## Finals

## First Half

(Tossup 1) The perpetrator of this event was pulled over for having no license plate on a yellow Mercury Marquis. Michael Fortier and Terry Nichols helped the central actor of this event who used a Ryder truck. Fireman Chris Fields was photographed holding infant (*) Baylee Almon in the aftermath of this event that was in response to the earlier Waco Siege and Ruby Ridge Standoff. For ten points, name this 1995 event by Timothy McVeigh that destroyed the Alfred P. Murrah Building.
ANSWER: Oklahoma City Bombing
(Bonus 1) This general commanded the Pancho Villa Expedition. For ten points each,
[Part A] Name this commander of the American Expeditionary Forces during World War I.
ANSWER: John Joseph Pershing
[Part B] Pershing's forces played a decisive role in stopping the German advance during this battle near the Marne River. US Marines distinguished themselves during fighting in this battle's namesake "Wood".
ANSWER: Battle of Belleau Wood
[Part C] Soldiers in the American Expeditionary Forces were often given this nickname, which was replaced during World War II by the nickname "GI".
ANSWER: Doughboys
(Tossup 2) This man wrote plays inspired by his novellas, one of which involves Winterbourne courting Daisy Miller. A governess in one of this man's works learns from Mrs. Grose that Miss Jessel and (*) Peter Quint had a sexual relationship. One of this man's works features an expatriate Gilbert Osmond who marries its protagonist Isabel Archer. For ten points, name this American author of The Turn of the Screw and The Portrait of a Lady.
ANSWER: Henry James
(Bonus 2) This author was the first African-American woman to win the Nobel Prize for Literature. For ten points each,
[Part A] Name this author who wrote Song of Solomon andJazz.
ANSWER: Toni Morrison
[Part B] In this first novel by Morrison, Pecola is mistreated because of her dark skin and odd behavior. This novel takes its title from a specific physical feature that Pecola's white dolls possess.
ANSWER: The Bluest Eye
[Part C] In this other Morrison novel, Sethe [SETH-eh] escapes slavery only to be tracked down by her owner. Sethe kills her eldest daughter rather than allow her to return to slavery in this novel.
ANSWER: Beloved
(Tossup 3) The Hymn of Creation in one of these works questions whether even the creator of the universe knows how the universe was created. One of these works has sparked a debate over whether it espouses atheism, monotheism, monism, or polytheism. This first one of these works is arguably the (*) oldest extant text in an Indo-European language and the oldest religious work still in use. For ten points, name this set of Sanskrit religious texts which includes a "Rig" one.
ANSWER: Vedas (Accept Rig Veda before mention)
(Bonus 3) For ten points each, answer some questions about various events or significant entities of the Eastern Orthodox faith.
[Part A] Name this event describing the split between the Churches in Rome and Constantinople that occurred in 1054.

## ANSWER: Great Schism or East-West Schism

[Part B] Name this clause added to the Nicene Creed that led to the above event, describing how the Holy Spirit proceeds from both the Father and the Son.

## ANSWER: Filioque

[Part C] Name this period or action whereby the use of religious images was opposed by the imperial authorities.
ANSWER: Iconoclasm
(Tossup 4) This region's $E$ layer is also known as the Kennelly-Heaviside layer and this region also contains the $D$ and $F$ layers. Daily changes in the total thickness of this region is why (*) AM radio can be broadcast a greater distance at night. For ten points, name this layer of the Earth's atmosphere, including parts of the thermosphere and mesosphere, located directly below the magnetosphere and named for its abundance of charged particles.

ANSWER: ionosphere
(Bonus 4) This supercontinent was the most recent one to have existed. For ten points each,
[Part A] Name this supercontinent formed from the merger of continents such as Gondwana and Euramerica. It is the first supercontinent to be reconstructed by geologists.
ANSWER: Pangaea
[Part B] Pangea was surrounded by this immense superocean.
ANSWER: Panthalassa (Accept Panthalassic Ocean, accept Panthalassan Ocean)
[Part C] This largest modern continental landmass does not qualify as a supercontinent.
ANSWER: Eurasia
(Tossup 5) This man measured attitudes towards various groups by seeing if they would mail a letter to 'Friends of the Nazi Party'. This man studied the average path length for social networks of people in his $\left(^{*}\right.$ ) small-world experiment. This man also conducted a study where participants were told to administer increasingly intense shocks to learners. For ten points, name this psychologist whose namesake experiment tested obedience to authority.
ANSWER: Stanley Milgram
(Bonus 5) This country is currently led by the People's Action Party. For ten points each,
[Part A] Name this Southeast Asian country which experienced rapid growth under the leadership of Lee Kuan Yew.
ANSWER: Singapore
[Part B] This current leader of Singapore is this man, the son of Lee Kuan Yew.
ANSWER: Lee Hsien Loong (Prompt on "Lee")
[Part C] Singapore is known for applying this punishment to numerous offenders, including American teenager Michael Fay. This punishment involves the use of a Rattan.

## ANSWER: Caning

(Tossup 6) A generalization of these numbers within the set of complex numbers is named for Carl Friedrich Gauss. The variables in a Diophantine equation must represent this type of number. The coordinates of lattice points are this type of number. The set of these numbers is symbolized (*) Z. The difference between any two of these numbers is also one of them, unlike the related natural numbers. For ten points, identify this set of numbers consisting of all whole numbers and their negatives.
ANSWER: Integers
(Bonus 6) A number is called constructible if these two tools can be used to create its length. For ten points each,
[Part A] Identify these ancient geometric tools used in Greek construction problems. One of these tools is used to draw perfect circles while the other is used to draw lines.
ANSWER: compass and straightedge (accept in either order, prompt on "ruler" in place of "straightedge")
[Part B] The Delian problem sought to use a straightedge and compass to find one of these shapes with double the volume of another. That problem to double this shape is impossible since the side length of "two to the one-third power" cannot be made.
ANSWER: cube
[Part C] This other problem is impossible to solve with straightedge and compass because a 20 degree angle cannot be constructed even though a 60 degree angle can.
ANSWER: trisecting an angle
(Tossup 7) This opera ends with a sextet describing the end of evildoers. This opera's plot starts when the protagonist tries to seduce Donna Anna and kills her father. In this opera, the protagonist interrupts the wedding of (*) Masetto and Zerlina. In this opera, the "Catalog Aria" is sung by the servant Leporello. Near the end of this opera, the Commendatore's statue comes to life. For ten points, name this Mozart opera where the title womanizer gets dragged to hell.

## ANSWER: Don Giovanni

(Bonus 7) The composer of The Song of the Earth intended that it not be considered this type of work, due to fear of a supposed curse. For ten points each,
[Part A] Name this numbered type of composition. Beethoven's work of this type includes a chorus singing "Ode to Joy."
ANSWER: Ninth Symphony (prompt on partial answers; prompt on "last symphony" or similar ideas)
[Part B] This composer had completed eight other symphonies, including Titan, and refused to number The Song of the Earth, fearing the "Curse of the Ninth." He then composed a ninth symphony and died without finishing his tenth.
ANSWER: Gustav Mahler
[Part C] Like Beethoven's Ninth, Mahler's The Song of the Earth includes vocal parts - specifically, for an alto and this male singing range that is higher than both bass and baritone.
ANSWER: tenor
(Tossup 8) Harun al-Rashid gifted this ruler an albino elephant in a peace embassy. Desiderius gave this ruler his daughter's hand in marriage in order to secure an alliance. Basques ambushed this ruler at (*) Roncevaux Pass, leading to an epic about a knight who died under this ruler's service, The Song of Roland. Pope Leo III crowned this ruler "Emperor of the Romans" on Christmas Day, 800. For ten points, name this King of the Franks and first Holy Roman Emperor.
ANSWER: Charlemagne (accept Charles the Great or Charles I)
(Bonus 8) This man fled his first battle at Mollwitz. For ten points each,
[Part A] Name this Prussian leader who won the Battle of Leuthen during the Seven Years War and is often called "the Great".
ANSWER: Frederick the Great (Accept Frederick II)
[Part B] Frederick the Great later fought the Potato War over the succession of this region. This region of southern Germany was later ruled by Ludwig the Mad.
ANSWER: Bavaria
[Part C] Frederick the Great had earlier fought the War of Austrian Succession in which he disputed the inheritance and accession of this Holy Roman Empress. This woman was the daughter of Charles VI.
ANSWER: Maria Theresa

## Sixty-Second Rounds

The categories are ...

1. Beat Generation
2. Women's Suffrage
3. Nobel Laureates

Beat Generation
Name the...
(1) City where the Beat Generation was centered and the setting of "A Supermarket in California". ANSWER: San Francisco
(2) Decade during which the movement took place, preceding the hippie movement by a decade.

ANSWER: 1950s
(3) Allen Ginsberg poem that begins "I saw the best minds of my generation destroyed by madness".

ANSWER: Howl
(4) Author of The Dharma Bums who included Sal Paradise in his novel On the Road?

ANSWER: Jean-Louis "Jack" Kerouac
(5) Brooklyn location that partially titles the most famous collection of Lawrence Ferlinghetti?

ANSWER: Coney Island
(6) Author who wrote about the Liquefactionists in his novel Naked Lunch?

ANSWER: William Seward Burroughs

## Women's Suffrage

In the history of the women's suffrage movement, name the...
(1) Number of the Constitutional Amendment that gave women the vote.

ANSWER: 19th
(2) Suffragette who was honored by being depicted on the silver dollar coin in the late 20th century.

ANSWER: Susan B. Anthony
(3) US state whose nickname, the Equality State, reflects its early adoption of women's suffrage. ANSWER: Wyoming
(4) Country, which, in its colonial period, became the first self-governing colony to grant women the right to vote in parliamentary elections.
ANSWER: New Zealand
(5) British family whose members included the suffragettes Emmaline and Christabel.

ANSWER: Pankhurst
(6) European country whose region of Appenzell-Innerrhoden only allowed women to vote on local issues in 1990.

ANSWER: Switzerland

Nobel Laureates
Name the Nobel Laureate who...
(1) Discovered the photoelectric effect.

ANSWER: Albert Einstein
(2) Predicted the existence of his namesake boson which was discovered by CERN.

ANSWER: Peter Higgs
(3) Shared a Nobel with Howard Florey and Ernst Chain for discovering Penicillin.

ANSWER: Alexander Fleming
(4) Created the world's first nuclear reactor, an Italian-American sometimes called the "architect of the nuclear age".
ANSWER: Enrico Fermi
(5) Won the 1935 Nobel Prize with her husband Frederic Joliot-Curie. She was the daughter of Marie Curie.

ANSWER: Irene Joliot-Curie
(6) Made a breakthrough in treatment of malaria by discovering artemisinin. She was the first Nobelwinning Chinese scientist.
ANSWER: Tu Youyou

## Second Half

(Tossup 9) In this work, Eleanor becomes engaged to a wealthy nobleman. The Mysterious Warning and The Castle of Wolfenbach were introduced to the protagonist of this novel, affecting her perception of this novel's title location. This novel's protagonist befriends (*) Isabella Thorpe, who breaks an engagement with the protagonist's brother James to pursue Captain Tilney. For ten points, name this Jane Austen novel about Catherine Morland who visits the title location.
ANSWER: Northanger Abbey
(Bonus 9) In this work, a character whispers "The horror! The horror!" as he dies. For ten points each,
[Part A] Name this work in which Marlow journeys up the Congo River and meets Mr. Kurtz.
ANSWER: Heart of Darkness
[Part B] Heart of Darkness was written by this Polish-British author who also wrote Lord Jim. ANSWER: Joseph Conrad
[Part C] This other work by Conrad is set in the mining town of Sulaco which lies in a fictional country named Costaguana.
ANSWER: Nostromo (Accept Nostromo: A Tale of the Seaboard)
(Tossup 10) The mutated protein in cystic fibrosis is involved in the binding of this molecule. The sodium-potassium pump is named for the breakdown of one of this molecule. A namesake synthase of this molecule is driven by a gradient of $\left(^{*}\right.$ ) protons created by the electron transport chain. The oxidative cellular respiration of one glucose molecule produces around 30 of these molecules. For ten points, the mitochondria produce what energy currency of the cell?
ANSWER: ATP (accept adenosine triphosphate)
(Bonus 10) Unrooted versions of these diagrams do not show a common ancestor. For ten points each, [Part A] Name these forked diagrams, which depict chronological relationships of descent between species. ANSWER: phylogenetic trees (accept cladograms; accept phylogeny; accept phylograms; accept, but do not otherwise reveal, evolutionary trees)
[Part B] Phylogenetic trees depict patterns of descent that result from this process, which was described as "descent with modification" in a theory developed by Charles Darwin.
ANSWER: evolution
[Part C] Evolution occurs through this mechanism, where organisms with the highest fitness survive to pass heritable traits to the next generation.
ANSWER: natural selection (prompt on selection)
(Tossup 11) One work by this artist featured a hunting party of three men in oriental clothing attacking the title animals. This painter of the Hippopotamus and Crocodile Hunt also painted Nicodemus and Joseph of Arimathea carrying out the title action in the (*) Descent from the Cross. This artist's most famous series comprises 24 paintings depicting the life of a French queen. For ten points, name this Flemish painter of the Marie de' Medici cycle.
ANSWER: Peter Paul Rubens
(Bonus 11) This artist created the etching The Sleep of Reason Produces Monsters. For ten points each, [Part A] Name this Spanish artist who created the Los Caprichos prints and painted The Milkmaid of Bordeaux.
ANSWER: Francisco Goya
[Part B] This Francisco Goya painting set during the Napoleonic Wars depicts a group of captives facing a French firing squad. This painting depicts events from its title date.
ANSWER: The Third of May, 1808
[Part C] Besides The Third of May, 1808, Goya also created this other set of works depicting the Peninsular war. This series of 82 prints feature many acts of brutality that occurred during the conflict.
ANSWER: The Disasters of War
(Tossup 12) The Woods Hole Oceanographic Institute is located on the southwest end of this geographic feature. One city located at the tip of this geographic feature is Provincetown, which is a prominent vacation spot. Barnstable is the largest city on this geographic feature, and John F. Kennedy's $\left(^{*}\right.$ ) summer home was located here. Before going to Plymouth, the Pilgrims first landed on this feature, which is located near Martha's Vineyard and Nantucket. For ten points, name this peninsula in the east of Massachusetts.

## ANSWER: Cape Cod

(Bonus 12) This island is home to Andersen Air Force Base. For ten points each,
[Part A] Name this westernmost point of the United States, a Pacific island in Micronesia home to Hagatna and Dededo.
ANSWER: Guam
[Part B] This American coral atoll in the Pacific is 1500 miles east of Guam and was attacked by the Japanese simultaneously with Pearl Harbour.
ANSWER: Wake Island (Accept Wake Atoll)
[Part C] Locations such as Guam and Wake are not states but rather have this legal status. This status is also held by an American Commonwealth in the Caribbean.
ANSWER: Unincorporated Territory
(Tossup 13) This man killed Antiphus and slaughtered hundreds during his "aristea". This leader's forces were hit by misfortunes such as a lack of wind after this man's slaying of a sacred deer offended the goddess Artemis. As a result, this man was forced to sacrifice his daughter (*) Iphigenia. This brother of Menelaus later captured Cassandra and stole Briseis from Achilles. For ten points, name this commander-in-chief of the Greeks during the Trojan War.

## ANSWER: Agamemnon

(Bonus 13) Zeus once declared that all oaths must be sworn upon this river and its namesake goddess. For ten points each,
[Part A] Name this river in the Greek underworld which could make someone dipped within it invulnerable. ANSWER: Styx
[Part B] This other river in the underworld was this "river of woe". In some legends, the boatman Charon ferries the newly dead across this river into the underworld.
ANSWER: Acheron
[Part C] The Phlegethon River was a "river of fire" which flowed into the depths of this deep abyss in the underworld.

## ANSWER: Tartarus

(Tossup 14) After his exile in the jungle of Sundarban in this novel, the protagonist gets involved with the demolition of the Jama Masjid slum and his country's "Emergency". This novel's protagonist was switched at birth with his rival, (*) "Shiva of the Knees", and he was born with superpowers on 15 August 1947. Saleem Sinai is the main character in, for ten points, what novel set around the independence of India by Salman Rushdie?

## ANSWER: Midnight's Children

(Bonus 14) This French author wrote "Mademoiselle Fifi". For ten points each,
[Part A] Name this French author known for his short stories such as Boule de Suif. This author wrote many works set during the Franco-Prussian War.

ANSWER: Guy de Maupassant
[Part B] This Maupassant work features Mathilde, who loses the title object she borrowed from Madame Forestier and spends 10 years working to pay for a replacement.

ANSWER: The Necklace
[Part C] Maupassant was a protege of this French author who wrote Madame Bovary.
ANSWER: Gustave Flaubert
(Tossup 15) This country's government killed over one million members of the Communist Party after an attempted coup by the September 30 Movement. This country's first president worked alongside Mohammad Hatta and established a system known as (*) "Guided Democracy". Suharto held power in this country for 30 years after overthrowing Sukarno, who lost popularity after a conflict with neighboring Malaysia. For ten points, name this country led from Jakarta.
ANSWER: Republic of Indonesia
(Bonus 15) Many of these vessels were lost at the Battle of Chilcheollyang. For ten points each,
[Part A] Name these heavily-armored Korean warships often covered with metal spikes. These ships were named after a type of marine animal.
ANSWER: Turtle ships (Accept Geobukseon)
[Part B] Turtle ships were used by this famous Korean admiral who inflicted numerous defeats against the Japanese during the Imjin War. This "Nelson of the East" was never defeated throughout his entire career.
ANSWER: Yi Sun-Shin
[Part C] During the Imjin War, Korean forces were aided by this Chinese dynasty which was followed by the Qing.
ANSWER: Ming Dynasty
(Tossup 16) This scientist discussed with John Wheeler the possibility that the universe only contains one electron. This scientist developed the Parton model of subatomic particles and the path-integral formulation. In a (*) construct named for this scientist, a helix represents a gluon and a wave represents a photon. For ten points, name this American physicist known for his diagrams depicting interactions between subatomic particles.
ANSWER: Richard Feynman
(Bonus 16) This quantity is the product of moment of inertia and angular acceleration. For ten points each,
[Part A] Name this quantity, the rotational analogue of force.
ANSWER: torque (accept moment; accept moment of force)
[Part B] The "torque-induced" form of this phenomenon occurs when the axis of a spinning object changes its orientation and forms a cone shape in space. It is often observed in spinning tops and gyroscopes.
ANSWER: precession (accept gyroscopic precession)
[Part C] Torque is expressed in units of this derived SI unit times meters. This SI unit of force is named for the scientist who formulated the law of inertia.
ANSWER: newtons (accept newton-meters)

## Tiebreakers

(Tossup 17) Prior to this battle, a foraging expedition was annihilated at Bennington and Barry St Leger's (SELL-in-jerz) eastward advance was halted at Fort Stanwix. The sharpshooter Tim Murphy fatally wounded General (*) Simon Fraser during this battle, which began when the British attempted to flank the American position at Bemis Heights but were intercepted at Freemans Farm. For ten points, name this decisive 1777 battle which ended with the surrender of John Burgoyne.
ANSWER: Battle of Saratoga
(Bonus 17) This man oversaw the impeachment of Samuel Chase. For ten points each,
[Part A] Name this Vice President who killed Alexander Hamilton in a famous 1804 duel.
ANSWER: Aaron Burr Jr.
[Part B] This daughter of Aaron Burr married Joseph Alston and was later lost at sea in 1812
ANSWER: Theodosia Burr Alston
[Part C] Burr became Senator from New York by defeating a man with this family name. That man was the father of Angelica and Eliza.
ANSWER: Schuyler (Accept Philip Schuyler)

