



1. On this type of port devices can use bulk, interrupt, or isochronous (eye-SOCK-row-ness) data transfer modes. For standard connectors its first and fourth pins are used for power while the other two are used for data. The maximum transfer speed is four-hundred eighty megabits per second for the 2.0 standard and nearly five gigabits per second for the 3.0 standard. For 10 points, name this standard that defines connections used by peripherals such as flash drives and mice.

ANSWER: **USB** [or **Universal Serial Bus**]

093-12-36-02101

2. This country's second largest city is known as "the white city," because its buildings are made from sillar, and is named Arequipa. Its highest point is mount Huascarán, and along with Bolivia, it controls the world's highest lake, Titicaca. Ruins in this country are found at its ancient capital of Cuzco and in the hidden city of Machu Picchu. It borders Ecuador and Colombia to the north, and Brazil to the east. For 10 points, name this South American country with capital at Lima.

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

015-12-36-02102

3. One form of spectroscopy determines the ratio between this property and the charge of a species. The difference between its calculated unbound amount and the measured amount is its namesake defect, observed in a nuclear reaction. For an electron, this property is about 1/1800 [one over 1800] that of a proton and a neutron. Carbon-12 is used as a standard for one measurement of, for 10 points, what property of substances measured in daltons or grams?

ANSWER: **mass** [or **weight**; accept **molecular mass**; do not accept **molar mass**]

020-12-36-02103

4. In the *Odyssey*, this figure assumes the guise of Mentor and is known as "grey eyed." In one story, she turned Medusa's hair into serpents out of jealousy. This goddess won a contest against Poseidon by placing her olive trees against his salty spring. This goddess turned Arachne into a spider after losing a weaving contest to her. After her father Zeus had a headache, she was born fully formed from his head. For 10 points, name this Greek goddess of wisdom and war.

ANSWER: **Athena** [or **Athene** or Pallas **Athena** or **Athena** Parthenos]

015-12-36-02104

5. The protagonist of this work relates how he slew nine nixies after he is ridiculed for his role in a swimming contest against Breca. The protagonist is later lent the sword Hrunting by that same taunter, Unferth. The title character is abandoned by all his companions except for Wiglaf when he fights the dragon who kills him, a battle which takes place many years after he defends Hrothgar's mead hall by killing Grendel. For 10 points, name this Old English poem.

ANSWER: **Beowulf**

014-12-36-02105

6. This state is home to a mountain engraved with images of Jefferson Davis, Stonewall Jackson, and Robert E. Lee. This site of Stone Mountain has much of its western border defined by the Chattahoochee River. This state's largest city is served by the MARTA system and is the headquarters of Coca-Cola. This state's second largest city is Augusta, which is located along the Savannah River. For 10 points, name this state, the home of Atlanta.

ANSWER: **Georgia**

015-12-36-02106

7. This king issued the Edict of Fontainebleau revoking the one of Nantes, which led to the War of the League of Augsburg. During his youth, this king's chief minister was targeted by the Fronde. This man's grandson receiving a throne resulted in the War of the Spanish Succession. This man was served by Cardinal Mazarin, the successor to Cardinal Richelieu. For 10 points, name this French monarch whose long rule led to his nickname of Sun King, who also built the palace of Versailles (ver-SIGH).

ANSWER: **Louis XIV** of France [prompt on **Louis**]

135-12-36-02107

8. Recognition helices of the zinc finger bind to the major groove of this molecule. Orange fluorescence indicates that ethidium bromide has intercalated to this molecule, whose composition follows Chargaff's Rules. Two or three hydrogen bonds form between purines and pyrimidines in this molecule, which contains adenine, guanine, cytosine, and thymine. For 10 points, name this nucleic acid whose double helix structure was elucidated by Franklin, Watson, and Crick.

ANSWER: **DNA** [or **deoxyribonucleic acid**]

020-12-36-02108

9. This plan may have been spoiled after Francis Tresham or another conspirator sent an anonymous letter to Lord Monteagle. Holbeach House was where Thomas Percy and this conspiracy's leader, Robert Catesby, were killed in a raid. This plan's goal was to blow up the House of Lords in order to start a popular rebellion and install a Catholic king in England. For 10 points, name this failed 1605 attempt to assassinate James I of England that is commemorated on Guy Fawkes Day, the fifth of November.

ANSWER: **Gunpowder Plot** [or **Gunpowder Treason Plot**]

137-12-36-02109

10. This author's autobiography was delayed for one hundred years and became a surprise 2011 bestseller. He created a pair of comen named the Duke and the King who put on a play called "The Royal Nonesuch." This author wrote of the gambler Jim Smiley in "The Celebrated Jumping Frog of Calaveras County." The protagonist of one novel by this man fakes his death to escape from Pap and runs away with the slave Jim. For 10 points, name this author of the *Adventures of Huckleberry Finn*.

ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**]

015-12-36-02110

11. One entity in this poem "retreats...down the vast edges drear and naked shingles of the world." The speaker of this poem describes "the world which seems to lie before us like a land of dreams" after exclaiming "Ah, love, let us be true to one another!" This poem ends with the image of "ignorant armies" clashing by night and begins by stating "The sea is calm tonight." For 10 points, name this poem by Matthew Arnold.

ANSWER: "**Dover Beach**"

014-12-36-02111

12. This god was given the realm of the elves as a teething present. This god gave up his giant killing sword in order to marry the jotunn Gerdr. This god rides the golden bull Gullinbrusti and owns the ship Skidbladnir, which can fold up and fit in his pocket. At Ragnarok, this god is killed by the fire giant Surtr. For 10 points, name this Norse god of sailing that was sent to the Aesir along with his sister Freyja.

ANSWER: **Freyr**

135-12-36-02112

13. This country is currently led by President Salva Kiir Mayardit. 2005's Naivasha Agreement failed to end a conflict between this country and a larger neighbor over the oil-rich Abyei region. The SPLM independence movement in this country proved successful after ninety-eight percent of its citizens voted to break away from another country led by Omar al-Bashir. For 10 points, name this African country that on July 9, 2011 declared independence from Sudan.

ANSWER: Republic of **South Sudan** [do not accept or prompt on "Sudan"]

079-12-36-02113

14. Near the end of the Miocene epoch, a near total evaporation of this body of water caused a salinity crisis. Several emperors pursued the strategy of turning this body of water into a "Roman lake." An arm of this body of water, the Sea of Marmara, is connected by the Bosphorus Strait to the Black Sea. For 10 points, name this body of water that separates Europe and Africa.

ANSWER: **Mediterranean** Sea

002-12-36-02114

15. The operator for this quantity commutes with the position operator, and that operator is equal to negative i times \hbar times the gradient operator. The De Broglie wavelength is equal to Planck's constant divided by this quantity for a particle. The change in this quantity is equal to the impulse, and this quantity is conserved in both elastic and inelastic collisions. For 10 points, name this vector quantity calculated by taking the product of mass and velocity.

ANSWER: linear **momentum** [do not accept **angular momentum**]

048-12-36-02115



1A. Name the Tudor king who won the Battle of Flodden Field and who married Anne Boleyn after divorcing Catherine of Aragon.

ANSWER: **Henry VIII** of England [prompt on **Henry**]

1B. Identify the Edward Hopper painting that depicts four patrons at a brightly-lit late night diner.

ANSWER: **Nighthawks**

2A. What jazz trumpeter, who recorded the song "Hello, Dolly!", was nicknamed "Satchmo" and led a group called the Hot Five?

ANSWER: Louis "Louie" **Armstrong**

2B. What statistical value can be found by arranging data from lowest to highest values and then finding the point directly in the middle?

ANSWER: **Median**

3A. This is a 10-second calculation question. What is the mode of the following set? {1, 1, 1, 2, 2, 3, 3, 3, 3, 4, 4, 5}

ANSWER: **3**

3B. This is a 10-second calculation question. Find the measure of angle alpha such that alpha and a ten-degree angle are complementary angles.

ANSWER: **80** degrees

4A. What scientific law states that an object at rest tends to stay at rest unless acted upon by some force.

ANSWER: **Newton's First** Law of Motion [prompt on **Newton's** law]

4B. What scientist theorized natural selection after visiting the Galapagos Islands?

ANSWER: Charles **Darwin**

5A. This is a 20-second calculation question. If one-third of the students in Mr. Jones's math class have A's, one-half have B's, and the remaining 5 have C's, how many total students are in the math class?

ANSWER: **30** students

5B. This is a 20-second calculation question. What is the point of intersection of the lines $y = 2x + 7$ and $y = -4x - 5$?

ANSWER: **(-2,3)** [or **x = -2** and **y = 3**]

6A. Identify the American author whose short stories including "The Birth-Mark" and "Young Goodman Brown" were collected in *Mosses from an Old Manse*.

ANSWER: Nathaniel **Hawthorne**

6B. Name the actor who starred in *The Truman Show* and *Ace Ventura: Pet Detective* in the 1990s and, in 2011, played the title character in *Mr. Popper's Penguins*.

ANSWER: Jim **Carrey**

7A. One secondary structure in proteins is this type of "pleated sheet," and decay of this type sees the emission of an electron or a positron. Identify this Greek letter.

ANSWER: **beta**

7B. Name the postmodern Italian novelist who wrote *Foucault's Pendulum* and created William of Baskerville in *The Name of the Rose*.

ANSWER: Umberto **Eco**

8A. Izanagi and Amaterasu are two prominent examples of what deities from the Shinto faith?

ANSWER: **kami**

8B. Admiral Howe and the British captured what city after the Battle of Long Island and controlled it from 1776 to 1783 during the Revolutionary War?

ANSWER: **New York** City

9A. Name the counter-terrorism surveillance legislation, first passed in 2001, that had several provisions renewed by Congress in 2011.

ANSWER: USA **Patriot** Act [or **Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism** Act of 2001]

9B. Name the type of past tense that describes a continuing past action in Indo-European languages and contrasts with the preterite (PRET-err-it).

ANSWER: **imperfect** tense

10A. This is a 30-second calculation question. An unfair coin is weighted to come up heads two-thirds of the time. What is the probability of getting at least two heads in three flips of this unfair coin? Express your answer as a fraction in lowest terms.

ANSWER: **20/27**

10B. This is a 30-second calculation question. Simplify the following expression to contain only one trigonometric function: quantity 1 plus tangent squared x , all over the quantity 1 plus cotangent squared x .

ANSWER: **tangent squared x** [or other equivalents to the mathematical expression **$\tan^2 x$**]



1. This man coined the term "suspension of disbelief" in his critical work *Biographia Literaria*. The speaker of one poem by this man sees an Abyssinian maid in a place where the title figure hears "ancestral voices prophesying war" and has built a "stately pleasure dome." This author of "Kubla Khan" also described the ill-fated killing of an albatross in a poem narrated to the Wedding Guest. For 10 points, name this poet of "The Rime of the Ancient Mariner."

ANSWER: Samuel Taylor **Coleridge**

105-12-36-02117

2. One song on this album samples "We Will Rock You" and declares there's "something about my cool Nebraska guy." Another song features a Clarence Clemmons saxophone solo and declares, "I'm hanging on a moment with you." The Catholic League attacked one track in which the singer is a lover of Christ who finds herself in love with his betrayer. Featuring "You and I," and "The Edge of Glory," and "Judas," for 10 points, name this 2011 Lada Gaga release whose title track celebrates individuality.

ANSWER: ***Born This Way***

079-12-36-02118

3. In one novel by this author, Isabella Thorpe befriends a girl obsessed with reading Gothic novels named Catherine Moreland. In another novel, the affections of Colonel Brandon are eventually accepted by Marianne, to the delight of Edward and Elinor. This author of *Northanger Abbey* also created Mr. Darcy and described the efforts of Mrs. Bennett to marry off her five daughters. For 10 points, name this female British novelist of *Sense and Sensibility* and *Pride and Prejudice*.

ANSWER: Jane **Austen**

105-12-36-02119

4. People affected by this document who testified before Congress included William Henry Singleton and Daniel Pettis. It was preceded by the Second Confiscation Act, and states like Maryland and Kentucky were not affected by it. The Battle of Antietam was close enough to a victory to allow the President to issue this document. For 10 points, name this executive order drafted during the Civil War by Abraham Lincoln and issued on January 1, 1863, which declared all slaves in Confederate states free.

ANSWER: **Emancipation Proclamation**

120-12-36-02120

5. This character's husband botches a surgery on a club-footed boy named Hippolyte. She rekindles an affair after attending a performance of *Lucia di Lammermoor* in Rouen. This character also borrows money excessively from Monsieur Lheureux ("LURE"-oh). Eventually, this mother of Berthe finds herself destitute and unwanted by her lovers Leon DuPuis (doo-PWEE) and Rudolphe Boulanger and kills herself with arsenic. For 10 points, name this title "Madame" of a Gustave Flaubert novel.

ANSWER: Emma **Bovary** [or **Emma** Bovary; or Madame **Bovary**]

079-12-36-02121

6. This man dedicated his seventh piano trio to Archduke Rudolph of Austria and wrote his 33 *Diabelli Variations* for charity. He included a C Minor funeral march as the second movement of his third symphony, dedicated initially to Napoleon but later to a "great man". This composer of the *Eroica Symphony* used a G-G-G-E flat motif to open his fifth symphony, while his ninth symphony concludes with a choral setting of "Ode to Joy." For 10 points, name this deaf German composer.

ANSWER: Ludwig van **Beethoven**

080-12-36-02122

7. Axel and Buck won a Nobel for discovering that this organ's function is performed by thousands of G-protein coupled receptors, which send signals to cranial nerve one. When Little's Area in this organ is exposed to dry air, a hemorrhaging known as epistaxis may result. This largely cartilaginous organ is used for olfaction. For 10 points, name this organ with two nostrils and aroma-detection ability.

ANSWER: **nose**

020-12-36-02123

8. A variant of this structure contains the ryanodine receptor and stores calcium ions. The secretory pathway for a newly synthesized protein begins in this structure. This structure releases vesicles which are sent for modification in the Golgi apparatus. This organelle is continuous with the nuclear membrane and is referred to as either smooth or rough depending on if it is lined with ribosomes. For 10 points, names this organelle that forms a network of transportation tubes in a cell.

ANSWER: **endoplasmic reticulum** [or **ER**, accept **sarcoplasmic reticulum** or **SR** throughout]

064-12-36-02124

9. During this President's first term, the beet sugar industry financed a five million dollar campaign against the passage of the Underwood Tariff. This man outlawed price discrimination in the Clayton Antitrust Act and appointed 'Black Jack' Pershing to head the American Expeditionary Forces. This President's Fourteen Points laid the foundations for the League of Nations. For 10 points, name this President who failed to get the Treaty of Versailles ratified to end World War I for the U.S.

ANSWER: Thomas Woodrow **Wilson**

130-12-36-02125

10. The protagonist of this novel is cheated when asking for change for a hundred-dollar bill from a barkeeper whom he is jailed for attacking. Jack Duane commits burglaries with the protagonist, who later attends a socialist meeting, in this novel which follows Lithuanian immigrant Jurgis Rudkus. For 10 points, name this muckraking novel which exposed the meatpacking industry written by Upton Sinclair.

ANSWER: *The **Jungle***

020-12-36-02126

11. The initial surprise attack of this battle was designed to occur before Don Carlos Buell's Army of the Ohio arrived. Fierce fighting during this battle occurred when Union troops under W.H.L. Wallace and Benjamin Prentiss held the Hornet's Nest. Despite being caught unprepared at this battle, Ulysses S. Grant's forces triumphed over the Confederates, whose commander, Albert Sidney Johnston, was killed in action. For 10 points, name this American Civil War battle fought in Tennessee in 1862.

ANSWER: Battle of **Shiloh** [or Battle of **Pittsburg Landing**]

137-12-36-02127

12. Since this element has two isotopes that differ by a mass of two in almost equal abundance, compounds containing it have a double peak in their mass spectra. Its anion is bound to ethidium in a common dye used in gel electrophoresis. Methylated and ethylated versions of this element were formerly used as pesticides. Its diatomic form predominates at STP, and exists as a red-brown liquid at room temperature. For 10 points, name this element, a halogen with atomic number 35 and symbol Br.

ANSWER: **Bromine** [or **Br** before mention, accept **bromide**]

048-12-36-02128

13. This man coined a word that means that events that are unlikely to be causally related can be related according to meaning. He proposed that archetypes make up part of the mind inherent to all organisms with a nervous system. This man, who coined "synchronicity," also believed that each person has an opposite gender image in one's psyche. For 10 points, name this psychologist who proposed the collective unconscious and theorized that one has either an *anima* or an *animus*.

ANSWER: Carl Gustav **Jung**

134-12-36-02129

14. The most potent cause of this phenomenon on a per-mole basis is sulfur hexafluoride. Due to sulfur aerosol emissions, the 1991 eruption of Mount Pinatubo temporarily halted this phenomenon. Coral growth rates, tree ring width, and isotopic composition of glacial cores are proxy evidence for this phenomenon. Because the oceans are a carbon sink, this phenomenon causes their acidification. For 10 points, name this geological phenomenon caused largely by an increase in greenhouse gas concentration.

ANSWER: anthropogenic **global warming** [or obvious equivalents such as **increase in global temperature** caused by humans; accept **greenhouse effect** before "Pinatubo" is read and prompt afterwards; prompt on **climate change** or obvious equivalents]

133-12-36-02130

15. This man was alleged to have painted his name on a stolen laptop and to have thrown that computer out a window. He led Blinn College to a national championship after transferring, and his father Cecil allegedly told Mississippi State it would take "more than a scholarship" for this man to attend the school. After winning another national championship, he was drafted first overall by the Carolina Panthers in April 2011. For 10 points, name this former Auburn Tigers quarterback.

ANSWER: Cameron "Cam" Jerrell **Newton**

002-12-36-02131



1. Ions of this element inhibit ferrochelatase and delta-ALA dehydratase. Galena is a common ore of this element, whose tetra-ethyl version was formerly used as a gasoline additive. One isotope of this element is the stable end-product of the decay of uranium-238, and oxyanions of this element are known as plumbates. This element was also used in paint until it was determined to be hazardous. For 10 points, name this poisonous element with atomic number 82 and symbol Pb.

ANSWER: **Lead**

048-12-36-02132

2. One leader with this family name had soldiers attack the Blue House to try to assassinate the president of a neighboring country. That leader ordered his men to capture the USS *Pueblo* and died in 1994, after which he became the "Eternal President." Another leader with this surname tested the Taepodong missiles, abducted several actresses, and has designated his son Jong Un as his successor. For 10 points, give this family name of Il-sung and Jong Il, both leaders of North Korea.

ANSWER: **Kim** [or **Kim** Il-sung; or **Kim** Jong Il; or **Kim** Song Ju]

020-12-36-02133

3. In one of this author's novels, an orphan helps a Tibetan monk search for the River of the Arrow against the historical backdrop of the Great Game. The speaker of one of his poems exclaims "You're a better man than I am" to an Indian water carrier. He also wrote a collection of short stories featuring Shere Kahn, Rikki-Tikki-Tavi, Baloo the Bear, and the wolf-boy Mowgli. For 10 points, name this British author of *Kim*, "Gunga Din," and *The Jungle Book*.

ANSWER: Joseph Rudyard **Kipling**

079-12-36-02134

4. Arias in this opera include "L'amour est un oiseau (WAH-so) rebelle," and the song "Votre toast, je peux (PEW) vous le rendre" is sung in a scene set in Lillas Pastia's inn, where one character confronts his officer Zuniga. That song, also known as the "Toreador Song," is sung by the bullfighter Escamillo (es-kah-MEE-yo), who later triumphs in the ring as the title character is stabbed by Don Jose. For 10 points, name this opera about a gypsy written by Georges Bizet (ZHORZH bee-ZAY).

ANSWER: **Carmen**

014-12-36-02135

5. One of this man's novels, a sailor jumps ship with his friend Toby and lives among the titular tribe of cannibals. In addition to *Typee*, this man wrote a novella about the conflict aboard the *Indomitable* between the master-at-arms Claggart and the title character, Billy Budd. In another novel, Queequeg befriends Ishmael and Captain Ahab leads the hunt for the titular white whale. For 10 points, name this American author of *Moby-Dick*.

ANSWER: Herman **Melville**

137-12-36-02136