

Tossups

1. Although he was one of the enlightened monarchs of the time, and tried to restrict the power of the Junkers [YOON-kers], he also placed a great deal of emphasis on the military, inaugurating the War of the Austrian Succession and the Seven Years' War with invasions of Silesia and Saxony. FTP, name this 'Great' monarch, who adopted the title of King of Prussia after the death in 1740 of his father, Frederick William I.

Answer: Frederick II or Friedrich II (accept Frederick the Great)

2. This name could refer to the site in New Jersey believed to have seen the first organized baseball game, a New Orleans street prominent in *A Streetcar Named Desire*, or, when translated, a famous avenue in Paris. It is more famously a region of the Underworld where a meeting occurs between Aeneas and his father Anchises. The poet Pindar describes it as a single island while Hesiod called it "the Isles of the Blessed." FTP, name this final resting place for dead heroes in Greek mythology.

Answer: Elysian Fields or Elysian Plains or Elysium

3. Prior to his work at Los Alamos, he illustrated that nuclear fission occurs in the isotope uranium-235, and he developed the correspondence principle whereby classical and quantum mechanics merge at high energy levels. A student of Thomson and Rutherford, he developed his own research on the electron, including complementarity, and his namesake radius. FTP, name this winner of 1922 Nobel Prize in Physics, a Danish physicist most notable for his model of the atom that utilized Planck's theory of quanta to posit that electrons exist at discrete energy levels.

Answer: Niels Bohr

4. The plot begins with a letter given by the dying Captain Leclère to the title character, who has no ideas of its content. His jealous rivals realize that the letter is one of support for the exiled Napoleon and reveal this to the local magistrate, who condemns him to the Chateau d'If prison. While imprisoned, he meets an elderly priest who helps him to escape and then reveals the location of a secret treasure, which Edmond Dantès can use to get revenge. FTP, name this novel, based on a true story, written by Alexandre Dumas.

Answer: The Count of Monte Cristo or Le Comte de Monte Cristo

5. A collection of Jane Austen's work is on sale at a local bookstore for \$4 per pound. If the store offers a 10% discount on those portions of an order over 5 lbs, and then levies a 10% sales tax on the total price, what is the final price of a hardcover collection weighing 8 lbs?

Answer: \$33.88

6. During it, an impostor appeared in Poland calling himself the son of Ivan the Terrible and demanded the throne. This period saw multiple such false Dmitri's, and it began in 1598, when Feodor I died and Boris Gudanov seized control to end the Rurikid dynasty. It did not come to an end until 1613, when Michael Romanov became tsar. FTP, name this aptly-named period of chaos in Russian history.

Answer: Time of Troubles

7. This principle can be seen most clearly in the results of dihybrid crosses, sometimes resulting in 9 to 3 to 3 to 1 ratios in the pea plants that were being studied. It helps to demonstrate the existence of recessive alleles as an explanation of how a trait is passed when it is not expressed in the phenotype. FTP, identify this principle which states that the emergence of one trait does not affect the emergence of another trait.

Answer: Law of Independent Assortment or Mendel's Third Law

8. He was voted the World's Best Dressed Man by *Esquire* Magazine in 2005, despite considering himself a "nerd." He has identified Carl Sagan as one of his heroes and named his label Star Trak as an homage to one of his favorite shows. As a teenager in Virginia Beach, he formed his most lasting collaboration when he met Chad Hugo, with whom he co-founded the Neptunes. Recently, he has appeared in a popular commercial for Hewlett-Packard, and has released his first solo album, *In My Mind*. FTP, name this hip-hop artist who was featured in Snoop Dogg's "Drop It Like It's Hot" and Ludacris' "Money Maker."

Answer: **Pharrell Williams**

9. The Nobel Prize committee called him the heir to Joseph Conrad as "the annalist of the destinies of empires." After spending ten years in England, he wrote *The Middle Passage* upon his return home. He wrote about Mohun striving for success and finally getting the titular abode after his marriage in *A House for Mr. Biswas*. FTP, name this Trinidadian 2001 Nobel Prize winner, most notable as the author of a work set in an unnamed post-colonial African country, *A Bend In the River*.

Answer: V.S. (Vidiadhar Surajprasad) **Naipaul**

10. Joan Didion wrote a 1977 novel by this title about the fictional country of Boca Grande. Its more famous incarnation incited a rebellion in Cornwall and was briefly taken out of usage during the reign of the Catholic Queen Mary. It was dramatically altered in 1552 after criticisms from many who did not feel that Thomas Cranmer's original 1549 version was adequately Protestant. FTP, name this book, the primary instrument of worship in the Church of England.

Answer: **Book of Common Prayer**

11. After France invaded this nation in 1883, sparking the First Franco-Hova War, it was annexed in 1896 and remained a French possession until 1960. After a disputed presidential election in 2001, supporters of Marc Ravalomanana instigated a crisis here which culminated in the flight of the incumbent President. Its ecology is an interesting example of allopatric speciation, as there are no monkeys there, but it contains the only lemurs in the world. FTP, name this African island nation with capital at Antananarivo.

Answer: **Madagascar**

12. This rule was hypothesized in 1811, but it wasn't given much credence until Cannizarro's discovery 50 years later that certain elements exist as diatomic molecules. It states that the ideal gas constant has the same value for all gases, independent of the gas molecule's size or mass. FTP, name this gas law that says equal volumes of gas at the same temperature and pressure contain equal numbers of particles.

Answer: **Avogadro's Law** or **Avogadro's Hypothesis**

13. Thirty-four of these name God specifically, and all but one contain some indirect mention of a supernatural being. This tradition began on April 30, 1789 in New York. The shortest one occurred in 1793, and the longest one in 1841, leading the speaker to catch cold and soon die of pneumonia. The first one delivered in Washington, DC occurred in 1801 at the Capitol. FTP, name these speeches given by incoming American heads of state.

Answer: **Inaugural Addresses** (or **Inaugural Speeches**) of U.S. Presidents

14. Ismail Pasha commissioned it in 1871, but its premiere was delayed because of the Franco-Prussian War. More recently, it was turned into a 1998 musical by Elton John and Tim Rice. It tells the story of Radames' struggle to choose between loyalty to the Pharaoh and his love for the title character, who had been sold into slavery in Egypt. FTP, name this opera by Giuseppe Verdi about an Ethiopian princess.

Answer: **Aida**

15. In this stage, people learn to group things by disjunction, conjunction, implication, or incompatibility. Some people never reach this stage, remaining instead in the stage where conservation and reversibility first develop. It usually begins to occur, alongside puberty, around age eleven and continues into adulthood, and it is characterized by capacity for abstract thinking and drawing conclusions. FTP, name this ultimate stage in Jean Piaget's theory of cognitive development that follows concrete operational.

Answer: **Formal Operational** Stage

16. The longest dynasty in Chinese history, this dynasty saw the introduction of iron working and cavalry, and the abolition of human sacrifice. Ji Yijiu moved its capital from Xi'an [She-AHN] to the East, ending its western period, and this dynasty also saw the introduction of the Mandate of Heaven to justify its seizing power from King Dixon of the Shang Dynasty. Also reigning during the Spring and Autumn and the Warring states period, FTP identify this Chinese dynasty which reigned from 1040 to 221 B.C. and preceded the Qin [Chin] dynasty.

Answer: **Zhou** or **Chou** (Pronounced JO)

17. During the 1960s, he worked on several Hollywood screenplays including the James Bond farce *Casino Royale* and the unfortunately named *Dirty Dingus Magee*. He joined the Army Air Force in 1941, basing his first novel on his experiences. His last book, *Portrait of the Artist, as an Old Man*, was published posthumously in 2000 and was his first novel since 1994's *Closing Time*. FTP, name this author who said he was tempted to reply "Who has?" when others said that he had not written anything as good since *Catch-22*.

Answer: Joseph **Heller**

18. A cocktail made with lime juice, vodka, and triple sec. A Mitsubishi aircraft which made a goodwill trip to the West in 1937. An album by Chicago rapper Twista, including the hit song "Slow Jamz." A divine wind which destroyed the ships in a Mongol invasion of Japan in 1281. These are all things which, FTP, share this name for Japanese suicide pilots in World War II.

Answer: **Kamikaze**

19. When he found himself poor at the end of his life, Catherine II of Russia agreed to buy his library and allow him to act as her librarian. Earlier, he had worked as a translator and had written the *Lettre sur les aveugles*, which demonstrated man's dependence on his five senses, for which he was jailed. After he was released from jail, he agreed to translate Ephraim Chambers' *Cyclopaedia*, which he eventually transformed into his most famous work. FTP, name this French philosopher and editor-in-chief of the *Encyclopédie*.

Answer: Denis **Diderot**

20. The ideas were first conveyed in Secretary of State James Byrne's "Restatement of Policy on Germany," and then later in a speech by Dean Acheson in Cleveland, Mississippi. Its namesake most clearly articulated its principles at a speech at Harvard University in 1947. It was named for him, a former Army General and current Secretary of State, in an attempt to capitalize on his popularity. FTP, name this strategy to rebuild Europe after World War II.

Answer: **Marshall Plan** or **European Recovery Program**

21. Light from a window above is underscored by gilded rays behind the sculpture, which lights the scene, set on a cloud. It depicts a passage from its subject's autobiography in which she dreams of being stabbed with a spear of gold. Located at the Cornaro Chapel in Rome, FTP name this sculpture that shows a Spanish saint having her heart pierced by the golden spear of an angel, a work by Bernini.

Answer: The **Ecstasy of St. Theresa** or **St. Teresa in Ecstasy** or **Transverberation of St. Teresa**

Bonuses

1. FTPE, name these contemporary secretaries-general of the United Nations.
This South Korean was elected to take over the position on October 13.

Answer: **Ban Ki-Moon**

This Ghanaian has been in office since 1997.

Answer: Kofi **Annan**

Preceding Annan, this Egyptian is more famous for his unusual name than for the US veto to prevent his second term.

Answer: Boutros **Boutros-Ghali**

2. FTPE, answer these questions about the five pillars of Islam.

Muslims must make this important pilgrimage to Mecca at least once in their lives if they are able.

Answer: **Haji**

Muslims must observe a fast and abstain from sex during this holy month.

Answer: **Ramadan**

This is the term for the five daily prayers Muslims must say while facing towards Mecca.

Answer: **Salat**

3. FTPE, name these dystopian works of literature.

This Margaret Atwood novel uses the fictional Republic of Gilead to warn against religious fundamentalism.

Answer: The **Handmaid's Tale**

This Ayn Rand novella tells of Equality 7-2521's rediscovery of the lightbulb.

Answer: **Anthem**

In this Ray Bradbury work, Guy Montag is employed as a fireman, which means he burns books.

Answer: **Fahrenheit 451**

4. FTPE, given a description of a cell organelle, name it.

This membranous network is the primary packaging and transporting mechanism in the cell. It comes in smooth and rough varieties.

Answer: **Endoplasmic Reticulum**

These organelles are important for making proteins as the site of translation. Their presence or absence distinguishes rough from smooth endoplasmic reticulum.

Answer: **Ribosomes**

This sub-organelle, composed mostly of parts of chromosomes with genes for ribosomal RNA, is responsible for producing ribosomes.

Answer: **nucleolus**

5. FTPE, given the treaty that ended it and the year of the treaty, name the war.
Versailles, 1918.

Answer: **World War I**

Portsmouth, 1905

Answer: **Russo-Japanese**

Utrecht, 1713.

Answer: War of the **Spanish Succession** or **Queen Anne's War**

6. FTPE, name these paintings by French artist Jacques-Louis David.

This work shows a set of Roman triplets holding up swords while pledging their loyalty.

Answer: **Oath of the Horatii**

One of David's most famous paintings is his depiction of this man crossing the Alps.

Answer: **Napoleon** Bonaparte

This painting shows the bathtub assassination of one of David's friends by Charlotte Corday.

Answer: The **Death of Marat**

7. Answer the following about a particular type of chemical reaction FTPE.

Whenever an atom, molecule, or ion gains or loses electrons, it is this type of reaction.

Answer: **Redox** or **Oxidation-Reduction**

Disproportionation occurs when the same molecule is both oxidized and reduced in the same reaction, as when this highly reactive chemical decomposes into water and oxygen.

Answer: **hydrogen peroxide** (accept **H₂O₂**)

One commercially important redox reaction is the Hall-Héroult process, which uses large electrolytic cells to extract this light metal from molten cryolite.

Answer: **aluminum**

8. FTPE, name these members of the British House of Stuart.

This king was executed in 1649 to end the English Civil War.

Answer: **Charles I**

This queen was co-ruler with her husband, William III, following the Glorious Revolution.

Answer: **Mary II**

James Stuart, the Catholic claimant to the throne and Mary's half-brother, was known by this insulting nickname.

Answer: The **Old Pretender**

9. 30-20-10, name the author based on works.

30: *Stamboul Train* and *A Burnt-Out Case*

20: *The Quiet American* and *Brighton Rock*

10: *The End of the Affair* and *The Power and the Glory*

Answer: Graham **Greene**

10. FTPE, Name the architect or designers of the following.

Gateway to the West Arch in St. Louis

Answer: Eero **Saarin**

The Guggenheim in Bilbao Spain

Answer: Frank **Gehry**

Rock and Roll Hall of Fame and Museum in Cleveland

Answer: Ieoh Ming **Pei** [pay]

11. FTPE, name these Communist national leaders.

This Vietnamese leader became president of North Vietnam in 1955, before Saigon was renamed for him in 1975.

Answer: **Ho** Chi Minh

This Yugoslavian gained international renown for standing up to Stalin and the Comintern in 1948.

Answer: Josip Broz **Tito**

This Romanian leader was in power from 1965 until his overthrow and execution in 1989.

Answer: Nicolae **Ceausescu**

12. FTPE, name these members of baseball's exclusive 40-40 club.

This Washington National was moved to left field before this season and responded with 46 home runs and 41 stolen bases.

Answer: Alfonso **Soriano**

This former Oakland Athletics outfielder and *Surreal Life* cast member was the first player in the 40-40 club.

Answer: Jose **Canseco**

The only other member of the club besides Barry Bonds, this perennial all-star had 42 home runs and 46 stolen bases in 1998 when he played for Seattle.

Answer: Alex **Rodriguez** (accept **A-Rod**)

13. FTPE, name these things associated with a particular philosophical movement.

This philosophy emphasizes the maximization of the welfare of a population, usually its happiness or pleasure.

Answer: **Utilitarianism**

One of the early proponents of utilitarianism was this man, who created the "felicific calculus."

Answer: Jeremy **Bentham**

This man, Bentham's godson, wrote the influential texts *Utilitarianism* and *On Liberty*.

Answer: John Stuart (J.S.) **Mill**

14. Pencil and paper ready, 15 seconds per part. Consider two three-dimensional vectors, $A=1i+2j+3k$ [A equals 1 times i plus 2 times j plus 3 times k] and $B=4i+5j+6k$. [B equals 4 times i plus 5 times j plus 6 times k]. FTPE:

Calculate the square of the absolute value of vector A

Answer: **14**

Calculate the dot product of A and B.

Answer: **32**

Calculate the cross product of A and B.

Answer: **$-3i+6j-3k$** [read: negative 3 times I plus 6 times J minus 3 times K]

15. FTPE, name these things related to the Peloponnesian Wars.

This historian wrote *The History of the Peloponnesian War*, considered the first work of scientific history.

Answer: **Thucydides**

Thucydides says this Athenian, who repeatedly changed his allegiance during the war, was responsible for the destruction of Athens.

Answer: **Alcibiades** Cleiniou Scambonides

Name the militaristic city-state which warred against Athens.

Answer: **Sparta**

16. FTPE, name these Russian composers, members of the Mighty Five.

This composer wrote *Pictures at an Exhibition* and *Night at Bald Mountain*.

Answer: Modest Petrovich **Mussorgsky**

This man, who had synesthesia, is most famous for his "Flight of the Bumblebee" and *Scheherazade Suite*, as well as being a renowned teacher.

Answer: Nikolai Andreyevich **Rimsky-Korsakov**

He is most famous for bringing together the Mighty Five, as well as his piano piece "Islamey: an Oriental Fantasy."

Answer: Mily Alexeyevich **Balakirev**

17. FTPE, name these Spanish-language writers.

This poet and playwright, author of *Romancero Gitano* and *The House of Bernarda Alba*, was killed in the Spanish Civil War.

Answer: Federico **García Lorca**

This Chilean poet and 1971 Nobel Prize winner is known for his collections *Elemental Odes* and *Twenty Love Poems and a Song of Despair*.

Answer: Pablo **Neruda**

This other Chilean is known for magical realism works like *The House of the Spirits*, as well as *Cuentos de Eva Luna* and *Paula*.

Answer: Isabel **Allende**

18. Identify the following mountains for ten points each.

This is the tallest mountain in the world NOT located in Asia. It is found in the Andes in Argentina.

Answer: **Aconcagua**

Named for a Georgia Congressman, this mountain of the Sentinel Range of the Ellsworth Mountains in Antarctica was not discovered until 1957, and not climbed until 1966.

Answer: **Vinson Massif**

This highest point in North America is found in the Alaska Range in the national park that bears one of its names.

Answer: **Denali** or Mt. **McKinley**

19. Identify the following about logic FTPE.

This term refers to a statement that by its construction is always true. For example: Either Shakespeare is a zombie, or Shakespeare is not a zombie.

Answer: **Tautology**

This term refers to a statement which is always false, for example Godzilla is ravaging Tokyo and Godzilla is not ravaging Tokyo.

Answer: **Contradiction**

This term refers to a system of formal reasoning championed by Aristotle in which one uses a major premise and a minor premise to deduce a new truth. For example, all men are mortal, Socrates is a man, therefore Socrates is mortal.

Answer: **Syllogism**

20. FTPE, name these notable features of our solar system.

This dwarf planet was considered the ninth planet until a recent change in status.

Answer: **Pluto**

This largest moon of Jupiter has a diameter greater than that of Mercury.

Answer: **Ganymede**

This region, extending outward from the orbit of Neptune, contains many small solar system bodies including Pluto, Sedna, and Eris.

Answer: **Kuiper Belt**