

1. This mythological figure was married to the sister of Circe, and because of his infidelities, his spouse cursed him to ejaculate spiders and scorpions; he gifted the perfect hunting dog Laelaps to the woman who cured his curse and was his lover, Procris. He found a man on whom he wanted revenge by getting him to string a spiral seashell, after which he was scalded to death in a bath. He was punished by Poseidon for keeping a sacred white bull by having his wife, Pasiphae, cursed to lust after that bull. FTP what king had Daedalus build the labyrinth to house the Minotaur and is the namesake of the ancient civilization on Crete?

ANSWER: Minos

2. The speaker of this poem describes men who are "deaf even to the hoots/Of tired, outstripped Five Nines." Those shells lead to an "ecstasy of fumbling," after which the speaker sees "as [if] under a green sea" a man "drowning" with blood "gargling from the froth-corrupted lungs." This scene makes the speaker admonish the reader to not "tell with such high zest" the title phrase. FTP what poem by Wilfred Owen describes as "that old lie" a Latin phrase that means "It is sweet and fitting to die for one's country."

ANSWER: "Dulce et Decorum Est"

3. This principle was used by and provided the name for a "box" made by Iomega during the 1980s that was a storage device. An instrument called the Pitot [*PEE-toh*] tube makes use of this principle, which can be given by integrating the Euler equations along a streamline. An application of this principle is the net upward force on airplane wings known as dynamic lift. In the steady flow of an incompressible fluid, this principle relates the fluid velocity, height, and pressure at any two points. For 10 points, name this principle named for an eighteenth century Swiss scientist.

ANSWER: Bernoulli's principle or equation

4. This entity took out twenty-two of its competitors in the Cleveland Massacre, while in a political cartoon, this entity is depicted as two large snakes attacking the infant Hercules. One work about this company was written following an interview with Henry Rogers and was published in 19 parts by *McClure's* magazine. That work detailed this company's history and was written by Ida Tarbell. This company, which was dissolved by the Sherman Antitrust Act, sought to obtain a monopoly by driving out competitors through vertical integration of the petroleum supply chain. FTP, name this company founded by John D. Rockefeller.

ANSWER: Standard Oil

5. In this book, a Pharisee [*FAIR-uh-see*] named Nicodemus asks, "How can a man be born when he is old?" This book includes a person saying "go and sin no more" to a woman taken in adultery. In this book, Jesus refers to himself as the "bread of life" and interrupts the Last Supper to wash the disciples' feet. The seven signs in this book include the raising of Lazarus from the dead. Chapter three, verse sixteen of this book states, "God so loved the world, that he gave his one and only son." FTP, what is this not-synoptic gospel, which usually is placed after Matthew, Mark, and Luke.

ANSWER: Gospel of John

6. A symphony by this man contains an alto solo called the "Midnight Song" and begins with a movement in which "Pan awakes." A funeral march is the first movement of this man's fifth symphony, which opens with a trumpet solo. That symphony by this man also includes an Adagietto fourth movement. Lines from a Friedrich Klopstock poem, such as "Rise again," appear in this man's second symphony. The finale of

this man's sixth symphony contains three hammer blows of fate, and the second theme of the first movement is named for Alma, his wife. For 10 points, name this Austrian composer of the "Resurrection," "Tragic" and "Titan" symphonies.

ANSWER: Gustav Mahler

7. An event in which this country fired on three French ships became known as the Paknam Incident. One kingdom based in this modern-day country defeated the Toungoo Dynasty in a war that saw the loss of their Queen Suriyothai. This nation once home to the Ayutthaya [*ah-YOO-thee-ah*] Kingdom was ruled at one time from Thon Buri by the insane king Taksin. This country's bloodless Promoters Revolution helped its People's Party lessen the power of this nation's Chakri Dynasty. This country's Prime Minister Yingluck Shinawatra recently lost power in a military coup d'état. Currently led by Rama IX, FTP, name this nation formerly known as Siam, with capital Bangkok.

ANSWER: Thailand

8. This character's father chases him with a knife while calling him the "Angel of Death," leading this character to fake his death by spreading pig's blood in a cabin. A companion tells this character he'll get bad luck from handling a snake skin; this character leaves that skin near that companion, who is then bitten by a rattlesnake. This character later decides his black companion is "white inside" because he is willing to risk capture to save this character's friend Tom after he's shot in the leg. Deciding he doesn't want to be "sivilize[d]" by his Aunt Sally, this character "light[s] out for the territories." FTP what icon of American literature is friend to the slave Jim and Tom Sawyer?

ANSWER: Huckleberry Finn

9. Rakeem Cato broke this person's record of throwing a TD pass in consecutive games. The phrase "Hustle-and-Bustle-Man-Muscle" is sometimes found in between the first and last name of this player, who is allegedly considered "not black enough" by some teammates. This player is the only quarterback in NFL history to throw for more than 300 yards and rush for more than 100 yards in a single game. This player, who attended college at NC State and Wisconsin, threw a touchdown to Golden Tate in the "Fail Mary" play. For 10 points, name this Seattle Seahawks quarterback.

ANSWER: Russell Wilson

10. An early classification system of this substance included zonal, intrazonal, and azonal orders. Hans Jenny developed the CLORPT equation that lists the factors that lead to its formation. This substance is organized into repellency classes based on the WDPT, or water drop penetration time. Illuvium is material leached from one layer of this substance to another; those layers are called horizons. Liquid nutrient solutions are used instead of this substance in hydroponics. For 10 points, name this substance that is composed of clay, sand, and silt, and that supports plant life.

ANSWER: soil [prompt on "dirt"]

11. The African pirate Black Caesar used the northernmost island of this chain as a base in the late 1700s. That island, Elliott, is now uninhabited, though the Tequesta tribe called it home until the 1870s. An abandoned rail bridge, once part of Henry Flagler's Overseas Railroad, is named for an island in this chain, Bahia Honda. Upper and Lower Matecumbe are two of the five islands in this chain comprising the city of Islamorada. Harry S Truman's "Winter White House" is on this chain's southernmost island, which sits 90 miles north of Cuba. FTP what island chain includes Key Largo and Key West?

ANSWER: Florida Keys

12. At a factory in this city, Mary Phagan was allegedly murdered by a Jewish man named Leo Frank, who was lynched. A speech delivered in this city urged blacks to "cast down your bucket where you are."

A motel in this city that refused to rent to blacks was the plaintiff in a 1964 Supreme Court case. Richard Jewell was falsely accused of a bombing in this city, which is home to the Jimmy Carter Library as well as Ebenezer Baptist Church, where MLK served as pastor. For 10 points, name this city that hosted the 1996 Summer Olympics, and is the capital of Georgia.

ANSWER: Atlanta

13. In one book, this thinker argued that Moses was actually an Egyptian aristocrat who worshipped Akhenaten and was killed by his own followers. Early in his career, this thinker dispensed with using the hypnotic techniques he had learned from Jean Charcot. This author of *Moses and Monotheism* believed that the experience of transcendence he called the “oceanic feeling” was a residue of the infant’s feeling before it is aware that other people exist in his book *Civilization and Its Discontents*. FTP what Austrian psychologist created the “talking cure” known as “psychoanalysis”?

ANSWER: Sigmund Freud

14. A structure named for this letter has up-and-down, Greek key, and jelly roll types. The last of four steps in a process named for this letter is catalyzed by thiolase. The class of drugs that includes propranolol [*proh-PRAN-uh-lawl*] is named for this letter and treats hypertension. Fatty acids are converted into acetyl-CoA molecules in a type of oxidation named for this letter, which also names the cells in the pancreas that release insulin. Types of protein secondary structures include alpha helices and sheets named for this letter. For 10 points, name this second Greek letter.

ANSWER: beta

15. This color partly names an Henri [*ahn-REE*] Matisse painting that was inspired by a trip to Biskra and depicts a reclining nude woman. In a series called *Anthropometries*, naked women covered in a shade of this color named for Yves Klein made imprints of themselves on canvas. Jonathan Buttall wears clothing of this color in a Thomas Gainsborough painting. A group partly named for this color that attempted to express spiritualism in painting included Franz Marc and Wassily Kandinsky as members. For 10 points, name this color often used to depict the sea or a clear sky.

ANSWER: blue

16. This writer noted that “It is good . . . to look closely at the world of objects at rest” in his 1935 manifesto “Towards an Impure Poetry.” He described the Spanish dictator being scratched in hell by a turtle that barks “with the voice of a dead woman” in the poem “General Franco in Hell” from the collection *Residence on Earth*. A section titled “The Earth’s Name Is Juan” is part of a long poetic cycle by this author providing an encyclopedic look at the Americas; that cycle’s second section is titled “The Heights of Macchu Picchu.” FTP what poet began the twentieth love poem of one collection with “Tonight I can write the saddest lines,” a Chilean who wrote a “Song of Despair”?

ANSWER: Pablo Neruda

17. This man’s thoughts on dualism likens the body to a machine in a work written after acquiring Princess Elisabeth of Bohemia as a pen pal. Both *The Description of the Human Body* and *Passions of the Soul* outline his form of dualism, wherein the mind proves superior. He defends the necessity of rationalism as a method of defining the world in the Wax Argument, a seminal chapter in his *Meditations on First Philosophy*. FTP name this philosopher, the author of *Discourse on Method*, best known for his maxim “I think, therefore I am.”

ANSWER: Rene Descartes

18. During this man’s rule, the Roman Empire subjugated the Tzani people for the first time. He also oversaw the Lazic War, which was followed by the Fifty Years’ Peace. His armies fought two wars with

the Sassanid Empire. An early instance of the Bubonic plague around 540 A.D. is named for this ruler. The Battle of Taginae was won against Totila by this ruler's general Narses, while the Vandals were subdued by this ruler's better known general, Belisarius. Known for building the Hagia Sophia, FTP, who is this Byzantine emperor famous for his a namesake revision of Roman law?

ANSWER: Justinian I (or Justinian the Great)

19. One writer with this surname collected poems like "Chaplinsque" and "For the Marriage of Faustus and Helen" in the book *White Buildings*, along with a long 1930 poem that includes the sections "Atlantis" and "Cutty Sark." Another man with this surname wrote the poetry collection *The Black Riders*. The author of the long poem "The Bridge" shares this surname with the author a short story in which The Swede dies soon after a fight with Johnny at the title location, the Blue Hotel. FTP what surname was shared by the poet Hart and the author of *The Red Badge of Courage*, Stephen?

ANSWER: Crane

20. These events in lyotropic liquid crystals are predicted by the hard-rod model. The one-dimensional Ising model lacks these events, unlike the two-dimensional model. Ehrenfest proposed a classification system of these events, which occur at both the Neel [*ney-EL*] and Curie temperatures. On a pressure versus temperature diagram, they occur when lines of equilibrium are crossed. The enthalpy change associated with one of these events is called the heat of fusion. For 10 points, name these events whose types include sublimation, vaporization, and melting.

ANSWER: phase transitions [or phase changes]

Delta Burke 2014  
Round 4 Bonuses

1. Answer the following about the number 60 in chemistry, for 10 points each.

[10] Buckminsterfullerene, which has 60 atoms in each molecule, is an allotrope of this element. Some other allotropes of this element are graphene, graphite, and diamond.

ANSWER: carbon

[10] Neodymium [*nee-oh-DIM-ee-uhm*], which has atomic number 60, is one of these metallic elements, which are used in hi-tech products. China controls around 90% of the global market of these metallic elements, which include all of the lanthanides, along with scandium and yttrium.

ANSWER: rare earth elements [or rare earth metals]

[10] The angle between adjacent carbons in this highly strained cyclic molecule is 60 degrees. Ethylene can be converted to this hydrocarbon in the Simmons-Smith reaction.

ANSWER: cyclopropane

2. Answer the following about St. Peter's Basilica, for 10 points each.

[10] Pope Julius II commissioned this architect to design St. Peter's Basilica, and his other works include the circular Tempietto, which commemorated the site of St. Peter's crucifixion.

ANSWER: Donato Bramante

[10] This man designed the dome of St. Peter's and also painted the Sistine Chapel's ceiling.

ANSWER: Michelangelo Buonarroti [accept either]

[10] This man mostly completed the design of St. Peter's, which contains his canopy known as the baldacchino. Another of his works depicts an angel thrusting an arrow into Saint Theresa.

ANSWER: Gian Lorenzo Bernini

3. Josiah Royce helped popularize this other thinker's ideas. FTPE:

[10] What American philosopher ushered in a new American philosophical tendency with his 1878 essay “How to Make Our Ideas Clear”?

ANSWER: Charles Sanders Peirce [*purs*]

[10] Peirce included an extra “i-c” in his version of the name of this American philosophical school; William James wrote a book titled for this school, subtitled “A New Name for Some Old Ways of Thinking.”

ANSWER: Pragmatism

[10] Royce and James, but not Peirce, were longtime instructors at this venerable university in Cambridge, Massachusetts, sometimes considered the “Valencia of the North.”

ANSWER: Harvard University

4. The protagonist of this book tries to recite a passage from the Bible while being bombarded by an advertisement for Denham’s Dentifrice [*den-tuh-FRIS*]. FTPE:

[10] Name this novel by Ray Bradbury, in which Guy Montag is a fireman whose job is to burn books.

ANSWER: Fahrenheit 451

[10] Early in the novel, Guy tests whether he’s in love with his wife by pressing this flower against his chin. A Bradbury novel titled after a drink made from this flower focuses on the boyhood of Douglas Spaulding.

ANSWER: dandelions (accept Dandelion Wine)

[10] In *Fahrenheit 451*, this robotic character with eight legs lives at the firehouse and injects its victims with morphine. Guy spends most of the third part of the novel on the run from this creature.

ANSWER: the Mechanical Hound

5. Answer some things about historical figures with the nickname “The Hammer,” none of whom regularly wore parachute pants, FTPE:

[10] Charles “The Hammer” Martel took it to Abdul Rahman following his victory at the River Garonne by smashing him at this 732 A.D. battle fought near the town of Poitiers [*pwa-TYEH*].

ANSWER: Battle of Tours

[10] This “Hammer of the Scots” returned to England after getting word of a humiliating defeat at Stirling Bridge, just in time to beat William Wallace at the Battle of Falkirk.

ANSWER: Edward I (or Edward Longshanks)

[10] This man, whose surname was allegedly derived from the Aramaic for “hammer,” led a namesake revolt against the Seleucids. That victory combined with a miracle in the Temple led to the establishment of Hanukkah.

ANSWER: Judas Maccabeus (or Judah Maccabee)

6. One psychologist argued that people will try compensate mentally for physical disabilities in a study of this concept. FTPE:

[10] What type of feeling of inadequacy has been grouped into a namesake “complex” in which a person might use a number of strategies to fight those feelings of low self-worth?

ANSWER: inferiority (complex)

[10] This Austrian psychologist emphasized inferiority in his writings on “individual psychology.”

ANSWER: Alfred Adler

[10] One major difference between Freud and Adler was the latter’s de-emphasis of the libido, the drive for this activity.

ANSWER: sex (accept word forms—within reason)

7. The automatic management of this computer resource is known as garbage collection. FTPE:

[10] Name this computer resource whose types include random-access and read-only.

ANSWER: memory [or storage]

[10] The top of the computer memory hierarchy includes these storage locations on the processor.

ANSWER: registers

[10] In this programming language, managing memory is performed by functions such as malloc and free. An extension of this language that could support OOP was developed by Stroustrup.

ANSWER: C

8. This drug was developed by endocrinologist Gregory Pincus with funding from Katherine McCormick. FTPE:

[10] What generically named type of oral contraceptive was approved for regular use by the FDA in 1960?

ANSWER: birth control pill

[10] This feminist activist and coiner of the term “birth control” was the major influence behind Pincus’s development of the pill.

ANSWER: Margaret Sanger

[10] Sanger was a founder of what became this family planning organization, which some people believe supports “black genocide.” It is currently headed by Cecile Richards, and its funding has been under attack by several Republican-led legislatures.

ANSWER: Planned Parenthood

9. Based on their interpretation of Biblical prohibitions against eating blood, this denomination doesn’t allow members to have blood transfusions. FTPE:

[10] What Christian sect founded by Charles Taze Russell distributes Watch Tower tracts?

ANSWER: Jehovah’s Witnesses

[10] Jehovah’s Witnesses think Jehovah created this figure, who then created everything else in the universe. They think this pretty famous guy was killed on a torture stake, not by crucifixion.

ANSWER: Jesus

[10] This name is applied to the worship places of Jehovah’s Witnesses, which are typically modest and lack religious symbolism.

ANSWER: kingdom hall

10. Name some characters from *One Thousand and One Arabian Nights*. FTPE:

[10] The frame story of the *Arabian Nights* is about this Persian Queen’s attempts to keep her husband Shahryar from killing her by telling him stories.

ANSWER: Scheherazade

[10] In one story, Ali Baba escapes the wrath of the forty thieves thanks to the cleverness of this slave girl, who kills them by scalding them all with boiling oil.

ANSWER: Morgiana

[10] One of the later tales in *Arabian Nights* tells of the voyages of this sailor, whose adventures include being attacked by giant birds called Rocs and being enslaved by the Old Man of the Sea.

ANSWER: Sinbad

11. This substance was made from a mixture of the blood of Kvasir and honey. MMMMM! FTPE:

[10] What tasty draught of Norse myth would turn any drinker of it into one capable of rhyming?

ANSWER: Mead of Poetry (accept word forms of “poetry,” like “poetic,” etc.)

[10] This All-Father of Norse myth and husband of Frigg stole the Mead of Poetry from Suttung.

ANSWER: Odin

[10] Kvasir was created from the spittle of the Aesir and this other group of gods with whom the Aesir battled.

ANSWER: Vanir

12. This empire grew out of the kingdom of Chenla, and one ruler of this empire died while chasing a wild elephant, FTPE:

[10] Name this Southeast Asian Empire founded by Jayavarman II, which also lent its name to a brutal communist government led by Pol Pot.

ANSWER: Khmer Empire

[10] The Khmer Empire was centered in this modern day country with capital Phnom Penh, the current king of which is Norodom Sihamoni.

ANSWER: Cambodia

[10] This temple built by Suryavarman II, in the then capital of the Khmer Empire, was originally built as a shrine to Vishnu. This building also appears on the national flag of Cambodia.

ANSWER: Angkor Wat

13. This man was barred from receiving a visa to visit the United States after the 2002 riots in Gujarat, the state where this man served as Chief Minister for over ten years. FTPE:

[10] Name this member of the BJP who won a national election in May of 2014.

ANSWER: Narendra Modi

[10] Narendra Modi is the current Prime Minister of this country, which uses the rupee.

ANSWER: India [or Bharat Ganarajya]

[10] India is currently home to this Maoist-inspired insurgency movement. Operation Green Hunt, which began in 2009 in the Red Corridor, is an ongoing offensive against this movement.

ANSWER: Naxalites [or Naxals; or Naksalvadi]

14. In this biological experiment, which was performed by its two namesakes, density gradient centrifugation revealed only three different bands over several generations. FTPE:

[10] Name this 1957 experiment that showed the semiconservative replication of DNA.

ANSWER: Meselson–Stahl experiment

[10] This bacterial model organism was used in the Meselson–Stahl experiment. One strain of this bacteria, O157:H7, produces Shiga toxins and causes food poisoning.

ANSWER: E. coli [or Escherichia coli]

[10] In the experiment, *E.coli* were grown in "heavy" medium containing the 15-isotope of this element. Purine and pyrimidine both contain this element, along with hydrogen and carbon.

ANSWER: nitrogen

15. This poet wrote that “nobody, not even the rain, has such small hands” in one work. FTPE:

[10] Who is this author who described a “goat-footed balloon-man” who “whistles far and wee” in his poem “in just spring” and who was known for his oddly structured poems and rule-breaking orthography?

ANSWER: e.e. cummings

[10] One perplexingly laid out cummings poem rearranges letters and words to depict this common insect “[up now gathering to leap].”

ANSWER: grasshopper

[10] Cummings’s memoir *The Enormous Room* describes his time as a POW in France in this war.

ANSWER: World War I

16. Identify some islands in the Mediterranean Sea, FTPE:

[10] This archipelagic nation made up of seven islands including Comino, Gozo, and its namesake, is home to the Hal Saflieni Hypogeum. This nation with capital Valletta once withstood an Ottoman invasion.

ANSWER: Malta

[10] This island with capital Palermo is home to Mt. Etna, and is separated from Italy by the Strait of Messina.

ANSWER: Sicily

[10] This archipelago controlled by Spain comprises the islands Ibiza, Formentera, Mallorca, and Menorca.

ANSWER: the Balearic Islands

17. This political party emerged from a coalition of anti-Jacksonian groups, including the National Republicans, in the early 1830s. FTPE:

[10] What party successfully got William Henry Harrison elected president in 1840, though it mostly dissolved after the Republican Party was born in the mid-1850s.

ANSWER: Whig Party

[10] The Whigs were supportive of government spending on projects, at the time embodied in the “American System” of what Kentucky senator?

ANSWER: Henry Clay

[10] Harrison pretended to be reluctant to be president during the 1840 election, famously saying he would rather drink “hard cider” in one of these structures, which lend their name to his campaign.

ANSWER: log cabin

18. He used the pen name of Isaac Bickerstaff in a parody of John Partridge’s Almanac. FTPE:

[10] Who was this 18<sup>th</sup>-century satirist who criticized copper coinage in Ireland in *The Drapier’s Letters* and depicted ancient writers versus moderns in *Battle of the Books*?

ANSWER: Jonathan Swift

[10] Swift claimed that an American he knew in London gave him the idea for alleviating poverty in Ireland by legalizing the eating of Irish babies propounded in this essay.

ANSWER: “A Modest Proposal”

[10] In this play, Swift depicts the brothers Peter, Martin, and Jack, representing Catholicism, Lutheranism, and other Protestant dissenters, as afloat in a “ship of state.”

ANSWER: A Tale of a Tub

19. A photon's energy equals this man's namesake constant times the frequency. For 10 points each:

[10] Name this physicist who formulated quantum theory while studying black-body radiation.

ANSWER: Max Planck

[10] Planck's law is similar to this other law at low frequencies, but not at high frequencies, where it predicts an infinite amount of energy, which is known as the ultraviolet catastrophe.

ANSWER: Rayleigh–Jeans law

[10] The reduced Planck constant equals the Planck constant divided by this value. The period of a spring equals this value times the square root of mass divided by the spring constant.

ANSWER: two pi



20. Art Blakey, an all-time great on this instrument, created the Jazz Messengers. FTPE:

[10] Buddy Rich was another great on this instrument, on which he engaged in a “groove battle” with Animal on *The Muppet Show* in 1981.

ANSWER: drums

[10] The standard jazz drum kit includes a stand with two cymbals given this nickname; notes on it can be played with the cymbals open or closed.

ANSWER: hi-hat

[10] Miles Davis’s drummer, Philly Joe Jones, is not to be confused with Jo Jones, who was a longtime drummer for this bandleader, best known for his theme song “One o’Clock Jump.”

ANSWER: “Count” Basie