QQBC Packet 6

1.  **This value is the real part of all known non-trivial zeroes of the Riemann zeta function. Expressed in octal as 0 . 4, this is the reduced result of dividing the radius of a circle by the diameter. When this is used as an exponent, it is equivalent to taking the (\*)** square root. For ten points, name this fraction, which is multiplied by width and height in the formula for area of a triangle and is equal to 0 . 4999, with the nine repeating.  
  
Answer: one-half (accept equivalents like point five or one over two)  
  
<SCI, OTHER>

Name some regions of the afterlife that share a name with the gods who governed them, for ten points each. This is the name of both the god who governed the Greek underworld and that underworld itself.  
  
ANSWER: Hades  
  
This world of the Norse afterlife was named for the daughter of Loki, and was home to those who died of age or sickness rather than in battle.  
  
ANSWER: Helheim  
  
In Aztec myth, Xolotl guided the dead to this underworld. Quetzalcoatl used the bones from this underworld to create the fifth version of the world.  
  
ANSWER: Mictlan  
  
<RMPSS, MYTH>

2.  **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>

For ten points each, give the following about conservation laws in physics.  
  
This quantity’s classical form is computed as mass times velocity. The conservation of this quantity can be used to calculate trajectories of objects following a collision.  
  
ANSWER: linear momentum (do not accept or prompt “angular momentum”)  
  
By itself, mass is not conserved, but there is a conservation law that pairs mass with this quantity. This quantity was related to mass in Albert Einstein’s famous equation “E equals m c squared”.  
  
ANSWER: energy (do not accept speed of light)  
  
The angular momentum of a system is conserved unless it is acted on by this type of rotational force.  
  
ANSWER: torque  
  
<SCI, PHYS>

3.  **According to the Red Queen hypothesis, predators and prey force each other to develop these traits. By closely matching with local food sources, the beaks of Galapagos finches qualify as these traits. Opposable (\*)** thumbs and a bipedal stance are among the most important of these in humans, leading to an increase in fitness by natural selection. For ten points, name this type of trait that develops to help an organism survive in its environment.  
  
ANSWER: adaptations (accept word forms like adaptive traits; prompt on less specific answers such as “useful traits” or “helpful traits”)  
  
<SCI, BIO>

This mountain range stretches from Southeastern Canada to Alabama. For 10 points each,  
  
[10] Name this mountain range which separated the Thirteen Colonies from "Indian Reserve."  
  
Answer: Appalachian Mountains  
  
[10] This proclamation set the Appalachian Mountains as the boundary for the Thirteen Colonies. However, despite this proclamation the colonies expanded westward anyway.  
  
Answer: Proclamation of 1763  
  
[10] The Proclamation of 1763 was issued by the British King who ruled during the American Revolutionary War.  
  
Answer: George III  
  
<HIST, AMER>

4.  **This artist painted a muddled gray portrait of his wife, Camille, on her deathbed, and painted her holding a parasol in a field in Argenteuil [ahr-zhon-TWEE]. He created a series of paintings of haystacks, and of an arched green (\*)** bridge in his garden in Giverny [zhee-vayr-NEE]. He depicted shadowy boats and a low, orange sun over a harbor in a work that named the Impressionist movement. The painter of Waterlilies is, for 10 points, what French creator of lmpression, Sunrise?  
  
Answer: (0scar-)Claude Monet  
  
<FA, VISUAL>

When following the scientific method, one of these statements can be tested by performing an experiment. For 10 points each,  
  
[10] Identify the term for this kind of prediction about the outcome of an experiment or a process in nature. These statements are often written in "If, Then" form.  
  
Answer: hypothesis (accept hypotheses)  
  
[10] When a hypothesis has been repeatedly confirmed by experimentation or observation, it becomes one of these, a well-supported explanation of how nature works. Einstein famously devised one of relativity.  
  
Answer: theory  
  
[10] The process of turning a hypothesis into a theory often involves this type of reasoning, in which specific cases are used to make a general rule. This type of reasoning allowed Kepler to determine the elliptical orbits of planets after observing the movement of Mars.  
  
Answer inductive reasoning (accept induction)  
  
<SCI, OTHER>

5.  **This figure tied stones to his feet to recover a plant at the bottom of the sea which, according to Utnapishtim, would make him young again. Humbaba, the guardian of the Cedar Forest, was defeated by this hero and his friend (\*)** Enkidu. After this hero rejected her advances, Ishtar sent the Bull of Heaven to kill this King of Uruk. For ten points, name this Babylonian demigod, the subject of a namesake epic.  
  
ANSWER: Gilgamesh (accept Bilgamesh)  
  
<LIT, OTHER>

String instruments represent this character, who declares “Boys like me are not afraid of wolves!” and, when one comes out of a forest, catches it in a noose and takes it to the zoo. For ten points each,  
  
Name this young boy, the title character of an orchestral composition for children. ANSWER: Peter (accept Peter and the Wolf)  
  
Peter and the Wolf was composed by this Soviet composer, whose other works include The Love for Three Oranges. ANSWER: Sergei Prokofiev  
  
In Peter and the Wolf, this double reed instrument represents the duck, which is swallowed whole by the wolf.  
  
ANSWER: oboe  
  
<FA, AUDIO>

6.  **Philip II expanded this city’s Holy Innocents’ cemetery, whose overflowing mass graves were later replaced by a series of catacombs. Jim Morrison, Oscar Wilde, and Frederic Chopin are buried in this city’s (\*)** Pe`re Lachaise [pair la-shez] Cemetery. The oldest eternal flame in Europe is located in this city beneath a structure commissioned by Napoleon Bonaparte. The Arc de Triomphe is located in, for ten points, what capital of France?  
  
 ANSWER: Paris  
  
<HIST, EURO>

This continent is home to the Drakensberg, a 600 mile long formation in the Great Escarpment, and Mount Kenya, which features over a dozen peaks. For ten points each,  
  
Name this continent whose highest peak, Kilimanjaro, stands over Tanzania. ANSWER: Africa  
  
A few different African mountains in Morocco have been proposed as the legendary southern “Pillar of Hercules;” the pillars are on either side of this narrow waterway that separates the Mediterranean Sea and Atlantic Ocean.  
  
ANSWER: Strait of Gibraltar  
  
On the opposite side of the continent, Table Mountain overlooks this city, the second most populous in South Africa after Johannesburg. South Africa’s Parliament meets in this coastal city.  
  
ANSWER: Cape Town  
  
<GEO, GEO>

7.  **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 mythical figure’s parents were either King Lot and Morgause or Morgaine and her half-brother. For ten points each,  
  
Name this figure from British legend, who mortally wounded a king at the Battle of Camlann, where this man was killed.  
  
ANSWER: Mordred (accept Medraut; accept Modred)  
  
Mordred betrayed this legendary king, who established the Round Table, went to war with Lancelot over his wife Guinevere, and was transported to Avalon after being mortally wounded at the Battle of Camlann.  
  
ANSWER: King Arthur Pendragon  
  
This mystic was unable to protect Arthur at the Battle of Camlann because he had been imprisoned in a cave by the sorceress Nimue, who had been this man’s student.  
  
ANSWER: Merlinus Ambrosius (accept Myrddin Emrys; prompt on “Emrys” or “Ambrosius”)  
  
<RMPSS, MYTH>

8.  **This man allowed his navy to attack neutral ships in the Milan Decree, and that decree was a part of this man's Continental System which targeted Great Britain. Despite winning the Battle of (\*)** Borodino, this man was forced to retreat from Russia. This man was defeated at the Battle of Waterloo and, as a result, was exiled to St Helena. For 10 points, name this French emperor who engulfed Europe in his namesake wars. Answer: Napoleon Bonaparte (accept Napoleon I; do not accept Napoleon III)  
  
 <HIST, EURO>

This painting's subject looks out at the viewer from a black backdrop and wears a white-collared golden dress. For 10 points each,  
  
[10] Name this painting of a young woman, who wears a blue and yellow headdress. This work is titled after the shining white piece of jewelry that hangs down to the subject's collar.  
  
Answer: Girl with a Pearl Earring  
  
[10] This painter created Girl Wit a Pearl Earring and a misty painting of his hometown, View o Del t. Answer: Johannes Vermeer (accept Jan or Johan Vermeer)  
  
[10] Vermeer was a painter from this northern European nation with capital at Amsterdam. Answer: Kingdom of the Netherlands (accept Dutch Republic)  
  
<FA, VISUAL>

9.  **An example of this phenomenon involving flagellate protists allows termites to digest wood. Mycorrhizae are an example of this association in plants. The exchange of water and nutrients between fungi and algae in lichens represents this (\*)** relationship, as does the two-way protection of anemones and clownfish. A flower and the bee that pollinates it show, for ten points, what kind of symbiotic relationship in which both species benefit?  
  
ANSWER: mutualism (accept symbiosis or symbiotic before “symbiotic” is read; accept word forms)  
  
<SCI, BIO>

Phase diagrams predict this state of matter should exist at low temperatures and high pressures. For ten points each,  
  
Name this state of matter that has definite shape and volume. Matter in this state may be amorphous, but often has a crystalline structure.  
  
ANSWER: solid  
  
At low pressure, phase diagrams show that solids can transition directly into gases by this phase change. Dry ice becomes carbon dioxide gas by this phase change.  
  
ANSWER: sublimation (accept word forms like subliming)  
  
The boundary between liquid and gas states on a phase diagram ends at this point. Carbon dioxide above this point can be used to decaffeinate coffee.  
  
ANSWER: critical point  
  
<SCI, CHEM>

10.  **The Gospel of James lists this figure’s parents as Joachim and Anne, who presented this Theotokos at the Temple in Jerusalem. When Elizabeth saw this figure, her baby jumped in her womb, foretelling (\*)** John the Baptist’s relation to this immaculately conceived woman’s son. Gabriel said “be not afraid” to this woman, who traveled to Bethlehem with her husband, Joseph. For ten points, name this biblical mother of Jesus.  
  
ANSWER: Mary (accept Mother Mary; accept Blessed Virgin Mary)  
  
<RMPSS, REL>

Name the following about Pixar films, for 10 points each.  
  
[10] The cowboy Woody struggles to see eye-to-eye with Buzz Lightyear in this first in a series of Pixar movies about the inhabitants of Andy's room.  
  
Answer: Toy Story  
  
[10] Bob Parr and his family of superheroes must band together to take down superfan-turned-evil-genius, Syndrome, in this Brad Bird-directed film.  
  
Answer: The Incredibles  
  
[10] Patton Oswalt voiced this rodent, the protagonist of Ratatouille. Tn the film, this character uses Linguini as a puppet to cook at the restaurant formerly headed by Auguste Gusteau.  
  
Answer: Remy  
  
<TRASH, POP CULT>

11.  **Twenty-five episodes of this show featured performances by Julia Collins, and this show was originally hosted by Art Fleming. The author of the book Brainiac and this show's top grossing champion, (\*)** Brad Rutter, were defeated by Watson, a computer, in 2011 . Ken Jennings has the most wins on this game show, whose format includes three "daily doubles." For 10 points, name this quiz show hosted by Alex Trebek. Answer: Jeopardy!  
  
 <TRASH, POP CULT>

This author set many of his works in the fictional Yoknapatawpha County [yawk-nah-pah-taw-fah county]. For ten points each,  
  
Name this Mississippi author of As I Lay Dying and Absalom, Absalom! ANSWER: William Cuthbert Faulkner  
  
This William Faulkner novel is narrated by Benjy and Quentin Compson, who are obsessed with their sister Caddy. ANSWER: The Sound and the Fury  
  
Most of the portions of the novel narrated by Quentin take place in this US state. Quentin commits suicide by jumping into the Charles River while attending Harvard University in this state.  
  
ANSWER: Massachusetts  
  
<LIT, AMER>

12.  **One of these objects named Themisto was discovered in 1975, but then lost for the next 25 years. The innermost of these objects form the Amalthea group, while the main group contains the most cratered and most volcanically active bodies in the (\*)** Solar System. One of these bodies, which may have a water ocean beneath its icy crust, is called Europa. Galileo discovered the first four of, for ten points, what satellites that orbit the fifth planet from the Sun?  
  
ANSWER: moons of Jupiter (accept Jovian moons; accept natural satellites of Jupiter or Jovian natural satellites before “satellites” is read; prompt on partial answers)  
  
<SCI, OTHER>

These disturbances can be longitudinal or transverse. For 10 points each,  
  
[10] Name this type of motion, also called an oscillation. These have periods and frequencies that can be determined by graphing their crests and troughs.  
  
Answer: waves  
  
[10] According to the principle of superposition, when the crest of one wave meets the trough of another wave of equal amplitude, the two cancel each other out by the destructive type of this phenomenon.  
  
Answer: interference  
  
[10] An interference pattern can result when a wave passes through a narrow slit and experiences this phenomenon, seen whenever a wave bends around the edge of an object. For optical waves, this process displays alternating fringes of light and dark.  
  
Answer: diffraction  
  
<SCI, PHYS>

13.  **Symbols in this faith include the KRC and ARC triangles, and Operating Thetan can be achieved after becoming Clear in this religion through the use of E-meters and auditing. "The Wall of Fire" in this religion is the hydrogen bombing of millions of people by galactic dictator (\*)** Xenu; that story was told by this religion's founder, science fiction author L Ron Hubbard. For 10 points, name this religion, whose adherents include John Travolta and Tom Cruise.  
  
Answer: Church of Scientology  
  
<RMPSS, REL>

Name the following dramatic terms that are important to Romeo and Juliet, for 10 points each.  
  
[10] Romeo and Juliet was printed in Shakespeare's first collection of plays issued in this format, which is larger than a quarto.  
  
Answer: folio (accept The First Folio)  
  
[10] Romeo and Juliet is this type of play, contrasted with Shakespeare's histories and comedies. In this type of play, the heroes' stories end sadly.  
  
Answer: tragedy  
  
[10] In the climactic scene of Romeo and Juliet, the audience knows that Juliet has taken a sleeping potion, rather than poison, but Romeo does not; that is an example of what literary device?  
  
Answer: dramatic irony (prompt on "irony")  
  
<LIT, BRIT>

14.  **This character narrates a novel in which he helps investigate Jake and Jubiter Dunlap, and another novel in which he flies to Africa in a hot air balloon. This character comes between the Shepherdsons and Grangerfords in one novel, in which he meets the (\*)** Duke and the Dauphin. This boy runs away from the Widow Douglas by rafting down the Mississippi River with a former slave, Jim. For 10 points, name this character created by Mark Twain, a friend of Tom Sawyer.  
  
Answer: Huckleberry Finn  
  
<LIT, AMER>

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>

15.  **In ancient times, the southern shore of this sea was split between Pontus, Paphlagonia, and Bithynia. The Strait of Kerch connects it to the oil-rich Sea of Azov, surrounding a peninsula home to (\*)** Yalta and Sevastopol. The Dniester [NEE-stur], Dnieper [NYE-pur], and Danube Rivers flow into the west shores of this sea. The Crimean Peninsula juts into, for ten points, what Asian sea north of Turkey?  
  
Answer: Black Sea  
  
<GEO, GEO>

For ten points each, give the following about “Buffalo Bill” Cody.  
  
As a teenager, Cody worked as a rider for this service that, despite only operating for 1 . 5 years, transmitted tens of thousands of messages between Missouri and California in the pre-telegraph era.  
  
ANSWER: Pony Express  
  
Buffalo Bill Cody worked with this sharpshooting woman to help popularize his show; that history inspired an Irving Berlin musical about this woman “[getting] her gun.”  
  
ANSWER: Annie Oakley (prompt on “Annie” and/or “Annie Get Your Gun”)  
  
Another member of Buffalo Bill’s Wild West show was this Lakota chief who, with Crazy Horse, defeated General Custer at the Battle of Little Bighorn.  
  
ANSWER: Sitting Bull (accept Thathanka Iyotake)  
  
<HIST, AMER>

16.  **The Rock Edicts were created by one follower of this religion, and that follower, Ashoka the Great, converted to this religion after the bloodshed of the Kalinga War. Anagarika (\*)** Dharmapala helped revive this religion through the Maha Bodhi Society. This religion was partially revived in India when the fourteenth Dalai Lama fled Tibet. For 10 points, name this nirvana-seeking religion which follows the teachings of Gautama.  
  
Answer: Buddhism  
  
<RMPSS, REL>

The protagonist of this novel muses about where ducks go in the winter after visiting Central Park. For ten points each,  
  
Name this novel, in which Holden Caulfield wanders around New York City after being expelled from Pencey Prep. ANSWER: The Catcher in the Rye  
  
The Catcher in the Rye is by this American author who also created Franny and Zooey, members of the Glass family. ANSWER: JD Salinger (accept Jerome David Salinger)  
  
Holden purchases the record “Little Shirley Beans” for this character. At the end of the novel, Holden watches as this character, his sister, rides a carousel in the rain.  
  
ANSWER: Phoebe Caulfield  
  
<LIT, AMER>

17.  **A b-minor work with this quality includes a short score of a third-movement scherzo. An opera with this quality was edited by Franco Alfano, whose work was not preserved when Arturo Toscanini premiered it. Franz Sussmayr worked on another of these works, Mozart's (\*)** Requiem mass. Puccini's opera Turandot suffered from, for 10 points, what quality, which names Franz Schubert's eighth symphony, a work that was left with only has two movements?  
  
Answer: works left unfinished by the composer (accept descriptions such as "incomplete musical works;" prompt on "symphonies," "eighth symphonies," or "symphonies by Franz Schubert" before "opera" is read; prompt on "works by Schubert" until "Franco Alfano" is read)  
  
<FA, AUDIO>

This woman left Virginia with John Rolfe, but died before she could return home. For 10 points each,  
  
[10] Name this Native American woman, who interacted with the Jamestown settlers. After her conversion to Christianity, this woman took the name Rebecca.  
  
Answer: Pocahontas (accept Matoaka; accept Amonute)  
  
[10] Pocahontas allegedly saved this Englishman from her father's club. However, most historians agree that the event never happened.  
  
Answer: John Smith  
  
[10] Pocahontas' father was this Native American chief who led a namesake tribe. Answer: Powhatan (accept Wahunsenacawh)  
  
<HIST, AMER>

18.  **This author asks “Doth God exact day-labour, light denied?” in a poem that ends “They also serve who only stand and wait.” In another work by this author of “When I Consider How my Light is Spent,” a character proclaims “Better to (\*)** reign in Hell, than serve in Heaven” after failing in his rebellion against God. Adam and Eve are banished from Eden in a work by, for ten points, what English author who was blind when he wrote Paradise Lost?  
  
ANSWER: John Milton  
  
<LIT, BRIT>

Some chemicals are used as weapons. For 10 points each,  
  
[10] Soldiers were burned in World War I when this gas, containing impure sulfur, was dropped from planes. Its yellow-brown color gave this substance its name.  
  
Answer: mustard gas (accept sulfur mustards)  
  
[10] The first poison gas deployed in World War I consisted of this gaseous element. In small quantities, this element can be used to disinfect water supplies.  
  
Answer: chlorine (accept Cl or Cl2)  
  
  
  
  
  
[10] This organophosphorus nerve agent causes a rapid loss in muscle function and was infamously used in a Tokyo subway attack in 1995 .  
  
Answer: sarin (accept GB)  
  
<SCI, CHEM>

19.  **Rulers of this city included Nabopolassar, who allied with the Medes to fight the Assyrians in the 7th century BCE. Although archaeologists haven’t found evidence of it, a terraced building in this city was legendarily built on the orders of (\*)** Nebuchadnezzar II, whose wife was homesick for greenery. “An eye for an eye” inspired many of Hammurabi’s laws for, for ten points, what ancient Mesopotamian city that was home to the Hanging Gardens?  
  
ANSWER: Babylon  
  
<HIST, OTHER>

This man declared “segregation now, segregation tomorrow, segregation forever,” then tried to back that up by standing in the door to block two black students from entering his state’s university in Tuscaloosa. For ten points each,  
  
Name this politician. His wife, Lurleen, ran for governor when he was term-limited in 1966 . ANSWER: George Wallace  
  
George Wallace was the governor of this southern state. His “segregation” quote was made during his inauguration address from this state’s capital, Montgomery.  
  
ANSWER: Alabama  
  
As governor, Wallace was a staunch supporter of this type of law, named for a racist caricature. These laws required segregation in public places.  
  
ANSWER: Jim Crow laws  
  
<HIST, AMER>

20.  **5261 Eureka is a trojan of this body, whose regions include the Hellas Planitia and the Valles Marineris, the latter being named for the Mariner mission. Another mission to this planet landed using a "sky crane" but never reached its volcano, (\*)** Olympus Mons, as it focused on evidence of water. This destination of the Curiosity rover has moons Phobos and Deimos. To date, no evidence of life has yet been found on, for 10 points, what so-called "Red Planet?"  
  
Answer: Mars (prompt on the "Red Planet" before it is read)  
  
<SCI, OTHER>

For ten points each, give the following about the literature surrounding America’s deadliest war.  
  
Name this novel about Henry Fleming’s experience as a Union soldier in the Civil War. In this work, Henry talks to the Tattered Soldier moments before the latter’s death.  
  
ANSWER: The Red Badge of Courage  
  
The aftermath of the Civil War is explored in this Toni Morrison novel which focuses on the haunting of 124 Bluestone Road by Sethe’s murdered child.  
  
ANSWER: Beloved  
  
According to legend, Abraham Lincoln called this author the “little woman who started the big war,” because she exposed the horrors of slavery in Uncle Tom’s Cabin.  
  
ANSWER: Harriet Beecher Stowe  
  
<LIT, AMER>