulder as the title piece of jewelry dangles to her collar.

ANSWER: **Girl with a Pearl Earring** (accept **Meisje met de parel**)

Tiebreakers

(Tossup 17) **This literary character is cared for by Hannah Gruen after her mother's death. This character was reimagined in 1959 to be 18 years old, and to have more interactions with her boyfriend, Ned Nickerson. This character is frequently aided by her friends Helen Corning Archer, (*) George Fayne, and Bess Marvin, who help her discover The Hidden Staircase and solve The Secret of the Old Clock. In 1930, writers using the pseudonym Carolyn Keene created, for ten points, what teenage detective?**

ANSWER: Nancy **Drew**

(Bonus 17) The 1977 Torrijos-Carter Treaties transferred ownership of this canal from the U.S. to the country where it is located. For ten points each,

[Part A] Name this canal, construction on which began in 1904. This canal enabled ships to travel between the Atlantic and Pacific Oceans without sailing around South America. ANSWER: **Panama** Canal

[Part B] The first serious attempt at constructing the Panama Canal came from this country, which had previously built the Suez Canal. This country's efforts, led by Ferdinand de Lesseps, failed due to tropical disease.

ANSWER: **France**

[Part C] Tropical disease, as well as a Spanish siege, also doomed an early plan to colonize Panama undertaken by this European kingdom known as the Darien scheme.

ANSWER: **Scotland**