

Round 7

First Half

(Tossup 1) **Wilms Tumor is a type of childhood cancer in these organs. The mammalian form of these organs contain Bowman's capsule and the loop of Henle. The (*) adrenal cortex is located directly above these organs. Nephrons are the functional unit of these organs, which are linked to the bladder by the ureters. For ten points, name these paired organs that filter blood and produce urine.**

ANSWER: kidneys

(Bonus 1) Mikhail Tsvet invented this technique while studying plant pigments. For ten points each,

[Part A] Name this technique used for separating mixtures based on their travel times through a mobile phase. A common demonstration uses this technique with paper to separate the pigments in pen ink.

ANSWER: chromatography

[Part B] In typical chromatography, how quickly a given component travels is based on this quality, which determines whether it is hydrophilic or hydrophobic. Molecules this quality possess a dipole moment.

ANSWER: polarity

[Part C] A common stationary phase in chromatography is this porous substance which is found in packets used as dessicants.

ANSWER: silica gel

(Tossup 2) **Paolo Veronese's *Feast In the House of Levi* was originally titled for this scene. Angels fly out of a lamp in the upper left corner of another version of this scene. Tintoretto's version of this scene is portrayed at an angle. In (*) Leonardo da Vinci's version of this scene, twelve men sit on the same side of a table, reacting to an announcement by their leader. For ten points, name this scene, which depicts Jesus's final meal.**

ANSWER: The Last Supper (accept L'Ultima cena)

(Bonus 2) Name the following musical notes. For ten points each,

[Part A] In the treble clef, the bottom line of the staff represents this note.

ANSWER: E natural

[Part B] The term "enharmonic" describes two equal notes that are named differently. For example, G sharp and A flat are enharmonic, as are this note and C sharp.

ANSWER: D flat (do not prompt on "D" alone)

[Part C] Mozart's *Jupiter* Symphony is written in this note's major key, which has no sharps or flats in its key signature.

ANSWER: C major (accept C natural)

(Tossup 3) **In calculus, one of these objects named for Brook Taylor can approximate a function in calculus and is a more general case of their “power” type. Approximate values for these objects are achieved by nth partial sums. A capital sigma is used in (*) summation notation to describe these mathematical objects, which may be considered “from 1 to infinity.” For ten points, give this term for the result of adding the terms of a sequence.**

ANSWER: series (accept additional information, like Taylor series; do not accept or prompt on sequence)

(Bonus 3) The area of one of these quadrilaterals is equal to the height times the average of its bases. For ten points each,

[Part A] Name this kind of quadrilateral defined as possessing a pair of parallel sides. There is some debate as to whether a parallelogram should be considered a subset of this shape.

ANSWER: trapezoid (accept trapezium)

[Part B] A trapezoid with two legs of equal length is known by this nine-letter term. Only trapezoids described by this word can be cyclic due to their opposite angles being supplementary. This word similarly describes triangles with a pair of equal sides.

ANSWER: isosceles

[Part C] Rotating a trapezoid around an axis perpendicular to its base results in one of these shapes which can be produced by slicing off the tip of a cone or a pyramid.

ANSWER: frustum

(Tossup 4) **This poet asks, “Does my haughtiness offend you?” in a poem that says “You may kill me with your hatefulness,” but insists “Out of the huts of history’s shame / I rise.” In another poem, this poet wrote about a creature that (*) “sings / with a fearful trill” of freedom while trapped in a cage. For ten points, name this American poet of “Still I Rise” and “I Know Why the Caged Bird Sings.”**

ANSWER: Maya Angelou (accept Marguerite Annie Johnson)

(Bonus 4) The speaker of this poem insists that “every atom belonging to me as good belongs to you.” For ten points each,

[Part A] Name this long poem whose final version was published in 1892. In the first of its fifty-two sections, its speaker says “I loafe and invite my soul” and “I celebrate myself.”

ANSWER: Song of Myself

[Part B] This author of the “Song of Myself” treated Union wounded during the Civil War and wrote two widely-read poems about the assassination of Abraham Lincoln.

ANSWER: Walter “Walt” Whitman

[Part C] “Song of Myself” appears in a collection named for this plant. Through his life, Whitman wrote and rewrote a poetry collection titled *Leaves of* this plant.

ANSWER: grass (accept Leaves of Grass)

(Tossup 5) **A leader of this empire created the religion Din-i Ilahi in an attempt to ease religious strife. Ibrahim Lodhi was defeated by a leader of this empire who fought the First Battle of (*) Panipat to seize control of Delhi. After the death of Empress consort Mumtaz, a leader of this empire ordered the construction of the Taj Mahal. Akbar, Babur, and Shah Jahan led, for ten points, what empire that controlled most of modern India?**

ANSWER: Mughal Empire (accept Mogul Empire)

(Bonus 5) This country was ruled by Lon Nol until he was overthrown in 1975. For ten points each,

[Part A] Name this country that experienced “Year Zero” after the Khmer Rouge took control.

ANSWER: Cambodia (accept Kampuchea)

[Part B] The Khmer Rouge was led by this “Brother Number One.” This man was forced to flee to Thailand after being deposed by Vietnam.

ANSWER: Pol Pot (accept Saloth Sar)

[Part C] The harsh rule of Pol Pot resulted in the creation of these sites, the general name of which was coined by Dith Pran. At these sites, Pol Pot’s troops carried out a genocidal campaign resulting in over 20,000 mass graves.

ANSWER: Killing Fields

(Tossup 6) **In preparation for this holiday in 1946, temporary residents of Munich wrote a *Survivors’ Haggadah* for this holiday. Modern observance of this holiday may add a Miriam’s Cup beside the Cup of (*) Elijah. This holiday’s association with an ancient barley festival survives in the Hag ha-Matzot, a feast of unleavened bread. For ten points, name this springtime Jewish holiday that commemorates Moses leading the Israelites out of Egypt.**

ANSWER: Passover (accept Pesach)

(Bonus 6) This mythical young man was turned into a beautiful water flower after he died near a lake. For ten points each,

[Part A] Name this mythical human who was so obsessed with his own reflection that he wasted away and died.

ANSWER: Narcissus

[Part B] Because of her obsession with Narcissus, this figure wasted away to nothing but her voice, which is doomed to repeat things that other people say.

ANSWER: Echo

[Part C] Echo was an Oread, one of these female nature spirits. Minthe was a Nereid, a water-based one of these nature spirits.

ANSWER: nymphs

(Tossup 7) **This politician published an edited version of the Ems Dispatch in an attempt to incite a war with France. This politician was forced to resign after a dispute over an anti-socialist bill with (*) Wilhelm II.** During one speech, this politician said that the “great questions of the day” will be resolved by “iron and blood.” For ten points, name this man who was made chancellor after masterminding the 1871 unification of Germany.

ANSWER: Otto von Bismarck (accept Otto Leopold; accept Otto von Bismarck-Schonhausen)

(Bonus 7) In 2019, George Takei published a graphic memoir about his experiences during this event titled *They Called Us Enemy*. For ten points each,

[Part A] Name this forced relocation of American citizens of a certain descent. During this event, entire families were suddenly moved to locations like the Tule Lake War Relocation Center.

ANSWER: Japanese-American Internment (accept answers related to imprisoning Japanese-Americans)

[Part B] Over 100,000 Japanese-Americans were incarcerated at this camp in the Owens Valley.

ANSWER: Manzanar

[Part C] The impetus for the interment of Japanese-Americans was this sudden attack by Japan on December 7th, 1941. This attack, which targeted the American fleet stationed in Hawaii, brought the United States into World War II.

ANSWER: attack on Pearl Harbor

(Tossup 8) **A soldier describes this other character by saying, “age cannot wither her, nor custom stale / her infinite variety.” After losing a battle to a character who becomes the first (*) Roman emperor, this character secludes herself inside of a monument and commits suicide using the bite of an asp.** A William Shakespeare play is titled after *Antony and*, for ten points, what queen of Egypt who was also a lover of Julius Caesar?

ANSWER: Cleopatra (accept Antony and Cleopatra)

(Bonus 8) This is one of the two title locations of Charles Dickens’s *A Tale of Two Cities*. For ten points each,

[Part A] Name this European capital city where Ebenezer Scrooge lives in *A Christmas Carol*.

ANSWER: London

[Part B] This other Dickens novel is largely set in London, where the title orphan falls is taken in by a gang led by Fagin, Nancy, and Bill Sikes.

ANSWER: Oliver Twist; or, the Parish Boy’s Progress

[Part C] In *Oliver Twist*, Oliver is invited to Fagin’s gang by this young pickpocket, whom he meets after he runs away to London from a workhouse.

ANSWER: The Artful Dodger (accept either underlined name of Jack Dawkins)

Sixty-Second Rounds

The categories are . . .

1. Ernest Hemingway
2. America in World War I
3. Glaciers

ERNEST HEMINGWAY

Name the...

(1) Home country of Hemingway, the setting of his Nick Adams stories.

ANSWER: United States of America (accept either underlined portion; accept USA)

(2) War that is the setting of Hemingway's novel *A Farewell to Arms*, during which Hemingway served as an ambulance driver in Europe.

ANSWER: World War I (or the First World War; accept the Great War)

(3) Country where Lady Brett Ashley seduces matador Pedro Romero in *The Sun Also Rises*.

ANSWER: Spain

(4) Setting of a novella about the fisherman Santiago, where Hemingway lived in the late 1930s and early 40s.

ANSWER: Cuba

(5) Novella in which the fisherman Santiago spends almost three months trying to catch a giant marlin.

ANSWER: The Old Man and the Sea

(6) Main character of *For Whom the Bell Tolls*, who is tasked with the dangerous destruction of a bridge.

ANSWER: Robert Jordan (accept either name)

AMERICA IN WORLD WAR I

Name the...

(1) Year the United States joined the war, 16 months before the surrender of Germany.

ANSWER: 1917

(2) President who led the United States into the war.

ANSWER: Woodrow Wilson

(3) Set of diplomatic principals presented by that man during peace talks.

ANSWER: Fourteen Points

(4) Ineffectual multinational organization founded in the aftermath of the war that the United States did not join.

ANSWER: League of Nations (accept LoN; accept Société des Nations; accept SdN)

(5) American general, nicknamed Black Jack, who led the American Expeditionary Force.

ANSWER: John J. Pershing

(6) Republican senator from Massachusetts that opposed the United States from joining that organization.

ANSWER: Henry Cabot Lodge

GLACIERS

Name the...

(1) Frozen solid substance that glaciers are made of.

ANSWER: ice

(2) Deep cuts in a glacier that may present challenges to mountain climbers.

ANSWER: crevasses

(3) Steep inlet of a coast carved out by a glacier, commonly seen in Norway and New Zealand.

ANSWER: fjords

(4) Piles of accumulated debris, or till, left behind by a glacier.

ANSWER: moraines

(5) Long, usually winding ridges caused by streams flowing within tunnels of glaciers.

ANSWER: eskers

(6) Term for alternating dark and light bands on the surface of a glacier, caused by their movement.

ANSWER: ogives (accept Forbes band(s))

Second Half

(Tossup 9) **This President vetoed the charter to the Second Bank of the United States as part of his feud with Henry Clay. In response to the ruling in *Worcester v. Georgia*, this man legendarily responded (*)** “John Marshall has made his decision, now let him enforce it.” This man was succeeded as President by his friend and protégé Martin van Buren. For ten points, name this 7th President of the United States nicknamed “Old Hickory.”

ANSWER: Andrew Jackson

(Bonus 9) This kingdom fought, and lost, four wars to the Roman Republic. For ten points each,

[Part A] Name this Greek Kingdom that was once led by Philip II. A later ruler of this kingdom would transform it into a massive empire by conquering Persia.

ANSWER: Macedonia

[Part B] Macedonia was the home of this “great” leader. This man, who won the battles of Issus and Gaugamela, was forced to end a campaign after winning the Battle of the Hydaspes in India by his homesick troops.

ANSWER: Alexander the Great (accept Alexander III of Macedon; prompt on Alexander)

[Part C] This horse, Alexander’s personal steed, died at the Battle of the Hydaspes. In his honor, Alexander founded a town on the Hydaspes and named it after him.

ANSWER: Bucephalus (accept Bucephalas)

(Tossup 10) **This body contains a series of “macula” which form the Brass Knuckles of this planet. One high albedo region of this body is the Sputnik Planitia, which is part of the heart shaped (*)** Tombaugh Regio. Minor moons orbiting this body include Styx and Hydra. This body’s orbit intersects with Neptune’s at two places. Charon orbits, for ten points, what dwarf planet, the former ninth planet from the sun?

ANSWER: Pluto

(Bonus 10) The dihedral angles of these molecules are displayed on a Ramachandra plot. For ten points each,

[Part A] Name these basic building blocks of proteins. Six of them are considered “essential” because the human body does not normally produce them.

ANSWER: amino acids

[Part B] This two-word term refers to the sequence of amino acids present in a protein. It is considered lower order than the shape of the protein or how it is folded.

ANSWER: primary structure

[Part C] Amino acids are linked together at these structures which line the rough portion of the endoplasmic reticulum.

ANSWER: ribosomes

(Tossup 11) **In one section of this book, the speaker discusses the Noble Lies of the three metals to justify social classes. This book discusses the Ring of Gyges and an allegory about men who can only see (*) shadows because they are chained in the title structure. The allegory of the cave is found in, for ten points, what Platonic dialogue which argues that the title systems should be ruled by philosopher kings?**

ANSWER: The Republic

(Bonus 11) This autonomous region’s capital of Urumqi has been the site of numerous violent protests against “reeducation camps.” For ten points each,

[Part A] Name this autonomous region, the homeland of the Uyghers, where China has instituted a crackdown on the Mulsim majority population.

ANSWER: Xinjiang (accept Sinkiang; accept East Turkestan; prompt on Uyghuristan)

[Part B] The crackdown in Xinjiang comes at the same time as increasing unrest occurs in this special autonomous region. This region was formerly leased by the British and lies across the Pearl River from Macau.

ANSWER: Hong Kong (or Xiang Gang)

[Part C] Both the Xinjiang and Hong Kong protests are held against this man’s government. This current President of China removed term limits soon after taking office.

ANSWER: Xi Jinping

(Tossup 12) **This composer created an opera where Zinovy is murdered by his wife Katerina. In addition to creating *Lady Macbeth of the Mtsensk District*, this composer created a Fourth Symphony which he withdrew from the public after being denounced in (*) Pravda. This composer created an “invasion” theme for his 7th symphony, which was named in honor of a city besieged by Nazi Germany. For ten points, name this Soviet composer who created the Leningrad Symphony.**

ANSWER: Dmitri Dmitriyevich Shostakovich

(Bonus 12) This architect designed the glass and steel main entrance to the Louvre. For ten points each, [Part A] Name this Chinese-American architect, who also designed the Rock and Roll Hall of Fame in Cleveland.

ANSWER: I.M. Pei (or Ieoh Ming Pei)

[Part B] Both the entrance to the Louvre and Rock and Roll Hall of Fame have this shape. This shape is also shared by the Luxor Casino in Las Vegas and was inspired by ancient buildings in Giza along the Nile river.

ANSWER: pyramid (prompt on triangle or prism)

[Part C] I.M. Pei also designed this non-Chicago city’s John Hancock Tower, which famously had a problem with windows falling off. This city’s baseball team plays at Fenway Park.

ANSWER: Boston

(Tossup 13) **This novel’s protagonist plants contraband in Mr Black’s kitchen, hoping that the Salamanders will punish him. In this novel, Millie leaves her house while sobbing over losing her enormous (*) televisions because her husband has been influenced to embrace reading by Professor Faber and Clarisse McClellan. A Mechanical Hound pursues a fireman in, for ten points, what novel about the book-burner Guy Montag, written by Ray Bradbury?**

ANSWER: Fahrenheit-451

(Bonus 13) This novel's title character does battle with a man dressed as the Knight of Mirrors, and with a group of windmills he thinks are giants after he begins to believe he is a knight. For ten points each,

[Part A] Name this novel by Miguel de Cervantes about a Spanish nobleman who becomes obsessed with chivalric romances and sets out for adventure on his aging horse, Rocinante.

ANSWER: The Ingenious Gentleman Don Quijote of La Mancha (accept El ingenioso hidalgo Don Quijote de la Mancha)

[Part B] Don Quijote is accompanied on many of his adventures by this man, a neighboring farmer who acts as Quijote's squire.

ANSWER: Sancho Panza (accept either underlined name)

[Part C] Don Quijote eventually retires as a knight after losing a battle with this knight. This knight is actually another of Don Quijote's neighbors, who had earlier pretended to be the Knight of Mirrors.

ANSWER: Knight of the White Moon

(Tossup 14) **A pair of scientists with this last name shared the 1903 Nobel Prize in Physics with Henry Becquerel. The term radioactivity was coined by a scientist with this last name who also discovered (*) radium and polonium. A member of this family was the first woman to win a Nobel prize. For ten points, give this surname shared by Pierre and Marie, the latter of whom died from cancer likely contracted from her work with uranium.**

ANSWER: Curie (accept Pierre Curie; accept Marie Curie)

(Bonus 14) This mineral's piezoelectric properties allow it to be used for timekeeping in many wristwatches. For ten points each,

[Part A] Name this mineral, the second most common mineral in the Earth's crust, after feldspar. This mineral is composed of silicon and oxygen.

ANSWER: quartz

[Part B] Quartz has a rating of 7 for this property according to the Moh's scale for this property. This property can also be measured by indentation measures such as the Vickers scale.

ANSWER: hardness (accept word forms such as "how hard it is"; do not accept or prompt on any other answers)

[Part C] This mineral represents a 1 on Mohs hardness scale. This mineral's use in baby powder has been linked to ovarian cancer.

ANSWER: talcum

(Tossup 15) **This deity is accompanied by the boar Hildisvini, and spent the night with each of four dwarves to receive the necklace (*)** Brisingamen. This deity received half of those who died in battle at her mead-hall, Fólkvangr. This goddess's chariot was pulled by cats. For ten points, name this Norse goddess of love and war.

ANSWER: **Freyja** [fray-yah] (do not accept or prompt on Frigg or Frigga; do not accept or prompt on Frey or Freyr)

(Bonus 15) Answer the following about Zoroastrianism. For ten points each,

[Part A] Zoroastrianism originated in this ancient empire, in what is now Iran.

ANSWER: **Persian** Empire

[Part B] In Zoroastrian temples named for this substance, priests wear padded face veils to protect this substance from contamination. In Zoroastrianism, this substance is a purifying substance, along with water.

ANSWER: **fire** (accept **atar**)

[Part C] In another attempt to prevent the contamination of fire, Zoroastrians place people with this condition on Towers of Silence instead of burning or burying them.

ANSWER: **dead** (accept reasonable equivalents)

(Tossup 16) **One city in this country is home to Zaha Hadid's only completed opera house. Another city in this country is home to the Oriental Pearl Tower, which lies in the (*)** Pudong District. This country's capital is home to a stadium that resembles a bird's nest as well as the Forbidden City. Another structure in this country was built to protect this country from Xiongnu invaders. For ten points, name this country home to the Great Wall.

ANSWER: **China** (accept **Zhongguo**; accept **People's Republic of China**; do not accept or prompt on Republic of China; do not accept Taiwan)

(Bonus 16) The Chicxulub [chik-shoo-loob] Crater lies off of the coast of this peninsula, which was created by an asteroid that may have wiped out the dinosaurs. For ten points each,

[Part A] Name this peninsula north of Guatemala and Belize that is partially controlled by the state of Campeche.

ANSWER: **Yucatan** Peninsula

[Part B] The Yucatan Peninsula is located in this country. This country's namesake capital city is located on the former Aztec capital of Tenochtitlan.

ANSWER: **Mexico**

[Part C] This Mexican resort city is located on the Yucatan Peninsula. Visitors to this capital city of Quintana Roo frequently travel to the Cenotes sinkholes.

ANSWER: **Cancun**

Tiebreakers

(Tossup 17) **A large salt marsh can be found in this city's Marine Park. This city is home to Castle Clinton National Monument which is located in Battery Park. Calvert (*) Vaux and Frederick Law Olmstead designed the largest park in this city which borders both the Met and Guggenheim museums. For ten points, name this city home to Central Park, the largest city in the United States.**

ANSWER: New York City (accept NYC; prompt on The Big Apple)

(Bonus 17) At the premiere of the fifth of these works, a very lengthy cadenza was probably played by its composer. For ten points each,

[Part A] Name this set of six concertoes written for Christian Ludwig, the Margrave of the German region for which they are named.

ANSWER: Brandenburg Concertoes

[Part B] The *Brandenburg Concertoes* were composed by this German Baroque master.

ANSWER: Johann Sebastian Bach

[Part C] The fifth *Brandenburg Concerto* is scored for orchestra with solos for flute, violin, and this plucked keyboard instrument.

ANSWER: harpsichord