QQBC Packet 5

1.  **According to Gibbs' phase rule, a pure substance at this point has zero degrees of freedom. Polymorphic substances, which exhibit multiple different solid forms, can have more than one of these points. Helium-4 has two of these points owing to its (\*)** superfluid behavior. For 10 points, name this point at which all three phases of a substance-solid, liquid, and gas-can exist in a state of thermodynamic equilibrium.  
  
Answer: triple point (do not prompt or accept critical point)  
  
<SCI, CHEM>

In this work, subtitled Mutiny of the Hispaniola, Billy Bones leaves his sea chest to a young boy. For 10 points each,  
  
[10] Name this adventure novel by Robert Louis Stevenson, in which Jim Hawkins travels to find pirate treasure.  
  
Answer: Treasure Island; or, The Mutiny of the Hispaniola  
  
[10] This ship captain pays Squire Trelawney to hire sailors to help him find the treasure. He ends up with a boatload of pirates who mutiny against this man.  
  
Answer: Captain Alexander Smollett  
  
[10] This peg-legged, parrot-toting cook on Smollett's ship leads the mutiny to claim the treasure. Answer: Long John SIlver  
  
 <LIT, BRIT>

2.  **One of these organizations was created by John Lewis and merged with one created by Samuel Gompers. Another one of these organizations was led by Terence Powderly and lost its public support after the (\*)** Haymarket Square Riots. A large one of these organizations is headquartered in Detroit, and its members work for companies such as Ford. For 10 points, name these organizations, exemplified by the United Auto Workers, which protects the rights of workers.  
  
Answer: labor unions (accept trade unions)  
  
<HIST, AMER>

These vortexes commonly touch down in their namesake "alley" in the central US. For 10 points each,  
  
[10] Name these rotating columns of air that are rated using the enhanced Fujita scale.  
  
Answer: tornadoes  
  
[10] Tornadoes are spawned by these rotating thunderstorms that produce a "hook echo" on radar. Answer: supercells (accept mesocyclones)  
  
[10] When tornados pass over a sea or lake they become this type of vortex that may cause fish to rain down from the sky.  
  
Answer: waterspout  
  
<SCI, OTHER>

3.  **This work's protagonist sees a "violet-purple" glow near London, which turns out to be made by a "red weed" that is wiped out at the end of this novel. The protagonist of this novel encounters creatures with "v-shaped mouths" and large eyes, who kill Ogilvy with a (\*)** "Heat-Ray" and use tripod fighting machines to collect humans in this novel. Earth's bacteria destroy the Martian invaders in, for 10 points, what novel by HG Wells?  
  
Answer: The War of the Worlds  
  
<LIT, AMER>

This text includes the "Cow" sura, and is divided into ayat. For ten points each,  
  
[10] Name this most holy text of Islam, which recounts Allah's revelations to Muhammad.  
  
Answer: al-Quran  
  
[10] The Quran was revealed to Muhammad by this archangel, who gave a revelation to Mary in Christianity. Answer: Jibreel (accept Gabriel)  
  
[10] This other holy text of Islam collects the teachings and sayings of Muhammad and his disciples.   
  
Answer: aHadith  
  
<RMPSS, REL>

4.  **New phosphodiester bonds are formed by ligase enzyme at the end of this process. E.coli grown in different isotopes of nitrogen were used by Meselson and Stahl to show that this process is semi-conservative. This process generates both a (\*)** leading and lagging strand, the latter containing Okazaki fragments. For 10 points, name this biological process in which polymerase pairs adenine to thymine and guanine to cytosine to duplicate genetic material.  
  
Answer: DNA replication  
  
<SCI, BIO>

No fictitious forces appear in reference frames named for this property. For 10 points each,  
  
[10] Name this tendency of an object to remain in uniform motion until it is acted on by an outside force. Answer: inertia (accept inertial reference frames)  
  
[10] This English scientist described inertia in the first of his three laws of motion. He also invented calculus independently of Leibniz.  
  
Answer: Isaac Newton  
  
[10] This law formulated by Newton states that the rate of change of an object's temperature is proportional to the difference between its current temperature and the surrounding temperature.  
  
Answer: Newton's Law of Cooling  
  
<SCI, PHYS>

5.  **A controversial "Isleworth" version of this painting includes two flanking columns in the foreground. A sfumato view of a winding road provides the backdrop for this portrait, whose subject may be the wife of Francesco (\*)** Giocondo. The subject's hands are folded on the arm of her wooden chair; she wears a veil over her dark hair and has no visible eyebrows. For 10 points, name this painting by Leonardo da Vinci of a woman with a mysterious smile.  
  
Answer: Mona Lisa (accept La Gioconda before "Giocondo" is read)  
  
<FA, VISUAL>

The ruler of this religion’s underworld is often depicted in a black suit and a top hat. For ten points each,  
  
Name this religion, primarily based in Haiti, that developed after West African slaves were forced to convert to Christianity. Contrary to popular belief, members of this religion do not create namesake dolls to stab with pins.  
  
ANSWER: Haitian Voodoo (accept Vaudou; accept Vodun; accept Vodoun)  
  
In Voodoo, Catholic saints were syncretized with these spirits, such as Papa Legba, who serve the creator god. These spirits can be summoned by Voodoo priests and can endow people with gifts.  
  
ANSWER: Loa (accept Lwa)  
  
Loa [loh-ah] serve this creator god, whose name is derived from Haitian creole for “good god.” ANSWER: Bondye  
  
<RMPSS, REL>

6.  **This novel’s protagonist steals a Bible from a woman who lights herself ablaze. In this novel, the pill- popping Mildred’s request to buy a fourth wall-sized television discourages her husband, who is encouraged by (\*)** Clarisse McClellan until she is hit by a car. Professor Faber helps a fireman escape from the Mechanical Hound in, for ten points, what Ray Bradbury novel about the book-burning Guy Montag?  
  
ANSWER: Fahrenheit 451  
  
<LIT, AMER>

This leader was attacked and denounced in the "Secret Speech." For 10 points each,  
  
[10] Name this ruler, who outmaneuvered Leon Trotsky to succeeded Vladimir Lenin. This man led his country through World War II.  
  
Answer: Joseph Stalin (accept Ioseb Dzhugashvili)  
  
[10]The "Secret Speech" was given by this successor to Stalin. During a meeting with the United Nations, this leader allegedly banged his shoe on a table in protest.  
  
Answer: Nikita Sergeyevich Khrushchev  
  
[10] Both Stalin and Khrushchev were leaders of this communist state, whose last leader was Mikhail Gorbachev.  
  
Answer: United Soviet Socialist Republics (accept Soviet Union; accept CCCP)  
  
<HIST, EURO>

7.  **The spin form of this phenomenon causes proton NMR spectra to show spacings between peak lines. Molecules with a specific kind of this relationship are labeled R- or S-. The position of groups with respect to a double bond can be labeled cis or (\*)** trans in the stereo type of this property. N-butane and isobutane are examples of, for ten points, what property of compounds with the same molecular formula but different structures?  
  
ANSWER: isomers (accept word forms such as isomerism)  
  
<SCI, CHEM>

This symbol appears with pi in the exponent of the e in Euler’s [oy-ler’s] formula. For ten points each,  
  
Name this letter that symbolizes the basic unit of imaginary numbers, the square root of negative 1 . ANSWER: i  
  
The imaginary numbers combine with the real numbers to form this class of numbers, usually written in a + bi [”a” plus “b” “i”] form.  
  
ANSWER: complex numbers  
  
If both a and b in a complex number are integers, the number belongs to a class named for this German mathematician who proved the fundamental theorem of algebra in 1799 .  
  
ANSWER: Carl Friedrich Gauss (accept Gaussian integers)  
  
<SCI, OTHER>

8.  **After the defeat of Nazi Germany, this man suggested attacking the Soviet Union in what became known as "Operation Unthinkable." While in Missouri, this man gave his "Sinews of Peace" speech, in which he coined the term (\*)** "Tron Curtain" to denote areas dominated by Soviet influence, and in an address to parliament this man stated he had nothing else to give but "blood, toil, tears, and sweat." For 10 points, name this man who succeeded Neville Chamberlain as Prime Minister of the United Kingdom.  
  
Answer: Sir Winston Leonard Spencer-Churchill  
  
<HIST, EURO>

For ten points each, give the following about the America First Committee, which organized to oppose American entry into World War II.  
  
The America First Committee was chaired by Robert Wood, a businessman who led this retail company for nearly three decades. This company began operating via mail order catalogs in the late 19th century, and was purchased by Kmart in 2005 .  
  
ANSWER: Sears, Roebuck & Company  
  
The AFC was criticized for supporting the anti-Semitic views of its primary spokesman, this American aviator. In 1927, this man became the first solo pilot to cross the Atlantic non-stop.  
  
ANSWER: Charles Lindbergh  
  
Critics of the AFC included this author, whose political cartoon “Adolf the Wolf” satirized the AFC’s opinion that “Foreign Children...really didn’t matter.” In 1984, this author’s Butter Battle Book ends with warring sides threatening to use the Bitsy Big-Boy Boomeroo.  
  
ANSWER: Dr. Seuss (accept Theodor Seuss Geisel)  
  
<HIST, AMER>

9.  **This team’s second Super Bowl victory was a 33-14 rout of the Oakland Raiders, a game that was preceded by a 4-point win over the Dallas Cowboys in the “Ice Bowl.” Bart Starr posted a losing record as this team’s head coach after quarterbacking it to wins in Super Bowls (\*)** I and II, while they were coached by a man now honored as the namesake of the Super Bowl trophy. Vince Lombardi coached, for ten points, what NFL team founded by Curly Lambeau in Wisconsin?  
  
ANSWER: Green Bay Packers (accept either or both names)  
  
<TRASH, SPORTS>

James Thurber wrote a collection of these stories For Our Time, including one about "The Unicorn in the Garden." For 10 points each,  
  
[10] Give the term for a story in which anthropomorphic animals or other characters teach a moral lesson. Many of these stories were written by Aesop.  
  
Answer: fables  
  
[10] Thurber adapted this Aesop fable, in which the title fast animal loses a race to a very slow creature because he stops to take a nap.  
  
Answer: The Tortoise and the Hare  
  
[10] Thurber also adapted another Aesop fable about two of these animals, who travel from the city to the country and vice-versa, only to discover they were each better off at home.  
  
Answer: mouse (accept mice; accept The Country Mouse and the City Mouse or either underlined portion of that title; accept The Mouse Who Went to the Country)  
  
<LIT, OTHER>

10.  **In one story, this figure uses yam hills to trick passersby into counting to nine, causing them to vanish. This mythical man performed a series of tasks for the sky god, Nyame, capturing the Mmoboro wasp in a calabash and receiving all of the world's (\*)** stories in return. This god's legs became long and thin after they were pulled by eight ropes in a story told in Ghana. For 10 points, name this African trickster, often portrayed  
  
as a spider.  
  
Answer: Kwaku Anansi  
  
<RMPSS, MYTH>

This President signed Executive 0rder 9981 which desegregated the armed forces. For 10 points each,  
  
[10] Name this successor to Franklin Roosevelt whose namesake doctrine provided aid to Turkey and Greece.  
  
Answer: Harry S. Truman  
  
[10] Early in his career, Truman served as a Senator from this state. While in this state, Truman was aided by Tom Pendergast in becoming a Jackson County judge.  
  
Answer: Missouri  
  
[10] During the election of 1948, the Chicago Tribune mistakenly reported that this politician had beaten Truman.  
  
Answer: Thomas E(dmund) Dewey  
  
<HIST, AMER>

11.  **John Wesley Powell explored this river’s rapids on an 1869 expedition that began on the Green River. The Gila [hee-la] River flows into this river near Yuma, shortly before this river flows into the Gulf of California. This river’s water forms Lake (\*)** Mead behind the Hoover Dam, which powers much of Arizona. For ten points, name this river that flows through the Grand Canyon and is named for its source state in the Rocky Mountains.  
  
ANSWER: Colorado River (accept Green River before it is read)  
  
<GEO, GEO>

An opera based on this legendary story was inspired by an experience fleeing Latvia through stormy seas. For ten points each,  
  
Name this legendary doomed ghost ship that is, in most stories, cursed to sail the oceans forever unless its captain can convince a faithful woman to marry him.  
  
ANSWER: The Flying Dutchman (accept Der Fliegende Hollander)  
  
The Flying Dutchman was written by this composer, whose later dramatic works include the Ring Cycle, a set of four operas based on Norse myth.  
  
ANSWER: Richard Wagner [ree-kard VAHG-ner]  
  
Thanks to his political activism, Wagner spent over a decade exiled from his homeland, this modern country. Late in life, he built a festival house in this country’s town of Bayreuth [bye-ROYT] to host his operas.  
  
ANSWER: Germany  
  
<FA, OTHER>

12.  **In a novel by this man, the painter Titorelli sells three identical landscapes to Herr Huld’s client, Josef K. In a shorter work by this man, Grete is sent to study the violin after her brother’s death. This author of The (\*)** Trial wrote a novella in which an apple lodges in the protagonist’s back after he wakes up to discover he has been transformed into a giant insect. For ten points, name this author who wrote about Gregor Samsa in The Metamorphosis.  
  
ANSWER: Franz Kafka  
  
<LIT, EURO>

Samuel Taylor Coleridge collaborated on a collection of these long poems. For 1O points each,  
  
[1O] Name this style of poetry exemplified by Coleridge's "Lyrical" ones. These long poems tell stories and are traditionally set to music.  
  
Answer: ballads (accept Lyrical Ballads)  
  
[1O] Coleridge composed the Lyrical Ballads with this Romantic poet, who wrote "Tintern Abbey" and "I wandered lonely as a cloud."  
  
Answer: William Wordsworth  
  
[1O] In this long Coleridge poem from Lyrical Ballads, a ship's crew blame the title sailor for their misfortune after he shoots an albatross, moaning that there is "water, water everywhere I nor any drop to drink."  
  
Answer: The Rime of the Ancient Mariner  
  
<LIT, BRIT>

13.  **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>

The photograph Pillars of Creation shows stars being formed within the “Eagle” one of these bodies. For ten points each,  
  
Name these interstellar clouds of dust and gas. They may be planetary, like the Cat’s Eye, or supernova remnants, like the Crab.  
  
ANSWER: nebulae (accept nebulas)  
  
Astronomers seeking stellar nurseries often search for this type of radiation, found between UV rays and gamma rays on the EM spectrum.  
  
ANSWER: X-rays  
  
Newly formed stars of sufficient mass will quickly deplete their supply of the 7-isotope of this element, the lightest of the alkali metals.  
  
ANSWER: lithium (accept Li)  
  
<SCI, OTHER>

14.  **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>

The feminist essay "A Room of One's Own" discusses the unequal opportunities of two people with this surname. For 10 points each,  
  
[10] Give this surname. One person with this surname in "A Room of One's Own" is the real-life author of Romeo and Juliet; the other is his fictional sister, who dies in obscurity.  
  
Answer: William and Judith Shakespeare  
  
[10] "A Room of One's Own" is by this author, who wrote about the Ramsay family's journey to the title building in her novel To the Lighthouse.  
  
Answer: (Adeline) Virginia (Stephen) Woolf  
  
[10] In this other work by Virginia Woolf, Septimus Smith commits suicide and the title woman laments her marriage to Richard while preparing for a dinner party.  
  
Answer: Mrs Dalloway  
  
<LIT, BRIT>

15.  **The wave nature of these particles was confirmed by the Davisson-Germer experiment. They are emitted in beta decay and the photoelectric effect, and these leptons drop to the lowest (\*)** unoccupied energy state to produce spectral lines. Their movement produces current. For ten points, name these particles that orbit the nucleus and are attracted to protons because of their negative charge.  
  
Answer: electrons  
  
<SCI, PHYS>

This character once mistook a giraffe bubble for an elephant, and he asked "What's the difference?" between stupid and Texas. For 10 points each,  
  
[10] Identify this pink sea creature, who lives under a rock in Bikini Bottom. Answer: Patrick Star (accept either underlined name)  
  
[10] This neighbor of Patrick Star works as a cook at the Krusty Krab. This title character lives in a pineapple with his snail Gary.  
  
Answer: Spongebob Squarepants (accept either underlined name)  
  
[10] This elderly superhero, a resident of Bikini Bottom, teams up with Barnacle Boy to face foes like Man Ray and the Dirty Bubble.  
  
Answer: Mermaid Man  
  
<TRASH, POP CULT>

16.  **This concept is rendered impossible by Laplace’s demon, a thought experiment involving total knowledge of the universe. Schopenhauer argued that this concept was an illusion, in part because the body’s reactions to stimuli are automatic. An opposite of this concept, (\*)** determinism, usually holds that there is a single, unavoidable course of events. For ten points, name this philosophical concept that holds people can make choices about their future actions.  
  
ANSWER: free will (accept freedom; accept word forms, such as freedom of the will; accept choice before “choices” is read)  
  
<RMPSS, PHIL>

This painting is named for its background, which shows a white farmhouse with a strangely ornate window. For 10 points each,  
  
[10] Name this painting, which shows the artist's sister and dentist posing as two Iowa farmers: a grim-faced, apron-wearing woman and a man in overalls holding a pitchfork.  
  
Answer: American Gothic  
  
[10] This American Regionalist painted created American Gothic.  
  
Answer: Grant DeVolson Wood  
  
[10] The title figure of this Grant Wood painting draws back the curtain to reveal a young George Washington admitting to having cut down a cherry tree.  
  
Answer: Parson Weems' Fable  
  
<FA, VISUAL>

17.  **A five-month-long one of these events started in San Francisco and was an attempt to bring attention to the historical treatment of Native Americans. One of these events was led by Jacob Coxey after the Panic of 1893 caused widespread unemployment. In 1963, (\*)** Martin Luther King led one of these events named for Jobs and Freedom, at the end of which he gave his "I have a Dream" speech. For 10 points, name this act of walking to the capital of the United States.  
  
Answer: marches on Washington DC (accept descriptions like "walking to Washington, DC" or "protesting by marching on Washington DC;" prompt on "marches" alone or anything that doesn't specify Washington DC)  
  
<HIST, AMER>

This mythical figure was the sister of Stheno and Euryale, and became the mother of Chrysaor and Pegasus after her death. For ten points each,  
  
Name this snake-haired Gorgon woman, whose gaze turned all who saw her into stone. ANSWER: Medusa  
  
This Greek hero, the son of Zeus and Danae, slew Medusa and later married Andromeda. ANSWER: Perseus  
  
Perseus returned Medusa’s head to Athena, who affixed it to this legendary shield. ANSWER: Aegis (accept Gorgoneion)  
  
<RMPSS, MYTH>

18.  **This species was infected with T2 phage DNA in the Hershey-Chase experiment. The lac [lack] and trp [trip] operons were first discovered in this species, which generates vitamin K for its hosts. Undercooked beef may be (\*)** contaminated with this prokaryote that can divide every 20 minutes in a Petri dish. For ten points, name this Gram-negative, rod-shaped species that is normally found in the human large intestine, the most important bacterial model organism.  
  
ANSWER: Escherichia coli  
  
<SCI, BIO>

This battle was codenamed Operation Detachment. For 1O points each,  
  
[1O] Name this battle over a Pacific island during which the USS Bismarck Sea was sunk. During this battle, Joe Rosenthal photographed a group of soldiers raising a US flag.  
  
Answer: Battle of Iwo Jima  
  
[1O] Joe Rosenthal's photograph was taken at the peak of this mountain. During the fight for Iwo Jima, the Japanese were highly entrenched at this location.  
  
Answer: Mount Suribachi (accept Suribachiyama)  
  
[1O] Rosenthal's photograph was recreated in a memorial for this branch of the military. This branch of the military uses the motto "Semper Fidelis" and works closely with the Navy.  
  
Answer: United States Marine Corps (accept USMC)  
  
<HIST, AMER>

19.  **This author wrote a book in which the protagonist grows old with her “Lancashire husband,” Jemy, after accidentally marrying her half-brother in Virginia. This author of Moll Flanders was inspired by the adventures of (\*)** Alexander Selkirk to create a character who befriends the former cannibal Friday while stranded for twenty-eight years on a desert island. For ten points, name this English author of Robinson Crusoe.  
  
ANSWER: Daniel Defoe (accept Daniel Foe)  
  
<LIT, BRIT>

Emulsions like milk are examples of these substances, which disperse light by the Tyndall effect. For 1O points each,  
  
[1O] Name these mixtures formed from two insoluble compounds. Other examples include gels and aerosols.  
  
Answer: colloids  
  
[1O] In colloids, compounds without this property can still mix with water, whose bent shape gives it this property. This property denotes a charge separation within a molecule, as seen in hydrogen fluoride and ammonia.  
  
Answer: polarity  
  
[1O] This type of mixture results when large particles are temporarily dispersed throughout a fluid. It ceases to exist through sedimentation, such as when sand and soil settle out of muddy water.  
  
Answer: suspension  
  
<SCI, CHEM>

20.  **This animal was the subject of a riddle given at Timnah, after Samson discovered honey inside the carcass of one of these animals. Revelation describes Jesus as this animal “of Judah,” which is honored in Rasta by wearing (\*)** dreadlocks. King Darius punished Daniel by throwing him into a den of these animals, which “roar for their prey” in Psalms. For ten points, name these ferocious big cats with dramatic manes.  
  
ANSWER: lion  
  
<RMPSS, REL>

When the Olympics leave town, stadiums often become abandoned. When the World’s Fair leaves town, many cities still have tourist landmarks! For ten points each,  
  
This iron structure was built for the 1889 World’s Fair. It remains the world’s most visited monument and the tallest structure in Paris.  
  
ANSWER: Eiffel Tower  
  
When Seattle hosted the 1962 World’s Fair, they commissioned this 600 foot tall observation tower, painted in “Astronaut White.”  
  
ANSWER: Space Needle  
  
For the 1967 World’s Fair, this city built a Biosphere and a model housing complex called Habitat 67; the latter was designed by Moshe Safdie, a student at this city’s McGill University.  
  
ANSWER: Montreal  
  
<GEO, GEO>