1. One person who plays this instrument was awarded the first Pulitzer Prize for Music for a jazz recording; that work is Blood on the Fields and was recorded by Wynton Marsalis. The Hot Five and Hot Seven were lead by a man who played this instrument, while another player of it wrote "A Night in Tunisia" and played a "bent" version. That man, Dizzy Gillespie, would also collaborate with a man who would play this instrument on Sketches of Spain and Kind of Blue. For 10 points, name this brass instrument played by Miles Davis and Louis Armstrong.
ANSWER: trumpet
2. Societal pressures are blamed for this phenomenon by Robert K. Merton and other proponents of Strain Theory. Emile Durkheim wrote an essay on the normality of this phenomenon, which is the first concept in the most famous title of Cesare Beccaria. Those who repeat this behavior are dubbed recidivists. The prefixes "organized" and "white collar"are sometimes applied to types of it. For 10 points, give this term for breaking the law that is often paired with punishment.
ANSWER: crimes
3. The energy density of this field is given by the equation one-half the permittivity times the absolute value of the field vector squared. In contrast to bipolar-junction transistors, field-effect transistors use this field to control the conductivity of the channels in the semiconducting material. The SI units of this field are newtons per coulomb. When this field moves, it produces a magnetic field. For 10 points, name this field, characterized by the effect it has on charged particles.
ANSWER: electric field
026-10-34-04103
4. In first trimester fetuses, this organ is the primary producer of red blood cells. As blood flows into this organ through the portal vein, sugars are converted into glycogen which is stored until needed. These organs in polar bears contain toxic amounts of retinol. It secretes about a quart of bile, and a yellowness of the skin called jaundice can occur when it malfunctions. Excessive alcohol consumption can cause cirrhosis of this organ. For 10 points, name this largest gland in the body, which removes toxins from the blood. ANSWER: liver

015-10-34-04104
5. In one poem, this author recalled throwing potato salad at a Dadaism expert with his friend Carl Solomon, to whom he dedicated the poem. This author wrote of walking with Walt Whitman down the aisles of a grocery store and through the darkened streets in his poem "A Supermarket in California." For 10 points, name this American poet who "saw the best minds of [his] generation destroyed by madness" at the beginning of his long poem Howl, which exemplified the Beat movement.
ANSWER: Irwin Allen Ginsberg
6. This author's short stories include one about doctor who offers water from the Fountain of Youth and another based off John Bunyan's Pilgrim's Progress. This author of "Dr. Heidegger's Experiment" and "The Celestial Railroad" also wrote many stories set in Puritan New England, including "Young Goodman Brown." He also wrote a novel featuring such characters as the minister Dimmesdale, Roger Chillingworth, and Hester Prynne. For 10 points, name this American author of The Scarlet Letter.
ANSWER: Nathaniel Hawthorne
7. One of this man's characters marries Helen of Troy in the second part of a two-part play after seducing Gretchen in the first part. This man wrote a semi-autobiographical novel about a young man with unrequited love for Charlotte, which spawned a rash of copycat suicides across Napoleonic Europe. This man's Wilhelm Meister's Apprenticeship is considered the prototype of the bildungsroman (BILL-doongs-roe-MAHN). For 10 points, name this German romantic who wrote Faust and The Sorrows of Young Werther.
ANSWER: Johann Wolfgang von Goethe ["GUR-tuh"]
8. This battle started after troops under Henry Heth (HEETH) spotted John Buford's cavalry. Key locations in this battle included the Peach Orchard and Devil's Den. One general in this battle, Dan Sickles, disobeyed orders by moving his corps from its location along Cemetery Ridge. That ridge was the object of Pickett's Charge at the end of this battle. George Meade's victory in this battle ended a Confederate invasion of the North. For 10 points, name this battle whose site was later the location of an Address by Abraham Lincoln.
ANSWER: Battle of Gettysburg
9. The Yamana are the only still extant native tribe from this region. Though not in Mexico, this region includes Lapataia and Ensenada Bays. One mountain range in this region is known as the Cordillera Darwin. The city of Ushuaia in this region calls itself the "End of the World," lies on the Beagle Channel, and is the southernmost city in the world. For 10 points, name this region between the Strait of Magellan and the Drake Passage, which is split between Chile and Argentina and whose name literally means "land of fire."

## ANSWER: Tierra del Fuego

003-10-34-04109
10. In addition to apoptosis, the CIDEA gene plays a role in the breakdown of these. The tissue associated with this is responsible for much of the body's thermogenesis. Leptin acts as an indicator of the level of this in the body. It is stored in tissue that can be brown or white. This is stored in adipose tissue. These are triglycerides, meaning they are lipids. Trans ones are associated with heart disease and they can be saturated or unsaturated. For 10 points, name this material that stores energy in the long term for humans and whose presence brings about an increase in weight.
ANSWER: fats [or fatty acids; accept adipose tissue before mentioned; prompt on lipidss; accept oil before thermogenesis]

001-10-34-04110
11. This empire came into existence after its first leader won the Battle of Kirina against the Susu chief Sumanguru. Another ruler of this empire had the general Sagmandia capture the Songhai capital, Gao. That ruler of this empire caused a long-lasting depression in the value of gold in Cairo by his considerable spending while traveling on a hajj to Mecca. For 10 points, name this West African empire that shares its name with a modern country and was ruled by mansas such as its founder Sundiata Keita and Musa I. ANSWER: Mali Empire [or Mandingo Empire; or Manden Kurufa]
12. These two countries' relationship was strained after a 1999 incident in which one of them bombed the other one's embassy in Belgrade. Two years later, they clashed over the detainment of pilots following the Hainan Island incident. These countries directly fought each other after one side's commander approached the Yalu River during the Korean War. Relations between these two countries improved due to Ping Pong diplomacy. For 10 points, name these two countries that experienced normalized relations after a 1972 visit by Richard Nixon.
ANSWER: U.S.A. and People's Republic of China [or equivalents in either order; do not accept "Republic of China" for China]

064-10-34-04112
13. He was forced to wear women's clothing while working for the Lydian queen Omphale. He accidentally killed his music teacher Linus, and killed his wife Megara in a fit of madness. He killed the giant Antaeus by lifting him off the ground. He scared away the Stymphalian birds and killed the Nemean Lion with his club. This figure rerouted some rivers to clean the Augean Stables as part of a series of tasks completed for Eurystheus. For 10 points, name this demigod son of Zeus known for his twelve labors.
ANSWER: Hercules [or Heracles]
14. This state was first reached by a European by the French explorer Jean Nicolet. A Democratic senator from this stated worked on a bipartisan bill that reformed campaign finance along with John McCain. That senator from this state was Russ Feingold. This state's namesake "idea" of being a laboratory for progressive legislation was championed by Senator Robert La Follette. For 10 points, name this state that was the home of Joseph McCarthy and has a capital at Madison.
ANSWER: Wisconsin
15. One work by this artist is situated across from a Donato Montorfano work and is located at Santa Maria delle Grazie. Another of his works depicts Cecilia Gallerani holding a small white mammal, while another of his works is a drawing based on proportions of a Roman architect. In addition to creating Lady with an Ermine and the Vitruvian Man, he also completed a portrait of Lisa Gherardini which is sometimes called "La Gioconda." For 10 points, name this Italian artist best known for his paintings The Last Supper and the Mona Lisa.

ANSWER: Leonardo da Vinci [accept either]
16. Atmospheric nitrogen or vacuum reaction conditions can be simulated with the Schlenk variety of these objects. Another variety can easily connect to vacuum filtration apparatuses via a sidearm. A more common variety than the Buchner variety contains a fill-line for measuring high-precision. For 10 points, identify these pieces of laboratory glassware that include a volumetric kind and a familiar conical variety known as the Erlenmeyer kind.
ANSWER: flasks
17. This belief system's apocalypse is called Frashokereti, and one heresy in this belief system was called Zurvanism. Funerary rites in this religion include leaving the dead on raised platforms called towers of silence, and the primary conflict between good and evil in this religion is represented by the beings Ahura Mazda and Ahriman. For 10 points, name this religion named after a certain Persian prophet.
ANSWER: Zoroastrianism
18. This author attached a story about a man who buys a pair of ruby slippers at auction to his work of film criticism, which opens "When I first saw The Wizard of $O z$ it made a writer of me." This author of novels such as Fury and Shame also wrote about the switched-at-birth Saleem and Shiva, part of a generation of children born at the moment of India's independence. For 10 points, name this author of Midnight's Children, who was targeted for assassination after his controversial The Satanic Verses.
ANSWER: Ahmed Salman Rushdie
019-10-34-04118
19. One process that takes place in these structures involves a combination with coenzyme A to create acetyl CoA. That process takes place in this organelle's matrix. Another process that takes place in this structure creates a proton gradient. This organelle is the location of the Krebs cycle and the electron transport chain. This double-membraned structure has an inner membrane that is folded called the cristae. For 10 points, name this organelle that is responsible for the production of ATP and is often called the powerhouse of the cell.
ANSWER: mitochondria [or mitochondrion]
20. In one of this author's novels, Joseph Grand struggles to write the perfect sentence, and Jean Tarrou dies despite the efforts of Dr. Bernard Rieux. This author wrote about a disease that strikes Oran in The Plague. A novella by this man begins with the sentence, "Maman is dead today;" in that novel, Mersault is executed for shooting an Arab "because of the sun." For 10 points, name this French existentialist author of The Stranger.
ANSWER: Albert Camus

## Second Period, 10 Tossups and 4 Bonuses

1. Before opposing the American independence activists in Taxation No Tyranny, this author used Juvenalian satire as a model for his poem "The Vanity of Human Wishes." He was the first to include real literary quotations as usage examples, in his monumental Dictionary of the English Language. He may be best-known not as an author but as a subject of a work based on two decades of friendship with a Scottish attorney. For 10 points, name this eighteenth-century literary figure, the subject of a noted biography by James Boswell.
ANSWER: Samuel Johnson
2. At very high pressure, such as below impact craters, this mineral can metamorphose into coesite (KO-uh-zite). Evidence of the K-T boundary was provided by a layer of the amorphous "shocked" type of this mineral. Together with various types of feldspar, this mineral comprises the major ingredient of granite. Its piezoelectric (pee-AY-zo-"electric") properties make it allows its use in crystal oscillators. For 10 points, name this mineral made up of silicon dioxide, which has a hardness of seven on the Mohs scale. ANSWER: quartz [before "silicon," accept silicon dioxide; or silica; or $\underline{\mathbf{S i O}_{\mathbf{2}}}$ ]
3. James Garfield used trapezoids to prove this result, which is also proven in Euclid's Elements. With integral values for its three variables, it gives rise to namesake "triples," which cannot be found for exponents greater than two, according to Fermat's Last Theorem. It is a special case of the cosine law, where the angle is ninety degrees. For 10 points, name this theorem which is stated as "A squared plus B squared equals C squared."
ANSWER: Pythagorean theorem
4. One element in this family was originally isolated by heating clevite, while the first isolated element in this family was discovered when Lord Rayleigh and William Ramsay noted that a sample of pure nitrogen air was too heavy to be just nitrogen. Neil Bartlett was the first chemist to make a compound containing one of these elements, which had previously been thought to be "inert." For 10 points, name this family of elements that includes xenon, argon, krypton, and helium, which is found at the extreme right of the periodic table.
ANSWER: noble gases [or inert gases before mentioned; or Group VIIIA (eight-A); or Group 18; prompt on Group $\mathbf{0}$ ]
5. This novel's protagonist yells at Teddy Henfrey and forces Thomas Marvel to be his assistant. After Marvel escapes to the town of Burdock, the title character is shot and finds his old colleague Dr. Kemp, who soon finds out about his experiments with changing the refractive index of objects. The title character, whose name is Griffin, is an albino who wraps himself up with bandages in order to conceal his most notable attribute. For 10 points, name this 1897 novel by H. G. Wells whose protagonist cannot be seen. ANSWER: The Invisible Man
6. This author wrote a novel in which the United States is ruled by the tyrannical Buzz Windrip. In another novel by this author of It Can't Happen Here, the shooting of Zilla by her husband Paul Riesling causes Myra's husband to resent his middle-class lifestyle. This man created the fictional city of Zenith, Winnemac, the home of the minister Elmer Gantry. In another of his novels, Erik Valborg has an affair with Carol Kennicott, who grows dissatisfied with Gopher Prairie, Minnesota. For 10 points, name this author of Main Street and Babbitt.
ANSWER: Sinclair Lewis
079-10-34-04126
7. This man received the Order of Lenin for supervising the completion of the Moscow subway system. This man oversaw the assimilation of Eastern Poland following the Soviet invasion in 1940. This leader served as a political adviser during the siege of Stalingrad. This man initiated his namesake "Thaw" after delivering the Secret Speech in 1956, which denounced Stalin's excesses. This leader allegedly banged a shoe on his desk at a 1960 United Nations meeting. For 10 points, name this premier of the Soviet Union during the Cuban Missile Crisis.
ANSWER: Nikita Sergeyevich Khrushchev
030-10-34-04127
8. This military campaign was preceded by a victory for Baldwin IV at the Battle of Montgisard and the defeat of Raynald of Chatillon and Guy of Lusignan at the Battle of Hattin. One side in this campaign included forces of the Ayyubid Dynasty. The other side was led by the French ruler Philip II and Richard the Lionhearted. Frederick Barbarossa drowned during this military campaign, which was fought against the Muslim ruler Saladin. For 10 points, name this third of a series of European attempts to conquer the Holy Land.
ANSWER: Third Crusade [prompt on Crusade]
9. A version of this instrument created for the Ring Cycle is known as the "Wagner" type and combines it with the French horn. This instrument replaced the ophicleide in the modern orchestra and its virtuosos include Harvey Phillips and Tommy Johnson. It was invented by Wieprecht and Moritz and is closely related to the euphonium and an instrument which sometimes replaces it in marching bands, the sousaphone. For 10 points, name this lowest pitched and largest of the brass instruments.
ANSWER: tuba
10. Binary coding based on these values depends on Zeckendorf's theorem, which states that any integer can be written as the sum of any one or more of them. Euclid's algorithm for finding a greatest common divisor has a worst-case runtime when consecutive values of this type are inputted. A namesake type of heap uses these numbers in its runtime analysis. The ratio of consecutive numbers of this type approaches the golden ratio. For 10 points, name these numbers, which comprise a sequence that begins $1,1,2,3,5$, and are named for an Italian mathematician.
ANSWER: Fibonacci numbers [or Fibonacci sequence]
11. Answer some questions about economics.
[5] Standard Oil exemplified this economic situation in which only one seller controls the market for a good.
ANSWER: monopoly
[10] This market situation is the exact opposite of monopoly. In it, there is no barrier to entry for any firm and the prices set by firms have no effect on any other firm.
ANSWER: perfect competition [accept perfectly competitive market; prompt "competition"; prompt "free market"]
[15] This type of monopoly arises when it is most cost-efficient for one supplier to control the sell of a good and it is allowed to do so.
ANSWER: natural monopoly
[20] According to introductory economics, monopolies maximize profit when the marginal cost equals the marginal revenue for their good. That always occurs on a quantity-price diagram underneath this curve. ANSWER: average total cost curve
12. Name these genetic diseases.
[5] A valine-to-glutamic acid mutation in one of the chains of hemoglobin causes this disease, which makes red blood cells adopt a namesake bent shape.

## ANSWER: Sickle-cell anemia

[10] A deletion of a phenylalanine at position 508 of a certain protein causes this disease, in which the lungs become clogged with mucus.
ANSWER: Cystic Fibrosis
[15] A mutation in an enzyme responsible for the creation of tyrosine from phenylalanine causes this metabolic disorder.
ANSWER: Phenylketonuria
[20] A mutation in the transport protein ATP7B causes this disease, in which the liver and brain accumulate large quantities of copper.
ANSWER: Wilson's disease
048-10-34-04102
3. Name these characters from American literature:
[5] This white whale is pursued by Captain Ahab in a novel by Herman Melville.
ANSWER: Moby-Dick
[10] This lifelong friend of Chingachgook is nicknamed "Hawkeye," "Pathfinder," and "Deerslayer" throughout James Fenimore Cooper's Leatherstocking Tales.
ANSWER: Nathaniel "Natty" Bumppo [or Natty Bumppo]
[15] This son of Willy Loman flunked out of summer school after he discovered his father having an affair in Boston. After Willy's death, he refuses to become a salesman, unlike his brother Happy.
ANSWER: Biff Loman
[20] This ex-girlfriend of Pierce Inverarity follows the sign of a muted post horn around San Narciso in an attempt to learn about the mysterious Trystero in Thomas Pynchon's novel The Crying of Lot 49.
ANSWER: Oedipa Maas [or Oedipa Maas]
4. Name these inhabitants of Dante's Inferno.
[5] This betrayer of Jesus is found with Satan gnawing on his head.
ANSWER: Judas Iscariot
[10] Dante meets this woman, who committed adultery with her brother-in-law Paolo Malatesta, in the Second Circle.
ANSWER: Francesca da Rimini
[15] This leader of the Malebranche guarantees Dante safe passage to a nonexistent bridge to the Sixth Bolgia of the Eighth Circle.
ANSWER: Malacoda
[20] This inhabitant of the Third Circle predicts the expulsion of the White Guelphs from Florence. ANSWER: Ciacco

Round 4

RIVERS

## THE LETTER 'C' THE NUMBER SIX

## RIVERS

[10] The Battle of Blood River took place in South Africa against which Kingdom that at one time was lead by Shaka?
ANSWER: Zulu Kingdom
[10] The song "Ol' Man River" is from what 1920s musical based on a novel of the same name by Enda Ferber?
ANSWER: Show Boat
[10] What author wrote Of Time and the River and Look Homeward, Angel?
ANSWER: Thomas Wolfe
[10] What type of lake is formed when a meander of a river is blocked off?
ANSWER: oxbow lake
[10] What science fiction author wrote the series Riverworld?
ANSWER: Philip José Farmer
[10] What river of Hades caused those who drank its waters to forget their lives?
ANSWER: Lethe
[10] The Battle of the Hydaspes River saw Porus defeated by what Macedonian who conquered much of the classical world and beyond?
ANSWER: Alexander the Great [or Alexander III of Macedon]
[10] What river starting at the Great Slave Lake is the longest in Canada?
ANSWER: Great Slave Lake
[10] In what Coleridge poem does Alph, the sacred river run near the title figure's Xanadu?
ANSWER: Kubla Kahn
[10] Rivers can undergo what process where an increase of phosphates causes algal blooms thus disrupting the river's ecosystem.
ANSWER: eutrophication

THE LETTER "C"
[10] These are the organized structure of DNA found in cells, and include "X" and "Y," the sex type. ANSWER: chromosomes
[10] This substance, whose deadliness comes from its ability to block oxidative phosphorylation, has formula KCN and can sometimes be smelled as bitter almonds.
ANSWER: potassium cyanide
[10] This man wrote the South Carolina Exposition and Protest as a response to the Tariff of Abominations.
ANSWER: John Caldwell Calhoun
[10] In the Steppes of Central Asia is a symphonic poem by Borodino set in this place, which also names a mountain range and includes Georgia and Azerbaijan.
ANSWER: Caucasus
[10] Claude Money painted this a series consisting of this cathedral painted at different times of day and during different times of year.
ANSWER: Rouen Cathedral
[10] This man wrote The Charge of the Light Brigade about the events at the Battle of Balaclava during the Crimean War.
ANSWER: Alfred, Lord Tennyson
[10] This author wrote the short story "The Celebrated Jumping Frog of Calaveras County".
ANSWER: Mark Twain [or Samuel Langhorne Clemens]
[10] This period of Chinese history follows the Spring and Autumn period and was named for the several areas that were competing for power.
ANSWER: Warring States Period
[10] This city fell to the Ottomans in 1453, thus marking the end of the Roman Empire.
ANSWER: Constantinople [do not accept "Istanbul"]
[10] This titan castrated his father Uranus to become the leader of the Titans before he was forced to vomit up his children by Zeus.
ANSWER: Cronos

THE NUMBER SIX
[10] What country passed the Six Acts after the Peterloo Massacre protesting the Corn Laws that Parliament eventually repealed?
ANSWER: United Kingdom of Great Britain [accept either underlined part; prompt "England"]
[10] What aromatic compound has six hydrogens bonded to six carbons arranged in a ring?
ANSWER: benzene
[10] The title figures interrupt a rehearsal in what Italian play by Luigi Pirandello?
ANSWER: Six Characters In Search of an Author [accept Sei personaggi in cerca d'autore]
[10] Catherine Parr and Anne Boleyn were among what English king's six wives?
ANSWER: wives of King Henry VIII
[10] Six characters such as Professor Plum and Colonel Mustard are possible murderers in what ...board game?
ANSWER: Clue [accept Cluedo]
[10] The cube is the six-sided example of what solids whose sides are polygons, named for a Greek philosopher?
ANSWER: Platonic solids
[10] What king has a namesake six-pointed Star symbolizing Judaism and fathered Solomon?
ANSWER: King David
[10] What is the SI prefix for 10 to the sixth of something?
ANSWER: mega
[10] "Six feet of earth" answers the title question of * "How Much Land Does a Man Need?" by what Russian author of Anna Karenina?
ANSWER: Count Leo Tolstoy [accept How Much Land Does a Man Need? or Mnogo li cheloveku zemli nuzhno before the asterisk]
[10] The "six-shooter" revolving pistol was invented by what American whose most famous bullet cartridge is the .45 ?
ANSWER: Samuel Colt

RATS AND MICE
[10] What genocide is depicted in the graphic novel Maus, by survivor's son Art Spiegelman?
ANSWER: The Holocaust [accept HaShoah]
[10] What mouse-riding son of Shiva is Hindu god with the head of an elephant?
ANSWER: Ganesha
[10] Edward Tolman's rats made "cognitive" examples of what navigation tool whose real-world examples were made by Mercator and Amerigo Vespucci of the known world?
ANSWER: maps
[10] Polyploids, such as the viscacha rat, have more than two sets of what DNA-containing bodies exemplified by X and Y ?
ANSWER: chromosomes
[10] Cat and Mouse is in what German author's Danzig trilogy with The Tin Drum?
ANSWER: Gunther Grass
[10] Yersinia pestis, a bacteria carried on fleas and rats, caused what European outbreak in 1347?
ANSWER: Black Death [accept bubonic plague]
[10] Who ran rats into walls in the Kerplunk experiment and made a baby frightened of rats in the Little Albert experiment?
ANSWER: John BroadusWatson
[10] What star during the Year of the Rat won eight gold medals at the Beijing Olympics as an American swimmer?
ANSWER: Michael Phelps
[10] A war between frogs and mice is attributed to what blind 8th-century BC poet of the Iliad and the Odyssey?
ANSWER: Homer [accept Omeros; prompt Maeonides]
[10] The Rat Islands are among what island chain extending to the International Date Line southwestward from Alaska?
ANSWER: Aleutian Islands

1. This President ran on a campaign that promoted his simplicity as a man who knew about "log cabins and hard cider." This man's popular nickname came from a battle he won against Tenskwatawa, whose brother Tecumseh was also defeated by this man at the Battle of the Thames. This President nicknamed Tippecanoe defeated Martin Van Buren in the election of 1840. This man then gave a two-hour-long inaugural address on a cold and rainy day, causing him to catch a cold. For 20 points, name this ninth President who died after a month in office.
ANSWER: William Henry Harrison [prompt on Harrison]
2. John Kay and James Hargreaves made inventions that allowed for greater growth of this crop, with those inventions being the flying shuttle and spinning jenny. The belief that Europe was dependent on this crop led it to be known as "king." In the late nineteenth century, this crop was ravaged by the boll weevil. This crop became widely grown after a machine was made to separate it from its seeds. For 20 points, identify this crop which was fed into a machine made by Eli Whitney.
ANSWER: cotton
004-10-34-04102
3. A snub of Hiram Johnson, the holder of this office in 1916, may have cost Charles Evans Hughes that year's election. After losing to incumbent Pat Brown in the 1962 election for this office, one man declared that "you won't have Nixon to kick around anymore." Brown was defeated four years later by Ronald Reagan, who promised that in this office he would "clean up the mess at Berkeley." For 20 points, name this office held by Gray Davis until a 2003 election recalled him.
ANSWER: governor of California [prompt on partial answer]
4. Sam Houston resigned as Governor of Texas to protest this action. The Federalist Party was ruined because the Hartford Convention became synonymous with performing this action, even though it decided against it. The admittance of California caused some states to threaten to do this in 1850, although no state actually performed this action until the election of Abraham Lincoln incited South Carolina to perform it. For 20 points, name this action taken by Southern states which directly caused the Civil War. ANSWER: seceding from the Union [or seceding from the United $\underline{\text { States; or clear-knowledge equivalents] }}$
5. This nation's capital contains the Olaya District, and is found on the central Nejd plateau. This country is home to Ghawar, the world's largest conventional oil field, and Aramco is its national oil company. It borders both the Red Sea and Persian Gulf, and a city in this country is home to the Ka'aba. It's southernmost portion is the massive sand desert Rub 'al Khali, or the "Empty Quarter". For 20 points, Mecca and Medina are found in what Islamic monarchy?
ANSWER: Kingdom of Saudi Arabia
6. Glycoprotein 120 is exposed on the surface of the envelop of the virus that causes this disease. A common tumor found in patients infected with the virus that causes this disease is Kaposi's Sarcoma. This disease is caused by a retrovirus that destroys CD4 plus T-cells. For 20 points, name this autoimmune deficiency disease.
ANSWER: AIDS [or Acquired Immune Deficiency Syndrome prompt on "HIV"]
7. One scholar in this field is Johannes Schmidt, who created the wave model of development. Derek Bickerton and Dan Everett also work in this field, whose modern form was inaugurated in a work which introduced the concept of the "sign" and which was written by Ferdinand de Saussure. Important concepts in this field include phonemes and the Universal Grammar. For 20 points, name this field which is dominated by the generative theories of Noam Chomsky, and is the study of language.
ANSWER: linguistics
024-10-34-04107
8. During this period of time, non-decomposed organic matter formed black shale and this period of time began after the "Great Dying" which occurred at the end of the Permian. The end of this geologic Era is marked by the K-T extinction event, which according to the Alvarez hypothesis was caused by a large asteroid. For 20 points, name this geologic era consisting of the Triassic, Jurassic and Cretaceous periods. ANSWER: Mesozoic Era [accept Triassic period until "K-T" is spoken]

084-10-34-04108
9. One player of this instrument composed songs such as "Billie's Bounce" and "Now's the Time." Another player of it included the songs "Countdown" and "Naima" on his album Giant Steps. Those players of this instrument made the albums Ornithology and A Love Supreme and are Charlie "Bird" Parker and John Coltrane. For 20 points, name this family of instruments important in jazz, a single-reed wind instrument made of brass and named for its inventor Adolph.
ANSWER: saxophone
079-10-34-04109
10. One role in this vocal range sings that in "matters vegetable, animal and mineral," he is the very model of his namesake occupation. Another role in this vocal range sings "Largo al Factotum" in an opera in which he arranges the marriage of Rosina and Almaviva. It is the higher of the two ranges variously used to perform Boris Godonov; the lower is bass (BASE). For 20 points, name this male vocal range, exemplified by the roles of Major-General Stanley and Figaro, found below the range of the tenor.

## ANSWER: baritone

002-10-34-04110
11. A portion of these structures is subdivided into the cuticle and cortex; another portion consists of a bulb whose cells are the most rapidly dividing of the human body. The papilla, sebaceous gland, and shaft are three anatomical features of these structures, which is made up of a hard protein known as keratin and can renew without scarring. For 20 points, identify these anatomical protrusions.
ANSWER: hairs
020-10-34-04111
12. A series of two transesterification reactions removes unwanted parts of this molecule via the spliceosome. This molecule can be monocistronic or polycistronic. 7-methyl-guanosine is added to the five prime end of this molecule, and a poly-A tail to the three prime end, after this molecule is created in transcription. This molecule's codons contain uracil instead of the thymine found in DNA. For 20 points, name this type of RNA that is transported to the ribosome in order to make proteins.
ANSWER: messenger RNA [or mRNA; accept messenger RNA or mRNA after "RNA"]

1. This deity is said to cause earthquakes when he writhes in pain because of the poison dripped on him by a snake. He took the form of a mare to give birth to the eight-legged horse Sleipnir. He is the father of the wolf Fenrir, Hel, and the Midgard Serpent. He tricked the blind Hod into killing his brother Baldur with a bow and arrow. He will kill and be killed by Heimdall at Ragnarok. For 10 points, name this trickster from Norse mythology.
ANSWER: Loki
024-10-34-04131
2. This author wrote about an old man who drinks with an imaginary version of himself in his poem "Mr. Flood's Party." One of his poems begins by telling the title character to "Go to the western wall." Another poem tells of a "child of scorn" who "loved the days of old." As well as writing "Luke Havergal," this author also created the fictional inhabitants of Tilbury Town in such poems as "Miniver Cheevy" and one about a "gentleman from sole to crown" who "put a bullet in his head." For 10 points, name this American poet who wrote "Richard Cory."
ANSWER: Edward Arlington Robinson
083-10-34-04132
3. The first ruler of this house was the son of Metropolitan Filaret. This family eventually merged with the Holstein-Gottorp line. This family came to power after the downfall of the Rurik line, which had fallen apart during the Time of Troubles. This dynasty was ended when the royal family was killed at Yekaterinberg. For 10 points, name this line of royals started by Michael and ended after Nicholas II's death, which ruled Russia until the 1917 revolution led to founding of the Soviet Union.
ANSWER: House of Romanov
