

TOSSUP 1

When his predecessor died suddenly, he became head of his party in 1994, and then led Labour to control of Parliament for the first time in over fifteen years. His popularity has waned in the decade he has resided at 10 Downing Street, and he is almost certain to step down for Gordon Brown later this year, but for now he is, FTP, the current Prime Minister of Great Britain.

Tony Blair

BONUS 1

Identify these British Prime Ministers FTPE.

10: Known as the “Iron Lady,” she was a formidable Tory who held the office for 11 years.

Margaret Thatcher

10: This much-criticized PM is infamous for his policy of appeasement toward Nazi Germany.

Neville Chamberlain

10: This son of a previous PM did his best to reduce the national debt and eliminate rotten boroughs at the close of the 18th Century.

William Pitt the Younger (Prompt on Pitt)

TOSSUP 2

Pencil and paper ready. An ant wants to walk from one corner of a cube of side length 2 inches to the opposite corner across the cube’s surface. The minimum distance the ant must travel is less than six inches, because once it reaches the top of the cube, it may walk diagonally across the cube’s face. FTP, how far does the ant walk?

$2 + 2\sqrt{2}$ inches

BONUS 2

Give the volumes of the following shapes FTPE.

10: A sphere with radius r .

$\frac{4}{3}\pi r^3$

10: A circular cone of base radius r and height h .

$\frac{1}{3}\pi r^2 h$

10: A triangular prism with base width b , base height h , and length l

$\frac{1}{2}bhl$

TOSSUP 3

Ones that are both this and onto are called bijections. $y = 2x + 3$ and $y = x^3 - 2$ both are. $y = x^2$ and the absolute value function are not. Ones that are can’t be even, but ones that aren’t may be odd. FTP, identify this type of function, which maps every value in the range to exactly one value in the domain.

One-to-one or injective

BONUS 3

FTPE, classify these functions as odd, even, both, or neither.

- 10: $\sin x$
odd
- 10: Absolute value of x
even
- 10: quantity x plus two squared
neither

TOSSUP 4

Between 1735 and 1745, this disease was responsible for over 80 percent of the deaths of children under the age of 10. A more mild form of it is limited to the skin. The first affective treatment against it started in 1880 with the use of respiratory tubes to prevent asphyxiation due to swelling of the lymph nodes. FTP, name this disease that is distinguished by the leathery membrane it produces covering the tonsils, throat, and nose.

Diphtheria or Corynebacterium diphtheriae (prompt on respiratory tract illness)

BONUS 4

Name these agents used in chemical warfare, FTPE.

- 10: This is the common name for Varicella simplex, it is classically one of the childhood infectious diseases caught and survived by most children.
Chicken Pox or Chickenpox
- 10: Classified as epidemic parotitis, the most common symptoms include a painful swelling of the salivary glands and a fever.
Mumps
- 10: Also known as German measles due to its similarity to the measles virus, common symptoms include abdominal rashes, swollen glands, and conjunctivitis.
Rubella (prompt on liberty measles or three day measles, accept epidemic roseola)

TOSSUP 5

Two characters wake up in the middle of the night after falling asleep while on guard duty and see a large silhouette which they mistake for a beast. Later, a character who represents innate goodness finds the figure after hallucinating that a pig's head is talking and realizes that the beast is not a physical being but exists within everyone. He goes back to the camp but after emerging from the forest they kill him because they have become a violent mob. Simon is murdered before he can tell the others that the beast does not exist in, FTP, what novel by William Golding?

Lord of the Flies

BONUS 5

Name these characters from Lord of the Flies FTPE.

10: He is elected the leader of the boys and tries to build a functional society.

Ralph

10: Initially he is the leader of the hunters but he gets all the boys except Ralph on his side by the end of the book.

Jack

10: He is not liked by the others even though most of the good ideas come from him. He wears glasses which are used to start a fire.

Piggy

TOSSUP 6

His *Theory of Colours* was an early description of optics and color, and he is also credited with the discovery of the human intermaxillary bone. A leading figure in the Sturm und Drang movement, he was also a poet, scientist, painter, minister of state, and most famously, author. A noted friend of Schiller, he was a key member of the "Weimar Classical" movement. His work often reflected an introspective view of the human character, such as the early work *The Sorrows of Young Werther*. FTP, name this German author of *Faust*.

Johann Wolfgang von Goethe

BONUS 6

Name these other German authors from the year they won the Nobel Prize for 10 points each; 5 points each if you require works.

10: 1946

5: Siddartha , Steppenwolf

Hermann Hesse

10: 1999

5: Cat and Mouse , Dog Years , The Tin Drum

Gunter Grass

10: 1929

5: Buddenbrooks , Death in Venice

Thomas Mann

TOSSUP 7

This name was applied by the Swedish chemist Berzelius to describe the property of certain pure substances that can exist with different chemical structures. The property can be applied to the chemical series graphite, diamond, and fullerenes. FTP, name this property that can also describe the series oxygen, ozone, and tetraoxygen.

Allotropy (accept Allotrope)

BONUS 7

BONUS FTPE, name the element given a description of its allotropes.

- 10: This element has three allotropes; red, white, and black. The red form is used in fireworks and pesticides.

Phosphorous

- 10: This element's most common allotrope has 8 atoms, but others have been found to have 12 or 18 atoms. The 7-atom allotrope is responsible for this element's yellow color.

Sulfur

- 10: This element has gray and alpha allotropes. Objects made of it slowly deteriorate when the alpha allotropes transform into gray ones.

Tin

TOSSUP 8

The artist claimed that they were never really intended for public consumption, but they became the most notorious of his works. The originals have mostly been lost to damage, but the more popular ones survive as replicas. The most famous one was submitted to test an art show's claim that it would accept all entries. A bottle rack and a snow shovel are among the objects in, FTP, what group of works by Marcel Duchamp, most famously including *Bicycle Wheel* and *Fountain*.

Readymades

BONUS 8

Name these other works of Duchamp FTPE.

- 10: This cubist work caused an uproar when it was shown at the 1913 Armory Show.

Nude Descending a Staircase, No. 2

- 10: The letters scrawled by Duchamp on this tiny reproduction of the Mona Lisa, when read in French, mean something along the lines of "she has hot pants."

L.H.O.O.Q. (Accept spelled or pronounced)

- 10: Later in his career, Duchamp became an aficionado of this board game, and manufactured a portable version of it as a readymade.

Chess

TOSSUP 9

Its name means "land of fire", as hills in this land are known to spontaneously burst into flame due to huge reserves of oil in the area. It has been invaded by many peoples throughout its long history, including the Medes, the Persians, and the Turks. Like many countries in the Middle East, Islam is its dominant religion, although before it became part of the Soviet Union its oil-rich capital was a haven for both Judaism and Christianity. FTP, name this Caucasian republic bordering the Caspian Sea with capital at Baku.

Azerbaijan

BONUS 9

FTPE, name any three of the four countries bordering Azerbaijan.

10-

10-

10:

Armenia, Iran, Russia, Georgia

TOSSUP 10

Its namesake project proposed drilling on the ocean floor, but was abandoned due to a drop in funding. Its discovery helped scientists discover different types of rocks in areas that were difficult to drill. Yugoslavian earthquake records were used to identify its existence by its discoverer, a Croatian meteorologist fascinated by faults and movements in the earth's infrastructure. FTP, name this layer which exists between the Earth's mantle and crust.

Mohorovicic Discontinuity or Moho

BONUS 10

Name these other layers of the mantle FTPE.

10: The outermost shell of the mantle, it goes to a depth of approximately 100 km.

Lithosphere

10: The lithosphere is broken up into these, which can cause earthquakes and volcanic activity.

Tectonic Plates

10: The region directly below the lithosphere, it goes to a depth of 250 km.

Asthenosphere

TOSSUP 11

After moving to London, he joined the Vegetarian Society and was elected to its executive committee. Son of the Prime Minister of Porbander, he was born into the vaishya caste. After being turned down by the bar of England, he went back to India but failed to establish a successful law practice. He then journeyed to South Africa, where he developed his philosophy of "satyagraha". In 1930 he launched a protest on high salt taxes by marching to a river to make salt himself. FTP, name this leader of the Indian Independence movement who was assassinated in 1948.

Mohandas Karamchand Gandhi

BONUS 11

Gandhi opposed the caste system, and his actions against it contributed heavily to its official abolition in 1947. FTPE, identify the Indian caste from descriptions.

10: Gandhi called them the "harijan", or "Children of God".

Untouchables

10: This highest class consists of scholars and priests.

Brahmins

- 10: This class consists of Kings and warriors, and all of the main characters of the “Mahabharatha” come from it.

Kshatriya [Sheh-THREE-ya]

TOSSUP 12

Each has a color, a property invented to account for the fact that they otherwise may be found together in the same quantum state, which would violate a certain principle of quantum mechanics. They are never found singly, but always bound together in hadrons made of two quarks, known as mesons, or three, known as baryons, like protons and neutrons. FTP, identify these fundamental particles that come in six flavors, including up, top, and strange.

quark

BONUS 12

FTPE, name these principles of Quantum Mechanics.

- 10: Only two electrons can occupy a given orbital, and both must have opposite spins.

Pauli Exclusion Principle

- 10: There is a limit to which we can know the position and momentum of a particle at a given time.

Heisenberg’s Uncertainty Principle

- 10: As protons are added to the nucleus to build up the elements, electrons must also be added to the lowest energy orbital.

Aufbau Principle

TOSSUP 13

This book, which was based largely on bedtime stories and letters the author wrote to his son, was never intended to become a published work. Its author was born in Edinburgh, became Secretary of The Bank of England, and was also known for writing *The Golden Age*, and its continuation, *Dream Days*. The book was eventually published in England in 1908, however its reception was lukewarm, and it was some years before this story of life by a river became established as a childrens classic. FTP name this tale of Rat, Mole, Badger and Toad which was penned by Kenneth Grahame.

The Wind in The Willows

BONUS 13

FTPE, name the authors of these British children’s classics:

- 10: The Railway Children

Edith Nesbit

- 10: The Water-Babies

Charles Kingsley

- 10: Swallows and Amazons
Arthur Ransome

TOSSUP 14

She was the daughter of Chrysaor and Callirhoe and the brother of Geryon and is often depicted as a figure with the head and torso of a nymph and the lower body of a snake. Among her prodigy include the Nemean lion, the sphinx, the hydra, the chimaera, and Cerberus. FTP, name this wife of Typhon, who happens to share her name with the spiny anteater.

Echidna

BONUS 14

FTP, name these other characters related to Greek mythology.

- 10: This winged ram was famous for its golden fleece, which Jason and his argonauts sought; it saved the lives of Phrixus but not his sister Helle.

Chrysomallos

- 10: Part man, part bull, this monster resided in an elaborate labyrinth designed by Daedalus.

The Minotaur

- 10: This centaur carried off Dejanara, the bride of Heracles and fooled her into poisoning her husband; he became famous when Giambologna sculpted 4 lavish statues of him.

Nessus

TOSSUP 15

It was constructed in 1869, and its first inductees were from the Boshin War. Its name means "Peaceful Nation", and does not include anyone who has died after 1951. Its Book of Souls includes 12 people guilty of crimes against peace, from World War II. Because of this, former Prime Minister Junichiro Koizumi has been criticized for paying visits to it since 2001. For ten points, name this Shinto shrine in Tokyo dedicated to the spirits of soldiers who died fighting for Japan.

Yasukuni Shrine

BONUS 15

FTPE, name these Japanese convicted for crimes against peace at the International Military Tribunal for the Far East.

- 10: He served as the Prime Minister from 1941 to 1944.

Hideki Tojo

- 10: He was the commander of the Japanese expeditionary force responsible for the Rape of Nanking.

Iwane Matsui

- 10: He was the Foreign Minister from 1940 to 1941 who announced Japan's departure from the League of Nations.

Yosuke Matsuoka

TOSSUP 16

Oliver Sacks in his "The Man Who Mistook His Wife for a Hat" characterizes two individuals as having this. Damage to the fornix or hippocampus can result in this condition, as can binge drinking. Date rape drugs also cause it because victims suffer memory gaps for short periods of time. FTP, name this form of amnesia in which new events cannot be transferred to long-term memory, the opposite of retrograde amnesia.

Anterograde amnesia (Prompt on Short-term-memory loss)

BONUS 16

Name these famous people who suffered brain damage FTPE.

- 10: This "other Steve" of Apple suffered anterograde amnesia after crashing an ultralight plane in 1981.

Steve Wozniak

- 10: This anonymous patient called by his initials has been widely studied since the 1950's and has been very important in the study of amnesia.

HM (accept Henry M)

- 10: The main character of this movie developed anterograde amnesia the night that his wife was raped.

Memento

TOSSUP 17

As a young man he held positions as an organist, chief musician, and cantor. He taught at the St. Thomas School in Leipzig, where he composed five cantatas. Becoming an orphan at 10, he went to live with his older brother in Ohrdruf [OR-droof], who eventually became jealous of his musical talent. He was married twice and was the father of 20 children. He gave his second wife, Anna Magdalena, a notebook in which family members wrote many pieces. FTP, name this Baroque composer who is best known for his inventions, preludes and fugues, and the Brandenburg Concerti.

Johann Sebastian Bach (accept J.S. Bach, prompt on Bach)

BONUS 17

FTPE, identify these ornaments used by Bach from clues.

- 10: This is a quick alternation between the note and the note above it.

Trill

- 10: Indicated by a trill sign with a line through it, this alternates the written note with the diatonic tone below.

Mordent

- 10: It is much like a grace note, but takes up half the value of the note with which it appears.

Appoggiatura

TOSSUP 18

The eldest of twelve children, she became seriously ill as a result of a broken blood-vessel and spent her life as an invalid. A fellow poet began a correspondence with her which led to their meeting and marriage in secret, since her father forbade any of his children to marry. She and her husband moved to Florence, where they lived for the rest of her life. FTP name this author of *Sonnets from the Portuguese* whose poetic reputation actually stood higher than that of her husband, Robert Browning, during her married life:

Elizabeth Barrett Browning

BONUS 18

FTPE, name these female poets from works FTPE.

- 10: Ariel , The Bell Jar

Sylvia Plath

- 10: “On the Burning of our House”

Anne Bradstreet

- 10: “First Fig,” “Resonance”

Edna St. Vincent Millay

TOSSUP 19

In his 40-year movie-making career, this man was notorious for taking great financial risks resulting in highly innovative and influential films, many of which were later remade by American directors into popular adventure movies. He is well-known for his adaptations of two Shakespeare plays into his native Japanese: his “Throne of Blood” was based on “Macbeth,” and his “Ran” on “King Lear.” FTP name this director, perhaps the most famous Japanese filmmaker to American audiences.

Akira Kurosawa.

BONUS 19

FTPE name the earliest American remakes of the following Kurosawa films, based on descriptions of the originals.

- 10: “The Seventh Samurai,” in which seven itinerant samurai join forces to protect a small village against marauders.

“The Magnificent Seven.”

- 10: “Yojimbo,” in which a samurai arrives in a town where two rival factions are at war. The samurai engages in repeated side-switching to play one against the other until both are defeated.

“A Fistful of Dollars.”

- 10: "The Hidden Fortress," in which two greedy peasants escort a man and woman across enemy lines. The peasants do not realize that their companions are actually a princess and her general.
Star Wars : Episode IV - A New Hope.

TOSSUP 20

In the Al Pacino film "A Dog Day Afternoon", Sonny, who is holding hostages in a bank, rouses the crowd outside by screaming the name of this incident repeatedly. Beginning in 1971, this collection of revolts was finally ended when police stormed the prison, killing ten hostages and 29 inmates. It began after a request by the prisoners for better living conditions and facilities was ignored. FTP, give the name of these incidents, which sparked hostility at the brutality of the police and are named after both the New York town and prison in which they were located.

Attica

BONUS 20

BONUS Name these other famous prisons FTPE.

- 10: The world's first official penitentiary, this Philadelphia prison was the setting for the film "Twelve Monkeys".
Eastern State Penitentiary
- 10: This former prison in the San Francisco Bay once held Al Capone.
Alcatraz
- 10: This New York prison off the banks of the Hudson River in a town called Mount Pleasant enforced solitary confinement.
Sing Sing