QQBC Packet 10

1.  **A worker in this play claims to build stronger structures than a mason, shipwright, or carpenter, and a mother in this play drinks poison prepared by Laertes and her husband. This play's title character calls (\*)** Polonius a fishmonger after his father accuses Claudius of murder, and he mourns Ophelia after questioning whether it is better "to be or not to be." For 10 points, name this Shakespeare play about the title prince of Denmark.  
  
Answer: The Tragedy of Hamlet, Prince of Denmark  
  
<LIT, BRIT>

Algorithms for performing this operation include “Bubble,” which checks pairs of adjacent elements and swaps if necessary. For ten points each,  
  
Name this computational task that is usually done to create ascending or descending lists out of randomly listed numbers.  
  
ANSWER: sorting (accept ordering a set)  
  
This mathematical term describes an arrangement of all the elements of a set. This term is often contrasted with combination, a similar concept that ignores the order of a set.  
  
ANSWER: permutation (prompt on “P” or “nPr”)  
  
One of the least efficient sorting functions imaginable, bogosort, simply generates every possible permutation until it lucks into the one in the desired order. If a set has n elements, there are this many total permutations for bogosort to potentially check.  
  
ANSWER: n factorial (accept n!)  
  
<SCI, OTHER>

2.  **In this state, the Imperial Canal became blocked, forcing the creation of the Salton Sea. The General Sherman stands 275 feet tall over this state, which includes the western shores of Lake (\*)** Tahoe and west slopes of the Sierra Nevada. Sequoia National Park is in, for 10 points, what state where animal bones are preserved in the La Brea tar pits in downtown Los Angeles?  
  
Answer: California  
  
<GEO, GEO>

This man took power of his country’s Ba’ath Party shortly after the death of his father, Hafez. For ten points each,  
  
Name this dictator who has violently cracked down on protests during an ongoing civil war. ANSWER: Bashar al-Assad  
  
Assad is the dictator of this Middle Eastern country, where protests began in the capital city, Damascus. ANSWER: Syria (accept Syrian Arab Republic)  
  
The protests in Syria began as part of this broad set of revolutions in the middle east in 2010 and 2011 . This period began in Tunisia and resulted in government changes in Egypt, Libya, and Yemen.  
  
ANSWER: Arab Spring  
  
<HIST, WORLD>

3.  **Salts of this element were once administered intramuscularly as a method of treating rheumatoid arthritis. Aqua regia, a mixture of nitric and hydrochloric acid, was given the nickname "royal water" for its ability to dissolve this element. (\*)** Ernest Rutherford proved the existence of the atomic nucleus using a thin foil of this element, which is found below silver on the periodic table. For 10 points, name this heavy transition metal with symbol Au.  
  
Answer: gold (accept aurum; prompt on "Au" before it is read)  
  
<SCI, CHEM>

Dr Hastie Lanyon dies of shock after witnessing the transformation of this novel’s protagonist. For ten points each,  
  
Name this novel, in which the respectable first title character creates a potion that transforms him into the ruthless second title character.  
  
ANSWER: The Strange Case of Dr Jekyll and Mr Hyde  
  
Dr Jekyll and Mr Hyde were created by this Scottish author, who also created the character David Balfour in  
  
Kidnapped.  
  
ANSWER: Robert Louis Stevenson  
  
In this Stevenson novel, Billy Bones asks Jim Hawkins to look out for a one-legged seafaring man. Jim later boards a pirate ship en route to this novel’s title location.  
  
ANSWER: Treasure Island, or the mutiny of the Hispaniola  
  
<LIT, BRIT>

4.  **The Aitken Basin lies near this body's south pole. One theory for the creation of this body involves a collision with the ancient planet Theia [THAY-ah]. This body's "ranging experiment" is an attempt to determine the (\*)** distance between the Earth and this object, which is about 238,000 miles. This body contains multiple plains known as marias, which include the Sea of Tranquility. For 10 points, name this satellite of Earth which was walked on by Neil Armstrong.  
  
Answer: moon (accept Luna)  
  
<SCI, OTHER>

For a sufficiently thin one of these devices, the reciprocal of focal length equals the reciprocal of object distance plus the reciprocal of image distance. For ten points each,  
  
Name these optical devices that use refraction to focus light rays and produce an image. ANSWER: lenses  
  
A magnifying glass contains this type of simple lens, which causes parallel light rays to converge at a single point. Concave lenses cause light rays to diverge away from each other instead.  
  
ANSWER: biconvex lens (accept double convex; accept plano-convex; prompt on “positive lens”)  
  
If an object is placed inside the focal length of a convex lens, this kind of upright image will result. These images cannot be projected onto a screen.  
  
ANSWER: virtual image  
  
<SCI, PHYS>

5.  **China’s Wukong space telescope is currently searching for proof of this phenomenon. One alternative for explaining its effects is modified Newtonian dynamics. WIMPs are hypothetical particles that make up this substance, first proposed by Fritz Zwicky to solve the (\*)** missing mass problem in galaxy clusters. About 27% of the mass-energy of the universe is made of, for ten points, what exotic type of matter that does not interact with light?  
  
ANSWER: dark matter  
  
<SCI, PHYS>

This largest internal organ produces bile that is used in digestion. For 10 points each,  
  
[10] Name this organ that removes toxins such as alcohol from the bloodstream.  
  
Answer: liver  
  
[10] Type A, B, and C viral infections may cause this inflammation of the liver. In some cases, this disease is spread by sexual contact and can be prevented by vaccine.  
  
Answer: hepatitis  
  
[10] Malfunction of the liver may cause bilirubin stores to increase and cause this condition which results in yellowing of the skin and eyes.  
  
Answer: jaundice  
  
<SCI, BIO>

6.  **In this work, Hygd rejects Heardred's [HERD-red] claim to the throne, and after Aeschere [ASH-hayr-ay] is killed, Hrunting [h-RUN-ting] is loaned to this poem's title figure as he dives into the sea. (\*)** Wiglaf helps kill a dragon in this epic poem, whose title Geat ["gate"] kills an underwater creature who had invaded the mead-hall Heorot [HAY-oh-roht] to avenge her son's death. For 10 points, name this Old English  
  
epic poem about the slayer of Grendel. Answer: Beowulf  
  
<LIT, BRIT>

For ten points each, give the following about proportional relationships in math.  
  
In a directly proportional relationship, a rise in one variable accompanies a rise in another variable. This term describes a relationship in which a rise in one variable causes a fall in the related variable.  
  
ANSWER: inverse (accept word forms and elaborations, such as “inversely proportional” or “inversely related”)  
  
Directly proportional relationships are often written as y = kx [”y” equals “k” “x”], with x and y being the related variables. This term describes direct relationships that combine more than two directly related variables, like y = kxz.  
  
ANSWER: joint relationship (accept word forms, like jointly related)  
  
The volume of a cube is proportional to the cube of its side length; as a result, if you triple the side length of a cube, it has this effect on the volume of the cube.  
  
ANSWER: the volume is 27 times larger than it originally was (accept descriptions thereof; prompt on generic answers of the form “it gets larger/bigger”)  
  
<SCI, OTHER>

7.  **Examples of these animals have been found with bite marks from Anomalocaris and all types of this animal possessed compound eyes with calcite lenses. The nearest living relatives of these creatures are (\*)** horseshoe crabs. These creatures became the most common animals on Earth during the Cambrian explosion, but went extinct at the end of the Permian period. For 10 points, name this diverse group of fossil animals named for their three-lobed bodies.  
  
Answer: trilobites (accept Trilobita)  
  
<SCI, BIO>

The harpsichord and pipe organ are generally incapable of changing this aspect of the music gradually during a piece, since pressing the keys harder does nothing. For ten points each,  
  
Give this musical concept, usually noted in sheet music by markings like “mp” or “f” under the staff.  
  
ANSWER: dynamics (accept dynamic level; accept volume; accept general descriptions of how loud and/or soft  
  
the music is)  
  
The notation “mp” notes a dynamic level of mezzo piano, while “f” describes this loud dynamic level. ANSWER: forte  
  
Gustav Mahler’s Seventh Symphony has the low strings play fortississississimo - that’s five f’s - and includes a variation on this direction, telling the player to “pluck so hard that the strings hit the wood.” This Italian term indicates that a string player should pluck, rather than bow, the strings.  
  
ANSWER: pizzicato  
  
<FA, AUDIO>

8.  **This conceptual group was supported by Athanasius’s description of homoousios, or a “single essence,” and was opposed by Arianism, which said that Jesus had instead been created by God. Belief in this group is declared in the (\*)** Nicene Creed, which says that there is a shared holiness between the Father, the Son, and the Holy Spirit. For ten points, name this group of three aspects of the Christian God.  
  
ANSWER: Holy Trinity (prompt on descriptions that include “Father, Son, and Holy Spirit” or “Holy Ghost;” prompton descriptions like the “unity of God”)  
  
<RMPSS, REL>

For ten points each, give the following about military theory.  
  
Sun Tzu, a general during China’s ancient Spring and Autumn Period, wrote this influential treatise on military tactics. Its 13 chapters include entries on using spies and moving armies.  
  
ANSWER: The Art of War  
  
In his treatise On War, 19th century Prussian general Carl von Clausewitz described this concept, the uncertainty that shrouds war. Applications of this idea may include a lack of intelligence about the enemy forces or, in a more literal sense, about the terrain of a battlefield.  
  
ANSWER: fog of war  
  
Von Clausewitz’s understanding of war was developed while he fought with the Russians in the Seventh Coalition against this French emperor. Clausewitz wasn’t able to stop him from winning at Ligny [li-NEE], but the Prussians did help beat this man at Waterloo.  
  
ANSWER: Napoleon Bonaparte (accept Napoleon I; do not accept “Napoleon III” or “Louis-Napoleon”)  
  
<RMPSS, PHIL>

9.  **This tissue is absent in the class Chondrichthyes [khan-DRIK-thee-eez], and this tissue's epiphyseal plates contain the Haversian canals. Hematopoietic [HEE-mat-oh-poh-YET-ik] stems cells form within long structures made of this tissue, which can suffer (\*)** rickets due to a lack of vitamin D or calcium. This tissue is made by osteoblasts and surrounds marrow. For 10 points, name this tissue that makes up the skeletal system.  
  
Answer: bone tissue (accept osseous tissue)  
  
<SCI, BIO>

According to some legends, this man reached Greece as a slave from Ethiopia. For ten points each,  
  
Name this ancient fabulist whose tales, such as “The Ant and the Grasshopper,” are catalogued in the Perry Index. ANSWER: Aesop  
  
In this fable by Aesop, a “slow and steady” animal defeats a fast and self-assured animal in a foot race. ANSWER: The Tortoise and the Hare  
  
In another of Aesop’s fables, a fox attempts to reach this fruit, but decides he didn’t want it anyway when he discovers it is too far away to get.  
  
ANSWER: grapes  
  
<LIT, OTHER>

10.  **This woman was the first president of the Ninety-Nines. With funding from Purdue, where she served as a technical adviser, this woman constructed a modified Model 10 Electra. A breakdown of communication between the Itasca and Fred (\*)** Noonan caused this woman’s failure to find Howland Island. For ten points, name this first woman to fly solo across the Atlantic Ocean, who disappeared over the Pacific in 1937 .  
  
ANSWER: Amelia Earhart  
  
<HIST, AMER>

Volcanoes have left their mark on the world's mythology. For 10 points each,  
  
[10] Name the Hawai'ian goddess of volcanoes, the daughter of Haumea. Answer: Tutu Pele (accept Madame Pele)  
  
[10]According to legend, the Yatsugatake Mountains were torn down for being taller than this volcano. This volcano, located on the island of Honshu, is Japan's tallest mountain.  
  
Answer: Mount Fuji (accept Fujiyama; accept Fuji-sama or Fuji-san)  
  
[10] Tt is theorized that the Minoan volcanic eruption may have caused the sinking of this legendary city, which Plato claimed had been sunk as punishment for trying to conquer Athens.  
  
Answer: Atlantis  
  
  
  
  
  
<RMPSS, MYTH>

11.  **A theorem in this branch of math is known as “pons asinorum,” or the “bridge of donkeys,” because weaker mathematicians could not get past it in a textbook. Forms of this branch of math that differ in whether Playfair’s (\*)** postulate is assumed may be called “elliptic” or “hyperbolic.” For ten points, name this branch of mathematics studied in Euclid’s [yoo-klid’s] Elements, which opens by defining objects like points, lines, and angles.  
  
ANSWER: geometry  
  
<SCI, OTHER>

Lady and Ghost are "dire" ones of these animals that appear in A Song of Ice and Fire. For 10 points each,  
  
[10] Name these wild animals. In a story by the Grimm brothers, one of these animals destroys the homes of three little pigs.  
  
Answer: wolves (accept wolf; accept canis lupus lupus)  
  
[10] Natty Bumppo is called a "wolf in the skin of a dog" in this second novel in James Fenimore Cooper's Leat ersto ing ales. This novel is named for Chingachgook, the final member of a Native American tribe.  
  
Answer: The Last of the Mohicans  
  
[10] Ulrich von Gradwitz and Georg Znaeym [GA -org ZN M] are trapped under a fallen tree and resolve their differences, only to be terrorized by the title wolves, in what short story by Saki?  
  
Answer: The Interlopers  
  
<LIT, OTHER>

12.  **In this poem, the shores of Acheron echo with the cries of self-serving people, and an angel opens the way to the City of Dis. This poem’s narrator sees fortune-tellers walking backwards, (\*)** adulterers blown toward and away from each other, and the traitors Brutus, Cassius, and Judas in the mouths of Lucifer as he follows the poet Virgil through nine “circles” of sinners. For ten points, name this first section of Dante’s Divine Comedy, which describes a journey through Hell.  
  
ANSWER: Inferno (prompt on The “Divine Comedy” or “Divina Comedia” before it is read)  
  
<LIT, EURO>

This network stretched from the South to Canada. For 10 points each,  
  
[10] Name this network of safehouses whose "conductors" transported slaves to freedom.  
  
Answer: The Underground Railroad  
  
[10] This slave nicknamed "Minty" led over ten groups through the Underground Railroad. During the trip, she allegedly threatened any slaves that tried to return to the South.  
  
Answer: Harriet Tubman (accept Araminta Ross)  
  
[10] Another conductor on the Underground Railroad was this African-American abolitionist who wrote My Bondage and My Freedom.  
  
Answer: Frederick Douglass (accept Frederick Augustus Washington Bailey)  
  
<HIST, AMER>

13.  **The region experiences Brewer-Dobson circulation. The sudden warming of this region occurs when the polar vortex reverses. The 1991 eruption of Mt. Pinatubo formed a global sulfur dioxide cloud in this layer, whose temperature actually increases with (\*)** greater altitude. Most commercial aircraft reach cruising speed within, for ten points, which layer of the atmosphere that contains the ozone layer and lies above the troposphere?  
  
ANSWER: stratosphere (accept ozone layer before “warming” is read; prompt on “atmosphere” before it is read)  
  
<SCI, OTHER>

In a play about two men who pretend to have this name, Gwendolen Fairfax and Cecily Cardew are deceived by men who pretend to share this title name. For ten points each,  
  
Identify this given name used by both Algernon Moncrieff and Jack Worthing. The play in which they appear is named for a pun that communicates the “importance of” having this name and behaving sincerely.  
  
ANSWER: Ernest (accept The Importance of Being Earnest)  
  
The Importance of Being Earnest is by this English playwright, who also wrote Lady Windermere’s Fan and was imprisoned for his homosexuality.  
  
ANSWER: Oscar Fingal O’Flahertie Wills Wilde  
  
Oscar Wilde was imprisoned in this location. The line “yet each man kills the thing he loves” is from Wilde’s Ballad of this place.  
  
ANSWER: Reading Gaol [”redding jail”]  
  
<LIT, EURO>

14.  **In 1970, a member of this family activated the War Measures Act and responded “Just watch me” to the question of how much liberty would be suspended to stop the October Crisis. Another member of this family stated “Because it’s (\*)** 2015” when asked why his cabinet was gender-balanced, shortly after he defeated Stephen Harper. For ten points, name this Canadian political family that includes former Prime Minister Pierre and current Prime Minister Justin.  
  
ANSWER: Trudeau family (accept Pierre Trudeau; accept Justin Trudeau after “2015” is read)  
  
<HIST, WORLD>

Answer the following about Shakespeare's poetry, for 10 points each.  
  
[10] Shakespeare's name is sometimes given to the "Elizabethan" style of these poems; that style is contrasted with the Italian style named for Petrarch. These poems have fourteen lines.  
  
Answer: sonnets (accept Elizabethan or Shakespearean sonnets; accept Italian or Petrarchan sonnets)  
  
[10] ne of Shakespeare's sonnets asks if the speaker could "compare thee" to a day in this season, saying "thou art more lovely and more temperate."  
  
Answer: summer (accept Shall I Compare Thee to a Summer's Day?)  
  
[10] "Shall I Compare Thee to a Summer's Day" is addressed to a "Fair outh," but another group of Shakespeare's sonnets were written for this black-haired woman, whose identity remains a mystery.  
  
Answer: the Dark Lady (prompt on an incomplete answer, such as "Lady" alone)  
  
<LIT, BRIT>

15.  **One example of these species, cobalt-60, is the major radiation source for cancer therapy. The extra mass in heavy water comes from deuterium, a hydrogen example of these atoms. Another example of these elements is denoted (\*)** "fourteen" and is used in carbon dating, and the atomic mass reported on a periodic table is a weighted average of these chemical variants. For 10 points, what is the name given to elements with the same number of protons but differing numbers of neutrons?  
  
Answer: isotopes  
  
<SCI, CHEM>

The protagonist of this work is described as a “prince of yesterday” and a “fools’ pope.” For ten points each, Name this Victor Hugo novel about Quasimodo, the title deformed bell-ringer of a Paris cathedral.  
  
ANSWER: Hunchback of Notre Dame (accept Notre-Dame de Paris)  
  
Quasimodo falls deeply in love with this young girl who was switched with him at birth by the Romani. This woman is arrested for witchcraft while performing with her goat, Djali.  
  
ANSWER: La Esmeralda (accept Agne`s)  
  
Esmeralda is considered a demoness by this Archdeacon of Notre Dame. This character adopts Quasimodo and orders him to kidnap Esmeralda.  
  
ANSWER: Claude Frollo  
  
<LIT, EURO>

16.  **The speaker of one of this man’s poems asks the title creature, which is “perched upon a bust of Pallas,” “is there balm in Gilead?” The narrator of a short story by this author hears a sound like a (\*)** “watch enveloped in cotton” after killing his neighbor and hiding the body under his floorboards. In a poem by this man, the title animal repeatedly tells the grieving speaker “Nevermore.” For ten points, name this author of “The Raven” and “The Tell-Tale Heart.”  
  
ANSWER: Edgar Allan Poe  
  
<LIT, AMER>

This god was dropped from Mount Olympus shortly after his birth because his mother was so horrified by his looks. For 10 points each,  
  
[10] Name this Greek god of smithing who was permanently crippled by his fall from Olympus even though he was caught by a nymph.  
  
Answer: Hephaestus (do not accept Vulcan)  
  
[10] This nymph found and raised Hephaestus. She later gave birth to Achilles, and dipped all but his ankle in the river Styx in hopes of providing him with invincibility.  
  
Answer: Thetis  
  
[10] After he returned to Olympus, Hephaestus married this unfaithful goddess of love. Hephaestus trapped Ares and this goddess together with a golden net.  
  
Answer: Aphrodite (do not accept Venus)  
  
<RMPSS, MYTH>

17.  **A story by this man inspired Shakespeare’s play The Two Noble Kinsmen. A character created by this man is sent on a quest to find what women want and learns the answer is sovereignty. In another story by this man, Arcite and Palamon duel over Emily. “The (\*)** Knight’s Tale” and “The Wife of Bath’s Tale” are in this man’s collection about pilgrims who tell stories on the way to Thomas Becket’s shrine. For ten points, name this Middle English author of The Canterbury Tales.  
  
ANSWER: Geoffrey Chaucer  
  
<LIT, BRIT>

Cholera can be a fatal illness because it reverses the direction of this process across the lining of the small intestine. For ten points each,  
  
Name this type of passive transport by which water diffuses across a semipermeable membrane. The reverse form of this process is used to purify drinking water.  
  
ANSWER: (forward and/or reverse) osmosis  
  
The rapid movement of water across the cell membrane is achieved through these channel proteins that are very abundant in nephrons.  
  
ANSWER: aquaporins  
  
Nephrons are the primary unit of this organ, which filters blood. Patients who have damaged or lost one of these bean-shaped organs may undergo dialysis.  
  
ANSWER: kidneys  
  
<SCI, BIO>

18.  **In this author's first novel, Zeebo defends two children against Lula in First Purchase Church. In one of this author's works, Miss Maudie mocks Stephanie Crawford when she claims to have seen a man who leaves trinkets in a tree for (\*)** Jem and his sister. This author's recent second novel concerns the adult Jean Louise, who returns to Maycomb, Alabama to visit her father, Atticus Finch. For 10 points, name this author of Go Set a Wat man and o Kill a Mo ingbird.  
  
Answer: (Nelle) Harper Lee  
  
<LIT, AMER>

This system of the body can be divided into the peripheral and central components. For 10 points each,  
  
[10] Name this system that initiates movement by transmitting signals to the muscles. It includes the brain and spinal cord.  
  
Answer: nervous system  
  
[10] Each nerve cell consists of multiple dendrites that lead to a soma which passes signals to this long, slender fiber. This section of a neuron is often studied in squid where it can be 1 millimeter thick.  
  
Answer: axon  
  
[10] Also called a nerve impulse, these events transmit signals down neurons by rapidly moving ions, thereby causing a change in voltage across the cell's membrane.  
  
Answer: action potentials  
  
<SCI, BIO>

19.  **A blue and yellow one of these objects appears in Rembrandt's The Nightwatch behind a girl in yellow, and Jasper Johns painted a "White" one of these. Delacroix painted a woman holding a three-colored one of these in (\*)** Liberty Leading the People, and a red-and-white striped one with a blue corner is held behind the title general in the patriotic Washington Crossing the Delaware. For 10 points, name these banners that sometimes represent a nation.  
  
Answer: flags  
  
<FA, VISUAL>

Answer the following about Jesus’s parable of the Pearl of Great Price, for ten points each.  
  
The parable appears in this gospel, the first book of the New Testament. This book is named for its apparent author, and precedes the books of Mark, Luke, and John.  
  
ANSWER: the Book of Matthew  
  
The Pearl of Great Price also appears in an apocryphal Gnostic gospel attributed to this “doubting” disciple, who could not believe in the resurrection until he had felt Jesus’s wounds.  
  
ANSWER: Saint Thomas the Apostle (accept Doubting Thomas)  
  
The Pearl of Great Price is the title of a collection of scriptures and teachings important to this church, which was founded by Joseph Smith and is headquartered in Salt Lake City.  
  
ANSWER: The Church of Jesus Christ of Latter-Day Saints (accept LDS Church or Latter-Day Saint Movement; accept Mormon church; accept mormons or mormonism)  
  
<RMPSS, REL>

20.  **This actor was cast in Cursed Part 3 while waiting tables at Bubba Gump's, and he plays a man who acts out scenes from Road House to entertain a debate watch party. This actor portrayed a wildlife specialist on Isla Nublar who helps Zach and Gray survive, and this man pilots (\*)** Milano and receives "Awesome Mix, Vol 1" from his dying mother in his role as Star-Lord. For 10 points, name this actor who played Andy on Parks and Rec and velociraptor trainer Owen Grady in Jurassic World.  
  
Answer: Chris(topher) Michael Pratt  
  
<TRASH, POP CULT>

This author spent two years, two months, and two days living in the woods in Massachusetts. For 10 points each,  
  
[10] Identify this American author, who promoted self-reliance in his book Walden.  
  
Answer: Henry David Thoreau  
  
[10] Henry David Thoreau belonged to this American literary movement, which promoted intellectual freedom and independence from government and society.  
  
Answer: Transcendentalism (accept word forms like Transcendentalist)  
  
[10] Thoreau protested government presence in his life by not paying his taxes and by writing this essay, in which he rails against slavery and the Mexican-American War and argues that the "government is best which governs least."  
  
Answer: Civil Disobedience (accept Resistance to Civil Government)  
  
<RMPSS, PHIL>