



1. In one poem by this man, the speaker writes, “Well, I like to eat, sleep, drink, and be in love,” as part of his assignment for English class. In another poem, this poet described entities “ancient as the world and older than the flow of human blood in human veins.” This poet asked, “Or does it explode?” of an entity he earlier examined with the question, “Does it dry up like a raisin in the sun?” For 10 points, name this poet of “Theme for English B” and “The Negro Speaks of Rivers” who wrote of a “dream deferred” in “Harlem.”

ANSWER: Langston Hughes [or James Mercer Langston Hughes]

014-12-71-14101

2. In quantum mechanics, the operator for this quantity is written as negative  $i\hbar$  grad. Although not acceleration, for rigid body motion, Euler's first law can be formulated in terms of this vector quantity. While inelastic collisions do not conserve kinetic energy, they do conserve this quantity. For a force that depends on time, the integral from time one to time two of the force with respect to time gives the change in this quantity, or impulse. For 10 points, identify this quantity equal to mass times velocity.

ANSWER: linear momentum [or translational momentum]

066-12-71-14102

3. The distribution denoted by this term is not obtained if an experiment is conducted without replacement; instead, one gets the hypergeometric distribution. That distribution given this name is written  $n$  choose  $k$  times  $p$  to the  $k$  times the quantity  $1$  minus  $p$  raised to the  $n$  minus  $k$ . When  $n$  equals  $1$ , one gets the Bernoulli distribution from this one. Although not binary, this term refers to a system of nomenclature in which organisms are identified by genus and species. For 10 points, identify this term that also refers to a polynomial with two terms.

ANSWER: binomial

066-12-71-14103

4. Beginning in 1969, the site of one of these institutions was occupied by Native American protesters for two years. Nixon met with Johnny Cash to discuss reform of these places. The killing of George Jackson in one of these places led to the Attica Riot in another of them. Theodore Cole and Ralph Roe drowned while fleeing from one of these places, which was the prototype for the modern "supermax" variety. For 10 points, name these institutions, one of which was notoriously operated on Alcatraz Island.

ANSWER: prisons [or jails; or penitentiaries; or islands until "places" is first read]

080-12-71-14104

5. One commander in this war was killed by a cannonball after his opponent crossed the Lech (LEK) on a bridge of boats. Events in this war included the assassination of Albrecht von Wallenstein, who fought the Battle of Lutzen undermanned against a king who had earlier won the Battle of Breitenfeld. This war's final French-Swedish phase was ended by the Peace of Westphalia. For 10 points, name this war of religion that ravaged the Holy Roman Empire and lasted from 1618 to 1648.

ANSWER: Thirty Years' War

014-12-71-14105

6. The Debye model of this quantity determines the effect of vibrations in a solid on this quantity. For a fluid, this quantity can be calculated differently in the cases of constant pressure or constant volume. The relation of this quantity to molar mass is determined using the Dulong-Petit law. Written in units of kilojoules per kilogram-Celsius, this quantity is 4.184 for water. For 10 points, name this quantity, the amount of heat needed to raise the temperature of a system by one degree Celsius.

ANSWER: **specific heat** capacity [accept **heat capacity**]

140-12-71-14106

7. The protagonist of one of this author's books dresses up as a cowboy in order to see if the bandit Joaquin Murieta is her lover Joaquin Andieta. The character created by this author settles for Tao Chien and is named Eliza Sommers. This author of *Daughter of Fortune* also created a work in which Count Jean de Satigny visits the hacienda Las Tres Marias. This author is most famous for a work about the Trueba family, into which the clairvoyant Clara marries. For 10 points, name this female Chilean author of *The House of the Spirits*.

ANSWER: Isabel **Allende**

149-12-71-14107

8. This man criticized Proudhon's ideas about exchange value in the *Poverty of Philosophy*. In a different work, this man claimed that culture is part of a society's superstructure, which is produced by its base. This Young Hegelian believed that a dictatorship of the proletariat needed to come before socialism. In a different work, he claimed that "religion is the opiate of the masses." This author of *Das Kapital* stated that history was the product of class struggle in a work that he co-authored with Friedrich Engels. For 10 points, name this author of *The Communist Manifesto*.

ANSWER: Karl **Marx**

149-12-71-14108

9. This poet began a narrative poem in four cantos with a mock invocation explicitly not calling on the Muses to assist him. He wrote, "One shade the more, one ray the less, had half impaired the nameless grace which waves in every raven tress," in a poem describing a woman "like the night of cloudless climes and starry skies." He also wrote an unfinished comical epic about a Spaniard easily seduced by women. For 10 points, name this British poet of "She Walks in Beauty" and *Don Juan*.

ANSWER: Lord **Byron** [or George Gordon **Byron**]

014-12-71-14109

10. The Wickersham Commission made a study of this period, during which Eliot Ness led his team of "Untouchables." At the beginning of this period, Congress passed the Volstead Act. "Speakeasies" operated during this period, which also saw the rise of organized crime bosses like Al Capone. Supported by the "dries" and opposed by the "wets," it began with the passage of the Eighteenth Amendment. For 10 points, name this period of United States history in which alcohol was illegal.

ANSWER: **Prohibition** [prompt on the **1920s** before "Volstead Act"]

080-12-71-14110

11. The sensitization step of creating a daguerreotype employs a vapor of one of these elements. Along with carbon and hydrogen, DDT and CFCs contain atoms of this group of elements. One of these elements is the only nonmetal that is a liquid at room temperature. Most of these elements form diatomic molecules in standard conditions, and one example is bonded to sodium in table salt. For 10 points, name these non-metallic elements, which have a minus one oxidation state and include bromine, chlorine, and fluorine.  
ANSWER: **halogens** [accept **group 17** elements]

140-12-71-14111

12. On the outskirts of this city, one can look at the ancient Buddhist art in the Kanheri Caves, part of Sanjay Gandhi National Park. This city originally consisted of seven different islands, which the British gradually united through land reclamation. This city's waterfront contains the Gateway of India, which faces its harbor on the Arabian Sea. This capital of Maharashtra state is the home of a notorious Indian variant of Hollywood. For 10 points, name this most populous city in India.

ANSWER: **Mumbai** [or **Bombay**]

080-12-71-14112

13. One type of this device partially consisted of a boom with an attached mass suspended by a pivot and a silk thread; that type of this device was the horizontal pendulum one devised by John Milne. A primitive version of this device created by the astronomer Zhang Heng had eight dragon heads that dropped a ball into the mouth of eight frogs beneath them. A more modern type scratches out a wave pattern with a needle. For 10 points, identify this device that detects or records the waves created by an earthquake.

ANSWER: **seismograph** [or **seismoscope**; or **seismometer**]

066-12-71-14113

14. This poet reflected on his experiences in the Spanish Civil War in a poem beginning, "Yesterday all the past." He described an "expensive delicate ship" that "had somewhere to get to and sailed calmly on" in an ekphrastic poem that begins, "About suffering they were never wrong, the Old Masters." He also wrote the line, "We must love one another or die," in a poem inspired by the outbreak of World War II. For 10 points, name this British poet of "Musee des Beaux Arts" and "September 1, 1939."

ANSWER: W. H. **Auden** [or Wystan Hugh **Auden**]

014-12-71-14114

15. In molecular biology, this type of activity is the cleavage of DNA at non-canonical locations by restriction enzymes under non-optimal conditions. A heuristic function is combined with Dijkstra's algorithm in the algorithm called A this. One family of objects known as this are classified from O to M based on their spectral class. Examples of those objects include Alioth, Procyon, and Sirius. For 10 points, name these gravitational bound balls of hot gas and plasma, exemplified by the sun.

ANSWER: **star**

001-12-71-14115



1A. What Israeli missile defense system shot down 85% of Palestinian rockets headed for population centers during Operation Pillar of Defense?

ANSWER: the **Iron Dome** [or the **Iron Cap**; or **Kipat Barzel**]

1B. What poetry term refers to a kind of rhyme in which only the final syllables of the lines rhyme?

ANSWER: **masculine** rhyme

2A. What kind of medications is split into classes like cephalosporins and sulfonamides is used to treat bacterial infections?

ANSWER: **antibiotics**

2B. This is a 20-second calculation question. Given a circle with a diameter of 10 units, what is the length, in terms of pi, of an arc that subtends an angle of 108 degrees?

ANSWER: **3 pi** units

3A. This is a 20-second calculation question. A card is drawn from a standard 52-card deck. If the card is not a spade, find the probability that it is red.

ANSWER: **2/3**

3B. What man spent 27 years in prison before working with F.W. de Klerk to end apartheid?

ANSWER: Nelson Rolihlahla **Mandela** [or **Madiba**]

4A. Name this collection of pieces in which Edward Elgar used musical cryptograms to depict his family and friends in movements like "Nimrod."

ANSWER: **Enigma Variations**

4B. What word in one form describes a group of poets that included John Donne and Andrew Marvell and also names as a branch of philosophy that studies "being *qua* being?"

ANSWER: **metaphysical** [or word forms]

5A. In what state was Tammy Baldwin elected senator and Scott Walker maintain his position of governor in a recall election?

ANSWER: **Wisconsin**

5B. Name the classic rock band that has continued performing songs such as "Light My Fire" and "Riders on the Storm" to the present day, despite the 1971 death of iconic lead singer Jim Morrison.

ANSWER: the **Doors**

6A. What maximally efficient thermodynamic cycle, named for a French engineer, consists of two adiabatic steps and two isothermal steps?

ANSWER: **Carnot** cycle

6B. What Christian holiday celebrates the Biblical event when the Holy Spirit empowered the apostles to speak in tongues?

ANSWER: **Pentecost** [or **Whitsunday**]

7A. This is a 30-second calculation question. Determine the number of positive integers that are factors of the number 24.

ANSWER: **8**

7B. This is a 30-second calculation question. Find the cosine of the inverse tangent of -1.

ANSWER: square **root** of **2**, **over 2** [or **1 over** square **root** of **2**; or **radical 2, over 2**]

8A. What pen name is universally used for French author Jean-Baptiste Poquelin, who wrote such classic plays as *The Imaginary Invalid*, *Tartuffe*, and *The Misanthrope*?

ANSWER: **Moliere**

8B. In paintings like *Golconda* and *The Son of Man*, Rene Magritte painted men wearing what kind of headgear?

ANSWER: **bowler hat** [or **coke hat**; or **derby**; or **billycock**; or **bombin**; prompt on **hat**]

9A. What language's writing system features sets of symbols known as hiragana and katakana?

ANSWER: **Japanese**

9B. What measurement of the acidity of a substance is measured with indicators like methyl red?

ANSWER: **pH**

10A. What Polish anthropologist authored *Coral Gardens and their Magic* and *Argonauts of the Western Pacific*?

ANSWER: Bronislaw **Malinowski**

10B. What layer of the atmosphere, named for the charged gas that makes it up, includes the thermosphere and exosphere?

ANSWER: **ionosphere**



1. This god was once left thirsty when his brother hid water from him, and had to be rescued by that brother's large hat after being abandoned in a fog. In Haida myth, this god brings salmon and berries to feed the first human beings, whom this animal finds in a clamshell. This brother of Logobola also placed the sun and moon in the sky and wrangled with the trickster Coyote. For 10 points, name this god of western Native American myth, who took the form of a black bird.

ANSWER: Raven [or Nankilslas; or Hemaskas; or Txamsem; or Wegyet; or Yehl; or Kewkwaxawe]

019-12-71-14117

2. The Alu element in humans is an example of one of these entities. One class of these entities utilizes reverse transcriptase to carry out its “cut and paste” mechanism. Surrounded by inverted repeats, these elements were first discovered by Barbara McClintock in maize, where they are responsible for mutations that alter the color of kernels. For 10 points, name these sequences of DNA known as “jumping genes,” which can move to a different location in an organism’s genome.

ANSWER: transposon [accept transposable element; accept retrotransposon; prompt on jumping genes until mention]

140-12-71-14118

3. In a State of the Union address, this President declared that “the era of big government is over.” This President signed the Gramm-Leach-Bliley Act, which repealed the financial regulations of the Glass-Steagall Act. This President was criticized for the American jobs lost as a result of the North American Free Trade Agreement. During his tenure, the Dow Jones more than tripled and the government deficit was turned into a surplus. For 10 points, name this Democrat first elected President in 1992.

ANSWER: William Jefferson Clinton

080-12-71-14119

4. A uniformly magnetized object of this shape will have a magnetic field equal to two-thirds the permeability of free space times the magnetization. Legendre polynomials are solutions to the Laplace equation in this type of coordinate system. If an object of this shape is charged, the electric potential is the same as that of a point charge. The moment of inertia for this shape is two-thirds the mass times the radius squared. For 10 points, name these three-dimensional surfaces whose points are all an equal distance from the center.

ANSWER: hollow sphere [or ball, or word forms]

121-12-71-14120

5. This man wrote a “tone parallel” to the history of blacks in America called *Black, Brown and Beige*. In a short film, this man's wife Fredi Washington dances herself to death while his band plays his “Black and Tan Fantasy.” Billy Strayhorn composed the theme of his orchestra, “Take the A Train.” He wrote the piece that brought him worldwide fame while working in the Cotton Club. For 10 points, name this jazz pianist who composed “Mood Indigo.”

ANSWER: Edward “Duke” Ellington

121-12-71-14121

6. Members of the Labour party criticized their own prime minister, Harold Wilson, for sending Lord Shepherd to this man's funeral. This man was interred at the prisoner-built Valley of the Fallen and was succeeded by the democratizing King Juan Carlos I. This leader of the Falangists launched a coup from the Canary Islands and succeeded in defeating the Republicans in the late 1930s. For 10 points, name this "generalissimo" who, until his 1975 death, was the dictator of Spain.

ANSWER: Francisco Paulino Hermenegildo Teódulo **Franco** Bahamonde

019-12-71-14122

7. An important measure of this thing's performance is CAS latency. The individual cells of this thing consists of a transistor-capacitor pair. If the capacity of this thing is not enough, one can supplement it with a page file or swap partition. Portable computers, like laptops, typically use it in its "SO-DIMM" form. It is primary storage and its most common type is the third version of its double data rate, synchronous dynamic type, or DDR3. For 10 points, name this quick, volatile memory that comes in namesake "sticks."

ANSWER: **RAM** [or **random-access memory**; prompt on volatile **memory**; prompt on **primary storage**; do not accept "ROM" or "read-only memory"]

066-12-71-14123

8. This poet wrote that "Death is the mother of beauty" in an early poem that opens by describing the effect of the "complacencies of the peignoir." In another poem, he describes a woman who "sang beyond the genius of the sea." The title figure of another of his poems demands, "Let be be finale of seem," and that the "roller of big cigars" whip up the title dessert. For 10 points, name this American poet of "Sunday Morning," "The Idea of Order at Key West," and "The Emperor of Ice-Cream."

ANSWER: Wallace **Stevens**

014-12-71-14124

9. In one episode of this show, Sinead O'Connor tore up an image of John Paul II. The films *Superstar* and *It's Pat* were based on this show. Ashlee Simpson was caught lip-synching to one of her songs on one episode of this program. This show debuted in 1975 and was created by current producer Lorne Michaels. Current performers on it include Fred Armisen and Bill Hader, who plays the bizarre Stefon during the "Weekend Update" segment. For 10 points, name this late-night NBC sketch comedy show that airs on the weekend.

ANSWER: ***Saturday Night Live*** [or ***SNL***]

052-12-71-14125

10. The eleven objects which bow down to Joseph in a dream in the Bible correlate with eleven objects in this painting. A preliminary attempt at this canvas depicts it "over the Rhone." A white church is the most prominent building in this work, in which the Alpilles mountains appear to the far right. Its painter blended many of the things he saw outside the window of his asylum in Saint-Remy. A black cypress tree shaped like a flame lies in front of a swirling sky in this painting. For 10 points, name this most famous painting by Vincent Van Gogh.

ANSWER: *The **Starry Night*** [or *De **sterrennacht***]

020-12-71-14126

11. A school located in this city defeated 2nd seeded South Carolina in the 1997 NCAA basketball tournament; that school in this city is Coppin State. This city is the location of the subject of the documentary *The Band that Wouldn't Die*, referring to a marching band that has supported three pro football franchises in this city. Brian Billick coached a team from this city to victory in Super Bowl XXXV, and Earl Weaver was a successful manager for a baseball team here that featured Brooks Robinson and Cal Ripken, Jr. For 10 points, name this city that is the home of the Ravens and Orioles.

ANSWER: **Baltimore**

030-12-71-14127

12. The headquarters of the African Union is in this country's capital. A triple junction is the reason for the Afar Depression in this country. This country's Jewish population, the Falash Mura, is in the process of emigrating to Israel. This country contains Lake Tana, the source of the Blue Nile. This country borders Somalia to the east and Eritrea to the north. Government business in this country is conducted in a Semitic language, Amharic. For 10 points, name this landlocked country on the Horn of Africa, the birthplace of Haile Selassie.

ANSWER: **Ethiopia**

080-12-71-14128

13. This city contains a statue of Martin Luther King carved out of the "Stone of Hope" and standing in front of a wall covered in his quotations. This city has restricted the height of residential buildings to 90 feet. Yukio Ozaki's gift of cherry trees to this city is commemorated every year by the Cherry Blossom Festival. A landmark in this city consists of a black wall gouged into the earth and covered with names of soldiers; that artwork was designed by Maya Lin. For 10 points, name this city that contains the Vietnam Veterans memorial as well as the Jefferson and Lincoln memorials.

ANSWER: **Washington**, D.C. [or Washington, **D.C.**; or Washington, **District of Columbia**]

080-12-71-14129

14. Along with John Glenn, this member of the "Keating Five" was cleared of improper actions. This man used a bus called the "Straight Talk Express" during a primary. In 2006, this man retracted his claim that Jerry Falwell was an "agent of intolerance." This man sponsored a bipartisan campaign finance reform bill with Russ Feingold. During the Vietnam War, this man was tortured in the "Hanoi Hilton." For 10 points, name this "maverick" Arizona Senator who lost the 2008 presidential election to Barack Obama.

ANSWER: John Sidney **McCain** III

080-12-71-14130

15. This author popularized the term "metaphysical poetry" in his *Life of Cowley*, part of a collection of about fifty "prefaces, biographical and critical" called the *Lives of the Poets*. His own poetry includes an imitation of Juvenal's tenth satire titled "The Vanity of Human Wishes." Though not the first of its kind, his *Dictionary of the English Language* became the most popular dictionary for over a century. For 10 points, name this 18th-century English writer, the subject of a biography by his friend James Boswell.

ANSWER: Samuel **Johnson**

080-12-71-14131





1. In this work, one character uses a letter placed in a basket of apricots to break up with the protagonist, who had earlier moved to Yonville. This work's protagonist borrows money from Lheureux while visiting Leon Dupuis in Paris. Charles and Homais botch an experimental surgery on the club-footed Hippolyte in this novel, whose main character commits suicide using arsenic after Rodolphe Boulanger forsakes her. For 10 points, name this novel about Emma's many affairs, which was written by Gustave Flaubert (floe-BAIR).

ANSWER: Madame Bovary

149-12-71-14132

2. This group had Alani and Asdingi branches. Majorian and Basiliscus were defeated in attempts to overthrow one of this group's rulers. These peoples were defeated in the battles of Ad Decimum and Tricamarum by the Byzantines under Belisarius, resulting in the capture of their last king, Gelimer. Other rulers of these people included Gaiseric, who led this group in its 455 sack of Rome. For 10 points, name this Germanic people whose name has become synonymous with wanton destruction.

ANSWER: Vandals

030-12-71-14133

3. Several proteins in the pathway responsible for this process have Kringle domains, and overactivation of this process causes TTP. The extrinsic part of this pathway relies on activation by tissue factor, and a mutation named for the city of Leiden leads to overactivation of it. Von Willebrand factor is also an activator of this process, several proteins in which require vitamin K for activation. This process produces a cross-linked fibrin mesh, and defects in this process result in hemophilia. For 10 points, name this process that prevents exsanguination after a wound or tear in a blood vessel.

ANSWER: clotting [accept coagulation, accept word forms]

048-12-71-14134

4. This poem's final stanza notes how "thy willing soul transpires at every pore with instant fires." The speaker recommends that he and the addressee "tear our pleasure with rough strife thorough the iron gates of life" before concluding, "Thus, though we cannot make our sun stand still, yet we will make him run." This poem's first stanza relates how the speaker's love would develop "had we but world enough, and time." For 10 points, name this seduction poem addressed to a hesitant woman written by Andrew Marvell.

ANSWER: "To His Coy Mistress"

014-12-71-14135

5. Examples of these objects in the Messier catalog include M20, the Trifid, in Sagittarius. One type of object given this name is the gas emitted by a dying star, which resembled planets in old telescopes and is thus known as the "planetary" kind. One of these is found in Taurus and is Messier object M1, the remnants of a supernova that burned day and night for three weeks in 1054. For 10 points, give this word, from the Latin for "cloud," that designates large masses of gas in the interstellar medium, such as the "crab."

ANSWER: nebula [or nebulae]

019-12-71-14136

What co-founder of the group f/64 photographed sites in the American West such as Manzanar internment camp and, in the picture *Moon and Half Dome*, Yosemite Park?

ANSWER: Ansel Adams