

1. His poems, which went largely unnoticed till after his death, include "Fish", "Snake", and "Mountain Lions." He's much better known for his fiction, some of which also have animals in the title, such as *The White Peacock* and *The Plumed Serpent*. FTP name the author of *The Rainbow*, *Sons and Lovers*, and *Lady Chatterley's Lover*.

Answer: D.H. (David Herbert) **Lawrence**

2. Speaking of D.H. Lawrence, his 1917 poetry collection *Look! We Have Come Through* tells of his relationship with his wife Frieda, who was also the sister of this man. Originally a cavalry officer, he was transferred to the Air Service in 1915 and flew bombers on the Prussian front until Oswald Boelcke selected him for an elite fighter squadron. Sources differ on whether Australian anti-aircraft fire or Canadian pilot Roy Brown should be credited with bringing him down, but no beagles were involved. FTP name the top ace of World War I, credited with 80 kills and nicknamed "the Red Baron."

Answer: Manfred von **Richtofen** [prompt on "Red Baron", but they don't have to say "von" or give the first name, despite the successes of his brother Lothar and his cousin Wolfram]

3. It consists of layers of calcium carbonate, in the crystalline form of either aragonite or calcite, held together by a hard organic substance called conchiolin. Secreted by epithelial cells of the mantle, it is identical in chemical composition to the nacre that forms the interior layer of the mollusk shell. FTP name this hard, rounded organic secretion, valued and used similarly to a gemstone.

Answer: **pearl** [accept **nacre** before it's said; accept **mother-of-pearl** before the words "interior layer"]

4. One of the bases for this 1854 papal pronouncement comes from Luke 1:28, which includes the Greek greeting "chaire kecharitomene," meaning "Hail, full of grace," given by the archangel Gabriel. It did not exempt its subject from the "temporal penalties of Adam," i.e. bodily infirmity and eventual death, though it did exempt her from an otherwise universal human birthright. Pronounced by Pius IX in *Ineffabilis Deus*, it allowed Mary to be the right vessel for the birth of Christ. FTP what two-word phrase refers to the Catholic belief that Mary was conceived without original sin?

Answer: **Immaculate Conception**

5. Two of the seven figures on the left of this painting seem to look out at the viewer rather than at the prone figure at the bottom. The title figure gestures pedagogically with his left hand while five of the others look intently at his work with his right hand, which holds a forceps in the muscle of a fleshless left arm. Completed in 1632 and the first painting its artist signed, FTP what is this Rembrandt work showing a corpse being dissected?

Answer: **The Anatomy Lesson of Dr. Tulp**

6. One victim, found in the titular location, had been beaten and decapitated; the other, the first victim's daughter, was found strangled and stuffed feet-first up the chimney. Though the apartment's safe was found open with cash strewn about the place, nothing seemed to have been stolen. Though a clerk named Adolphe Le Bon is charged, the detective protagonist is certain he's innocent, and he seeks to find the killer by placing a lost-animal ad in a Paris newspaper. Thus is caught, FTP, the murderous orangutan in what short story about detective C. Auguste Dupin (doo-PAN) by Edgar Allan Poe?

Answer: **"Murders in the Rue Morgue"**

7. Pencil and paper ready, you will have 15 seconds. Given that the integral from zero to 1 of a function is 2, the integral from 2 to five of the function is -1, and the integral from zero to five is 0, FTP what is the integral of the function from 1 to 2?

Answer: **negative one**

8. The Second Treaty of Fort Stanwix marked the official end of it, though its dissolution had truly begun years earlier. It had an extensive written constitution, which mandated one group to be the Fire-Keepers, as its great meeting place was on their land. That constitution also called for a ruling council of 50 sachems, or chiefs, with prescribed numbers representing each of its original five groups; that number had to change when the Tuscarora entered later. FTP name this alliance of five Eastern American Tribal groups, which included the Seneca, Onondaga, Oneida, Cayuga and Mohawk peoples.

Answer: **Iroquois** League (or Confederation or Alliance)

9. The singer of the song went off to war when he got into a jam at home. His brother died there, and now the only thing he has left is a picture of his brother hugging a woman he met in Saigon. When he goes back home, the veteran's affairs office can't help him get back on his feet and his boss at the refinery won't give him his old job back. FTP, this describes the plight of the main character in what 1984 Bruce Springsteen song?

Answer: **Born in the U.S.A.**

10. We all know the formula of a water molecule is H_2O , but this man was the one who established that fact. For that matter, he was the first to use the word "molecule" in its current sense. He determined the formula by combining Gay-Lussac's law of combining volumes with his own hypothesis that at the same temperature and pressure, equal volumes of gases contain the same number of molecules or atoms. FTP name this man, who died years before others determined the number of molecules in a mole of any substance, a number that now bears his name.

Answer: Amadeo **Avogadro**

11. In 1996 this national park's visitor's center was named for Ernest F. Coe, the man who in 1928 publicly called for its protection and agitated for park status. It has entrances at Chekika and Shark Valley, among others, and it was dedicated in 1947 by Harry Truman, who noted its lack of "lofty peaks" and "rushing streams," but praised it as the "last receiver of [water]." The largest park east of the Rockies, and the largest continuous stand of sawgrass prairie in North America, FTP name this national park in South Florida often called the "river of grass."

Answer: **Everglades National Park**

12. He got on the good side of the papacy in 1155 by executing Arnold of Brescia and restoring Pope Eugenius's temporal authority over Rome. But he got excommunicated six years later for supporting the antipope Victor IV. Despite losing much of his army to pestilence and seeing the rest get whipped at Legnano, he managed a deal that kept peace in Italy from 1177 to 1189. To avoid another war over Italy, he took the cross and led the Third Crusade, which got off to a good start before he drowned crossing a river en route. And we didn't even mention all his maneuvering back home in Germany. FTP name this 12th century Holy Roman Emperor, remembered less for his political skills than for his red beard.

Answer: **Frederick Barbarossa**, or Frederick (or Friedrich) I

13. After serving in WWII, this author took a Fulbright Scholarship to Oxford in 1949-50, where he began writing short fiction. He finished his last novel, *Portrait of the Artist as an Old Man*, shortly before his 1999 death. In between he wrote one moderately successful play, *We Bombed in New Haven*, and a handful of novels, including *Good as Gold*, *God Knows*, and *Something Happened*. But he was never able to capture the critical and commercial success of his first novel, even with its sequel, *Closing Time*. FTP name this author who created the character Yossarian in *Catch-22*.

Answer: Joseph **Heller**

14. To solve for this property, take twice the difference in density between the sphere and the liquid, multiply that by the acceleration due to gravity and the radius of the sphere squared, and divide it all by nine times the velocity due to gravity. This property helps determine whether volcanic magma explodes or simply flows down a mountain; it also explains why it is easier to run in air than in water. In superfluids this quantity goes to zero. FTP what is this property that literally describes the measurement of the resistance of liquid to flow?

Answer: **viscosity**

15. He considered himself primarily a composer of vocal music, and his operas based on the works of Henry James, Thomas Mann, and Herman Melville particularly showcase the tenor roles written for his lover, Peter Pears. But he is better known for music he composed for a British government-sponsored film intended to introduce schoolchildren to classical music. FTP name this composer whose operas *Peter Grimes*, *The Turn of the Screw*, *A Death in Venice*, and *Billy Budd* are today largely overshadowed by *The Young Person's Guide to the Orchestra*?

Answer: Benjamin **Britten**

16. When this character's benefactor Jacques is drowning, he urges the title character not to rescue the drowning man, arguing that the bay had been expressly formed for Jacques to drown in. His own story contains much woe: he is so ravaged by syphilis that when the title character comes across him in Bulgaria, he is unrecognizable, and later he is nearly hanged in an auto-da-fé in Lisbon. Yet he continues to maintain that all's for the best in this best of all possible worlds. Meant to satirize G.W. Leibniz, FTP who is this fictional doctor and friend of Candide?

Answer: Dr. **Pangloss**

17. The founder of this school of thought began propounding his ideas in Athens around 306 BCE, where he created a secluded community called the "Garden." It followed the atomistic metaphysics of Leucippus and Democritus, but it included a doctrine of survival of the fittest in order to explain evolution without appeal to Aristotle's "final causes." That doctrine is best explained in De Rerum Natura by Lucretius. Espousing the need for philosophy to create katestamatic, or prolonged, pleasures, attained by renouncing unnecessary desires, FTP what was this ancient philosophical school whose name is now wrongly associated with hedonism and sensual enjoyment?

Answer: **Epicureanism** (prompt on Epicurus)

18. R.W. Holley first described the structure of this molecule in 1965. This molecule composes over half the structure of ribosomes, and a few types have been identified to act as catalysts. It primarily exists in single strand form, and also differs from DNA in that thymine is replaced by uracil. FTP, name this cellular molecule which functions in protein synthesis.

Answer: **RNA** or ribonucleic acid

19. When his memoirs were published in 1952, he titled chapter 2, "We Attempt to Stop the Orgy of Speculation." "We" would have included his friend and neighbor Federal Reserve Board member Adolph Miller and a somewhat reluctant Secretary of the Treasury, Andrew Mellon. The attempt to reign in optimism on Wall Street was unsuccessful and may have even precipitated the October 1929 crash. FTP, name this president on whose watch the Great Depression began.

Answer: **Herbert Hoover**

20. She's an average high school teenager, balancing the cheerleading captain position, honor roll, and classes while saving the world from villains like Dr. Drakken. She couldn't do it without her two best friends, one of whom is a naked mole rat named Rufus. Call her, beep her, if you wanna reach her, and FTP name this teenage crime-fighter starring in her own Disney Channel series

Answer: **Kim Possible**

21. Based on a novel by Prosper Merimee, it was deemed unsuitable for family audiences at its premiere in 1875. The most shocking features of the opera were the title character's blatant sexuality and her readiness to discard men like picked flowers; also the rowdy women's chorus who both fight and smoke on stage. Less controversial was the decision to have that title character killed at the final curtain, though doubtlessly she deserved it for playing on the emotions of Escamillo and Don Jose. FTP name this tremendously popular opera, the best known work of composer Georges Bizet.

Answer: **Carmen**

22. Made of fire, air and water, these substances give the characteristic colors of blue, red, and green to it. Its guardian lives in a small spot just off of it called Himinbiorg. Every day all the Aesir, except for Thor, who has to swim somehow, must cross it to visit the well of Urd. Also called Asbru, and guarded by Heimdall, FTP what is this bridge associated with the rainbow which joins Midgard to Asgard?

Answer: **Bifrost**

1. FTPE name the 20th century playwright from works:
 - a) The Caucasian Chalk Circle, The Good Woman of Szechuan, and (with composer Kurt Weill) The Threepenny Opera
Answer: Bertolt **Brecht**
 - b) Six Characters in Search of an Author
Answer: Luigi **Pirandello**
 - c) All My Sons and Death of a Salesman
Answer: Arthur **Miller**

2. Find the following about a mass of 2 kg on a spring with constant 10 N/m, for ten points each.
 - (a) The angular frequency
Answer: **square root of 5 or 2.236** seconds
 - (b) The angular period
Answer: **1 over the square root of 5 or .447** seconds
 - (c) The amount of energy put into the system if the mass is pulled half a meter away from equilibrium
Answer: **5/2 or 2.5** Newtons

3. Given a college or university's mascot, name that college FFPE.
 - A. Sebastian the Ibis
Answer: University of **Miami**
 - B. Ralphie the Buffalo
Answer: University of **Colorado**
 - C. Smoky, a blue-tick hound
Answer: University of **Tennessee**
 - D. Buzz, a yellowjacket
Answer: **Georgia Tech**
 - E. UGA VII, a bulldog
Answer: University of **Georgia**

4. 5,10,20,30 who was King of England at the time of each of these events?
 - The French Revolution
Answer: **George III**
 - The beginning of the Thirty Years' War
Answer: **James I**
 - The end of World War II
Answer: **George VI**
 - The signing of the Magna Carta
Answer: **John**

5. Hey, what's Tchaikovsky doing right now? Decomposing! Answer the following FTPE.
 - A. Tchaikovsky's most recorded piece is this overture celebrating the Russians thwarting of Napoleon's attempt at conquest.
Answer: **1812 Overture**
 - B. Some critics call this piece a tone poem while Tchaikovsky himself called it an "overture fantasy." It stands with Berlioz's symphonic treatment of the same Shakespearean title pair.
Answer: **Romeo and Juliet**
 - C. One of Tchaikovsky's most popular works is this symphony, his last.
Answer: **Symphony Number 6** (acc. **Pathetique**)

6. Identify these parts of the human brain FTPE.

(10) This part is responsible for coordinating sensory input with muscular responses and is located in the rear of the brain above the brainstem.

Answer: **Cerebellum**

(10) This lowest portion of the brainstem connects the brain to the spinal cord. It controls many involuntary functions such as breathing.

Answer: **Medulla Oblongata**

(10) This largest white matter structure of the brain connects the right and left hemispheres and is responsible for most communication between the two halves.

Answer: **Corpus Callosum**

7. Name these locations pivotal to the Civil Rights movement FTPE.

A. One of the earliest events in the movement was the 1955-56 bus boycott in this Alabama city.

Answer: **Montgomery**

B. Marchers on the Edmund Pettis Bridge were attacked by police near this other Alabama city in 1965.

Answer: **Selma**

C. Four men staged a famous sit-in at a Woolworth's lunch counter in this North Carolina town on February 1, 1960.

Answer: **Greensboro**

8. Stuff about a famous 19th-century author FTPE.

A. This founder of the Overland Monthly and author of the comic (and racist) ballad "Plain Language from Truthful James" and local color stories about the West was among the most popular writers of his era.

Answer: Bret **Harte**

B. This title story of a Harte collection

Answer: "The Luck of Roaring Camp"

C. Perhaps Harte's best-known work is this story about the eviction of the gambler Oakhurst and four others from the title town.

Answer: "The Outcasts of Poker Flat" (accept it if they add an 's' to "Flat", but not if they leave it off "Outcasts")

9. Answer the following about the pyramids at Giza FTPE.

A. The largest of the pyramids is named for this Fourth Dynasty Pharaoh, known by the Greeks as Cheops.

Answer: **Khufu**

B. The famous sphinx is thought by most archaeologists to have the face of this son of Khufu, also the namesake of the second-largest of the three pyramids.

Answer: **Chephren** (acc. Khafre)

C. The internal funeral chambers of all three pyramids face this direction, thought by the ancient Egyptians to be the direction of the land of the dead.

Answer: **west**

10. FTPE Identify these modern sculptors from clues.

a. This Romanian-born sculptor used wire to create masterpieces such as "Bird in Space"

Answer: Constantin **Brancusi**

b. This American made his career off of two new genres, *stables* and *mobiles*.

Answer: Alexander **Calder**

c. Oh, all right. Whose most famous work is "The Thinker"?

Answer: Auguste **Rodin**

11. FTPE, given a quote from one of the American Film Institute's 100 Years, 100 Laughs list, tell which film the quote comes from:

10 – "Surely you can't be serious!" "I am serious...and don't call me Shirley."

Answer: **Airplane!**

10 – "What if there is no tomorrow?! There wasn't one TODAY!"

Answer: **Groundhog Day**

10 – "How could this happen? I was so careful! I picked the wrong play, the wrong director, the wrong cast. Where did I go right?"

Answer: **The Producers**

12. Name these apparatus used in the physics classroom FTPE.

A. A belt runs across two rollers and in contact with a metal wire. The wire helps generate and store charge in a large metal ball at the top of the machine. Touching it makes your hair stand on end.

Answer: Van de Graaf Generator

B. Two parallel weighted beams suspended by wires at their centers can sense variations in the Earth's gravity.

Answer: torsion balance

C. This is a rapidly rotating disk with a heavy rim, mounted in low-friction gimbals. While the Earth rotates beneath it, it maintains its orientation in space.

Answer: gyroscope

13. Given two characters, name the Shakespeare play in which they appear FTPE.

A. Rosalind and Touchstone

Answer: As You Like It

B. Mistress Ford and Bardolph

Answer: The Merry Wives of Windsor

C. Leontes and Perdita

Answer: A Winter's Tale

14. His name lives on in the name of the currency of Venezuela, though its weakness is probably not the best compliment. Answer these questions related to Simon Bolivar, FTPE.

A. This confederate of Bolivar, considered the liberator of Argentina and Peru, led the victorious forces at Chacabuco.

Answer: Jose de San Martin

B. This son of a Spanish officer of Irish descent declared Chile independent in 1810, though he needed the troops of San Martin to make it true.

Answer: Bernardo O'Higgins

C. In 1819, Bolivar became the first president of this republic, now broken into Ecuador, Panama, Colombia and Venezuela.

Answer: Gran Colombia

15. FTPE answer the following about the work of a Swiss family not named Robinson:

a) The namesake principle of Daniel, perhaps the most famous member of this family, states that as the speed of a moving fluid (liquid or gas) increases, the pressure within the fluid decreases.

Answer: Bernoulli

b) Sources differ on whether Bernoulli's Principle or a related concept, the Magnus effect, should be used to explain how this works. But in both cases, the spin created by a snap of the pitcher's wrist is an essential precondition.

Answer: breaking ball or curveball

c) Daniel Bernoulli's uncle Jacob was the first to use this term, which now refers to a whole branch of calculus, in solving Leibniz's problem of the isochronous curve.

Answer: integral

16. Identify the American poets who wrote the following lines FTPE; if you need the name of the poem, you'll accept your shame and earn five.

A. (10) "I like to think some boy's been swinging them./But swinging doesn't bend them down to stay/As ice storms do."

(5) "Birches"

Answer: Robert Frost

B. (10) "And he was rich—yes, richer than a king,--/And admirably schooled in every grace:"

(5) "Richard Cory"

Answer: Edwin Arlington Robinson

C. (10) "Jesus/he was a handsome man/and what i want to know is/how do you like your blueeyed boy/Mister Death"

(5) "Buffalo Bill's (defunct)"

Answer: e.e. cummings

17. Answer the following about an early Southern champion of states' rights FTPE.

A. This South Carolinian was vice-president to both JQ Adams and Andrew Jackson despite the great animosity between those two men.

Answer: John C. Calhoun

B. Calhoun today is the best known proponent of this concept, which argues that individual states had the right to void federal laws with which they didn't agree.

Answer: nullification

C. Calhoun most forcefully made the case for nullification in this pamphlet.

Answer: South Carolina Exposition and Protest

18. Lunch-boxes are full of terribly unhealthy foods...that you look forward to the whole morning. FTPE, we'll describe a individually-wrapped snacky food, you name it.

Cheese or peanut butter, with crackers or tiny breadsticks. Just don't forget the tiny red stick.

Answer: Handi-Snacks

Flat, plastic cherry or strawberry-flavored strips over 3 meters long.

Answer: Fruit by the foot

Fruit flavored hexagonal gummi-snacks filled with sugary ooze

Answer: Gushers

19. A solution of cadmium chloride in water with scintillation detectors next to them were placed next to a nuclear reactor by Raines and Cowan in 1953. For ten points each:

(a) name the particle that they thus discovered.

Answer: neutrino

(b) For five points each, name the two fundamental forces the neutrino interacts through.

Answer: weak force and gravity

(c) This is the most massive neutrino, weighing under 70 MeV, but more so than the generation 2 neutrino, the mu neutrino.

Answer: tau neutrino

20. Impress us with your knowledge of the Buddha, FTPE.

A. First, a softie: what was the birth name of the Buddha?

Answer: Siddhartha Gautama

B. The Buddha entered a superconscious state, or Samadhi, while sitting beneath this type of tree now associated with him.

Answer: Bodhi Tree (acc. Bo or Pipal)

C. This entity tempted Buddha in various ways while he sat beneath the Bodhi tree, but he was able to ignore her, just as Boris has renounced all the pleasures of the physical world.

Answer: Maya

21. Stuff about a Native American tribe FTPE.

A. This group developed a separate identity from the Creek in the 18th century after a large number fled south from South Carolina after the Yamassee War. One theory argues their name is a variant of the Spanish word "cimarron," or wanderer.

Answer: Seminole

B. This leader of the tribe in the Second Seminole War was captured and died at Fort Moultrie, South Carolina.

Answer: Osceola

C. This later president led many illegal raids into Spanish Florida between 1814 and 1818 in what became known as the First Seminole War.

Answer: Andrew Jackson