1. World Literature

His first name is Alexis, and he chopped off one of his fingers because it got in the way of his pottery making. Who goes with Boss to Crete to work in a mine? He was created by Nikos Kazantzakis and famously portrayed by Anthony Quinn.

ANSWER: Zorba (the Greek)

2. Algebra (60 Seconds)

Find the inverse of the two by two matrix with a first row of 2 2 and a second row of 3 4.

ANSWER: First row 2 -1, Second row –3/2 1 (-1 ½ or –1.5 can be substituted for –3/2)

3. Biology

Which hormone produced in the corpus luteum causes a decrease of FSH and LH? It is also produced in the placenta, and its level is increased significantly during pregnancy.

ANSWER: Progesterone (prompt on progestin)

4. United States History

What began in 1881 when a White banker and Black political leader invited a teacher from the Hampton Institute to start a school for training teachers? Though it started with only thirty students learning in an old building, it grew quickly due in large part to the founder's ambitions. Identify this Alabama school which was led for many years by Booker Taliaferro Washington.

ANSWER: Tuskegee (Institute or University or College)

5. Pop Culture (see handouts)

6. Technology

Giving the brand name, what was put on sale on amazon.com this week at a cost of $4950? Because it has a single axis, its turning radius is zero. Its tires are resistant to flats and are designed not to leave marks indoors. It has five gyroscopes for balance that can override each other if one gives a faulty reading. Identify these scooters designed by Dean Kamen.

ANSWER: Segway(s)

7. British Literature

The first part was published in 1623, while the second and third parts were published in 1594 and 1595. One of the titles used was, "The first part of the contention betwixt the two famous houses of Yorke and Lancaster." Identify this history which may have been the first one written by Shakespeare, though its authorship is more questionable than other works attributed to him. The action takes place in the middle of the fifteenth century.

ANSWER: (King) Henry the Sixth (prompt on Henry or King Henry)

8. Calculus (60 Seconds)

Make sure you give only what is asked for in your answer. Find the x-coordinate for the local maximum of the graph of $y=x^3+6x^2+9x-3$.

ANSWER: -3

9. Language Arts

What word of German origin refers to the general cultural, intellectual, and moral state characteristic of an era? It comes from the words for time and spirit and begins with the letter Z.

ANSWER: Zeitgeist

10. Chemistry (see handouts)

11. World History

Which battle along the Meuse River lasted almost a year? Terms associated with it include The Sacred Way, which was the only supply route the French were able to maintain, the French rallying cry, 'They shall not pass,' and The Dead Man, a hill that was eventually lost to the Germans. In the end, the French were able to maintain their defensive thanks to diversionary attacks by the British and Russians. Identify this battle which killed or wounded close to one million people in 1916.

ANSWER: Verdun

12. Music

Which opera features Rodolfo, Marcello, Colline, and Schaunard, four friends living in an attic in the Latin Quarter of Paris? Rodolfo falls in love with Mimi, who is ill with tuberculosis. This opera was composed by Puccini.

ANSWER: La Boheme

13. United States Literature

Which short story depicts the end of the Grierson family? The main character is a recently deceased Southern lady who pays no taxes to the town of Jefferson. It was written in 1924 by William Faulkner.

ANSWER: (A) Rose for Emily

14. Physics (10 Seconds)

Which famous experiment was carried out carefully in 1886 and 1887 in Cleveland by the two men it is named after? Though it could have provided evidence for the Theory of Relativity, the several explanations given to its results did not imagine anything so bold. It is probable that Albert Einstein either did not hear of the experiment or did not think much of it. The experiment's purpose was to measure the speed of the ether, but it was a complete failure in that regard.

ANSWER: Michelson-Morley (Experiment)

15. Current Events (see handouts)

16. Geometry/Trigonometry (60 Seconds)

Find all four answers in degrees between zero and three hundred sixty. Solve the equation: Sine of x times Cosine of x equals one-fourth.

ANSWER: 15, 75, 195, 255 (degrees) (any order)

17. Religion/Mythology

What religion, founded in the fifteenth century, has a name that means disciple? It reveres a succession of ten

gurus beginning with its founder Nanak. Identify this religion centered in the Punjab region of India.

ANSWER: Sikh(ism)

18. Astronomy/Earth Science/Geography

Whose most important works were published in the 1830s and provided a lot of information to Charles Darwin in his development of evolutionary theory? This man studied the Earth's crust and argued that it was billions of years old and that its features could be explained by natural forces. Identify this man who wrote 'Principles of Geology' and 'Elements of Geology'.

ANSWER: (Charles) Lyell

19. Nonfiction

Near the beginning of which work will you find the paragraph: "Freeman and slave, patrician and plebeian, lord and serf, guild-master and journeyman; in a word, oppressor and oppressed, stood in constant opposition to one another, carried on an uninterrupted, now hidden, now open fight, a fight that each time ended, either in a revolutionary reconstitution of society at large, or in the common ruin of the contending classes."

ANSWER: (The) Communist Manifesto

20. Art/Architecture (see handouts???)

21. World Literature

His father was Russian nobility, and his mother was the descendant of an Ethiopian slave. Identify this poet who died in a duel in 1837. He is considered by some people to be the founder of Russian literature and wrote Eugene Onegin.

ANSWER: (Aleksander Sergeevich) Pushkin

22. Algebra (60 Seconds)

What is the smallest whole number that is evenly divisible by all of the whole numbers one through seven?

ANSWER: 420

23. Biology

These are most abundant just under your scalp and face and do not exist under the palms of your hands and soles of your feet. They can be responsible for causing acne when there is no outlet from them to the surface of your skin. Identify these tiny glands that release sebum.

ANSWER: Sebaceous (Glands)

24. United States History

Who moved to California in 1839, settling in what was then Mexico and calling his settlement New Switzerland? He owned a very successful fifty thousand acre ranch at the meeting point of the Sacramento and American Rivers. At the same time that the United States was taking over California, one of his employees made a big discovery near a new sawmill. When word got out, thousands of people besieged his property, leaving him with little. Whose ranch was the site of America's first major gold rush?

ANSWER: (John Augustus) Sutter

25. Pop Culture

What nickname is given to the famous play that occurred on December 23, 1972? There is a still unresolved controversy as to whether the ball was deflected by Jack Tatum of the Oakland Raiders or Frenchy Fuqua of the Pittsburgh Steelers, but the completion from Terry Bradshaw to Franco Harris allowed the Steelers to advance to the AFC Championship. This play's nickname is an alteration of the phrase that represents the creation of The Virgin Mary.

ANSWER: (The) Immaculate Reception

26. Technology (see handouts)

27. British Literature

Which work opens with a knight riding across a plain? He is followed by a lady who is attended by a dwarf. This epic was supposed to consist of twelve books each devoted to one of the virtues of chivalry, but only half of them were completed. The title character is Gloriana but is considered by many people to represent Queen Elizabeth I. It was written in the 1590s by Edmund Spenser.

ANSWER: (The) Faerie Queene

28. Calculus (10 Seconds)

Whose father was the first person to translate the Psalms into Gaelic? This mathematician was a big fan of Isaac Newton and the author of The Treatise of Fluxions. This 763-page work contained the integral test for the convergence of an infinite series and the special cases of Taylor's series that are now named after him.

ANSWER: (Colin) MacLaurin

29. Language Arts

What word was coined in 1944 by Raphael Lemkin, who wrote about the actions of the Ottoman Empire against Armenians? It was defined in 1948 by the United Nations, though this definition was not accepted by the United States until Senator William Proxmire made a speech a day about it from 1967 until 1988. Identify this word which means the use of deliberate systematic measures calculated to bring about the extermination of a racial, political, or cultural group or to destroy the language, religion, or culture of a group.

ANSWER: Genocide

30. Chemistry (10 Seconds)

Who is usually considered the most successful student of J.D. Bernal, who worked on the structures of complex three-dimensional molecules? This British chemist was born in Egypt and was awarded the Nobel Prize for determining the structures of penicillin and Vitamin B_{12}. Success continued after the Nobel Prize was awarded with the discovery of the structure of insulin.

(Dorothy Mary Crowfoot) Hodgkin (accept Crowfoot, give a second chance on Hodgkins)

31. World History

By what two-word name are the following series of events commonly known? A letter by the Immortal Seven was sent during the Trial of the Seven Bishops. The letter was carried by the Earl of Torrington from London to The Netherlands. In the end, a Declaration of Rights was passed which included an indictment of

James II and a declaration that William and Mary would become the King and Queen of England.

(The) Glorious Revolution (of 1688)

32. Music (see handouts)

33. United States Literature

Give the first and last names. Which sailor leaves the ship The Rights of Man to serve on the HMS Indomitable? On the new ship, he unsuccessfully tries to get along with his superiors Claggart and Captain Vere. Identify this title character in the last novel written by Herman Melville.

ANSWER: Billy Budd

34. Physics (60 Seconds)

Assume that the force of gravity is 9.8 Newtons per kilogram and ignore air resistance. What is the maximum height that an object will reach if it is tossed up from ground level with an initial speed of 39.2 meters per second?

ANSWER: 78.4 Meters

35. Current Events

From 1981 through 1997, what Swede served as Director General of the International Atomic Energy Agency? He now heads a group nicknamed Unmovic. Name the man who recently traveled to Iraq as the Chief United Nations Weapons Inspector.

ANSWER: (Hans) Blix

36. Geometry/Trigonometry (60 Seconds)

How many space diagonals are there in a pentagonal prism? Space diagonals do not include face diagonals or edges.

ANSWER: 10

37. Religion/Mythology

Whose wife stepped on a poisonous snake while being pursued by Aristaeus? He would later be killed by wild women who threw his head into a river, where it kept singing as it went out to sea. When he was still alive, he went down to Hades and made a deal that he could have his wife back as long as he did not look at her as they left, but he failed to live up to his end of the bargain.

ANSWER: Orpheus

38. Astronomy/Earth Science/Geography (see handouts)

39. Nonfiction

This book covers events beginning in 1750 and lasting into the twentieth century. Major characters include Kizzy, Chicken-George, and Bertha, who is the author's mother. Identify the book that begins with the birth of Kunta Kinte and ends with Alex Haley. It was made into a very successful television miniseries in 1977.

ANSWER: Roots

40. Art/Architecture

What cathedral used to be a pilgrim destination because it contains the supposed veil of Mary? One of its architectural innovations was the way it used flying buttresses to support its massive clerestory. An old cathedral on the site was destroyed by fire in 1194, and the current one was consecrated in 1260. Identify this cathedral located Southwest of Paris.

ANSWER: Chartres (accept Notre Dame d'Chartres or similar names, prompt on Notre Dame)

TIEBREAKERS

FIRST TIE

Which phase of a liquid crystal is characterized by the arrangement of molecules in layers with the long molecular axes in a given layer parallel to one another and parallel to those of other layers but perpendicular to the plane of the layer? Its name comes from Greek and Latin words for cleansing and soap. This phase can be contrasted with cholesteric and nematic phases.

ANSWER: Smectic

Who was the maternal grandfather of Adonis and the inspiration for the character Professor Henry Higgins? According to Ovid, this king made an ivory statue of ideal womanhood, which Venus brought to life. Identify this man who created Galatea.

ANSWER: Pygmalion

(60 Seconds) A bag has three red, two white, and one blue marble. If two marbles are chosen at random together, what is the probability that one is white and one is blue?

ANSWER: 2/15

Who was a European country's dictator from 1939 through 1973 and was allowed to choose his successor? His rise to power came about when he took over a rebel group upon the death of its leader. This rebel group was able to take over the country through a Civil War. Identify this leader of Spain.

ANSWER: (Francisco) Franco

What method often uses pictures of stars taken six months apart? By comparing the location of the stars in the pictures, you can figure out their locations.

ANSWER: Parallax (Method)

SECOND TIE

This governor and senator fought hard for workers' rights, women's rights, and the involvement of professors in politics and fought against United States involvement in World War One and the League of Nations. When he ran for President in 1924, he was only able to carry his native Wisconsin. Identify the Progressive leader known as Fighting Bob.

ANSWER: (Robert Marion) La Follette

(60 Seconds) If the cosine of theta is one-third, what is the cosine of two theta?

ANSWER: -7/9

This book consists of two essays. The first is a letter to the author's nephew telling him to define himself and by so doing redefine American culture. The second essay describes how the author was able to achieve his own goals despite the obstacles he faced growing up in Harlem. Identify this book by James Baldwin that

takes its title from the end of the Biblical story of Noah.

ANSWER: (The) Fire Next Time

What designer was born in 1939 with the last name Lifshitz? He first gained fame in 1968 designing wide ties. Identify this man associated with the image of a man on horseback wielding a polo mallet.

ANSWER: (Ralph) Lauren

Which twelve-letter word has seven syllables? It refers to the branch of medical science that deals with the incidence, distribution, and control of a disease in a population.

ANSWER: Epidemiology

THIRD TIE

All of this composer's works are in a contrapuntally simple style. He wrote many chorale preludes and organ works. Often associated with the city of Nurnberg, whose most famous composition is titled Canon in D Major?

ANSWER: (Johann) Pachelbel

Which search engine sorts results based on subject, type, source, or language? You can then enter custom search folders and subfolders to further refine your search.

ANSWER: (www.)northernlight(.com)

(60 Seconds) Find the area between the graphs of $y=x^3$ and $y=x^2$.

ANSWER: 1/12

In which collection of short stories will you find the characters Hoppy Holohan, Father Flynn, and Gabriel Conroy? The stories include Araby, Eveline, and The Dead. All of the characters live in the same city in this collection by James Joyce.

Dubliners

What name is given to organic compounds with carboxylic acid groups in which the hydrogen of the carboxyl group has been replaced by an alkyl group? These chemicals are sometimes used as food additives and are responsible for many distinctive flavors and odors.

ANSWER: Ester(s)