QQBC Packet 6

1.  **This man notes that “honor is the delight of men when they are old and useless” according to a speech recorded by Thucydides. This man’s sons, Paralus and Xanthippus, died of a plague that killed him a few months later. In peaceful times, this leader hired (\*)** Phidias to sculpt a statue of Athena for the Acropolis. For ten points, name this statesman who delivered a funeral oration after the first year of the Peloponnesian War and led during the Golden Age of Athens.  
  
ANSWER: Pericles  
  
<HIST, OTHER>

For ten points each, answer the following about using mathematical formulas wisely.  
  
[10] The formula “area equals one-half times a times b times the sine of angle C” will find the area of one of these shapes, but you wouldn’t use it if angle C is a right angle. Sine of 90 degrees is 1, so that formula reduces to “the area of this shape equals one-half times base times height.”  
  
ANSWER: (right) triangle  
  
[10] The distance formula, d equals the square root of the sum of the squares of the differences of the corresponding coordinates, has an undeserved reputation for being complicated; in two dimensions, the distance can be drawn as the hypotenuse of a right triangle, making the distance formula a disguised version of this formula, named for a Greek.  
  
ANSWER: Pythagorean formula (theorem, etc.)  
  
[10] The quadratic formula is great for some quadratic equations, but if the equation is of the form “1 x squared plus b x equals 0,” then the two solutions are easy enough to find without it. Give either solution, in terms of b if necessary.  
  
ANSWER: 0 or negative b (only need one of the two answers to get points; if they give two answers, accept both correct answers in either order, but if two answers are given and one is incorrect, the whole answer is incorrect.)  
  
<SCI, OTHER>

2.  **This religion’s founder may have entered a monastery under the name Abba Keddus in 1975. Bobo Ashanti and the Twelve Tribes of Israel are two “Mansions” of this religion, which refers to its home nation as “Zion.” Believers in this religion honor the Lion of Judah, a title given to the Emperor of (\*)** Ethiopia, Haile Selassie, an embodiment of Jah. For ten points, name this religion whose adherents often wear dreadlocks and ritually consume cannabis.  
  
ANSWER: Rastafari (accept Rastafarianism or Rastafarians)  
  
<RMPSS, REL>

For ten points each, answer the following about music inspired by the stories of E.T.A. Hoffman.  
  
A Hoffman short story about this folk character, who steals the eyes of children who won’t sleep, inspired the first act of the opera The Tales of Hoffman. In most depictions, this character is far less vicious and simply charms kids to sleep with magic dust.  
  
ANSWER: The Sandman (accept Der Sandmann)  
  
The Tales of Hoffman was composed by Jacques Offenbach, though only performed posthumously. Offenbach found more fame for a telling of the Orpheus story in which a chorus line performs this “infernal galop,” a dance with many high kicks.  
  
ANSWER: Can-Can  
  
A Hoffman novella inspired this Tchaikovsky ballet, in which the title toy defeats the Mouse King in Act One and the Sugar Plum Fairy dances in Act Two.  
  
ANSWER: The Nutcracker  
  
<FA, AUDIO>

3.  **In one video, a bad Arnold Schwarzenegger impersonator sings this song set to scenes from Batman and Robin. In one parody of this song, "It's in my head, it's in my dreams," is sung by a tormented father. John Travolta called this song's performer (\*)** "Adele Dazeem" at the 2014 Oscars, where it won Best Original Song. Idina Menzel sings that "the cold never bothered me anyway" in, for 10 points, what hit song from Disney's 2013 film Frozen?   
  
Answer: Let It Go   
  
<TRASH, POP CULT>

Some conspiracy theorists claim that a gunman involved in this event stood on a grassy knoll, either in addition to or instead of a gunman in the Texas School Book Depository. For 10 points each, [10] Name this November 22nd, 1963 event in which Texas governor John Connolly was wounded.   
  
Answer: assassination of John F. Kennedy (accept equivalents for "assassination;" accept "JFK" for   
  
"Kennedy;" prompt on "assassination of Kennedy" alone)   
  
[10] The Warren Commission concluded that this man was the lone gunman responsible for Kennedy's death. After fleeing from the Book Depository, he killed police officer J.D. Tippit before being captured in a movie theater.   
  
Answer: Lee Harvey Oswald   
  
[10] While being transported out of police headquarters, Oswald was fatally shot by this nightclub owner.   
  
Answer: Jack Leon Ruby (accept Jack Leon Rubenstein)   
  
<HIST, AMER>

4.  **One work by this composer includes a “limping waltz” and a dynamic marking of 6 p’s for the bassoon; that sixth symphony was premiered just a week before this man’s death. After this man’s death, Marius Petipa revamped one of his ballets, in which (\*)** Von Rothbart curses the princess Odette. Another popular work by this composer is scored for cannonfire. For ten points, name this Russian composer of the Pathetique symphony, the ballet Swan Lake, and the 1812 Overture.  
  
ANSWER: Peter Ilyich Tchaikovsky  
  
<FA, AUDIO>

This English Romantic poet wrote that he would “build a fane / in some untrodden region of [his] mind” in a poem addressed to Psyche. For ten points each,  
  
Name this poet who wrote about being taken to an “elfin grot” by “La Belle Dame Sans Merci,” and about a “still unravished bride of quietness” in another poem about an urn.  
  
ANSWER: John Keats  
  
Keats’s poems to Psyche and “on a Grecian Urn” are this type of poem, which is divided into a strophe, antistrophe, and epode.  
  
ANSWER: odes  
  
”Ode on a Grecian Urn” claims that “all ye need to know” is that “beauty is [this] and [this is] beauty.” In a sonnet by Shakespeare, the speaker declares that his love is not made of this quality, since “I know she lies.”  
  
ANSWER: truth  
  
<LIT, BRIT>

5.  **This figure experienced the Seven Sorrows, which include misplacing a child in a temple and hearing the prophecy of Simeon. This religious figure was the daughter of Anne, and she caused   
  
Elizabeth’s son to leap for joy in her womb. This woman, called Theotokos [thay-oh-toh-kos] in Greek, was (\*)** conceived immaculately, and she received a prophecy from Gabriel before giving birth in a stable in Bethlehem. For 10 points, name this wife of Joseph, the mother of Jesus.   
  
Answer: (Blessed) Virgin Mary (accept Mother Mary; prompt on “Holy Mother” or “Holy Virgin;” prompt on “Our Lady of (Seven) Sorrows” or “Mother of Sorrows”)   
  
<RMPSS, REL>

Pablo Picasso painted many works of his native Spain. For 10 points each,   
  
[10] A tired-looking man plays the title instrument on the streets of Barcelona in this Picasso work.   
  
Answer: The Old Guitarist   
  
[10] The Old Guitarist was painted during this sad, colorfully-named period of Picasso’s work.   
  
Answer: Blue Period   
  
[10] This painting depicts the aftermath of a bombing on a Spanish city, and shows a dead man holding a broken sword and a woman cradling her dead child.   
  
Answer: Guernica [gayr-NEE-kah]   
  
<FA, VISUAL>

6.  **A character in this novel grows to over ten feet tall after being put on a stretching machine, since he had tried to appear on TV by using a shrink ray. The title character of this novel is deemed more virtuous than children like Mike (\*)** Teavee and Augustus Gloop after he opens a Whipple-Scrumptious Fudgemallow Delight. For ten points, name this Roald Dahl novel in which Willy Wonka entrusts his Oompa-Loompas to the title boy after he finds a golden ticket.  
  
ANSWER: Charlie and the Chocolate Factory (do not accept Willy Wonka and the Chocolate Factory)   
  
<LIT, AMER>

Nucleic acids and proteins are biological examples of these molecules. For 10 points each, [10] Name these long-chained molecules composed of many monomers. Examples include nylon and polystyrene.   
  
Answer: polymers   
  
[10] This polymer has an ethylene monomer with a substituted chlorine. It has recycling code 3 and is widely used in plastic piping.   
  
Answer: PVC (accept polyvinylchloride; prompt on “polychloroethylene”)   
  
[10] This synthetic polymer, discovered in 1907 by Leo Baekeland, was the world’s first widely used plastic. It is formed by reacting phenol with formaldehyde.   
  
Answer: Bakelite   
  
<SCI, BIO>

7.  **Aldehydes can be reduced to primary types of these compounds. This organic group can be created using hydroboration and oxidation. These compounds have a carbon bonded to a hydroxyl group; that is, to an (\*)** oxygen bonded to a hydrogen. Yeast can ferment sugar into molecules of this type like ethanol and methanol. For 10 points, name this compound found in “wood” and “rubbing” varieties.   
  
Answer: alcohol   
  
<SCI, CHEM>

A surface of lapis lazuli “as brilliant as the sky” appeared at this location when god revealed himself to the Hebrew elders. For ten points each,  
  
Name this mountain, where God gave instructions for the building of the Tabernacle while his presence hung about this mountain “like a cloud.”  
  
ANSWER: Mount Sinai (accept Har Sinai; accept Mount Horeb; accept Jabal Musa; prompt on “Musa”)  
  
After giving instructions on Mount Sinai for the Tabernacle, God gave Moses stone tablets displaying these core laws of Abrahamic religions.  
  
ANSWER: Ten Commandments (accept Decalogue; prompt on “Commandments”)  
  
While Moses received the Ten Commandments on Sinai, his brother Aaron oversaw the construction of this false idol, which angered Moses so much that he smashed the Commandments and had to get a second copy.  
  
ANSWER: golden calf (prompt on “golden idol” or “calf” alone; prompt on “golden cow” or “golden bull”)   
  
<RMPSS, REL>

8.  **A character in this novel gets a piece of parmesan cheese from Dr Livesey’s snuff box in exchange for his help. In this novel, a cook rebukes Dick Johnson for tearing a page from a Bible to make a (\*)** “black spot,” and is the “seafaring one-legged man” that Billy Bones tells Jim Hawkins to look out for. The Hispaniola sails in search of Captain Kidd’s buried treasure in, for ten points, what novel about Long John Silver, written by Robert Louis Stevenson?  
  
ANSWER: Treasure Island, or the Mutiny of the Hispaniola  
  
<LIT, BRIT>

The Grimm brothers removed this story from the last few editions of their Children’s and Household Tales when they discovered that it was a Danish tale, rather than a German one. For ten points each,  
  
[10] Name this fairytale in which a dainty girl proves that she is royal by complaining that she slept on something hard, even though it was cushioned by twenty mattresses and twenty quilts.  
  
ANSWER: The Princess and the Pea (accept Prinsessen paa Aerten; accept Die Prinzessin auf der Erbse)  
  
[10] In this Grimm brothers story, the title woman’s stepsisters cut off their toes and heels to force their feet to fit into a slipper in an attempt to trick a prince into marrying them.  
  
ANSWER: Cinderella (accept Aschenputtel)  
  
[10] In one version of this story, the title imp viciously tears himself in half after being foiled, but in the first edition of Grimm’s tales, he flies away after the queen discovers this creature’s true name and stops him from stealing her baby.  
  
ANSWER: Rumplestiltskin  
  
<LIT, EURO>

9.  **The Eyring-Polyani equation modifies an equation named for this man that contains a preexponential factor and relates rate constant to activation energy and temperature. This scientist developed a theory involving increases in (\*)** hydrogen and hydroxide ion concentrations that was later replaced by the Bronsted-Lowry and Lewis theories. For 10 points, name this Swedish chemist who won a Nobel Prize for his work on acids and bases.   
  
Answer: Svante Arrhenius   
  
<SCI, CHEM>

Mata Hari was executed by the French for this action in 1917, as were Julius and Ethel Rosenberg in 1953. For 10 points each,   
  
[10] Give this term for illegal secretive intelligence gathering, as often done in wartime.   
  
Answer: espionage or spying (or word forms)   
  
[10] In 1776, this colonial soldier and spy volunteered to scout British troop movements, but was caught and hanged. At his hanging, he legendarily said "I only regret that I have but one life to lose for my country."   
  
Answer: Nathan Hale   
  
[10] In 1948, a series of classified documents found in one of these plants implicated Alger Hiss in spying for the Soviet Union.   
  
Answer: pumpkin (accept Pumpkin Papers)   
  
<HIST, AMER>

10.  **A caldera in this location was formed after a series of eruptions at Mesa Falls and Huckleberry Ridge; within that caldera lies North America’s largest supervolcano. A 1988 wildfire burned over a third of this location. Four million tourists annually visit this national park, which contains a (\*)** geyser known for its highly predictable eruption pattern. For ten points, name this protected area in Wyoming whose Old Faithful helped establish it as America’s first national park.  
  
ANSWER: Yellowstone National Park  
  
<GEO, GEO>

For ten points each, answer the following about levers.  
  
Like the wheel and axle, screw, and pulley, levers are one of these classical devices that can alter a force.  
  
ANSWER: simple machine  
  
A lever pivots at this hinge in the system, whose name derives from the Latin for “support.”  
  
ANSWER: fulcrum  
  
If the components of a lever are in this position, the mechanical advantage of a lever can be equal to one, meaning that there’s no trade-off between effort made and distance required to move a load, just a change in the force’s direction. You can either give this class of the lever, or you can describe the position of the lever’s fulcrum.  
  
ANSWER: first class lever (accept Class 1; accept descriptions of “the fulcrum is in the middle, between the effort  
  
and the load”, “the lever looks like a seesaw or teeter-totter”, and equivalents)  
  
<SCI, PHYS>

11.  **A failed 1982 coup in this country was co-led by Raila Odinga and tried to oust Daniel arap Moi. The community-building concept of “Harambee” was fostered by the first President of this country. Dedan Kimathi led an uprising in the 1950s that sought to reclaim Kikuyu land from European colonists. The (\*)** Mau Mau Rebellion challenged British rule of, for ten points, what African country with capital Nairobi, first led by Jomo Kenyatta?  
  
ANSWER: Republic of Kenya  
  
<HIST, OTHER>

This man wrote a poem in which “under a spreading chestnut tree / the village smithy stands” and another in which a historical pilgrim seeks the love of Priscilla Mullins. For ten points each,  
  
Name this early American poet of historically-inspired poems like “The Courtship of Miles Standish” and “The Village Blacksmith.”  
  
ANSWER: Henry Wadsworth Longfellow  
  
Longfellow wrote about this American hero, a silversmith who rode to Lexington and Concord, Massachusetts to warn the colonists that the British were coming.  
  
ANSWER: Paul Revere (accept Paul Revere’s Ride)  
  
Longfellow also wrote a fictionalized “Song of” this Mohawk leader, who marries Minnehaha and lives “by the shores of Gitchee Gumee.”  
  
ANSWER: Hiawatha (accept Song of Hiawatha)   
  
<LIT, AMER>

12.  **The field equations for a rotating one of these objects were solved by Roy Kerr. Objects above the Tolman-Oppenheimer-Volkoff limit are predicted to gravitationally collapse within the (\*)** Schwarzchild radius, thereby forming these objects. These objects only possess mass, charge, and angular momentum, as observable from beyond its event horizon. For ten points, name these regions of space whose gravitational fields are strong enough to prevent light from escaping.  
  
ANSWER: black holes  
  
<SCI, PHYS>

The Madelung rule dictates the order in which these entities are filled, and the Aufbau principle notes that lower-energy ones must be filled before higher-energy ones. For ten points each,  
  
Name these regions surrounding an atom that are occupied by electrons.  
  
ANSWER: atomic orbitals (accept electron shells)  
  
The orbital with the lowest energy level holds up to two electrons and is labeled by this letter; larger orbitals are labeled p, d, and f.  
  
ANSWER: s (accept 1s, 1s1, or 1s2)  
  
This element has the simplest electron configuration, 1s1, indicating it only has one electron. Accordingly, it also has the lowest atomic number.  
  
ANSWER: hydrogen (accept H)  
  
<SCI, CHEM>

13.  **Robert Yates kept detailed notes of this meeting, despite his opposition to its goals. This meeting’s discussions were to be kept secret and were moderated by George Washington. At this meeting, Roger Sherman proposed a (\*)** compromise between the Virginia and New Jersey plans that balanced the interests of large and small states. For ten points, name this 1787 meeting that replaced the Articles of Confederation with a newly written “supreme law” of the United States.  
  
ANSWER: Constitutional Convention   
  
<HIST, AMER>

The Khumbu Glacier in this mountain range is the site of a dangerous icefall popular with mountain climbers, as it is part of one of the more accessible paths up the Nepalese side of one of its mountains. For ten points each,  
  
Name this mountain range between China and India  
  
ANSWER: Himalayas (accept Himalayan Mountains)  
  
The Himalayas are home to this tallest mountain in the world, first climbed by Sir Edmund Hillary in 1953. ANSWER: Mount Everest  
  
Hillary was assisted in his summit of Everest by this Sherpa mountaineer, who was controversially not knighted for his accomplishment.  
  
ANSWER: Tenzing Norgay  
  
<GEO, GEO>

14.  **A satirical work of this type by Ambrose Bierce claims that the French eat more bread than anyone else because “only they know how to make [wheat] palatable.” An eighteenth-century one of these works by Samuel (\*)** Johnson contained over 42,000 entries. An American work of this type used twenty-six languages to establish etymologies, and was written by Noah Webster. Lexicographers create For ten points, what books that provide the pronunciations and definitions of words?  
  
ANSWER: dictionary (accept dictionaries)  
  
<LIT, OTHER>

This concept is symbolized by a solid line and a broken line; the ba gua are the eight possible trigrams formed from a set of three of those lines, and represent concepts like fire and water. For 10 points each,   
  
[10] Give this Chinese philosophical term that describes complementary, yet opposing, forces. It is also symbolized by a circle with swirling black and white regions.   
  
Answer: Yin and Yang   
  
[10] This text, dating to before 1000 BCE, lists and describes hexagrams, the 64 possible pairs of ba gua. Its title is sometimes translated as "Book of Changes," and it can be used for divination.   
  
Answer: I Ching (or Zhouyi)   
  
[10] The ba gua for wind and water give their name to this practice of creating harmony within one's surroundings. It strives to properly control qi [chee], or life energy, by carefully placing of buildings within an area or items within a room.   
  
Answer: feng shui   
  
<RMPSS, REL>

15.  **The complexometric type of this process is used for solutions of metal ions. PKa [P-K-A] equals pH halfway to the equivalence point on a namesake curve in the acid-base kind of this technique, which often uses indicators like (\*)** phenolphthalein [fee-nol-THAY-leen] to find the endpoint. For 10 points, name this lab technique in which a solution of known concentration is added to a solution of unknown concentration using a buret [byur-ET].   
  
Answer: titration   
  
<SCI, CHEM>

It can be difficult and costly to use real brands in fictional media, so movies and TV shows often create their own brands instead. For ten points each,  
  
This corporation sells everything from rocket-powered roller skates to explosive tennis balls. Its best customer is probably Wile E. Coyote, who uses this company’s wares in his pursuit of the Road Runner.  
  
ANSWER: Acme Corporation (accept Acme Rocket-Powered Products, Inc.)  
  
This restaurant’s signature yellow delivery truck makes cameos in Pixar-animated films like Wall-E and Monsters, Inc, and is even shown as a miniature wood carving in Brave. This restaurant made its first appearance in Toy Story as the location of the green aliens’ claw machine.  
  
ANSWER: Pizza Planet  
  
The search engine “Finder-Spyder” appears in dozens of shows, including Dexter, Criminal Minds, and this long-running procedural drama starring William Peterson and Marg Helgenberger, with spin-offs set in New York and Miami.  
  
ANSWER: CSI: Crime Scene Investigation (accept CSI New York or CSI Miami)  
  
<TRASH, POP CULT>

16.  **In 1984, Bernard Goetz shot four black teenagers on this city's subway, claiming self-defense. In 1976 and 1977, six murders by the "Son of Sam" terrorized this city. The zero-tolerance for "broken windows" policy used by this city in the (\*)** 1990s corresponds with a drop in the crime rate under mayor Rudolph Giuliani. For 10 points, name this city, whose failed 2013 law banning large soft drinks was supported by former mayor Michael Bloomberg.   
  
Answer: New York City (or NYC)   
  
<HIST, AMER>

In one work by this author, Tom Canty and Edward VI [“the sixth”] switch places, and both are accused of insanity. For 10 points each,   
  
[10] Identify this author of The Prince and the Pauper. The title character is in love with Becky Thatcher and finds gold in a cave in this man’s novel The Adventures of Tom Sawyer.   
  
Answer: Mark Twain (accept Samuel Langhorne Clemens)   
  
[10] Twain wrote this novel about Hank Morgan, a fairly ordinary American who wakes up in medieval England and uses his superior knowledge of science to take power.   
  
Answer: A Connecticut Yankee in King Arthur’s Court   
  
[10] In this Twain short story, Simon Wheeler tells a story about the title animal when the narrator asks for information about Leonidas W. Smiley.   
  
Answer: The Celebrated Jumping Frog of Calaveras County (accept Jim Smiley and his Jumping Frog)   
  
<LIT, AMER>

17.  **The discovery of this concept was assisted by Galileo’s ball-rolling experiment which, without friction, would have continued horizontally forever. One definition of this concept notes that, under zero net external force, an object will experience (\*)** constant velocity. The rotational analogue of mass is known as the “moment of” this quantity. Newton’s first law defines, for ten points, what concept that describes an object’s resistance to changes in its motion?   
  
ANSWER: inertia   
  
<SCI, PHYS>

For ten points each, give the following about US Highway 40.  
  
Highway 40 follows a number of historically important roads and trails, including this wagon trail used by tens of thousands of settlers to travel from Independence, Missouri to the Willamette Valley in the Pacific Northwest.  
  
ANSWER: Oregon Trail  
  
In California, Highway 40 passes through this mountain pass, named after an infamous traveling party that was unable to cross it in winter 1846 and resorted to cannibalism to survive.  
  
ANSWER: Donner Pass (accept Donner Party)  
  
Highway 40 was largely replaced in the west by Interstate 80, as originally designed by this U.S. President’s Interstate Highway System.  
  
ANSWER: Dwight D. Eisenhower  
  
<HIST, AMER>

18.  **In Jean Sibelius’ symphony of this number, the horns play a swan call. In a movement of this number, the idee fixe´ feex] becomes a “vulgar dance tune” during a “Witches’ Sabbath;” that movement ends (\*)** Hector Berlioz’s Symphonie Fantastique. Beethoven’s symphony of this number opens with a “short-short-shortlong” motif. For ten points, give this number of flats in the key signature of D-flat major and number of performers in Franz Schubert’s Trout Quintet.  
  
ANSWER: five (accept fifth symphony, fifth movement, etc.)   
  
<FA, AUDIO>

In this epic, the demon Ravana disguises himself as a beggar to trick Sita into crossing a magical protective boundary. For ten points each,  
  
Identify this epic named for Sita’s husband, a hero who defeats Ravana with the help of Lakshmana and Hanuman. ANSWER: Ramayana  
  
In the Ramayana, Hanuman leads an army of these creatures to help Rama save Sita. Because Hanuman has the form of one of these animals, he is able to set the island of Lanka on fire with his long, prehensile tail.  
  
ANSWER: monkeys (accept apes, since the text is sometimes translated this way)  
  
The Ramayana is an epic from this modern country. Other famous works from this country include the Upanishads and the Mahabharata.  
  
ANSWER: India  
  
<RMPSS, REL>

19.  **This work’s protagonist dreams about lions on a beach in Africa, and encourages his apprentice to believe that the “Indians of Cleveland” will be defeated by The Great DiMaggio. This novella’s title character catches a giant (\*)** marlin without Manolin’s help after an 84-day unlucky streak, but the fish is eaten by sharks before he returns to shore in Cuba. For ten points, name this novella about the elderly fisherman Santiago, written by Ernest Hemingway.  
  
ANSWER: The Old Man and the Sea  
  
<LIT, AMER>

A 1950s government led by this party saw Minister of Housing Harold Macmillan lead a construction boom and Foreign Secretary Anthony Eden support a coup d'etat in Iran. For 10 points each,   
  
[10] Name this British political party, which defeated the Labour Party of Clement Attlee in 1951 elections.   
  
Answer: Conservative Party (prompt on Tories)   
  
[10] This man became Prime Minister for a third time in 1951, having led the United Kingdom during much of World War II.   
  
Answer: Sir Winston Leonard Spencer-Churchill   
  
[10] During his third Prime Ministership, Churchill sent British troops to capture Dedan Kimathi and put down this Kikuyu uprising in colonial Kenya.   
  
Answer: Mau Mau Rebellion (or Uprising, Revolt, or other equivalents)   
  
<HIST, WORLD>

20.  **This author argued that Moses may have been the pharoah Akenhaten in the book Moses and Monotheism. He described behaviors as guided by Thanatos, the death drive, as a companion to sexual drive in his Beyond the Pleasure Principle. (\*)** Carl Jung opposed this man's theory of the psyche, in which the superego controls one's instincts. For 10 points, name this Austrian psychoanalyst, the author of The Ego and the Id and The Interpretation of Dreams.   
  
ANSWER: Sigmund Freud (accept Sigismund Schlomo Freud)   
  
<RMPSS, SOC SCI>

For ten points each, give the following about Young’s double slit experiment.  
  
The double slit experiment starts by shining light through a single slit and noting the effects of this phenomenon, in which light spreads as it passes through the hole.  
  
ANSWER: diffraction  
  
The interference pattern demonstrated in the two-slit phase of the experiment showed that these quantum units of light displayed wave properties.  
  
ANSWER: photons  
  
The double slit experiment provided evidence of the duality of light, that light can be described as behaving both as waves and as these small fragments of matter. Electrons, neutrons, and photons are often described as these objects.  
  
ANSWER: particles (accept elaborations, like (sub)atomic particles)   
  
<SCI, PHYS>