

1. This philosopher wrote that his “formula for greatness in a human being is *amor fati*,” in one work, and he celebrated Arthur Schopenhauer “as educator” in a chapter from his book *Untimely Meditations*. He included sections titled “Why I Am So Clever,” and “Why I Write Such Good Books” in his work *Ecce Homo*. This philosopher divided the title concept into the Apollonian and Dionysian in one work, while in another work he declared that, “God is dead.” This philosopher wrote *The Gay Science* and *The Birth of Tragedy*. FTP, name this German philosopher who wrote about the Ubermensch in *Thus Spake Zarathustra*.

ANSWER: Friedrich Nietzsche

2. In 2013 in this city, a performance artist drove a nail through his scrotum into the cobblestones in a historic square once home to the GUM [goom] department store. In 1987 an 18-year-old illegally landed a small plane near that same square in this city, leading to the arrest of West German aviator Mathias Rust. This city is home to a large park with gardens and amusement rides named for the writer Maxim Gorky. The 16<sup>th</sup> century capture of Kazan and Astrakhan was celebrated by the construction of a large church with notable onion domes in this city, its Saint Basil’s Cathedral. FTP Red Square and the Kremlin are in what most populous Russian city?

ANSWER: Moscow

3. Vietnam veteran Norman Bowker performs this action in the story “Speaking of Courage” from Tim O’Brien’s *The Things They Carried*. After describing how the title fish can eat up to 78 bananas to Sybil Carpenter, Seymour Glass carries out this action in Salinger’s “A Perfect Day for Bananafish.” The people of Tilbury Town seem surprised that the title figure, who “glittered when he walked” and was “richer than a king,” performed this action in the poem “Richard Cory.” FTP, Edna Pontellier carries out what action at the end of Kate Chopin’s *The Awakening* when she walks into the Gulf of Mexico?

ANSWER: suicide (accept specific forms early, like “hanging oneself” for Bowker, “shooting oneself in the head” for Seymour and Richard Cory); anti-prompt at end, though)

4. Philip Glass composed *Piece in the Shape of a Square* for two of these instruments. The headjoint is one part of this instrument, which contains the gizmo key. This instrument plays sixteenth notes at the beginning of Smetana’s *The Moldau*, and in Ravel’s *Bolero*, this instrument is the first to play the melody. Frederick the Great played this instrument, and Theobald Boehm devised its fingering system. Debussy’s piece *Prelude to the Afternoon of a Faun* begins with this instrument chromatically descending. The bird in *Peter and the Wolf* is depicted by this reedless woodwind. For 10 points, name this instrument pitched an octave lower than a piccolo.

ANSWER: flute

5. This quantity is plotted on the y-axis of a Bergeron diagram, and determinants are used to calculate this quantity in mesh analysis. The magnetic field is proportional to this quantity according to the Biot–Savart law. The power dissipated due to Joule heating is proportional to the square of this quantity, which is also the subject of Kirchhoff’s first law. This quantity, which is measured in amperes, is the rate that electric charge flows. For 10 points, name this quantity that is equal to voltage divided by resistance, according to Ohm’s law.

ANSWER: electric current

6. A scoundrel created by this author writes "Souvenirs of a Soldier in Africa" in *La Vie Francaise* with the help of Charles Forestier's wife. A character created by this author is stabbed in the neck by a prostitute named Rachel with a dessert knife. Other characters created by this author of "Mademoiselle Fifi" attempt to travel to Le Havre [*luh A-vruh*], but are held up until the plump title character sleeps with a Prussian officer. This author wrote a story in which Mathilde [*ma-TEELD*] and her husband borrow a lot of money to replace the titular piece of jewelry, which turns out to be fake. For 10 points, name this French author of "Ball of Fat" and "The Necklace."

ANSWER: Guy de Maupassant

7. The Ancilia were 12 of these items sacred to the Romans, kept in the Temple of Mars. The one owned by Ajax the Lesser was created by Tikios from seven layers of ox hide. One Norse myth says that one of these items called Svalinn kept the earth from being burned by the sun. A set of gifts given to a Greek hero included Hades' helmet of darkness, winged sandals given by Hermes, and one of these items polished to allow its holder to see Medusa in it. FTP what defensive item was used as a mirror by Perseus and likely included the Aegis of Zeus and Athena?

ANSWER: shield

8. This term names the effect, which was discovered by Chernaev and is strongly seen in ligands such as carbon monoxide and the cyanide ion, that is the largest factor governing substitution reactions involving square planar complexes. This term is found in an alternative name for maleic acid, but not fumaric acid. This term denotes an isomer that has a pair of identical atoms or groups on *opposite* sides of a double bond, and is the opposite of cis. For 10 points, identify this five-letter term that also names a type of fat that was banned in New York City restaurants.

ANSWER: trans

9. In a song named for this city, the speaker wins a contest by guessing the number of molecules in Leonard Nimoy's butt. The cartoon character Bugs Bunny often says "I knew I should of taken that left turn at" this city. The film *High School Music* is set in this city, which is home to a Triple-A team nicknamed the Isotopes, as well as a hot air balloon fiesta. A television show set in this city starred Bryan Cranston as a chemistry teacher with cancer who makes meth. For 10 points, name this city in New Mexico that was the setting of *Breaking Bad*, with airport designation ABQ.

ANSWER: Albuquerque

10. Over 20 participants in a sit-down strike at this company's Fisher Plant Number 2 were wounded by company security or Genesee County police in 1937. A former VP of a subsidiary of this company, Charles Erwin Wilson, became Secretary of Defense in 1953, famously being misquoted during confirmation hearings as saying "what is good for [this company] is good for America." FTP, what corporation was founded by Will Durant in 1908 to eventually combine automakers like Cadillac, Chevrolet, and Oldsmobile?

ANSWER: General Motors

11. Baha'i adherents may carry these objects to help with recitations. Like those found in Islamic traditions, these are kept in numerical accordance to the names of God. In Zen Buddhism, collections of these usually number 108; only the first hundred are used to count out spoken mantras. The *paternoster* and *chotki* are forerunners to these meditative objects commonly used in Christian denominations. Frequently used to focus the petitioner's thoughts and spiritual energies, FTP, what are these religious objects, a necklace type of which is a rosary?

ANSWER: prayer beads

12. This literary character bursts into tears upon seeing the large collection of English dress shirts owned by the title character of the novel in which she appears. Earlier, she had briefly thrown away a \$350,000 pearl necklace after getting a letter from that title character. Described as having a voice “full of money,” near the end of the novel in which this character appears she kills Myrtle Wilson, her husband’s mistress, with her car. Perhaps represented by the green light on the end of her dock to the protagonist, FTP what cousin of Nick Carraway is the ideal love interest of Jay Gatsby?

ANSWER: Daisy Buchanan

13. Worthington Whittredge served as a model for this painting's title figure, whose head was based on a Jean-Antoine Houdon [oo-DAWN] bust. Painted a decade before its artist's mural *Westward the Course of Empire Takes Its Way*, this work appears in the Grant Wood painting *Daughters of Revolution* behind three elderly women. Prince Whipple is depicted in this painting, along with James Madison, who holds a flag. For 10 points, name this Emanuel Leutze [LOIT-suh] painting that depicts the first U.S. president on a boat in an icy river on the night of December 25, 1776.

ANSWER: Washington Crossing the Delaware

14. In dimensions greater than or equal to this number, Stephen Smale proved the generalized Poincare [pwan-ka-REY] conjecture. This number is the only Catalan number between two and fourteen. In the third term of the Maclaurin expansion of the sine function, the variable is raised to this power. The roots of polynomial equations of this degree or higher are not capable of algebraic solutions according to the Abel-Ruffini theorem. The value of the golden ratio equals one plus the square root of this number, all divided by two. In a regular polygon with this number of sides, each interior angle is 108 degrees. For 10 points, name this number of sides on a pentagon.

ANSWER: five

15. A non-US President named William McKinley died holding this office in 1920. Among the other notables to have this job are Everett Dirksen, who has two different federal buildings named for him, and Roland Burris, who served for less than two years in this legislative role, starting in January 2009. A non-folk singer named Paul Simon held this post, serving part of his time with Carol Moseley-Braun, the only black woman to be elected to this post. FTP, what elected office is currently held by Mark Kirk and Majority Whip Dick Durbin, also the last post held by Barack Obama before he became president?

ANSWER: U.S. Senator from Illinois

16. Anthropologist Meyer Fortes was born in a country on this continent and analyzed customs of a culture on this continent in *The Sanusi of Cyrenaica* [sir-uh-NEY-i-kuh]. Fortes co-edited a book titled for the “Political Systems” of this continent with an anthropologist who wrote a trilogy of works about a people of this continent called the Nuer [NOO-er]. This continent provided the setting for E. E. Evans-Pritchard’s work challenging native beliefs in order to learn more about them in the book *Witchcraft, Oracles and Magic among the Azande*. “The Tribal Life of the Gikuyu” is the subtitle, FTP, of an anthropological study of people on what continent written by Jomo Kenyatta?

ANSWER: Africa

17. A hybrid creature made from a cross between raccoons and these other animals were bred for the harvesting of organs in Atwood's *Oryx and Crake*. Another of these animals, Pinky, is the pet of Robert in a young adult novel by Robert Newton Peck titled for a "Day No [animal of this type] Would Die." One of these animals drunkenly falls off a ladder while trying to change a commandment against drinking alcohol. That one, Squealer, represents propaganda in an allegorical novel in which other examples of this animal represent Stalin and Trotsky. FTP what farm animals were Napoleon and Snowball in Orwell's *Animal Farm*?

ANSWER: pigs

18. Within this body of water are the islands of Mancarroncito and La Venada. The historic city of Granada is located on its northwestern shore, and it is the drainage site of more than forty rivers including the Tipitapa. The active volcanoes of Concepción and Maderas are located on its largest island of Ometepe. The San Juan River provides access for this body of water to the Caribbean Sea, and it is separated from the Pacific Ocean by the Rivas Isthmus. Home to a namesake species of freshwater shark, FTP, what is this Central American lake, the largest in an eponymous country with capital at Managua?

ANSWER: Lake Nicaragua [also accept Lake Cocibolca]

19. *The Book of Five Rings* and *Hidden in Leaves* were texts that dealt with the philosophy of this people. One subset of this group wore the *jingasa* hat and armor made from hexagonal pieces of metal called *tatami*. One army of these people was defeated at the Battle of Shiroyama, which ended the Satsuma Rebellion. This group adapted the Portuguese arquebus gun into their repertoire. These people often carried swords like the *wakizashi* and the *katana*, and a member of this caste whose lord had died was known as *ronin*. These people operated under the code of honor known as *bushido*. FTP, identify this group of Japanese military nobility.

ANSWER: Samurai

20. The bacterial population in this organ is controlled by the Paneth cells, which secrete lysozyme. The middle portion of this organ is affected by tropical sprue, and lymph nodules called Peyer's patches are found in its lowest portion. An alkaline substance is secreted by Brunner's glands to protect this organ's mucosal lining. Circular folds called plicae circulares are found around this organ, which is divided into the duodenum, jejunum, and ileum, and is covered with villi to help absorb nutrients. For 10 points, name this organ located between the stomach and large intestine.

ANSWER: small intestine [or small bowel; prompt on partial answer]

## Delta Burke Round 5

### Bonuses

1. A 1962 novel by Doris Lessing is titled for a notebook of this color. FTPE:

[10] What adjective form of the name of a color associated with wealth also describes a “pavilion” in a temple burned by the monk Mizoguchi?

ANSWER: Golden

[10] *The Temple of the Golden Pavilion* is a novel by this Japanese author of *Confessions of a Mask* who famously committed suicide on top of the Japanese Defense Force building in 1970.

ANSWER: Yukio Mishima

[10] In *Confessions of a Mask*, Mishima’s protagonist describes his narrator being disgusted to find out that an image of a knight in a picture book he loved looking at was actually this female.

ANSWER: Joan of Arc

2. Answer the following about some strong acids, for 10 points each.

[10] The contact process replaced the lead chamber process as the most common method of producing this diprotic acid, which is used in lead-acid car batteries, and has the formula H<sub>2</sub>SO<sub>4</sub>.

ANSWER: sulfuric acid [or oil of vitriol]

[10] Along with zinc amalgam, the strong acid hydrochloric acid is used in this eponymous organic chemistry reaction, which can convert either aldehydes or ketones into alkanes.

ANSWER: Clemmensen reduction

[10] Aqua regia, which can be used to dissolve gold, is composed of three parts hydrochloric acid and one part this other strong acid, which can be obtained from ammonia in the Ostwald process.

ANSWER: nitric acid [or HNO<sub>3</sub>; or aqua fortis; or spirit of niter]

3. Answer some questions about fundamental concepts in Islam FTPE.

[10] This is the term used to refer to chapters of the Qur’an, composed of many ayat.

ANSWER: Sura

[10] This longest sura, revealed to Muhammad after his flight to Medina, contains the Throne Verse. Its title comes from an incident in which the title creature’s flesh brings a dead man back to life.

ANSWER: The Cow (accept “*Surat al-Baqarah*”)

[10] This man was the leader of a group of Israelites who sacrificed the titular heifer in the Koran. He was involved in another bovine-related incident when he prohibited the worship of a golden calf idol.

ANSWER: Moses or Musa

4. It is considered just a coincidence by many that this event, which occurred at a Mafia-owned bar on June 28, 1969, took place shortly after Judy Garland's funeral. For 10 points each:

[10] Name these riots that took place at the namesake gay bar in Greenwich Village and is considered the beginning of the gay-rights movement.

ANSWER: Stonewall riot(s)

[10] Christopher Street is a center of Gay culture in Greenwich Village, which is a neighborhood in this city.

ANSWER: New York City

[10] Three years before the Stonewall riots, the Compton's Cafeteria riot, in which transgender individuals fought police harassment, took place in the Tenderloin neighborhood of this city.

ANSWER: San Francisco

5. The book *Born Free and Equal* contains photographs by this man. For 10 points each:

[10] Name this member of Group f/64 whose photos include *Moonrise, Hernandez, New Mexico*.

ANSWER: Ansel Adams

[10] Adams took a photograph titled *Monolith, the Face of Half Dome* in this national park located in California, which is also home to El Capitan and Bridalveil Fall.

ANSWER: Yosemite

[10] The book *Born Free and Equal* includes a photograph of Richard Kobayashi, a farmer with cabbages, who was interned at this California relocation center during World War II.

ANSWER: Manzanar

6. One hint at the surprise ending of this story is the protagonist's observation that the constellations above him are "strange" and holding "secret and malign significance." FTPE:

[10] What 1890 short story ends with Peyton Farquhar dead by hanging from the title structure, though he has dreamed of escape?

ANSWER: "An Occurrence at Owl Creek Bridge"

[10] "An Occurrence at Owl Creek Bridge" is a story by this "bitter" American author of *The Devil's Dictionary*. This author's disappearance into Mexico provides the basis for the Carlos Fuentes novel *The Old Gringo*.

ANSWER: Ambrose Bierce

[10] This other Bierce story, named for a Civil War battle, depicts a deaf-mute child who at first glories in the idea of war and a burning building he sees, before he realizes it is his own home and his mother is dead. Good times!

ANSWER: "Chickamauga"

7. A water diversion system in this state is partly named for the Big Thompson River, and the tallest dunes in North America are located in its Great Sand Dunes National Park. FTPE:

[10] Name this state where over 600 cliff dwellings can be found in its Mesa Verde National Park.

ANSWER: Colorado

[10] Colorado is home to this range, which forms the Continental Divide and contains Pikes Peak.

ANSWER: Rocky Mountains [or the Rockies]

[10] This mountain, which is the tallest in the Rockies, is located in the Sawatch [*suh-WAHCH*] Range of central Colorado, and is only a few feet higher than Mount Massive and Mount Harvard.

ANSWER: Mount Elbert

8. Answer the following about electron spin, for 10 points each.

[10] The quantization of electron spin was confirmed in this 1922 experiment, in which a beam of silver atoms was passed through a magnetic field and split into two components.

ANSWER: Stern-Gerlach experiment

[10] These particles, an example of which are electrons, have half-integer spin. They are named for a physicist who, along with Leo Szilard [*SIL-ahrd*], built the first nuclear reactor.

ANSWER: fermions

[10] Two electrons in the same orbital must have opposite spins is a consequence of this eponymous principle, which applies to fermions but not bosons.

ANSWER: Pauli exclusion principle [accept either]

9. John Hickenlooper narrowly retained his governorship of this state in the November, 2014, election. FTPE:

[10] Bob Beauprez lost to Hickenlooper in what state in which recreational marijuana use became legal in January, 2014?

ANSWER: Colorado

[10] Coloradans elected a toothy empty suit named Cory Gardner as US senator over this Democrat who was mocked as Senator Uterus for his focus on Gardner's votes against women's reproductive rights in the state house.

ANSWER: Mark Udall

[10] In other election news, Texans surprised no one by electing gun-humping Shriek Monkey Greg Abbott over this female Democratic candidate who gained national fame for filibustering an egregious anti-abortion bill in June, 2013.

ANSWER: Wendy Davis

10. Kondraty Bulavin led an uprising of Don Cossacks during the reign of this man. FTPE:

[10] Name this tsar who defeated Charles XII of Sweden at the Battle of Poltava during the Great Northern War, and who also imposed a tax on beards in order to modernize Russia.

ANSWER: Peter the Great [or Peter I; or Pyotr Velikiy; or Pyotr I; prompt on partial answer]

[10] Peter I disbanded this group after their 1698 uprising that supported his sister Sophia.

ANSWER: streltsy [or shooters]

[10] The streltsy were created by this tsar, who also created the oprichnina, summoned the first zemsky sobor, and lost to Poland and Sweden in the Livonian War.

ANSWER: Ivan the Terrible [or Ivan Grozny; or Ivan IV; prompt on partial answer]

11. Answer the following DNA repair, for 10 points each.

[10] The deamination of cytosine to this other base can be repaired using a glycosylase. This base, which replaces thymine during transcription, is usually found bonded to adenine in RNA.

ANSWER: uracil [or U]

[10] Along with DNA ligase, this enzyme can be used to repair DNA damaged by thymine dimers or mismatched bases. This enzyme may be better known for synthesizing DNA from nucleotides.

ANSWER: DNA polymerases [accept specific types]

[10] The failure of DNA repair can lead this protein to trigger apoptosis or arrest the cell cycle. This protein, which is named for its molecular mass, is nicknamed the "guardian of the genome."

ANSWER: p53

12. The first of these works is the only with four movements, the fourth is scored for an echo flute, the fifth gives prominence to the harpsichord, and the sixth is not scored for any violins. FTPE:

[10] Name this collection of six concertos that were dedicated to Christian Ludwig, a margrave.

ANSWER: Brandenburg Concertos [or BWV 1046–1051]

[10] This composer of the *Brandenburg Concertos* also wrote *The Art of Fugue*. This composer from the Baroque period had many children, including Carl Philipp Emanuel.

ANSWER: Johann Sebastian Bach [prompt on "Bach"]

[10] This other JS Bach collection consists of 24 preludes and 24 fugues, one in each major and minor key. Glenn Gould's recording of part of it is included on the Voyager Golden Record.

ANSWER: *The* Well-Tempered Clavier [or BWV 846–893]

13. In this myth system, Ometochtli, or “Two Rabbit,” was head partymeister of a group of 400 rabbits who represented states of drunkenness, probably from drinking pulque [*POOL-kee*]. FTPE:  
[10] The myth system of what central Mexican people includes the “smoking mirror,” Tezcatlipoca?

ANSWER: Aztec myth

[10] This being is the Aztec storm god. He holds up the sky and demands human sacrifice in exchange for rain.

ANSWER: Tlaloc

[10] Huitzilopochtli [wee-tsee-loh-POHCH-tlee] was associated with a blue type of this bird; his helmet depicted this bird.

ANSWER: hummingbird

14. This “mighty man” with “sinewy hands” works “Under the spreading chestnut tree.” FTPE:

[10] What title iron worker of a 19<sup>th</sup>-century poem teaches the speaker that “at the flaming forge of life/Our fortunes must be wrought”?

ANSWER: “The Village Blacksmith”

[10] “The Village Blacksmith” is a poem by this American who used the trochaic tetrameter of the Finnish Kalevala to structure his “Song of Hiawatha.”

ANSWER: Henry Wadsworth Longfellow

[10] Longfellow described the 1775 “midnight ride of” this patriot who looked for the signal of “one if by land, two if by sea.”

ANSWER: Paul Revere

15. A French thinker argued that complex societies developed “organic solidarity” in response to this condition. FTPE:

[10] What term denoting the specialization of work is exemplified by a pin factory in *The Wealth of Nations*?

ANSWER: division of labor

[10] This early economist wrote *The Wealth of Nations*.

ANSWER: Adam Smith

[10] This French sociologist contrasted mechanical and organic solidarity in his work *The Division of Labor in Society*.

ANSWER: Emile Durkheim

16. A type of diplomacy named for this product was practiced by the Confederacy. FTPE:

[10] What product necessary for Britain’s textile industry was referred to as the “king” crop in the 19<sup>th</sup> century?

ANSWER: cotton

[10] The Union blockade of the Confederacy led to the capture of James Mason and John Slidell on this ship, namesake of the “affair” created by their arrest.

ANSWER: Trent Affair

[10] Cotton production became much more profitable upon the improved cotton gin patented by this inventor.

ANSWER: Eli Whitney



17. This philosopher explored the “Forms” and “Expressions” of the title concept in his *The Sense of Beauty*. FTPE:

[10] Name this American philosopher who wrote in *The Life of Reason* that, “Those who cannot remember the past are condemned to repeat it.”

ANSWER: George Santayana

[10] Santayana wrote one work titled after this philosophical attitude and *Animal Faith*. Pyrrho of Ellis founded a Greek school of thought named for this position of doubting any fact without empirical evidence.

ANSWER: skepticism

[10] Santayana’s *Skepticism and Animal Faith* argues that philosophy begins in this state. This phrase meaning “in the midst of things” was coined by Horace to explain the beginning of Homer’s *Iliad*.

ANSWER: “in media res”

18. For launching a satellite, the square root of two times the universal gravitational constant times the mass of the Earth divided by the distance equals the "escape" type of this quantity. FTPE:

[10] Name this derivative of acceleration that is often measured in meters per second.

ANSWER: velocity

[10] These plots of a type of velocity of stars versus distance away from the galactic center show velocity remains roughly constant instead of declining, which is predicted by Kepler's third law.

ANSWER: galactic rotation curves

[10] The leading explanation for the "galaxy rotation problem" is this substance, which makes up 25% of the universe, and may be composed of weakly interacting massive particles, or WIMPs.

ANSWER: dark matter

19. This civilization used the still-undeciphered Linear A script, and Arthur Evans excavated its site of Knossos. FTPE:

[10] Name this ancient civilization centered on the island of Crete, which was presumably wiped out by a volcanic eruption on the island of Santorini.

ANSWER: Minoan Civilization

[10] This archaeologist had planned on excavating Knossos, but died before he could make the attempt. This man is more famous for unearthing the site of Hissarlik, which was later identified at the ancient city of Troy.

ANSWER: Heinrich Schliemann

[10] A famous fresco at Knossos depicts people practicing a ritual involving jumping over these animals. In Greek myth, one of these animals was the father of the Minotaur.

ANSWER: bull (please, please, don’t accept or prompt on “cow”)

20. In one play by this man, Judge Azdak determines that Grusha is the real mother of the baby Michael. FTPE:

[10] Name this playwright of *The Caucasian Chalk Circle* who wrote about Shui Ta in *The Good Person of Szechwan*.

ANSWER: Bertolt Brecht

[10] In this play by Brecht set during the Thirty Years War, Swiss Cheese is shot trying to retrieve a cashbox, while Katrin is killed trying to warn villagers of an attack.

ANSWER: *Mother Courage and her Children* (or *Mutter Courage und ihre Kinder*)

[10] Brecht wrote several plays that satirized this group, including *The Resistible Rise of Arturo Ui* and *Fear and Misery of the Third Reich*.

ANSWER: the Nazi Party (accept National Socialist German Worker’s Party or NSDAP)