

Round 11

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Tossups

(1) **This man relieved Douglas MacArthur for publicly commenting on Presidential policy. During this president's first term, his Secretary of State, George Marshall, created a plan to rebuild Europe. The US armed forces were racially integrated by this President, who attended the (*) Potsdam Conference months after the death of his predecessor. For ten points, name this US President who authorized the use of nuclear weapons at the end of World War II after the death of Franklin Roosevelt.**

ANSWER: Harry S. Truman

(2) **Two of these objects are produced by the Traveller to prove his adventures to dinner guests in the H.G. Wells novel *The Time Machine*. The reader is called a "hypocrite" in a Baudelaire collection titled for "these objects" of (*) evil. In a sonnet, Elizabeth Browning wrote that her beloved plucked many of these plants from the garden to bring to her. For ten points, name this colorful part of a plant that names John Steinbeck's *The Chrysanthemums*.**

ANSWER: flowers

(3) **This company's early history, including the controversial use of powdered milkshakes, is the subject of the 2017 film *The Founder*. Morgan Spurlock relied on this company for thirty days as part of his 2004 documentary *Super (*) Size Me*. In 2017, this company hosted a special giveaway for a product originally released alongside a 1998 Disney film, Szechuan [sesh-wan] sauce. For ten points, name this fast food chain that sells Big Macs under the "golden arches."**

ANSWER: McDonald's

(4) **An analog of this statement, the Poiseuille [pwah-SYE-uh] equation, models the flow of blood through the circulatory system. A phasor diagram can help apply this statement to cases where impedance is present. This statement predicts a linear relationship between (*) I and V , while the reciprocal of each resistor's value must be summed to apply this law to parallel circuits. For ten points, name this law stating voltage equals current times resistance.**

ANSWER: Ohm's law

(5) **This musician was inspired by the works of Joaquin Rodrigo and Manuel de Falla for his *Sketches of Spain*. "Boplicity" and "Darn that Dream" appear on an album by this musician, who led a sextet that included Bill Evans and John (*) Coltrane and recorded modal jazz songs like "Freddie Freeloader" and "So What." For ten points, name this jazz trumpeter of the albums *The Birth of the Cool* and *Kind of Blue*.**

ANSWER: Miles (Dewey) Davis III

(6) **This empire built the Qhapaq Nan road system, on which runners would pass messages via quipu [kee-poo], a series of knotted strings. The Kingdom of Cusco was a predecessor state to this empire. A civil war between Huascar and his half-brother, (*) Atahualpa, weakened this empire, allowing Spanish conquistadors to conquer it. Machu Picchu was part of, for ten points, what empire that was conquered by Francisco Pizarro in modern Peru?**

ANSWER: Incan Empire

(7) **A poem by this author takes place “by the shores of Gitchee Goomie” and describes the title character’s marriage to Minnehaha. This author created a character whose “cry of alarm” reached “every Middlesex village and farm.” In a poem by this author, a man is told to hang (*) lanterns, “one if by land, and two if by sea,” to warn of British troops. For ten points, name this poet of “The Song of Hiawatha” and “Paul Revere’s Ride.”**

ANSWER: Henry Wadsworth Longfellow

(8) **In three dimensions, this concept is maximized in the isoperimetric problem of minimum surface area. When differentiated with respect to the radius, this quantity’s formula becomes $4\pi r^2$, which not-coincidentally gives the (*) surface area of the object. For ten points, name this mathematical quantity, calculated by the formula four-thirds times pi times the radius cubed, that can be imagined as the amount of air in a perfectly round balloon.**

ANSWER: volume of a sphere (accept volume of a 3-ball; prompt on “volume”; prompt on “size of a sphere” or similar descriptions)

(9) **This concept is defined in Spinoza’s *Ethics* as a “hindrance [...] in the attainment” of useful things. Hannah Arendt wrote a book about the banality of this concept, studying Adolf Eichmann’s trial for war crimes. Gottfried Leibniz coined the term “theodicy” for the attempt to explain this concept in a (*) world ruled by an all-powerful God. For ten points, name this philosophical concept, often defined as the absence of good.**

ANSWER: evil

(10) **This event will begin after a fire in Yemen lures citizens into the land of Mahshar. The rise of Gog and Magog may precede this event. The Great Tribulation will signal this event, which will begin with the breaking of seven seals or the coming of the (*) Messiah. Believers may be raptured in, for ten points, what cataclysmic future event that, according to the Book of Revelation, is heralded by the arrival of four horsemen?**

ANSWER: End of the World (accept end times; accept Yawm al-Qiyamah or Yawm ad-Din; accept apocalypse)

(11) **By 1852, this state’s New Helvetia settlement was abandoned by all its workers after an event that inspired this state’s motto, “Eureka.” Samuel Brannan created a short-lived real estate and business empire in this state shortly after James Marshall made a (*) discovery in the American River at Sutter’s Mill. For ten points, name this western US state where a gold rush drew hundreds of thousands of “forty-niners” to cities like San Francisco.**

ANSWER: California (accept elaborations relating to the California Gold Rush)

(12) **The enzyme dismutase removes this type of radical oxide from cells. Liquid helium will empty itself from a cup when it is this kind of fluid. Because it registers below zero on the pH scale, fluoro-antimonic acid is this type of acid. A solution that contains (*) more dissolved particles than should be possible at a given temperature has this kind of saturation. For ten points, give this prefix that also describes the script used to write charges above a chemical symbol.**

ANSWER: super (accept superoxide, superfluid, superacid, supersaturated, and superscript after their terms are said)

(13) **Off the southwest coast of this island, the Great Skelling island is home to an abandoned monastery. Port cities on this island include Kinsale and Galway, while Drogheda lies on the River Boyne five miles inland from a sea named for this island. (*) Hibernia was the Latin name for this island, where a political division created a Northern country with capital Belfast. For ten points, name this “Emerald Isle” that is home to Dublin, east of Great Britain.**

ANSWER: Ireland (accept Northern Ireland *only after* “Northern” is read)

(14) **In a play by Tirso de Molina, this character is killed by a ghostly “Stone Guest.” John Tanner is cast as this character “in Hell” in Act III of George Bernard Shaw’s play *Man and Superman*. In an epic satire written in ottava rima, this character flirts with Catherine the Great after fleeing (*) Spain for being discovered in Donna Julia’s bed. For ten points, name this legendary Spanish womanizer, the subject of a satire by Lord Byron.**

ANSWER: Don Juan [JOO-on]

(15) **This species was infected with T2 phage DNA in the Hershey-Chase experiment. The *lac* [lack] and *trp* [trip] operons were first discovered in this species, which generates vitamin K for its hosts. Undercooked beef may be (*) contaminated with this prokaryote that can divide every 20 minutes in a Petri dish. For ten points, name this Gram-negative, rod-shaped species that is normally found in the human large intestine, the most important bacterial model organism.**

ANSWER: Escherichia coli

(16) **This god and Zephyrus both fell in love with a youth who died in a discus-throwing accident. This accidental murderer of Hyacinth served as a shepherd for King Admetus after he intentionally murdered the Cyclopes as revenge for the death of his son (*) Asclepius. This god pursued the nymph Daphne, and received his lyre from Hermes. For ten points, name this Greek god of light and music, the twin brother of Artemis.**

ANSWER: Apollo (accept Apollon; or Phoebus Apollo)

(17) **This man created a 202-foot-tall memorial near Pudding Lane to commemorate a disaster that led this man to rebuild fifty-one churches. This man designed the Sheldonian Theater and the Royal Observatory in (*) Greenwich, and this architect created a whispering gallery in the dome of a building designed to emulate a Greek cross, which sits on Ludgate Hill. For ten points, name this English architect who, after the Great fire of 1666, designed St Paul’s Cathedral in London.**

ANSWER: Sir Christopher Wren

(18) **The 11th ruler of this name cried “the city is fallen and I am still alive” before leading a suicidal charge during the fall of his capital. Another ruler of this name fought Maxentius after seeing a cross in the sky, winning the Battle of Milvian Bridge. The first ruler of this name issued the Edict of (*) Milan, recognizing Christianity.** For ten points, give this name of a “Great” Roman Emperor who moved to Byzantium and renamed the city after himself.

ANSWER: Constantine (accept Constantine XI Palaiologos; accept Constantine I or Constantine the Great; prompt on “Constantinople” after “renamed the city” is read)

(19) **This constellation includes the star most likely to produce the next daytime visible supernova. With Gemini and Auriga, this constellation lies entirely within the Winter Circle. This constellation, which is notably never seen in the sky at the same time as Scorpius, includes a (*) shield west of its third-brightest star, Bellatrix.** The supergiants Rigel and Betelgeuse are found in, for ten points, what constellation whose three central stars make up the hunter’s belt?

ANSWER: Orion (accept Orion’s Belt after “belt” is read)

(20) **This creature is told “Still, thou art blest, compared wi’ me!” because it cannot lament the past or fear the future. The speaker of a 1785 poem calls this “fellow-mortal” creature a “wee, sleeket, cowran, tim’rous beastie,” and uses the phrase (*) “gang aft agley,” which is often translated from Scottish as “often goes awry.”** For ten points, name this rodent subject of a Robert Burns poem that remarks on “the best laid plans o’” these creatures “an’ men.”

ANSWER: mouse (accept mice; accept To a Mouse)

Bonuses

(1) Failure of this process in the embryo explains why some babies are born with tails or webbed fingers. For ten points each,

Name this process of programmed cell death in which the release of cytochrome *c* from mitochondria triggers a cell to commit suicide.

ANSWER: apoptosis

Resistance to apoptosis is characteristic of these undifferentiated cells that can form multiple cell types. The adult kind is found bone marrow while the embryonic kind is pluripotent.

ANSWER: stem cells

Another apoptosis-resistant type of cell is this immortal tumor cell line, named for an African-American patient who died of cervical cancer in 1951.

ANSWER: HeLa (accept Henrietta Lacks)

(2) In a play about two men who pretend to have this name, Gwendolen Fairfax and Cecily Cardew are deceived by men who pretend to share this title name. For ten points each,

Identify this given name used by both Algernon Moncrieff and Jack Worthing. The play in which they appear is named for a pun that communicates the “importance of” having this name and behaving sincerely.

ANSWER: Ernest (accept The Importance of Being Earnest)

The Importance of Being Earnest is by this English playwright, who also wrote *Lady Windermere’s Fan* and was imprisoned for his homosexuality.

ANSWER: Oscar Fingal O’Flahertie Wills Wilde

Oscar Wilde was imprisoned in this location. The line “yet each man kills the thing he loves” is from Wilde’s *Ballad of this place*.

ANSWER: Reading Gaol [”redding jail”]

(3) Ancient Egyptians called themselves the “cattle of” this leader of the Egyptian pantheon, who was often depicted with a falcon head. For ten points each,

Name this sun god, who defeated Apep every day while sailing the “sun boat” across the sky.

ANSWER: Ra (accept Re)

This god was syncretized with Ra as Ra-Horakhty. This son of Isis and Osiris had eyes representing the sun and moon, and defeated Set in a boat race by using a boat made of wood painted to look like stone.

ANSWER: Horus (accept Harpocrates; accept Nekhenty)

Like Horus, Khepri, and Atum, this patron of Thebes was also syncretized with Ra after the rule of Ahmose I. When this wind god was combined with Ra, he was depicted as a red-eyed, lion-headed man.

ANSWER: Amun (accept Amun-Ra)

(4) In June 1940, this man proclaimed “we shall defend our island, whatever the cost may be. We shall fight on the beaches...” For ten points each,

Name this British Prime Minister.

ANSWER: Sir Winston **Churchill**

Churchill’s “We shall fight on the beaches” speech was given after Operation Dynamo, a week-long evacuation of Allied forces off the continent from this French harbor town. Hundreds of thousands of troops were rescued, many by “little boats.”

ANSWER: **Dunkirk** (accept extra information, like the **Dunkirk** evacuation)

In a speech two weeks later, Churchill noted that “...the Battle of France is over, the Battle of Britain is about to begin.” The speech encouraged listeners with the declaration “Let us...bear ourselves that if the British Commonwealth and Empire lasts for a thousand years, men will still say” this five word phrase.

ANSWER: **“This was their finest hour.”**

(5) For ten points each, give the following about the number 2 pi.

Two pi is the exact measurement of this quantity, the distance around a circle, if the circle’s radius is 1.

ANSWER: **circumference** (do not accept or prompt on perimeter)

Two pi is the period, or the amount of time before behavior starts repeating, of both the sine and cosine functions; two of the basic six trigonometric functions have a period of just pi. Name either.

ANSWER: **tangent** and/or **cotangent**

Two pi is an important part of the formula for several probability distributions, including this bell curve-shaped distribution. The Empirical Rule, learned early in stats classes, notes that 95 percent of this distribution lies within two standard deviations of the mean.

ANSWER: **normal** probability distribution (accept **Gaussian** probability distribution)

(6) This essay states that “History cannot bring enlightenment; only individual searching can.” For ten points each,

Name this essay that instructs the reader to “trust thyself.” This essay reinforces its author’s idea of rejecting conformity by stating “a foolish consistency is the hobgoblin of little minds.”

ANSWER: **Self-Reliance**

This Transcendentalist author wrote “Self-Reliance.” This author of the *Over-Soul* allowed his friend Henry David Thoreau to stay on his land so that the latter could write *Walden*

ANSWER: Ralph Waldo **Emerson**

In a chapter titled *Spring*, Thoreau states he witnessed the green rebirth of this concept. While at Walden Pond, Thoreau wandered the woods and observed nearby animals to become one with this concept.

ANSWER: **nature**

(7) The Japanese Alps run the length of this island. For ten points each,

Name this largest of the Japanese islands. It contains the Kanto and Kansai regions, as well as the cities of Kyoto and Osaka.

ANSWER: **Honshu**

The Ainu people are indigenous to this island north of Honshu. This snowy island forms Japan's largest prefecture and is governed from Sapporo.

ANSWER: **Hokkaido**

Hokkaido and Honshu are connected by one of these structures named Seikan. In Europe, one of these structures connects England and France by crossing under the English Channel.

ANSWER: underwater **tunnel** (accept the **Chunnel**)

(8) Answer the following about artistic depictions of a symbolic woman, for ten points each.

In this enormous sculpture that stands in New York Harbor, designed and built by Bartholdi and Eiffel and given to America as a gift from France, the title symbolic woman holds a tablet inscribed with the date July 4, 1776 and holds a torch in her other hand.

ANSWER: **Statue of Liberty** (accept **Liberty Enlightening the World**; accept La **liberté éclairant la monde**)

In this painting by Eugène Delacroix [**yoo-JEHN deh-lah-CWAH**], Lady Liberty holds the French flag over the bodies of fallen Frenchmen while walking beside a young boy brandishing pistols.

ANSWER: Liberty **Leading the People** (accept La Liberté **guidant le peuple**)

A woman often interpreted as Liberty stretches her head and lantern-wielding hand through a doorway in this artist's black and white painting *Guernica* [**gayr-NYEE-kah**], which protests the horror of war and the bombing of the title city in the Spanish Civil War.

Guernica

ANSWER: Pablo Ruiz y **Picasso**

(9) This political party's failed Presidential candidates included Charles Coteworth Pinckney and DeWitt Clinton. For ten points each,

Name this early American political party, which did attain the Presidency via John Adams.

ANSWER: **Federalist** Party

Charles Cotesworth Pinckney was part of a powerful political family from this southern state. His brother, Thomas Pinckney, served as Governor shortly before this state's legislature moved from Charleston to its current capital, Columbia.

ANSWER: **South Carolina**

As Governor of New York, DeWitt Clinton pushed for the construction of this project, which his opponents mockingly nicknamed "Clinton's Ditch."

ANSWER: **Erie Canal** (prompt on canal and other generic answers)

(10) This author wrote about a prostitute nicknamed “Boule de Suif,” [bool duh sweef] or “Ball of Fat,” who is scorned by her fellow travelers after she secures their safe passage between Rouen and Le Havre by sleeping with a soldier. For ten points each,

Name this French author, who included “Boule de Suif” in a collection of short stories about the Franco-Prussian War.

ANSWER: Guy de Maupassant

In this Maupassant [moh-pah-SAWN] short story, Mathilde Loisel [mah-TEELD lwah-ZELL] and her husband work for ten years to repay a debt after Mathilde returns from a fancy party to discover that she has lost the title borrowed piece of jewelry.

ANSWER: The Diamond Necklace (accept La parure)

In Maupassant’s short story “The Horla,” the narrator is terrorized by an invisible type of this creature, which feeds on human life. A more common form of this legendary creature is the title character of Bram Stoker’s *Dracula*.

ANSWER: vampire

(11) Antoine Lavoisier [lah-vwah-see-ay] determined that cellular respiration and this reaction are essentially the same, since both consume oxygen and release energy. For ten points each,

Name this type of chemical reaction in which a flammable substance combines with oxygen, producing carbon dioxide and water.

ANSWER: combustion (accept burning)

Because they release heat and raise the temperature of the surroundings, combustion reactions can be described by this term.

ANSWER: exothermic

By carefully measuring mass changes in combustion reactions, Lavoisier disproved the existence of this substance, once thought to be released by all burning objects.

ANSWER: phlogiston

(12) This author set many of his works in the fictional Yoknapatawpha County [yawk-nah-pah-taw-fah county]. For ten points each,

Name this Mississippi author of *As I Lay Dying* and *Absalom, Absalom!*

ANSWER: William Cuthbert Faulkner

This William Faulkner novel is narrated by Benjy and Quentin Compson, who are obsessed with their sister Caddy.

ANSWER: The Sound and the Fury

Most of the portions of the novel narrated by Quentin take place in this US state. Quentin commits suicide by jumping into the Charles River while attending Harvard University in this state.

ANSWER: Massachusetts

(13) In the early 1800s, Napoleon gave up on building a French empire in the New World. For ten points each, Napoleon sold this territory of nearly one million square miles of land to the United States in 1803.

ANSWER: Louisiana Territory (accept the Louisiana Purchase)

The Louisiana Purchase was made possible after Toussaint L'ouverture [too-sahn low-ver-ture] led one of these rebellions against their French masters in Haiti.

ANSWER: slave revolt (accept slave rebellion; accept descriptions of rebellions by slaves)

A large factor in the French army's inability to put down the Haitian slave revolt was this disease. In 1793, Philadelphia suffered an outbreak of this viral disease, which causes liver damage.

ANSWER: yellow fever

(14) In January 2017, this athlete won the Australian Open while pregnant with her first child. For ten points each, Name this American tennis player whose 23 Grand Slam titles are the most in the modern era, seven of which ended with final victories over her sister, Venus.

ANSWER: Serena Williams

Even with Serena's break from tennis, the semifinalists in this tournament's Women's Singles draw were all Americans for the first time since 1985. This tournament is held at the Billie Jean King National Tennis Center at Flushing Meadows in New York.

ANSWER: U.S. Open Tennis Championships

This player entered the 2017 U.S. Open unseeded after missing time with a foot injury; she then defeated Venus Williams in the semis and Madison Keys in the finals to win the tournament.

ANSWER: Sloane Stephens

(15) This country's majority political parties, the Christian Democratic Union and Christian Social Union, opposed a vote on same-sex marriage until 2017, when its chancellor put the issue to a conscience vote. For ten points each, Name this European country where, in June 2017, the Bundestag voted to legalize same-sex marriage.

ANSWER: Federal Republic of Germany

This German chancellor allowed the same-sex marriage bill to come to a vote, but voted against the measure herself.

ANSWER: Angela Merkel

After Germany's same-sex marriage bill passed, this far-right German political party announced its intentions to sue to stop the bill from becoming law. This anti-immigrant party won 97 seats in the Bundestag in 2017 elections, but not enough to file that lawsuit.

ANSWER: Alternative for Germany (accept Alternative für Deutschland; accept AfG; accept AfD)

(16) This scientist's ice pail experiment showed that electric fields inside and outside a conductor do not affect each other, the basis for his namesake cage. For ten points each,

Name this British scientist whose law of induction explains the operation of electric motors and generators.

ANSWER: Michael **Faraday**

The farad is the SI unit of this quantity, the ability of an object to store electric charge, as demonstrated by two parallel plates in a DC circuit.

ANSWER: **capacitance**

Faraday's cup is a device for collecting these particles. These are atoms that have gained or lost electrons in their valence shells and so possess a net electrical charge.

ANSWER: **ions** (accept **cations**; accept **anions**)

(17) Give the following about the musical piece *Also Sprach Zarathustra* for ten points each.

Also Sprach Zarathustra is an example of this type of program music that evokes the images of a story. Most pieces in this genre are a single movement, and many include program notes to help listeners understand the story.

ANSWER: **symphonic poem** or **tone poem** (prompt on poem)

The piece's first movement, "Sunrise," opens with a fanfare of instruments in this family playing the C, G, C motif.

ANSWER: **brass** instruments (accept **trumpet** but no other specific type of instrument)

The piece is probably most famous for its use in this Stanley Kubrick film, in which the "Sunrise" opening brass fanfare plays as an ape learns to use a bone as a crushing tool.

ANSWER: **2001**: A Space Odyssey

(18) Both the Russian Kola Superdeep and Japanese Chikyu Hakken projects attempted to drill down more than 12 kilometers to reach this region. For ten points each,

Name this semi-fluid layer of the Earth, rich in the mineral olivine, that is located between the crust and outer core.

ANSWER: **mantle**

The boundary between the crust and the mantle is this discontinuity, named after a Croatian seismologist, where the speed of P-waves changes.

ANSWER: **Mohorovičić** [mo-ho-ro-vitch-itch] discontinuity (accept **Moho**)

The absence of the Moho in some areas of the Pacific may have helped form volcanic island arcs like the Solomons, Ryukyus, and this long Alaskan chain at the southern edge of the Bering Sea.

ANSWER: **Aleutian** Islands

(19) Answer the following about three major schools of Chinese thought, for ten points each.

This ideology focuses not on the morality of individual people, but on their responsibilities toward forming a functioning state. Advocated by Li Si, this school of thought led to a highly autocratic and merit-based society.

ANSWER: **legalism** (accept word forms like **legalist**; accept **fa jia**)

Another authoritative Chinese ideology was created by this man, whose teachings are collected in the *Analects*. This man advocated for a society ruled by junzi, or gentlemen, who shared this often-quoted man's scholarly inclinations.

ANSWER: **Confucius** (accept **Kong Fuzi**; accept **Kong Qi**)

The authoritative outlooks of legalism and Confucianism are contrasted by this philosophy, possibly created by Laozi. This ideology advocates a balance with nature, exemplified by the balance of yin and yang, and believes in following "the way."

ANSWER: **Taoism** (accept **Daoism**)

(20) This man declared "segregation now, segregation tomorrow, segregation forever," then tried to back that up by standing in the door to block two black students from entering his state's university in Tuscaloosa. For ten points each,

Name this politician. His wife, Lurleen, ran for governor when he was term-limited in 1966.

ANSWER: George **Wallace**

George Wallace was the governor of this southern state. His "segregation" quote was made during his inauguration address from this state's capital, Montgomery.

ANSWER: **Alabama**

As governor, Wallace was a staunch supporter of this type of law, named for a racist caricature. These laws required segregation in public places.

ANSWER: **Jim Crow** laws