

1. Its second period was dominated by Diego Lainez, and its third session was influenced by Charles Borromeo. This event excluded the Prayer of Manasseh and the Third and Fourth Books of the Maccabees as canon but declared most of the Vulgate as canon. Its first session accepted the Nicene Creed as the basis of Christian faith and rejected justification by faith alone. It was convened by Paul III in 1545. For 10 points, name this council of the Catholic Church that sparked the Counter Reformation.

ANSWER: Council of **Trent**

030-10-21-07101

2. He's not Bacchus, but this deity was associated with Dionysus in the country with which he is most associated. This deity's soul was worshipped as the ram god Banebdjed, and he is frequently depicted holding a crook and flail. This deity is the father of Horus, and one story about this god tells how he was killed in the Nile after being chopped into pieces by his brother Set, though he was revived by Isis. For 10 points, name this Egyptian god of the underworld.

ANSWER: **Osiris** (accept **Asar** or **Wesir** or **Ausare**)

081-10-21-07102

3. One group of these organizations is funded nationally by the founders of the Gap and is called KIPP. A 2010 documentary titled *The Lottery* followed one of these institutions in Harlem, and their success was heralded in Davis Guggenheim's film *Waiting for "Superman"*. These organizations receive public money, are not permitted to charge tuition, and often have long waiting lists of prospective students. For 10 points, name this type of school which is usually governed by a namesake document.

ANSWER: **charter** schools [prompt on "school"]

015-10-21-07103

4. This author's 1996 essay from *Harper's* about the fate of the novel, "Why Bother?", was reprinted in his collection of essays *How To Be Alone*. This man's most recent novel was cited by Ruth Franklin as an example of sexism in book reviewing, and features the Minnesotan couple of Walter and Patty Berglund. His previous novel centered on the three children of elderly Alfred and Edith Lambert, and gained publicity due to its selection for and removal from Oprah's Book Club. For 10 points, name this author of *Freedom* and *The Corrections*.

ANSWER: Jonathan **Franzen**

082-10-21-07104

5. In the election of 1848, Lewis Cass ran on the platform of enforcing this policy, whose critics replaced its first word with the word "squatter." Support for this policy was undermined by the violence of Border Ruffians, which caused the state that implemented this policy to be called "bleeding." It became law after the passage of the Kansas-Nebraska Act and was heavily promoted by Stephen Douglas. For 10 points, name this pre-Civil War policy in which the settlers of a state determined whether it was slave or free.

ANSWER: **popular sovereignty**

004-10-21-07105

6. The protagonist of this work encounters Siduri and Urshanabi when he travels to the mountain Mashu to talk to the survivor of a great flood named Utnapishtim. That journey comes after the death of the main character's friend, who had earlier helped the protagonist defeat Humbaba and later helped him slay the Bull of Heaven sent by Ishtar. The main character of this work is a king of Uruk and friend of Enkidu. For 10 points, name this ancient Mesopotamian epic poem.

ANSWER: *Epic of* **Gilgamesh**

023-10-21-07106

7. One institution in this city, the brainchild of Lewis Adams, was founded in 1881 and its buildings were built entirely by its students. This city in Macon County was home to a study exposed by Peter Buxton in which, from 1932 to 1972, the U.S. Public Health Service withheld penicillin from hundreds of infected sharecroppers. The first squadron of African-American fighter pilots in World War II were known as this city's "Airmen". For 10 points, name this Alabama city home to a historically black college led by Booker T. Washington and an infamous syphilis experiment.

ANSWER: **Tuskegee**

082-10-21-07107

8. George Chapman translated this author's two main works into English. This author used the epithets "wine-dark" to describe the sea and "grey-eyed" to describe Athena. One of this author's title characters is attacked by the Laestrygonians, and calls himself "No-Man" to escape from the Cyclops Polyphemus. An epic poem by this author begins by depicting the wrath of Achilles, and ends with a victorious army hiding inside the Trojan Horse. For 10 points, name this ancient Greek poet of *The Iliad* and *The Odyssey*.

ANSWER: **Homer**

004-10-21-07108

9. One battle in this war saw the Earl of Pembroke fail to stand his ground while waiting for reinforcements under the command of the Earl of Devon. That engagement, the Battle of Edgecote Moor, was a resounding victory for Richard Neville, the Earl of Warwick, who was known as the "kingmaker." That battle occurred several years after Warwick had helped Edward IV secure power, partially due to Edward's victory at Towton. Concluding with the Battle of Bosworth Field, this is, for 10 points, what war that pitted the houses of York and Lancaster against each other and is named for a flower?

ANSWER: **Wars of the Roses**

040-10-21-07109

10. Variations of this substance are created when different macromolecules bind to H antigen, the lack of which is known as the Bombay phenotype. One type of cell comprising this substance differentiates into types like neutrophil and eosinophil cells. This substance is also comprised of cells called thrombocytes, which facilitate coagulation. For 10 points, name this bodily fluid comprised of white cells, red cells, and platelets.

ANSWER: human **blood**

026-10-21-07110

11. In one of this man's operas, Mustafa kidnaps the shipwrecked Isabella so that he can have a European wife. This composer of *The Italian Girl in Algiers* wrote an opera in which Ninetta is nearly executed for stealing a spoon. In addition to writing *The Thieving Magpie*, he composed an opera about a Swiss patriot who defies Gessler and shoots an arrow off his son's head, as well as one in which Figaro sings "Largo al Factotum." For 10 points, name this composer of *William Tell* and *The Barber of Seville*.

ANSWER: Gioacchino **Rossini**

080-10-21-07111

12. One operator named for this property is used in the general definition of Heisenberg Uncertainty Principle, which relies on the fact that this property does not apply to position and momentum operators. Hilbert names rings that have this property, while groups that exhibit this property are called Abelian. This property notably does not hold for multiplication of matrices, or division. For 10 points, name this mathematical property that states that the order an operation is performed on two numbers is irrelevant.

ANSWER: **commutative** or **commutativity**

081-10-21-07112

13. A report released in November 2010 advocating the repeal of this policy was the work of a 66 member team led by Jeh C. Johnson and Carter F. Ham. That report supporting the repeal of this policy was supported by Mike Mullen, the Chairman of the Joint Chiefs of Staff, and Defense Secretary Robert Gates. For 10 points, name this policy of the United States military started in 1993 that does not allow for those in the armed forces to be openly gay or bisexual.

ANSWER: **Don't Ask**, Don't Tell [or **DADT**]

023-10-21-07113

14. When this marking is used in languages such as Afrikaans and Dutch with the letter e, it is known as a deelteken. Although this use has fallen out of favor, this marking used to be used on words such as cooperate and reelect to show that the paired vowels in those words were two syllables. In German, this diacritical marking can be replaced by putting an e after the letter it marks, which can only be an a, o, or u. For 10 points, name this mark also known as a diaeresis that is two dots above a letter.

ANSWER: **umlauts** [or **tremas**; or **diaeresis** before it is read]

023-10-21-07114

15. A story by this man about a London telegraphist is "In the Cage." In a novel by this author, Maggie Verver ultimately purchases the titular ornate object. In addition to *The Golden Bowl*, this man wrote about a woman who reject's Lord Warburton's advances to marry Gilbert Osmond, as well as a similar socialite who is sought after by Winterbourne before dying of malaria in Rome. For 10 points, name this author who wrote about Isabel Archer in *The Portrait of a Lady* and also wrote *Daisy Miller*.

ANSWER: Henry **James**

081-10-21-07115

1A. The author of the textbook *The Sceptical Chymist*, which British scientist lends his name to a gas law that deals with the relationship between volume and pressure when temperature is constant?

ANSWER: Robert **Boyle**

1B. Which band, whose albums include *Parachutes* and *A Rush of Blood to the Head*, is headed by Chris Martin and is responsible for the songs "Yellow" and "Don't Panic"?

ANSWER: **Coldplay**

2A. What Austrian composer developed the twelve tone technique and wrote *Pierrot Lunaire*?

ANSWER: Arnold **Schoenberg**

2B. What psychologist is remembered for his work in psychoanalysis and for his idea of the Oedipus Complex?

ANSWER: Sigmund **Freud**

3A. This is a 10-second computation question. If seven numbers have a mean of 9, and six of those numbers are equal to 4, what is the value of the 7th number?

ANSWER: **39**

3B. This is a 10-second computation question. If the probability that one rolls a head with a weighted coin is 40%, what is the probability of rolling two tails with the coin in succession? Give your answer as a percentage.

ANSWER: **36%**

4A. Which weapon, used ineffectively by Beowulf to fight Grendel's mother, was a powerful sword that had earlier been bequeathed to Beowulf by his friend Unferth?

ANSWER: **Hrunting**

4B. What nation was the home of Sergei Eisenstein, the director of classic films such as *Alexander Nevsky* and *October*?

ANSWER: **Russia** [or **Soviet Union**]

5A. This is a 20-second calculation question. Factor $4x^2 - 19x + 12$.

ANSWER: **$(x-4)(4x-3)$**

5B. This is a 20-second computation question. What is the sum of edges and faces for the four dimensional analogue of a cube?

ANSWER: **56**

6A. GCC is a collection of what type of programs that convert source code to executables?

ANSWER: **compilers**

6B. Name the man whose uncompleted Analytical engine was the successor to his Difference engine and an early mechanical programmable computer.

ANSWER: Charles **Babbage**

7A. This is a 30-second computation question. Factor $-12 - 8x + 6x^2 + 4x^3$.

ANSWER: **$(x^2-2)(4x+6)$**

7B. This is a 30-second computation question. What is the secant of 105 degrees?

ANSWER: **negative square root 6 minus square root 2** [or **negative square root 3 time square root 2 minus square root 2** or **negative square root 2 times (1 + square root 3)**]

8A. What island nation in the Caribbean region that has a capital at Bridgetown was once a Portuguese and later British colony?

ANSWER: **Barbados**

8B. What polyhedron, with volume given by the formula $\pi r^2 h / 3$, shares its name with a kind of cell necessary for color vision?

ANSWER: **cone**

9A. The Ludovico Technique is performed on the ultra-violent Alex in which Anthony Burgess novel?

ANSWER: A **Clockwork Orange**

9B. Name the British painter of *Rain, Steam, and Speed* and *The Slave Ship*.

ANSWER: Joseph Mallord William **Turner**

10A. Name the Czech author who wrote about the effect of Prague Spring on his characters in the work *The Unbearable Lightness of Being*.

ANSWER: Milan **Kundera**

10B. What U.S. Senator from Nevada named a 1950 Internal Security Act?

ANSWER: Patrick Anthony **McCarran**

1. One of these particles produces an electron and a positron in pair production. One of them is spontaneously emitted when a nucleus in an excited state transitions to a ground state. These particles were emitted in Thomas Young's double-slit experiment, which demonstrated wave-particle duality. They mediate the electromagnetic interaction. For 10 points, name these particles which make up light.

ANSWER: **photons**

024-10-21-07117

2. One sub-structure in this organelle develops with the aid of VIPP1, a protein present in every organism that contains this organelle, from *Arabidopsis Thaliana* to cyanobacteria. Besides a similarly-named compound, these organelles contain carotenoid pigments. Lamellae connect parts of the stroma, the fluid that surrounds stacks of thylakoids. These structures also consist of a fluid stroma, where NADP is reduced to NADPH after light energy is captured. For 10 points, identify these organelles that carry out photosynthesis in plants.

ANSWER: **chloroplasts**

020-10-21-07118

3. This geological feature retreats in a process known as transgression, and it can grow outward and upward in progradation and aggradation, respectively. This feature can be described as cusped, arcuate, bird-foot, or estuarine. This is the equivalent of an alluvial fan located in water. These features are characterized by large drainage basins, which deposit sediment. For 10 points, name this geological feature that occurs when a river flows into a lake or ocean, which is named for the shape of the Greek letter formed by the Nile one.

ANSWER: **deltas**

003-10-21-07119

4. One property exhibited by this molecule is the Haldane effect, and the A1C type of this molecule is used in monitoring the blood sugar levels of diabetics. One similarly named molecule performs a function similar to that of this protein in the muscles, rather than in the location associated with this protein, and variants of this protein are responsible for sickle-cell anemia. For 10 points, name this protein that, as its name suggests, binds and transports oxygen in red blood cells.

ANSWER: **hemoglobin**

081-10-21-07120

5. An Indian character on this show has selective mutism, which only allows him to talk to women after consuming alcohol. That character is Rajesh Koothrapalli, while another character on this show uses the catchphrase "Bazinga!" On this show, the attractive waitress Penny lives across from Leonard Hofstadter and Sheldon Cooper, two awkward, but brilliant Caltech physicists. For 10 points, name this CBS sitcom.

ANSWER: *The **Big Bang Theory***

080-10-21-07121

6. In this country, Senior General Than Shwe is orchestrating the first elections in two decades as well as completing the construction of the new capital at Naypidaw. The governing military junta known as the State Peace and Development Council recently released a woman held under house arrest for the past 16 of 21 years, the Nobel Peace Prize winning Aung San Suu Kyi. For 10 points, name this South east Asian country whose largest city is Yangon.

ANSWER: Republic of the Union of **Mynamar** [accept **Burma**]

084-10-21-07122

7. One suggested cause of this event was an affair with the actress Lida Baarova. This event's immediate cause was Herschel Grynszpan's assassination in Paris of Ernst von Rath. This event saw the destruction of over 1600 buildings of a certain type and resulted in 30,000 men being sent to concentration camps. For 10 points, name this November 1938 event that saw the German Jewish population attacked by Nazis, also known as the "Night of Broken Glass."

ANSWER: **kristallnacht** [or **November Pogroms**; or "**Night of Broken Glass**" before it is read]

081-10-21-07123

8. This poet asks "O why sting me for a swift moment only" in the poem "O Hymen! O Hymenee." Another work by this author depicts "houses and rooms... full of perfumes, the shelves are crowded" and begins "I celebrate myself." In addition to "Song of Myself," this man addressed the title leader of another poem to say "our fearful trip is done" in a work written in memory of Abraham Lincoln. For 10 points, name this American poet of the collection *Leaves of Grass* who also wrote "O Captain! My Captain!"

ANSWER: Walt **Whitman**

081-10-21-07124

9. In one story by this author, the ex-Marine Harold Krebs tells his mother that he cannot love anymore after experiencing World War I. In addition to "Soldier's Home," this man wrote a story in which the title character's wife Margot spends the night with Robert Wilson after her husband ran from a lion. Margot ultimately shoots and kills her husband in that story by this author, "The Short Happy Life of Francis Macomber." For 10 points, name this man who wrote a book about Santiago's attempt to catch a marlin, *The Old Man and the Sea*.

ANSWER: Ernest **Hemingway**

030-10-21-07125

10. One former player that ended his career with this team is now partnered with "Moose" Johnston and Kenny Albert. That player, Tony Siragusa, helped win a Super Bowl for this team with quarterback Trent Dilfer, and the only active player on this team from that victory is a first-round draft pick from Miami who now plays alongside Terrell Suggs and Ed Reed. Recently acquiring Anquon Boldin and T.J. Houshmandzadeh, for 10 points name this NFL team now quarterbacked by Joe Flacco, that plays in Baltimore.

ANSWER: **Baltimore Ravens** (accept either part)

081-10-21-07126

11.

An incident involving a chieftainess' open defiance of this deity is recounted in Tennyson's poem, "Kapiolani." That defiance consisted in eating ohelo berries, which are sacred to this deity without permission. Born from the female spirit, Haumea and Sky God Wakea, the appearance of glass threads or fibers near a geologic formation this deity is associated with is known as her hair. For 10 points, name this Hawaiian goddess of lightning, fire and volcanoes.

ANSWER: **Pele**

084-10-21-07127

12. *The Feather Mantle* and *The Wind in the Pines* are two well-known works of this genre, which is usually subdivided into five main categories, including ones called “wig” and “demon.” Works in this genre are accompanied by a group of four musicians and a chorus, who recite the chant utai (OO-“tie”). Usually interrupted by comedic interludes called kyogen, works of this genre would go on to influence kabuki (KAH-boo-kee) theatre. For 10 points, name this ancient form of Japanese theatre which usually sees the actors wear masks to express emotions.

ANSWER: **Noh** play [or **Noh** theatre; or **Nogaku** play; or **Nogaku** theatre]

083-10-21-07128

13. This man permitted a group of unarmed protesters to enter Goa in 1955, thirty of which were killed, and later invaded that colony. This man stated, "We shall never allow that torch of freedom to be blown out, however high the wind or stormy the tempest," in his "Tryst With Destiny" speech. This man presided over the Lahore session of the Indian National Congress in 1929 that advocated independence. For 10 points, name this man who served as the first prime minister of post-independence India.

ANSWER: Jawaharlal **Nehru**

030-10-21-07129

14. Four species of locusts have this quality, but the sciatic nerve does not. Items which do not conform to this are considered "treyf", and include any mammal which does not have a cloven hoof and chew the cud. These items are classified as meat, dairy, and neutral (or parve) due to the necessity of not consuming meat and dairy at the same meal, and chametz, or leavened bread, is not considered *this* for Passover. For 10 points, name this term which refers to foods which are permitted under Jewish dietary law.

ANSWER: **kosher** laws or **kashrut**

082-10-21-07130

15. The majority of this state receives its water supply from Scituate Reservoir, and suburbs of its largest city include Cranston and Woonsocket. A referendum to shorten the official name of this state was defeated in the 2010 elections, in which its citizens also chose independent Lincoln Chaffee to be its next governor. Its namesake landmass is home to the city of Newport, and is found in Narragansett Bay. For 10 points, name this New England state whose capital and largest city is Providence, the smallest by area in the United States.

ANSWER: **Rhode Island** and Providence Plantations

082-10-21-07131

1. A distributed model of this was developed for treating pyrolysis of biomass. This quantity is represented using double daggers after delta e . The e is raised to the negative this divided by RT in the Arrhenius equation. This quantity does not influence the equilibrium constant. This is required to reach the transition state. This is lowered by a catalyst, allowing the reaction rate to increase. For 10 points, name this energy needed for a chemical reaction to take place.

ANSWER: **activation energy**

001-10-21-07132

2. This battle was preceded by the largest cavalry engagement in U.S. history, the Battle of Brandy Station, and it was also preceded by the resignation of General Joseph Hooker. One force that saw action at this battle was the 20th Maine, which was led by Joshua Chamberlain and fought at Little Round Top. An attack during this battle failed to take Cemetery Ridge and was known as Pickett's Charge. For 10 points, name this 1863 Civil War battle that inspired a namesake "Address" by Lincoln.

ANSWER: Battle of **Gettysburg**

081-10-21-07133

3. Multiwalled structures formed from this element have a tensile strength up to 63 gigapascals. A related structure made out of 60 atoms of this element has an icohedron shape and can be used to trap atoms of other elements. In addition to forming fullerenes, this element makes up graphite and diamonds. Organic compounds contain this element of which there is one atom in the gas that people breathe out. For 10 points, name this element with atomic number six and symbol C.

ANSWER: **carbon**

001-10-21-07134

4. This law was originally discovered by Descartes under the name the Law of Sines. This law can be used to express an equation for finding the polarizing or Brewster's angle. When one part of this law exceeds the critical angle, the result is called total internal reflection. This law equates the angles of incidence for a wave entering a new medium to the indices of refraction for those mediums. For 10 points, name this law that can be used to explain the bending of light when it enters and exits glass and water from the air.

ANSWER: **Snell's Law**

023-10-21-07135

5. One poem written in this form asks the reader to "accept the fluster / of lost door keys, the hour badly spent," and repeats, "the art of losing isn't hard to master." Poems written in this form include Elizabeth Bishop's "One Art" and a poem that exhorts the reader to "Rage, rage, against the dying of the light." Dylan Thomas' poem, "Do Not Go Gentle Into That Good Night" was written in this form, in which the first line is repeated at the end of the second and fourth tercets, as well as in the final quatrain. For 10 points, name this 19-line poetic form of French origin.

ANSWER: **villanelle**

080-10-21-07136

What title character of a Charlotte Bronte novel is the governess of Thornfield Hall and ultimately marries Mr. Rochester?

ANSWER: **Jane Eyre** [accept either name]

080-10-21-07137