



1. One text about these entities theorizes “condensation” and “displacement” as two of the main mechanisms employed in forming them. That text distinguished between the latent and manifest content of these entities and proposed that they must be viewed in some form as wish-fulfillments. Sigmund Freud launched psychoanalysis with a book titled for the interpretation of these entities. For 10 points, name these psychological phenomena experienced during sleep.

ANSWER: **dreams**

014-12-70-10101

2. After being castigated by his wife, Senator Bird helps out the central characters of this novel. Its title character is married to Chloe and shares his piousness with Eva St. Clare. Another of its characters is Eliza Harris, who carries her son Harry during her daring escape across the frozen ice of the Ohio River. In this work, the goodness of George Shelby is contrasted with the evil of Simon Legree. For 10 points, name this anti-slavery novel by Harriet Beecher Stowe.

ANSWER: **Uncle Tom’s Cabin**

015-12-70-10102

3. During this monarch's reign, William Paxton built a Crystal Palace for the Great Exhibition. The last ruler of the House of Hanover, this monarch entered perpetual mourning after the death of Prince Albert of Saxe-Coburg Gotha. She led the United Kingdom during the construction of the Suez Canal, the controversy over the Corn Laws, the Irish Potato famine, and the Crimean War. For 10 points, name this longest reigning British monarch of all time, a queen who died in 1901.

ANSWER: Alexandrina **Victoria**

015-12-70-10103

4. Proteins are brought from the cytoplasm into this organelle by the TIM and TOM translocases. This organelle has both outer and inner membranes, the latter of which has increased surface area due to folds called cristae. This organelle possesses its own DNA, which is inherited from the mother, and which leads biologists to theorize it was originally a bacterium taken into the cell through endosymbiosis. For 10 points, name this organelle where most of respiration takes place, making it the "powerhouse of the cell."

ANSWER: **mitochondrion** [or **mitochondria**]

080-12-70-10104

5. This composer used the chorus “Sing dem Herren alle Stimmen” to conclude an oratorio beginning with a "Representation of Chaos." He used a ticking rhythm in his *Clock Symphony*. This composer of *The Creation* is known as the “Father of the String Quartet” for his pioneering of that genre. A sudden loud C major chord in the second movement of his *Symphony No. 94 in G Major* led to it being nicknamed the “Surprise.” For 10 points, name this Austrian who composed 104 symphonies.

ANSWER: Franz Joseph **Haydn**

014-12-70-10105

6. The protagonist of this work dreams of his friend asking, "Why hast thou forsaken me?" followed by that friend turning into a woman and suckling him. The protagonist reunites with a courtesan who dies of a snakebite while working for the ferryman Vasudeva. Earlier, he joins a group of ascetic Samanas along with his friend Govinda. For 10 points, name this novel by Hermann Hesse about a man who searches for enlightenment and meets the founder of Buddhism, with whom he shares his name.

ANSWER: Siddhartha

014-12-70-10106

7. The lack of a structure that is named for breaking down this compound results in Zellweger syndrome. That structure is the most common microbody and was discovered by Christian de Duve. This compound has a very similar structure, and is analogous, to hydrogen disulfide and is a common non-chlorine based bleaching agent. Catalase catalyzes the decomposition of this compound to water and oxygen. For 10 points, identify this simplest peroxide with formula  $H_2O_2$ .

ANSWER: hydrogen peroxide [or  $H_2O_2$  before it is read]

066-12-70-10107

8. In January 2012, this company's assets were frozen in Hong Kong, where it was legally incorporated. At the time, this company's holdings accounted for one percent of all Internet traffic. The U.S. Department of Justice website was taken down by Anonymous following the shutdown of this company's sites and a raid by New Zealand police on founder Kim Dotcom. For 10 points, name this defunct file host, now the target of a copyright-infringement case.

ANSWER: Megaupload Limited [or megaupload.com]

019-12-70-10108

9. Broadening of these things resulting from the Heisenberg uncertainty principle gives rise to a Lorentzian distribution. These things can also be broadened by the Doppler effect due to random thermal motion. Fraunhofer names a set of them first observed in the Sun. Using a prism, they can be observed in a flame test. For hydrogen, their wavelength can be calculated using the Rydberg formula and can be grouped into series like the Balmer. For 10 points, name these atomic fingerprints, discrete wavelengths observed in excited atoms.

ANSWER: atomic spectral lines [or emission lines; or absorption lines]

066-12-70-10109

10. This country is the birthplace of a kind of seafood dish marinated in lime, ceviche. Huge drawings of hummingbirds, monkeys, and spiders that can be seen from the sky were created in this country by the Nazca culture. A zigzagging bus ride from Aguas Calientes allows tourists to reach a lost city in this country that was rediscovered by Hiram Bingham. It shares control of the world's highest navigable lake, Lake Titicaca, with its eastern neighbor Bolivia. For 10 points, name this Andean country that contains Machu Picchu and other Incan ruins.

ANSWER: Peru

080-12-70-10110

11. This poet described skin "bright as a Nazi lampshade" in a poem which begins "I have done it again. One year in every ten I manage it." Another of this author's poems begins, "You do not do, you do not do any more, black shoe." The wife of Ted Hughes, this poet of "Lady Lazarus" wrote about Esther Greenwood's estrangement with Buddy Willard and treatment with shock therapy in her novel *The Bell Jar*. For 10 points, name this suicidal American poet of "Daddy."

ANSWER: Sylvia Plath

015-12-70-10111

12. One example of the escape type of these things is octal 033 and prefixes escape sequences; the backslash is another example often used in programming languages. These things are the smallest possible match for a regular expression. Their control examples include carriage return and line feed. Types of encodings for them include UTF-8 and ASCII. An array of these things constitutes a string in C. For 10 points, name these things declared with the keyword char in C.

ANSWER: **characters**

066-12-70-10112

13. This opera includes a love duet beginning, "Wie sie fassen, wie sie lassen," and this opera opens with a notable dissonant chord consisting of F, B, D-sharp and G-sharp. This opera ends with a famous *Liebstd* sung by the female lead. In this opera, Brangäne explains to Marke, the king of Cornwall, how a love potion caused the affair between the title characters, one of whom is an Irish princess betrothed to Marke. For 10 points, name this opera by Richard Wagner.

ANSWER: ***Tristan and Isolde*** [or ***Tristan und Isolde***]

014-12-70-10113

14. Its not acid-base, but a type of titration that utilizes this type of reaction uses phenanthroline or methylene blue as an indicator. Reactions of this type in which more than one species undergoes both of the namesake process simultaneously is called a disproportionation. One method of balancing these reactions begins with examining the reaction's net ionic equation and is called the half-reaction method. Also balanced by finding changes in a species' oxidation number, for ten points, name this type of chemical reaction characterized by the loss and gain of electrons.

ANSWER: **oxidation-reduction** reactions [or **redox** reactions]

131-12-70-10114

15. As Secretary of State, this man negotiated an 1842 treaty with Britain named for him and Baron Ashburton. He concluded his "Second Reply to Hayne" with the phrase "Liberty and Union, now and forever, one and inseparable!" This man formed the so-called "Great Triumvirate" with John C. Calhoun and Henry Clay. This Whig was vilified by the anti-slavery faction for throwing his support behind the Compromise of 1850. For 10 points, name this great Massachusetts orator.

ANSWER: Daniel **Webster**

015-12-70-10115



1A. Who was the founder of the National Farm Workers Association who led a boycott of California grapes during a grape picker strike in the 1960s?

ANSWER: Cesar Estrada **Chavez**

1B. What 1962 film directed by David Lean stars Peter O'Toole as the title Englishman rallying the tribes of the title location against the Turks during World War I?

ANSWER: **Lawrence of Arabia**

2A. What Muslim dynasty ruled India for 200 years, starting in 1526 under Babur and reaching its greatest height under Akbar?

ANSWER: **Mughal** Dynasty

2B. This is a 20-second calculation question. If  $f(x) = x^3$ , and  $g(x) = x - 4$ , what is  $f$  of  $g$  of 6?

ANSWER: **8**

3A. This is a 20-second calculation question. Express 270 degrees as radians with the simplest fraction.

ANSWER: **3pi/2** [or **three-halves pi**]

3B. What man from Padua is known as the Catholic patron saint of lost things?

ANSWER: Saint **Anthony** of Padua

4A. What U.S. Senator, an independent from Connecticut, announced in 2011 that he would not run for re-election?

ANSWER: Joseph Isadore **Lieberman**

4B. In what Vermeer portrait does the subject look towards the viewer while wearing a blue and yellow head scarf and the title jewelry?

ANSWER: *The* **Girl with the Pearl Earring**

5A. What onetime writer for the Nickelodeon series *Clarissa Explains It All* has achieved fame by writing about Katniss Everdeen in *The Hunger Games* series?

ANSWER: Suzanne **Collins**

5B. Pawnee, Indiana is the setting for what show that includes characters such as Lil' Sebastian, Ron Swanson, and the Amy Poehler-portrayed Leslie Knope?

ANSWER: **Parks and Recreation**

6A. What term describes an organism's maintenance a stable internal environment, such as a constant body temperature?

ANSWER: **homeostasis**

6B. Name the process that allowed for the production of ammonia on an industrial scale.

ANSWER: **Haber**-Bosch process

7A. Examples of these divisions include Nazca and Juan de Fuca ones (WAHN day FOO-kah). Name these divisions of the lithosphere that can subduct under one another and whose collision can cause earthquakes.

ANSWER: tectonic **plates**

7B. This is a 30-second calculation question. What is the distance between the points (2, 5) and (10, 9)?

ANSWER: **4 root 5** units [or **4 radical 5** units; prompt on square **root** of **80** units]

8A. This is a 30-second calculation question. What is the greatest common divisor of 374 and 578?

ANSWER: **34**

8B. What author created the character of David Balfour in his adventure novel set in Scotland entitled *Kidnapped*?

ANSWER: Robert Louis **Stevenson**

9A. What nation's basketball team played at the Olympics with Serge Ibaka, Jose Calderon, and Pau Gasol?

ANSWER: **Spain**

9B. Swift Current, Moose Jaw, and Regina are cities in what Canadian province, found to the east of Alberta?

ANSWER: **Saskatchewan**

10A. What German idealist expounded on the "world spirit" in works like *Lectures on the Philosophy of History* and the *Phenomenology of Spirit*?

ANSWER: Georg Wilhelm Friedrich **Hegel**

10B. What military campaign recaptured Jerusalem after 400 years of Muslim rule and was the most successful and earliest of its type?

ANSWER: **First Crusade**



1. This author wrote of eight men and a beaver who board a boat seeking a creature which was actually a Boojum. This author of “The Hunting of the Snark” made up words such as “outgrabe,” “brillig,” and “vorpal” in a poem advising “Beware the Jabberwock, my son!” He made one character speak to the March Hare and the Queen of Hearts after falling down a rabbit-hole. For 10 points, name this British author of *Alice’s Adventures in Wonderland*.

ANSWER: Lewis **Carroll** [or Charles Lutwidge **Dodgson**]

104-12-70-10117

2. A machine used to measure this phenomenon comes in pin-on-a-disc and four-ball varieties. The arctangent of its coefficient is equal to the angle of repose, and the coefficient of this phenomenon is the y-coordinate of the Stribeck curve. On a non-banked curve, this is the force that provides the centripetal acceleration. This force is equal to a coefficient, mu, times the normal force, and it occurs parallel to a ramp. For 10 points, name this force that comes in kinetic and static varieties, the resistance to sliding between two surfaces.

ANSWER: **friction** [accept **kinetic friction** or **static friction**]

048-12-70-10118

3. This language uses the prefixes “tsi” and “ag,” indicating inalienable possession, at the start of all words for body parts and relatives. Speakers of this language refer to it as Tsalagi, and are concentrated in North Carolina and Oklahoma. This member of the Iroquoian family became the first Native American language with a written form, when, in 1821, its syllabary was devised by Sequoyah. For 10 points, identify this language spoken by the second-largest tribal affiliation in the United States.

ANSWER: **Cherokee** language [or **Tsalagi** before it is read]

019-12-70-10119

4. This city was the site of the 1775 Gunpowder Incident, which caused Lord Dunmore to abandon his position as governor. This city grew out of a settlement called Middle Plantation. After 1699, the House of Burgesses met in this city, as the capital had moved here from Jamestown. This city was reconstructed and preserved in the 1920s with the financial backing of John D. Rockefeller, Jr. For 10 points, name this colonial capital of Virginia.

ANSWER: **Williamsburg**

015-12-70-10120

5. Organisms in this phylum detect light through a pair of eyespots on top of their triangular heads. Like rotifers, they have a set of tubules called protonephridia that terminate in flame cells. Despite being bilaterians, they lack a body cavity and have only one orifice, and excrete via diffusion. These hermaphroditic organisms reproduce through a ritual of "fencing" one another with the male organ. Including monogeneans and planarians, this phylum also contains tapeworms and other parasites. For 10 points, name this phylum of flatworms.

ANSWER: **platyhelminthes** [or **flatworms** before it is read]

080-12-70-10121

6. This object was at the center of a problem that that observed only one-third the electron neutrinos expected. Sporer's law states that certain features of this object form a butterfly pattern when graphed. The Maunder (MAHN-der) minimum occurred on this object. Another problem associated with this object is how its corona is many magnitudes hotter than its surface. Helium was discovered due to unexplained spectral lines in the photosphere of this object. For 10 points, identify this star at the center of our solar system.

ANSWER: the **Sun**

066-12-70-10122

7. In this play, one character defines fiction as the good ending happily and the bad ending unhappily, as she describes a lost three-volume novel she wrote. Another character's discovery of an inscription on his friend's cigarette case leads to the revelation that that friend has a ward in the country named Cecily Cardew. At the end of this play, Gwendolen Fairfax is permitted to marry by Lady Bracknell. For 10 points, name this play in which Algernon Moncrieff and Jack Worthing both pretend to have the title name, a work of Oscar Wilde.

ANSWER: *The **Importance of Being Earnest***

014-12-70-10123

8. Square matrices for which this operation is defined have linearly independent columns. A statement with this kind of relationship to a conditional statement is logically equivalent to the converse and can be stated as, "if not a, then not b." Exponential and logarithmic functions have this relation, as do, over a certain domain and range, the sine and arcsine functions. One third is one type, for three, while negative four is another type, for four. For 10 points, name this mathematical term that includes multiplicative and additive ones.

ANSWER: **inverse**

131-12-70-10124

9. In this novel, Mrs. Phelps breaks down in tears when the protagonist reads a poem. Its other characters include Mildred, who wants to buy a fourth wall for her TV set. After killing Captain Beatty, the protagonist of this novel is forced to flee from the Mechanical Hound. That protagonist is Guy Montag, who is tasked with memorizing the Book of Ecclesiastes after leaving his job as a fireman. For 10 points, name this Ray Bradbury novel titled for the temperature at which books burn.

ANSWER: ***Fahrenheit 451***

015-12-70-10125

10. This god gives Odysseus the moly plant which makes him immune to Circe's magic. In one story, he kills the hundred eyed watchman Argos. On the day of his birth, he uses a tortoise shell to invent the lyre after stealing the cattle of Apollo. He carries a staff called the caduceus (cuh-DOO-see-us) and wears winged sandals. This patron of travelers and thieves is analogous to the Roman god Mercury. For 10 points, name this messenger god of Greek mythology.

ANSWER: **Hermes**

015-12-70-10126

11. One type of these cells does its job by expressing the Fas ligand on its surface or releasing perforin to start the caspase cascade. Their surface projects a complex made up of alpha and beta chains linked by a disulfide bond, the TCR, which recognizes epitopes presented by the major histocompatibility complex on other cells. Their "cytotoxic," or "killer" variety attacks cancerous cells and cells infected by viruses. For 10 points, name these white blood cells so named because they mature in the thymus, unlike B cells.

ANSWER: **T-cells** [or cytotoxic **T cells**]

080-12-70-10127

12. The protagonist of this novel has a dream in which he borrows money from his father. Another of its characters performs a personal ritual before deciding to kill Carla Jean. Carla Jean is the wife of Llewelyn Moss, a welder whose theft of millions of dollars from a drug deal sparks the action of this novel. This novel's protagonist is the Sheriff Ed Tom Bell, who retires when he is unable to find Anton Chigurh, who kills his victims with a cattle gun. For 10 points, name this novel by Cormac McCarthy.

ANSWER: *No Country for Old Men*

015-12-70-10128

13. The Dr. Sun Yat Sen Classical Chinese Garden can be found in this city's Chinatown, whose size gives this city the proportionally-largest Asian population in North America. A seawall surrounds this city's 1000-acre Stanley Park. Greenpeace was founded in this city, which is 78 miles south of the resort Whistler. This site of the 2010 Winter Olympics is located just north of the state of Washington. For 10 points, name this Canadian city, the capital of British Columbia.

ANSWER: Vancouver, British Columbia

080-12-70-10129

14. In two final novels, this author idealized female characters who want to be raped by powerful male figures. In another work by this author, Equality 7-2521 lives in a world in which people who say the word "I" are put to death. She also wrote a novel in which Dominique Francon's lover, the architect Howard Roark, is put on trial for dynamiting his own building. For 10 points, name this "Objectivist" author of *Anthem*, *Atlas Shrugged*, and *The Fountainhead*.

ANSWER: Ayn Rand [or Alissa Zinovievna Rosenbaum]

015-12-70-10130

15. Much of the information about this man comes from the journal of the Italian Antonio Pigafetta. This man was replaced by his lieutenant Juan Sebastian Elcano after dying in the Battle of Mactan. He discovered and named a strait between Tierra del Fuego and the mainland. After this man was killed in the Philippines, his crew rounded the Cape of Good Hope and returned to Charles I of Spain. For 10 points, name this Portuguese explorer who led the first circumnavigation of the earth.

ANSWER: Ferdinand Magellan [or Fernao de Magalhaes; or Fernando de Magallanes]

015-12-70-10131



1. In one poem, this author idealizes those who can dream and not make dreams their master. He also wrote about the son of an orphaned Irish soldier who helps his mentor find the River of the Arrow. This author of *Kim* and "If--" wrote a short story in which the protagonist protects Teddy and his family by killing Karait and thwarting Nagaina's murderous plot. For 10 points, name this British author who wrote about Rikki-Tikki-Tavi and Mowgli in *The Jungle Book*.

ANSWER: Rudyard **Kipling** [or Joseph Rudyard **Kipling**]

131-12-70-10132

2. One leader of this movement was David Walker, who was found dead in Boston after publishing his *Appeal*. A mob in Alton, Illinois, destroyed a printing press and killed Elijah Lovejoy for supporting this cause. Another of its leaders was William Lloyd Garrison, who published a newspaper called *The Liberator*. For 10 points, name this nineteenth century social movement whose supporters, such as Frederick Douglass, advocated the immediate end to slavery.

ANSWER: **abolition** of slavery [or **abolitionism**; or **anti-slavery** movement]

015-12-70-10133

3. The trained memory class of these substances are used in stents to strengthen blood vessels. In one type of these substances, solute particles are found in gaps in the crystal lattice of the solvent. That type, the interstitial one, is contrasted with the substitutional type of this kind of substance. Common examples of these substances include pewter, brass, bronze, and steel. For 10 points, name these substances, metallic solutions of two or more elements.

ANSWER: **alloys**

131-12-70-10134

4. In one play by this author, a man is barricaded in his house by a group of slaves due to his addiction to the law court. This author of *The Wasps* also wrote a play in which the title creatures construct a city in the sky called Cloud Cuckoo Land. In another of his plays, a sex strike is organized by the women of Sparta and Athens to end the Peloponnesian War. For 10 points, name this ancient Greek comic playwright of *The Birds* and *Lysistrata*.

ANSWER: **Aristophanes** (air-ih-STAHF-uh-nees)

014-12-70-10135

5. One material commonly used in these devices is yttrium (YE-tree-um) aluminum garnet doped with neodymium (NEO-dim-ee-um). These devices can shorten their output by mode-locking. These devices are used to perform Doppler cooling, which was used to create the first Bose-Einstein condensate. They consist of a pair of mirrors bookending a gain medium, which undergoes population inversion to emit photons of a single wavelength. These devices are used to read CDs in CD players. For 10 points, name these devices that emit a coherent beam of visible electromagnetic radiation.

ANSWER: **LASER** [or **light amplification by stimulated emission of radiation**]

048-12-70-10136

This is a calculation question. What is the negative root of the polynomial  $3x^2-21x-24$ .

ANSWER:  $x = -1$

What painting by Grant Wood depicts a farmer holding a pitchfork and standing next to his wife?

ANSWER: **American Gothic**