## TOSSUPS - VIRGINIA TECH ETC. <br> CENTER OF THE KNOWN UNIVERSE OPEN 2002 -- UTC

 Questions by Virginia Tech, Northwestern, Missouri-Rolla, Michael Falk, Robert Trent, \& Charlie Steinhice1. After reading this piece, a reader without a sense of irony would believe its author was promoting cannibalism. The writer refers to children as "a most delicious, nourishing and wholesome food," and suggests they would make the perfect meal for English gentlemen and landlords, who have "already devoured most of their parents." The entire tract, however, is a complex parody of the inhumane treatment of Ireland by its neighboring kingdom, England. For ten points, name this short but bizarre work by the Irish satirist Jonathan Swift.

Answer: A Modest Proposal
2. For the Danube's last 190 miles, it flows through this country before emptying into the Black Sea. Once a vast nation after adding territory from Russia and the Austro-Hungarian Empire after World War I, this nation in Eastern Europe is now about the size of Oregon, with the Carpathian Mountains and Transylvanian Alps criss-crossing the country. For ten points, what is this Balkan nation with capital at Bucharest?

Answer: Romania
3. He currently stars on the Minneapolis stage as Toad in "A Year with Frog and Toad," a play for children. No stranger to the stage, he has also appeared in "A Funny Thing Happened on the Way to the Forum" and as Mark Slackmeyer in the musical adaptation of the comic strip Doonesbury, and his film roles include a co-starring role opposite the Oscar-nominated Peter O'Toole in My Favorite Year. But he's still undoubtedly best known for his starring role in an ABC sitcom that ran for seven years. FTP, name the actor who played Larry Appleton, the American cousin on Perfect Strangers.

Answer: Mark Linn-Baker
4. His law states that the speed of flow of a liquid from an orifice is equal to the speed it would attain if falling freely for a distance equal to the height of the free surface of the liquid above the orifice. As Galileo's secretary, and then as his successor as professor of philosophy and mathematics at Florence, he improved the telescope and a form of microscope. FTP name this scientist, best remembered as the inventor of the barometer.

Answer: Evangelista Torricelli
5. It was revoked at Fontainebleau on October 22, 1685, the forty-third year of King Louis XIV's reign. It is said to have created a "State within a State," as Huguenots were afforded the same rights as Catholics, with their own church organization, functions within the government, and degrees of autonomy. For ten points, name the 1598 decree which was precipitated by years of religious war and the ascension of France's first Bourbon monarch, Henry IV.

Answer:
Edict of Nantes
6. Composed in 1919, it premiered on Dec. 30, 1921 in Chicago. Based on a play by Carlo Gozzi, it is a fairy tale of a hypochondriac prince in search of a cure for laughter. The jester accidentally succeeds when Fata Morgana falls over and exposes herself. Fata Morgana then curses the prince, who has to pursue the title objects. For 10 points, name this Prokofiev opera.

Answer: $\quad$ The Love of 3 Oranges
7. The main proponent of this plan in Congress, Joseph Robinson of Arkansas, died three months before it was voted upon. Willis DeVanter, George Sutherland, and Charles Hughes were among those to be marginalized if the bill became law. For ten points, name this idea of lessening conservative power in the Supreme Court striking down New Deal legislation by appointing extra justices as justices reached the age of 70 after ten years of service.

Answer: court packing
8. In an infant, the skull formation is incomplete in some areas. There are a number of these "soft spots;" one of the best known, the anterior, is located at the junction of the two parietal and the frontal bones of the skull and usually doesn't close until about 18 months of age. For ten points, give the name of these spots.

Answer: Fontanels
9. The map still in use today was designed by Harry Beck in 1933 and is notable for the fact that the map's geography bears little to no resemblance to the geography of the city above. Twelve lines total, with the recent addition of the Waterloo and City line, see three million journeys a day through 275 stations on 253 miles of railway. For ten points, what is this subway system, which, dating to 1863 , is the oldest in the world?

Answer: London Underground or The Tube
10. The protagonist of this work is a depressed male who writes under a somewhat embarrassing female pseudonym. The book is a descent into the grotesque, with frightening characters popping up at various turns, such as Shrike, the fiendish newspaper editor who makes it his everyday duty to mock the title character. The novel's author worked unsuccessfully as both a journalist and a Hollywood screenwriter, which might explain his gloomy writings on those genres. For ten points, name this work about an advice columnist by Nathanael West.

## Answer: Miss Lonelyhearts

11. Its name comes from the Greek word for "bishop," chosen because bishops head the church in this offshoot of Christianity. Although the name only dates back about 250 years, the religion itself is nearly 500 years old, dating back to England's dissolution of ties to the Roman Catholic Church. For ten points, name this American Church, which decided after the American Revolution that it no longer wanted to be known as Anglican in this country.

Answer: Episcopalian Church
12. Assigned to copy the tomb paintings at Bani Hassan, he worked all day long and then slept in the tomb with the bats, intense dedication for a 17 -year-old on his first trip outside England. Working as an archaeologist for the next 12 years, his career nearly ended after a skirmish between his Egyptian site guards and some drunken tourists, but he was brought back into the fold after meeting the fifth Earl of Carnarvon in 1908. For ten points, name this archaeologist who, backed by Carnarvon, discovered King Tut's tomb in 1922.

Answer: Howard Carter
13. He was born in 1882 in Nyack, New York, where he dreamed of one day becoming a naval architect. He began his formal studies at the New York School of Art under Robert Henri, the founder of the Ash Can School. Beginning in 1921, his paintings caught the attention of critics and dealers, who dubbed him America's foremost realist. For ten points, identify this artist whose works include High Noon, People in the Sun, Chop Suey, and Nighthawks.

Answer: Edward Hopper
14. Its king has disbanded the cabinet and fired the prime minister, the first time since 1990 that the monarch has assumed direct control of the government. While the king cites Prime Minister Sher Bahadur Deuba's failure to hold elections on time, Deuba argues that King Gyanendra is in violation of the constitution. This is more political turmoil for a nation shaken up by Crown Prince Dipendra's murder-suicide, which killed eight royal family members in June 2001. For ten points, name this Himalayan monarchy.

## Answer: Nepal

15. Its protagonist is never named, and through its narration it becomes clear the main character deeply resents his readers; he explains in the introduction that he doesn't care what "we" think of him. His life isn't rosy by any means; he inhabits nineteenth century St. Petersburg's equivalent of a garden apartment, and he has to borrow his old friend Simonov's money in order to hire a young prostitute, Lisa. For ten points, name the book that concerns this embittered man, written by Fyodor Dostoevsky.

Answer: $\quad$ Notes from the Underground
16. While he did postdoctoral work at Johns Hopkins, his M.D. was from Maryland. His 44 -year stint as a school doctor included a 13-year study of students' hearts and blood pressure that received some attention in medical journals. His death in 1965 at the age of 85 was mourned locally, but he was virtually unknown outside Chisholm, Minnesota, till newspaper editor Veda Ponikvar gave some info and a photo to author W.P. Kinsella. FTP name this physician, whose real-life one-game major league career with the New York Giants provided a pivotal element for Kinsella's novella Shoeless Joe and its film adaptation, Field of Dreams.

Answer: Archibald "Moonlight" Graham
17. They are formed when gluons temporarily unite a quark and its antiquark, which explains why this class of particles is unstable. They are then converted to other particles as the quark and antiquark annihilate each other. FTP name this class of particles, which includes positive kaons, positive and neutral pions, D plus, and J/psi.

## Answer: mesons

18. His first published poem was dedicated to Maurice Pilorge \& was called "The Man Condemned to Death." Pilorge reappears as the title character of the author's first novel Notre-Dame-des-Fleurs. After other novels, like Miracle of the Rose, he turned to the "Theatre of Hatred" with such somewhat absurdist works as Deathwatch. FTP, name this French writer also noted for The Screens and The Balcony.

Answer: Jean Genet
19. Dating from the early thirteenth century to the late fifteenth century, this empire rose out of what was once the empire of Ghana and controlled the trade routes of the Sahara. It reached the height of its power under the reign of Mansa Musa, who made a pilgrimage to Mecca in 1324 laden with gold and slaves. For 10 points, name this African kingdom which was one of the world's chief gold suppliers and shares its name with a present-day African country.

Answer:
20. Measure spaces don't need to have it, and the algebraic variety deals with winding numbers and homotopy. Formally, it's a collection of sets that includes the whole space, the empty set, and is closed under finite, countable, and uncountable unions. From there, we can define compactness, neighborhoods, closed sets, and boundaries. For ten points, identify this branch of mathematics that can deal with shapes and their distortions.

Answer: topology (accept topological space on early buzz)
21. Records from different dynasties give her various surnames, including Chu and Wei, which have led to confusion. Little is known about her personal life, but her father was enlisted to serve in the Chinese Army, and rather than let the old man fight, she chose instead to disguise herself as a man and fight. No one discovered her true identity until she was offered a place as a high officer in the court system. For ten points, identify this woman who was the subject of a recent Disney film.

Answer: Mulan
22. Parts of this nation's literary canon include Doll, Crusaders, and The Wedding. Recently, Pan Tadeusz (TADEUSH), Of Fire and Sword, and Quo Vadis have been made into big-budget movies and one of its most highly honored living poets, after a five year break, has published a collection entitled "Moment." FTP, name the home of recent Nobel Prizewinning poets Czeslaw Milosz (CHESWAF MIWOSH) and Wislawa Szymborska (VISWAVA SHIMBORSKA).

Answer: Poland
23. The investigation of his murder was a fiasco, as the police nationwide were not notified for two hours - as a result, only two men were ever arrested for it. One, Christer Pettersson, was convicted, but not until July 1989 - three and a half years after the crime, and then he was released three months later. Americans can sympathize - no one is quite sure who killed JFK either. For ten points, name this Swedish social democrat, prime minister on February 28, 1986, when he was shot while walking in central Stockholm.

## Answer: Olof Palme

BONI - VIRGINIA TECH ETC.
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1. Identify these features of a cell for 10 points each.
a) Although they have no membrane to separate them from the rest of the nucleus, these are the specific locations in the cell nucleus where ribosomes are manufactured.

Answer: nucleolus
b) It comes in two varieties, rough and smooth, which are characterized by the presence or absence of ribosomes. The rough variety serve as centers for protein synthesis and transfer, while the smooth type are involved in the production and storage of lipids.

Answer: endoplasmic reticulum
c) Rough ER transports proteins to other locations in the cell where they are needed, or to this organelle, where they can be exported from the cell.

Answer: $\quad$ Golgi apparatus (complex, body)
2. Identify the following from the Nullification Crisis for the stated number of points.
a) For 10 points: This 1828 essay laid the framework for the crisis by asserting that the states, as sovereign entities, could nullify federal laws within their boundaries.

Answer: $\quad$ The South Carolina Exposition and Protest or The South Carolina Doctrine
b) For 10 points: The Exposition and Protest was adopted by the South Carolina legislature in response to the increase on import duties passed by Congress in 1828. This was the nickname given to that tariff by its opponents.

## Answer: <br> Tariff of Abominations

c) \& d) It was later discovered that the author of the Exposition and Protest had written it in secret. The secrecy was not without reason, since he was serving as Andrew Jackson's vice president at the time. Since the essay's author presided over the Senate, it was another South Carolinian who championed the ideas of the Exposition and Protest in a famous Senate debate with Daniel Webster. Name these two men for 5 points each.

Answer: John C. Calhoun (author of Exposition and Protest), Robert Hayne (South Carolina Senator)
3. You don't have to be 21 to be bombarded with their commercials. FTPE name the alcoholic beverages from recent ads. (A) This beverage is pitted against "Beer" and "Trendy Ice" in the imagination of a young man at a bowling alley. Inevitably it wins, as it will supposedly lead to a pillow fight with many beautiful young women.

Answer:
Zima
(B) The commercial for this new premium malt beverage features the slogan "cold, bold, with a crisp new taste" and asks the viewer questions such as "Think aerobics is a sport a spectator sport?"

Answer: $\quad$ Captain Morgan Gold
(C) What else does a man do when he's grown an evil second head, or he has a monster gnawing at him from within, or aliens kidnap his date and all other women? Why of course he goes to the bar with a friend to have one of this drinks in this flavored malt beverage line.

Answer: $\quad$ Mike's (Hard Lemonade etc.)
4. Given the following information about writers with similar sounding names, name them for ten points each: 1. This author's best known book concerns two East Coast boarding school friends, Gene and Finny, who come of age during World War II. Name this writer of A Separate Peace.

Answer: John Knowles
2. The most famous novel by this author reads more like a choose your own adventure book, as he gives you the option of three different endings. Who is this author of The French Lieutenant's Woman?

Answer: John Fowles
3. He might be the most famous contemporary philosopher, and in his important work of 1971, "A Theory of Justice," he sets forth his moral philosophy using techniques similar to that of Kant's.

Answer: John Rawls
5. Given a description of a way soil is deposited, name the type of deposit for ten points each. For example, soil deposited as a glacier moves is called "glacial till."
a. Consisting mostly of silt grain, this type of deposit occurs when winds pick up loose sediment and deposit it elsewhere.

Answer: Loess
b. Eroded rock debris deposited by water; often forms deltas.

Answer: Alluvial
c. Sediment and rocks are carried down a slope by gravity.

Answer: Colluvial
6. FTPE, identify these other Indo-European languages spoken in small pockets in the British Isles. 1. This language of an island in the Irish Sea came from Old Irish. Its last native speaker died in 1975, and today it survives more as an identity than a means of communication.

Answer: Manx
2. Spoken primarily in the southwest of England, this Celtic language was fortunate to undergo a scholarly rebirth just as it died out as a native tongue in the late 1800s.

Answer: Cornish
3. Closely related to Cornish, this language is spoken by enough people that its region contains bilingual signs on the road, though no monoglot speakers are thought to remain.

## Answer: Welsh

7. FTPE, answer stuff about an author:
a) She lived in New Orleans and later Natchitoches Parish where she gained the knowledge of Creole, Cajun, and Acadian customs that shows up in such "local color" works as Bayou Folk and a Night in Acadie.

Answer: Kate Chopin
b) Considered her masterwork is this novel about the transformation and eventual suicide of Edna Pontellier.

## Answer: The Awakening

c) One of her major influences was this French master of the short story, author of "Ball of Fat" and "The Necklace."

Answer: Guy de Maupassant
8. Late in his career, Picasso turned to some classic paintings for inspiration. Name these from clues FTPE:
a) Both Picasso and Dali painted versions of one of fellow Spaniard Diego Velazquez's most famous paintings. In one of Dali's versions, the original artist and his palette, standing at the left in front of his canvas, is represented by a number 7, while the central figure, the Infanta of Spain in her billowing skirt, is represented by a wide-bottomed number 8 .

Answer: Las Meninas or The Maids-in-Waiting
b) This 1961 Picasso work inspired by the Manet work of the same name also depicts as its central figures a seemingly out-of-place nude woman engaging in the title activity with two men. In the distance, a second woman is seen kneeling.

Answer: Luncheon on the Grass or Le déjeuner sur l'herbe
c) Picasso made multiple versions of this Delacroix work, which depicts the original artist's impressions on the Arabic culture, particularly that of the harem scene depicted in the original and its many variations.

Answer: $\quad$ The Women of Algiers or Les femmes d'Alger
9. A volume of air at a given initial temperature goes through a four-step cycle: expansion while held at a constant temperature; expansion without the loss or gain of heat, which lowers its temperature, compression while held at a constant temperature, and compression without the loss or gain of heat, which returns it to its original state and temperature.
a) For 10 points, what name is given to this cycle, and to a theoretical engine that uses the cycle to do work? Both are named after the French scientist who studied the problem of engine efficiency, and who went on to develop the ideas of the cycle and the engine.

Answer: Carnot cycle (Named after N.L. Sadi Carnot.)
b) For 5 points each, what terms are given to the periods of expansion and compression, one in which volume changes without temperature change, and one in which volume changes without transfer of heat?

Answer: isothermal, adiabatic
c) Since the temperature of the gas cannot be lowered to absolute zero through any finite number of processes, the efficiency of a Carnot engine can never be one hundred percent. This is alternative statement of what physical law?

Answer: the third law of thermodynamics
10. Identify these mythological trios for 10 points each.
a) Euphrosyne (yoo fras nee), Thalia, and Aglaea (ug lee uh), or Mirth, Cheer, and Splendor. In the Greek mythos, these goddesses were the personification of beauty and charm.

## Answer: $\quad$ The Graces (Charities)

b) Urd, Verdandi, and Skuld, or Fate, Necessity, and Being. In Norse myth, these goddesses of destiny controlled the lines of fate of all beings. They lived at the base of the World-Tree Yggdrasil (ig dra sil) and tended to its natural decay.

## Answer: The Norns

c) In addition to the name referring to a single goddess, whose provinces were battle, strife, and fertility, the name is also used to refer to a trio of Celtic goddesses of war - Badb and Nemain completed the triad. If that doesn't help, it's also the name of the succubus babe with the batwings sticking out of her hair in the old school Capcom videogame Darkstalkers.

## Answer: The Morrigan

11. Answer the following about the defendants at the first International Military Tribunal at Nuremberg FTSNOP:
a) (5) Of the defendants who were sentenced to death, this former Reichsmarshall and commander of the Luftwaffe cheated the hangman by taking cyanide hours before his scheduled execution.

Answer: Hermann Goering
b) (5) Hitler's deputy in charge of the Nazi party organization, he was the last of the surviving defendants to die. Sentenced to life imprisonment, he was the only inmate of Spandau Prison from 1966 until his suicide in 1987.

Answer: Rudolf Hess
c) (10) Perhaps the best known and most controversial of the 9 defendants upon whom a sentence of death was carried out was Hitler's Foreign Minister, whose name you may know from the 1939 non-aggression pact with Russia

Answer: Joachim von Ribbentrop
d) For a final 10 points, identify any one of the three defendants who were acquitted: the Minister of Economics at the start of World War II, Hitler's predecessor as Chancellor, and the head of the Reich Wireless News Services.

Answer: $\quad$ any of Hjalmar Schacht, Franz von Papen, or Hans Fritzsche
12. A point moves in a plane such that it is equidistant from a fixed line in the plane, and a second fixed point in the plane that is not on the line. For 10 points each:
a) What curve does the motion of the point generate?

Answer: parabola
b) In the generation of the parabola, what name is given to the fixed point?

Answer: focus
c) What name is given to the line?

Answer: directrix
13. Identify these battles, in which bridges figured prominently, for 10 points each.
a) After seeing the sign of the cross superimposed on the sun, and the words "In this sign, you shall be the victor," Constantine defeated Maxentius in 312 CE at this battle near Rome, restoring the rule of one man to the Roman world.

Answer: Milvian Bridge
b) Three days before marching an exhausted army southward to meet William, Duke of Normandy at Hastings, Harold II defeated his exiled brother Tostig and his Norwegian allies on September 25, 1066 at this battle in Yorkshire, the site of the last Viking invasion of England.

Answer: Stamford Bridge
c) With its strategic location at the head of navigation of the Firth of Forth, it had been the site of many battles between the Scots and the English prior to September 11, 1297, when Sir William Wallace crushed English forces trying to move across the Forth into Scotland.

Answer:
Stirling Bridge
14. Identify the following about the similarities of two Shakespeare comedies FTSNOP:
a) For 5 points each, name the cross-dressing heroines of, respectively, "Twelfth Night" and "As You Like It".

Answer: $\quad$ Viola and Rosalind
B. F5PE, name the women who fall for, respectively, Viola in "Twelfth Night" and Rosalind in "As You Like It."

Answer: Olivia and Phebe
C. For 10 points, name either the man who marries Olivia in "Twelfth Night" or the one who marries Phebe in "As You Like It."

Answer: either Sebastian or Silvius
15. A small amount of a strong acid is added to a solution containing a weak acid and a salt of its conjugate base. Little change in the pH is measured as a result. For 10 points each:
a) What name is given to solutions consisting of weak acids or bases and their conjugates, which resist changes in pH that occur as a result of the addition of strong acids or bases?

## Answer: buffer solution (Accept reasonable equivalents.)

b) Since the weak acid does not disassociate completely in solution, the addition of hydrogen ions shifts the equilibrium away from generation of the disassociated weak acid, and towards the generation the ionized weak acid. What is the name of this qualitative principle that predicts the direction in which equilibrium shifts in response to the addition of reagents?

Answer: Le Chatelier's principle (Accept reasonable equivalents.)
c) This expression relates the pH of a buffer solution to the acid ionization constant of the weak acid, and the concentrations of the unionized acid and its salt, thus giving a quantitative explanation to buffer action.

Answer: Henderson-Hasselbalch equation (Accept reasonable equivalents.)
16. Given a brief list of short works by American authors, name them for ten points each.

1. He wrote "The Summer Farmer," "The Common Day," "Mene, Mene, Tekel, Upharsin," "Artemis, the Honest

Well Digger" "The Five-Forty-Eight," and "The Swimmer," as well as the novel Falconer.
Answer: John Cheever
2. His short stories include "The Revolutionist," "Cross-Country Snow," "Mr. and Mrs. Elliot," "The Gambler, the Nun, and the Radio" and "The Short Happy Life of Francis Macomber."

Answer: Ernest Hemingway
3. This writer's short works include "USFS 1919: The Ranger, the Cook and a Hole in the Sky," "Logging and Pimping and 'Your Pal, Jim'" and "A River Runs Through It."

Answer: Norman Maclean
17. Identify these statistical measures from sport for 10 points each.
(a) Divide the total number of bases -1 for a single, 2 for a double, 3 for a triple, and 4 for a home run - by the total number of at-bats. The value is usually referred to as a percentage, even though it can theoretically have values in excess of one. In practice, it never does.

Answer: slugging percentage (Do not accept on-base percentage; that's the total number of hits, walks, and hit-by-pitches divided by the total number of at-bats, walks, hit-by-pitches, and sacrifice flies.) (b) Obtain four values. First, subtract 30 from the percentage of completed passes, and divide by twenty. Second, subtract three from the average yards gained per attempt, and divide by four. Third, divide the percentage of touchdown passes by five. Fourth, divide the interception percentage by four, and subtract that number from 2.375. Cap each of the four values at 2.375 . Finally, add the four values together, divide by six, and multiply by 100 .

Answer: quarterback efficiency rating or passing efficiency rating
(c) Divide the number of goals scored by the opposing team number of games played. In hockey, empty-net goals count in the calculation, so to a degree, the statistic provides information on overall defensive efficiency.

Answer: goals against average
18. Identify these heresies of the early Christian Church for 10 points each.
a) From the Greek for "knowledge," it developed as a combination of Greek philosophy and Jewish tradition before taking on Christian elements. It held that a good God could not have created a world filled with evil. Instead, numerous other forces, which were children of God, were responsible for Creation. The Christ was one such spirit, which dwelt in the body of Jesus from his baptism up to his crucifixion.

Answer: $\quad$ Gnosticism or Gnostic heresy
b) Its namesake priest held that God the Son could not be of the same nature as God the Father, since the Father predated the Son. The issue was not settled until the Church council at Nicaea in AD 325, although adherents to the position among the Germanic kingdoms kept it from disappearing until the eighth century.

Answer: Arianism or Arian heresy
c) It asserted that the Christ was of two natures, one divine, which He had merged into one. As such, Christ was equal to the Father through his divine nature, but even with the human nature of Jesus, could not be equal to man. Condemned at the Council of Chalcedon in AD 451, it survived in the Eastern Empire until being largely arrested by the advance of Islamic forces.

Answer: Monophysitism or Monophysite heresy or Eutychianism
19. Generally speaking, it is the Chief Justice of the United States who swears in the President on Inauguration Day. a) For 5 points, who thus was the only person to be sworn in as President, and to swear someone else in as President? Answer: William Howard Taft
b) 5 points for 1 or 15 for both, name the two Presidents to whom Taft administered the oath of office.

Answer: Calvin Coolidge, Herbert Hoover (Taft was Chief Justice from 1921 to 1930. He did not administer the oath to Coolidge after Harding's death, but did in 1925 after Coolidge won a full term in his own right.) c) For 10 points, which Chief Justice administered the oath of office to President Taft on March 4, 1909?

Answer: Melville Fuller
20. Identify these collective works of Johann Sebastian Bach for 10 points each.
a) Bach himself gave no title to this collection of works. He referred to each of the individual compositions as a contrapunctus, as opposed to the term for them contained in the title at its publication. His last great single-themed work, much has been made of the mystery surrounding the seemingly unfinished Contrapunctus 14

## Answer: $\quad$ The Art of Fugue

b) The Art of Fugue is seen as a counterpart to this earlier work. The preludes and fugues, one written in each of the 12 major and 12 minor keys, are viewed not simply as etudes, but as demonstrations of varying styles of Baroque keyboard composition.

Answer: The Well-Tempered Clavier [not, as your genial quizmaster once said, well-tempered clavicle] c) Bach dedicated this collection of six pieces to the Margrave Christian Ludwig. This is a possible indication that at the time, he was looking to the German nobleman for employment.

Answer: Brandenburg Concertos
21. Identify these possibly related events for 10 points each.
a) This 6000 -mile journey from Jiangxi (jang zhee) Province in the southeast to Shaanxi (shan zhee) Province in the north lasted for about 12 months in 1934 and 1935.

## Answer: Long March

b) This migration of Boers from the Cape of Good Hope to the Transvaal and Orange Free State began in 1835 and lasted into the 1840s.

## Answer: Great Trek

c) Following the battle of Cunaxa in 401 BC , the Persians murdered the leaders of a group of Greek mercenaries who had been in their employ. The mercenaries managed a heroic fighting retreat from Babylonia, through unknown and hostile territory, all the way back to their homeland. Among their leaders in the return was the historian Xenophon, who recounted the event in the Anabasis.

Answer: $\quad$ March of the Ten Thousand (Accept reasonable equivalents.)
22. Identify each of the following digital implements and processes from clues for 10 points each. If you require a second non-technical definition, you will receive 5 points.
a) (10) In this process, a namesake device is used to facilitate the transmission of signals on multiple input channels on one output channel. A number of select inputs equal to (log base 2 ) of the number of input channels are used to determine which input has "access" to the output.
(5) As a noun, it refers to a building complex that houses several movie theaters.

Answer: multiplex (The device is a multiplexer.)
b) (10) This device takes an $n$-bit input and activates one of (2 to the power $n$ ) output lines. It can be said to be the functional equivalent of a multiplexer.
(5) Put in simpler words, a person might be said to hold this job if he works at the tail end of the encryption and decryption process.

Answer: decoder
c) (10) Commonly available in four standard varieties, these devices are capable of storing one-bit of data, because the application of a given input makes them change between one of two stable states.
(5) After you get out of the shower or while walking on the beach, you might wear a pair of these rubberized sandals that stay on the feet by means of a thong.

Answer: flip-flop
23. Answer the following about the residents of London's Downing Street for 10 points each.
a) This is the title displayed on the letterbox at Number 10 Downing Street. Robert Walpole accepted the residence from George III on the condition that it would become the residence for his successors in the office. The office has been held concurrently with the Prime Ministry ever since.

Answer: First Lord of the Treasury
b) This government official, officially the Second Lord of the Treasury, has his traditional London residence at Number 11 Downing Street. With the development of the office of Prime Minister, this official took on the task of overseeing the government's finances.

Answer: Chancellor of the Exchequer
(The current Chancellor lives in Number 10. PM Blair and his family live in Number 11, since he and his family required larger quarters than Number 10 afforded them.)
c) The holder of this government position, whose job is akin to that of Tom Delay in the U.S. House of Representatives, uses Number 12 Downing Street as his London residence.

Answer: Government Chief Whip (Accept parliamentary secretary to the Treasury, the Chief Whip's official title.)

