



1. A large population of albino people lives on this lake's largest island, Ukerewe (OO-kay-RAY-way) Island. The Winam Gulf of this lake is the site of Homa Bay and the port city of Kisumu (kiss-OO-moo). James Ogwang brought South American weevils to combat this lake's problem with the invasive water hyacinth. This lake receives the Kagera (kah-GAIR-uh) River to its west, and is the source of the White Nile. For 15 points, name this East African lake that is the second largest freshwater lake in the world and the largest overall in Africa.

ANSWER: Lake **Victoria**

023-13-104-24101

This man wrote a parody of Robert Southey's eulogy for George III called *The Vision of Judgment*. This poet of *Manfred* also created a man who is kidnapped by his lover Haidee's pirate father and who is easily seduced by women, inverting the Spanish legend. This poet wrote *Childe Harold's Pilgrimage* and *Don Juan* (JOO-uhn). For 15 points, name this philandering Romantic poet who died in the Greek War of Independence.

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

030-13-104-2410-11

2. A brown stripe across this body vanished in May 2010, but re-emerged during its November 2010 prominence in the sky. That "South Equatorial Belt Outbreak" is located below a white spot that coalesced in 2000. The Lagrange points of this planet are occupied by the asteroids called Trojans, and it is also orbited by the Galilean moons, including the heavily cratered Callisto and the red Io. For 15 points, the Great Red Spot is another prominent feature of what largest planet in the solar system?

ANSWER: **Jupiter**

019-13-104-24102

This author's poem "Tomorrow, at Dawn," is one of his most famous responding to the premature death of his daughter Leopoldine. He included a lengthy chapter describing the problems with the Paris sewer system in a novel in which the protagonist escapes through the sewers his daughter's beloved. That novel by this author features Marius Pontmercy, Cosette, and Jean Valjean. For 15 points, name this French novelist of *Les Miserables*.

ANSWER: Victor **Hugo**

014-13-104-2410-11

3. This poet's reputation was transformed by a 1947 book of criticism by Northrop Frye. His long poems include the prophetic epics *Jerusalem* and *The Four Zoas*. This poet described "mind-forg'd manacles" in a poem in which he wanders through the chartered streets of the title city. Another of his poems describes an animal "burning bright in the forests of the night." For 15 points, name this eccentric poet of "London" and "The Tyger."

ANSWER: William **Blake**

014-13-104-24103

The thermal utilization factor is a ratio between this process and absorption, while the reproduction factor is an average of how many neutrons are produced in this event. This reaction is sustained at a multiplication factor of one, and when uranium undergoes this process, it releases 2.5 neutrons on average. Discovered by Hahn and Meitner, for 10 points, name this process in which an atomic nucleus is split into two pieces.

ANSWER: nuclear **fission**

236-13-104-2410-11

4. These compounds usually have low-energy LUMOs. Inorganic examples of these compounds include boron trifluoride and ammonium chloride. Adjacent electronegative elements increase the strength of these compounds because they can better stabilize a negative charge. These substances can accept electrons according to the Lewis theory but are often proton donors in solution. For 15 points, name these compounds which turn litmus paper red and taste sour.

ANSWER: Lewis **acids** [or Bronsted-Lowry **acids**; or Arrhenius **acids**]

190-13-104-24104

BONUS: What magnesium silicate mineral is the softest mineral, occupying the lowest position on Mohs' hardness scale?

ANSWER: **talc** [prompt on "talcum"]

190-13-104-2410-11

5. San Blas was the name of a region in this country that is now called Guna Yala, home of the Guna people who produce blouses called "molos." A province in this country is the namesake of the Darien Gap. In 1999, this country received full control of a formerly extraterritorial area through the Torrijos-Carter Treaty. That area in this country includes Gatun Lake, where one of three locks is located on a waterway between the Caribbean and Pacific. For 15 points, name this Central American country found on an isthmus, where a namesake canal connects the Pacific to the Atlantic.

ANSWER: Republic of **Panama** [or Republica de **Panama**]

023-13-104-24105

When analyzing the function of this organ, one typically sees a QRS complex. This organ contains Purkinje fibers. Blood returns to this organ through the vena cava, and the SA node generates its contractions. This organ is surrounded by the pericardium membrane, and it contains four chambers. For 15 points, identify this human organ responsible for pumping blood.

ANSWER: **heart**

234-13-104-2410-11

6. This country used the codename "Chagai-I" for underground nuclear tests it conducted in 1998. Its president Yahya Khan was replaced by the People's Party after it lost territory in 1971. This country was the site of the 2007 assassination of Benazir Bhutto; the next year, this country had its president, Pervez Musharraf, resign. It formerly controlled Bangladesh. For 15 points, name this Asian country, the site of a military campaign against the Taliban.

ANSWER: **Pakistan**

088-13-104-24106

BONUS: What word is used to describe the bleak futuristic societies depicted in such novels as *Nineteen Eighty-Four* and *Brave New World*?

ANSWER: **dystopian**

014-13-104-2410-11

7. This character is charged with treason shortly after refusing to conquer Blefuscu. When last seen, he is horrified by his family and ends up spending much time in stables after living among super-intelligent horses and the brutish “Yahoos.” This man visits such lands as Brobdingnag and Lilliput, which consist of giants and very short people, respectively. For 15 points, name this Jonathan Swift created character, a ship’s doctor who ends up traveling through many bizarre lands.

ANSWER: Lemuel **Gulliver** [or **Lemuel**]

052-13-104-24107

In this novel, a group of men are compared to "mule drivers" and "mud diggers." At the end of the novel, the protagonist becomes a flag-bearer and he and his friend Wilson take a group of several men prisoner. In one scene, the protagonist sees his friend Jim Conklin wounded, and comes to the realization that a wound would be akin to the title honor. For 15 points, name this novel about Henry Fleming that takes place during the American Civil War, written by Stephen Crane.

ANSWER: *The **Red Badge of Courage***

064-13-104-2410-11

8. This man’s namesake temperature equals surface gravity over two pi. This man calculated the proportionality constant between entropy and surface area in a formula he co-names with Bekenstein. With Penrose, he names a theorem stating that singularities can be “space-like” or “time-like”, and this Lucasian Chair from 1979 to 2009 also predicted that black holes emit radiation. For 15 points, name this ALS-suffering author of *A Brief History of Time*.

ANSWER: Stephen **Hawking**

190-13-104-24108

A fibrous of this rock type is known as Pele’s hair, while a member of this rock type forms pillows near mid-ocean ridges. Dikes of this rock type can intrude into existing rock, and obsidian is an example of an extrusive type of this rock. For 15 points, name this rock type which forms from cooled magma, including basalt and granite.

ANSWER: **igneous**

236-13-104-2410-11

9. These things are described by the principal, azimuthal, and magnetic quantum numbers. These things are visualized as spheres and dumbbells. The block named for the fourth of these things contains the lanthanides and actinides. They come in s, p, d, and f varieties. For 15 points, give this term for the function that describes an electron’s probability distribution around an atom.

ANSWER: atomic **orbital**

127-13-104-24109

This poet wrote a collection describing many mundane objects such as artichokes and clothing. That work was titled *Elemental Odes*. One poem in one of this man’s collections begins with the line “Tonight I can write the saddest lines,” while he evokes the history of Latin America in *Canto General*. For 15 points, identify this Chilean poet of *Twenty Love Poems and a Song of Despair*.

ANSWER: Pablo **Neruda** [or Neftali Ricardo **Reyes** Basoalto]

140-13-104-2410-11

10. For an object in uniform circular motion, this quantity equals angular velocity squared times radius. Final velocity squared minus initial velocity squared equals two times displacement times this quantity. In another relationship, one half this quantity times time squared gives the displacement of an object starting from rest. For 15 points, name this quantity equal to force divided by mass in Newton’s Second Law, the time derivative of velocity.

ANSWER: linear **acceleration** [or centripetal **acceleration**]

190-13-104-24110

The Sackur-Tetrode equation gives this quantity for an ideal gas. The derivative of temperature with respect to pressure equals the derivative of volume with respect to this quantity by the Maxwell relations. Boltzmann derived this quantity as proportional to the natural log of the number of microstates. The second law of thermodynamics states that it increases with time in a closed system. For 15 points, name this physical quantity that measures the total disorder of a system.

ANSWER: **entropy**

127-13-104-2410-11

11. In July of this year, an outbreak of Legionnaires' disease hit Philadelphia, killing over twenty people. During this year, a governor gave an interview to *Playboy* magazine, where he admitted lusting in his heart for women. In Republican primaries in this year, the incumbent president defeated Ronald Reagan to earn the G.O.P. nomination. During the presidential election of this year, Jimmy Carter defeated Gerald Ford. For 15 points, name this year, the United States' bicentennial year.

ANSWER: **1976**

052-13-104-24111

One of this author's characters resents Miss Taylor's marriage to Mr. Weston, as that leaves her alone at home with her hypochondriac father. A conflict in a novel by this author is resolved when Lucy decides to marry Robert, not Edward. Lady Catherine de Bourgh and Catherine Bingley attempt to prevent the Bennett girls from marrying Mr. Bingley and Mr. Darcy in her best-known novel. For 15 points, name this author of *Sense and Sensibility* and *Pride and Prejudice*.

ANSWER: Jane **Austen**

190-13-104-2410-11

12. This character was born on the same day as Susan, the daughter of her attendant, who calls this woman a "lamb" and "ladybird." She is courted by Count Paris, who ends up dying outside her crypt. This character is given a drug by Friar Laurence to go into a deathlike state, and her cousin Tybalt kills Mercutio. She stabs herself with a dagger after realizing her true love has drunk poison. For 15 points, name this female member of the Capulet family, the lover of Romeo in a William Shakespeare play.

ANSWER: **Juliet** [prompt on **Capulet** until mentioned]

052-13-104-24112

This general ordered a frontal assault at Kennesaw Mountain that led to disastrous casualties but also forced the removal of his opponent Joseph E. Johnston. He was named overall commander of the Union armies in the West after Grant was brought east. Known for saying "War is Hell," this general burned crops and destroyed railroads during a month-long march from Atlanta to Savannah. For 15 points, name this Union General known for his "March to the Sea."

ANSWER: William Tecumseh **Sherman**

015-13-104-2410-11

13. This city is the headquarters of the organization that administers Earthwatch, an environmental information clearinghouse among governments. This home of the United Nations Environment Program is five miles north of a national park with the same name that includes an "animal orphanage." This city receives water from the Sasumua (sah-suh-MOO-uh) Dam, which dams the Tana River. At least sixty-seven people were killed in this city's Westgate Mall by al-Shabab gunmen in 2013. For 15 points, name this capital city of Kenya.

ANSWER: **Nairobi**

030-13-104-24113

This man adopted the Creek Indian boy Lyncoya after he was orphaned in a battle, and he executed the British agents Arbuthnot and Ambrister during a military raid, causing an international crisis. This man lost his first run for President to John Quincy Adams due to what he called a "Corrupt Bargain." For 15 points, identify this President nicknamed "Old Hickory" whose issuing of the Specie Circular may have ruined the presidency of his successor, Martin Van Buren.

ANSWER: Andrew **Jackson**

135-13-104-2410-11

14. Henry and Bill only appear in the beginning of this novel, but are introduced to Kiche, this title character's mother, who kills their dogs. Lip-lip leads the others in his village in tormenting him. He is first traded when Grey Beaver goes to Fort Yukon and passes him to Beauty Smith, who is interested in using him for fights. This book's title character is eventually tamed by Weedon Scott, who takes him in and integrates him into his family. For 15 points, name the Jack London book about dog that is part-wolf.

ANSWER: ***White Fang***

147-13-104-24114

In plant cells, preparation for this process involves fracturing the central vacuole and the creation of a phragmosome that bisects the cell. Astral microtubules only exist during this process, whose second phase involves the breakup of the nucleus, which frees sister chromatids. Unlike a similar process, this process contains only a single stage of prophase, anaphase, metaphase and telophase. For 15 points, identify this process of asexual reproduction that produces two identical daughter cells, as opposed to meiosis.

ANSWER: **mitosis**

066-13-104-2410-11

15. This construction is generally used only in formal or written French, and is replaced by liberal use of "c'est" (SEH) or "ce" (SUH) to start sentences in most speech. This construction involves the preposition "par" when there is a specific action expressed, or "de" when a more general state of being is involved. This construction is formed by conjugating the verb "être" (ATE-ruh) with the past participle, which agrees in gender and number with the subject. For 15 points, identify this French verb voice which is used to express actions done to the subject by an agent.

ANSWER: French **passive** voice [or la voix **passive**]

019-13-104-24115

The locus coeruleus (sir-RULE-ee-us) is theorized to be responsible for the motor inhibition characteristic of this state, which can be tonic or phasic depending on whether muscle activity is intermittent or absent. In the first ultradian (ul-TRAY-dee-an) cycle, it lasts for approximately five to fifteen minutes, but goes on longer as "slow-wave" periods shorten throughout the night. For 15 points, name this stage of sleep notable for the predominance of dreams.

ANSWER: **REM** sleep [or **rapid eye movement** sleep]

142-13-104-2410-11

16. These cells have a glycoprotein outer coating called the zona pellucida. In mammals, the development of these cells is aided by granulosa cells. In some plants, these cells are formed from megasporangia. When they are formed, three polar bodies are formed and degenerate. Their release leads to the formation of the corpus luteum from the follicle. These haploid cells always contain an X chromosome and form a zygote upon merging with another type of cell. For 15 points, name these gametes that are fertilized by sperm cells.

ANSWER: **egg** cells [or **ovum**; or **ova**; or **oocytes**; or **ovocytes**; or **ovarian follicles**; prompt on **gametocyte**; prompt on **gametes**]

232-13-104-24116

This Constitutional amendment was the subject of the *U.S. v. Leon* decision, which established a "good faith" exception. The *Weeks v. U.S.* case established the federal exclusionary rule for enforcing this amendment, which was extended to states in *Mapp v. Ohio*. This amendment was inspired by the "writs of assistance" and "general warrants" issued by British colonial governments. Identify this amendment which protects individuals from unreasonable search and seizure.

ANSWER: **Fourth** Amendment

019-13-104-2410-11

17. This right was protected by the Supreme Court in 2009's *Baxter v. Montana*, and in 2004's *Gonzales v. Oregon*, the Court ruled that the Controlled Substances Act could not be used to prosecute people who aided in this action. Jeb Bush attempted to prevent a woman from using this right in 2005, but that law named for Terri Schiavo was struck down. For 15 points, name this right exercised by people who are euthanized.

ANSWER: the right to **die** [or the right to commit **suicide**; or physician-assisted **suicide**; or **euthanasia** or word forms before it is read]

190-13-104-24117

This process involves decolorization with alcohol or acetone, after which safranin is used. The mordant for this process is typically a solution of iodine and potassium iodide. When performed on organisms whose cell walls are made primarily of peptidoglycan (pep-tid-oh-GLY-can), it results in a purple color. Its creator first used it to distinguish between two different pneumonia-causing bacteria. For 15 points, name this stain which separates bacteria into "positive" and "negative" groups.

ANSWER: **Gram** staining

024-13-104-2410-11

18. This character is instructed about "crabs" and "feathers" while rowing a boat with an egg-selling sheep. In another work, she serves as a witness in a trial in which the Knave of Hearts is accused of stealing some tarts. This protagonist of *Through the Looking Glass* is also featured in another novel in which she has a tea party with the March Hare and meets the Cheshire Cat and the White Rabbit. For 15 points, name this Lewis Carroll character who has adventures in Wonderland.

ANSWER: **Alice**

015-13-104-24118

BONUS: What shape is formed when a paper strip is given a half-twist and then has its ends taped together, and is notable for having only one side?

ANSWER: **Möbius** strip

233-13-104-2410-11

19. The Sahtu people in this country speak the endangered "Slavey" language, and the book *Languages in Conflict* describes its "bilingual belt." The "children of Bill 101" here are educated in a specific language. In a territory of this country, Inuktitut (in-UHK-teh-TUT) and Inuinnaqtun (IN-oo-uh-NOK-tin) are official languages. Leonard Jones sued to challenge the 1969 Official Languages Act here. This country features a large French-speaking Acadian minority in a bilingual province. For 15 points, name this country where both English and French are spoken in places such as New Brunswick.

ANSWER: **Canada**

052-13-104-24119

This singer was criticized online for dating James Lowe, and Veronica Bayetti Flores wrote an October 2013 article claiming that a song by this artist is racist. A song by this artist includes the lyrics "I'm kind of over getting told to put my hands up in the air" and starts the chorus with "we live in cities you'll never see on screen." This singer of "Team" also has a song that begins "I've never seen a diamond in the flesh" and asks "let me be your ruler" and "let me live that fantasy." For 15 points, name this New Zealand singer whose album *Pure Heroine* included the song "Royals."

ANSWER: **Lorde** [or Ella **Yelich-O'Connor**]

023-13-104-2410-11

20. This indicative tense's third-person plural conjugation is the basis of the subjunctive forms in another tense. The third-person singular conjugation in this Spanish verb tense adds a "y" when the verb has two consecutive vowels. Verbs that end in "-car" replace the "c" with a "q" in the first person in this tense. In this tense, the verbs "ser" and "ir" (EAR) are conjugated the same: "fui," (FWEE) "fuiste," (FWEE-stay) "fue," (FWAY) and so on. This tense should be used only if the action was completed. For 15 points, name this past tense in Spanish contrasted with the imperfect tense.

ANSWER: Spanish **preterite** [or el **preterito**; do not accept or prompt on "past"]

190-13-104-24120

A city in this state built a bridge with an inscription saying that while that city "makes, the world takes". The "crime of the century" perpetrated by Bruno Hauptmann happened in this state. Its town of Manchester saw the explosion of the *Hindenburg*. This location of the Lindbergh kidnapping also produced inventions like the phonograph at Menlo Park. For 15 points, name this state home to Thomas Edison, whose cities include Paterson, Trenton and Princeton.

ANSWER: **New Jersey**

232-13-104-2410-11

21. Geoffrey Chaucer employed this rhyme scheme in *The Canterbury Tales*. The alexandrine version, made up of two lines of twelve syllables, became the standard of 17th century French drama. In the 18th century, Alexander Pope perfected the heroic version of eight syllables per line. What is the term for this two line rhyming structure that Shakespeare used to end his sonnets?

ANSWER: **couplet**

045-13-104-24121

Meridional flow occurs in this structure and generates more vorticity than zonal flow. The lapse rate changes from positive to negative at the top of this region, also known as the temperature inversion. The lower boundary of the stratosphere is this layer's namesake "pause." 80% of the atmosphere's mass is in this turbulent layer, where most weather phenomena occur. For 15 points, identify this lowest layer of the atmosphere.

ANSWER: **troposphere**

228-13-104-2410-11

22. A difference of opinion exists between using "qabd" (KAH-bid) or "sabl" (SAH-dil) positioning during one portion of this action. This action is immediately preceded by an optional "iqama" (EE-kah-mah), and one ends it by performing "tasleem" on at least one side of the body. Examples of this action include "fajr" (FAH-jur), which is performed after "suhor" and before sunrise during Ramadan. Each "rak'ah" of this action begins with a declaration of "Allahu Akbar." This action is the second pillar of Islam. For 15 points, identify this action which is performed five times a day by Muslims.

ANSWER: daily **prayer** [or word forms; or **salaah**; or **salaat**; or **dhuhr** until "fajr" is read; or **asr** until "fajr" is read; or **maghrib** until "fajr" is read; or **isha** until "fajr" is read; or **fajr** until it is read]

189-13-104-24122

This man was advised on investments by Frederick Taylor Gates, and he donated the funds that helped to create the University of Chicago. Along with Samuel Andrews and Henry Flagler, he founded a successful business in Cleveland, Ohio. He founded a company denounced by Ida Tarbell, which was eventually broken up into 34 new companies, such as Continental Oil. For 15 points, name this “robber baron,” the founder of the Standard Oil Company.

ANSWER: John Davison **Rockefeller**

052-13-104-2410-11

23. A mutation in the GAA gene, which codes for a protein in this organelle, causes the accumulation of glycogen known as Pompe's disease. Another gene coding for a protein in this organelle is HEXA, a mutation in which causes the disease that results in the buildup of gangliosides in neurons, Tay-Sachs. Old or unneeded cell parts are targeted for this organelle, which releases its contents during apoptosis. These organelles have a low pH of around 4.5. For 15 points, name this organelle that digests molecules in a cell.

ANSWER: **lysosomes**

140-13-104-24123

A woman who held this position said George H.W. Bush was “born with a silver foot in his mouth.” Besides being held by Ann Richards, it was held by a man who released the anti-homosexual YouTube video “Strong” and who could not remember the third government agency he would eliminate while debating other Republicans. While holding this position, George W. Bush was elected president in 2000. For 15 points, name this position currently held by Rick Perry.

ANSWER: **governor of Texas**

052-13-104-2410-11

24. In one novel by this writer, a door tied with a crepe streamer is compared to a porch dangled with dead cucumber vines as the title character imagines the death of his wife Zeena. In another novel by this writer, May Welland remains a loyal wife despite her suspicions that her cousin Countess Ellen Olenska is having an affair with her husband Newland Archer. For 15 points, name this American writer who wrote *Ethan Frome* and *The Age of Innocence*.

ANSWER: Edith **Wharton** [or Edith Newbold **Jones**]

130-13-104-24124

This city's Augarten park contains two half-finished anti-aircraft towers too solid to be safely demolished. For many years, the world's tallest Ferris wheel was in the park called the Prater in its district of Leopoldstadt. When this city's second through ninth districts were added, the old city walls were replaced by the road called the Ringstrasse. The Schönbrunn Palace was the summer residence for this city's Habsburg monarchs. For 15 points, name this capital of Austria.

ANSWER: **Vienna**, Austria [or **Wien**, Österreich]

121-13-104-2410-11

25. The poems of the Pearl Poet commonly use a repeating unit of this many lines called the bob-and-wheel. Sapphic stanza includes this many syllables in the final line of the poem. The first and third lines of a tanka poem contain this many syllables. This is the number of ancient Confucian classics. Blank verse contains this many metrical feet per line. Most of Shakespeare's plays have this many acts. The first and last line of a haiku have this many syllables. For 15 points, name this number of lines in a limerick.

ANSWER: **five**

190-13-104-24125

BONUS: At what event does Jesus turn water into wine in the Gospel of John?

ANSWER: the **Wedding at Cana** [or the **Marriage at Cana**]

014-13-104-2410-11

26. In January 2011, Harvey Updike called in to a radio show to claim he poisoned this university's Toomer's Corner Oaks. Chris Davis returned a kick more than a hundred yards to give this university a win in the 2013 Iron Bowl. This university got a late lead on a Tre Mason run during a 2014 bowl game, but gave up a touchdown with thirteen seconds left to a team led by Jameis (JAY-mis) Winston. This university won the 2011 BCS title with Cam Newton. For 15 points, name this university that lost in the 2014 title game to Florida State and has an in-state rivalry with Alabama.

ANSWER: **Auburn** University [prompt on **Tigers**]

023-13-104-24126

The Slaughter-House cases largely stripped the power of this amendment's Privileges and Immunities Clause. Rulings under this amendment are often later applied to Washington D.C. under the Fifth Amendment, since both have Due Process clauses. This amendment may be best known for its Equal Protection Clause, which prevents state discrimination against protected classes. For 15 points, name this amendment to the Constitution which granted freed slaves citizenship.

ANSWER: **Fourteenth** Amendment

015-13-104-2410-11



27. Examples of these bonds include sigma and pi bonds. Lewis diagrams can be used to depict these bonds, which are more likely to occur between elements with similar electronegativity. When charge separation occurs, creating a dipole moment and enabling hydrogen bonding, these bonds can be labeled as polar; that charge separation occurs due to unequal sharing. For 15 points, name this kind of chemical bond that forms when valence electrons are shared by two atoms.

ANSWER: **covalent bonds**

147-13-104-24127

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