

## TOSSUP 1

After a happy early childhood in Cheatham, England, misfortune befell his family and he left school to work in a blacking warehouse, and then as an office boy. As a young man he studied shorthand and became a reporter of debates in the House of Commons for the "Morning Chronicle." Only later did he marry Catherine Hogarth and establish himself as an author of serial fiction and an advocate of international copyright law. FTP name this author of *Oliver Twist* and *A Tale of Two Cities*.

**Charles Dickens.**

## BONUS 1

15: Harold Skimpole, Detective Bucket.

10: John Jarndyce, Lady Dedlock.  
**Bleak House .**

15: Tommy Traddles, Steerforth.

10: Mr. Micawber, Uriah Heep.  
**David Copperfield .**

## TOSSUP 2

It is the strongest part of the personality during infancy, but becomes less and less prominent as a person ages. In the "iceberg" model of the unconscious, it would be represented by the bottom. Its main driving force is the "pleasure principle", or the need for instant gratification of all desires and needs. FTP, name this component of the psyche, defined by Freud to represent baser drives, such as hunger, thirst, or sex.

**Id**

## BONUS 2

FTPE, answer the following questions about the Id and Freud's structural theory.

10: Name the 1923 work in which Freud defined the Id.

**The Ego and the Id**

10: This component of the psyche is the opposite of the Id, representing cultural rules and regulations.

**Super-ego**

10: The Super-ego is formed through the dissolution of this complex, named after a mythological Greek hero who killed his father and married his mother.

**Oedipus complex**

### TOSSUP 3

The opening chorus, “O Fortuna,” has been used many times in films, including in Natural Born Killers and even on the dance floor. First staged in Frankfurt in 1937, it is an almost pagan-sounding choral work which became the most commercially successful classical composition of the 20th century. FTPE, name this work by Carl Orff.

**Carmina Burana**

### BONUS 3

FTPE, name these German musicians.

- 10: He was a close confidant of Robert and Clara Schumann and when Robert died, he supported Clara for the rest of her life, but they never married.

**Johannes Brahms**

- 10: His third symphony was originally dedicated to Napoleon Bonaparte, but when he heard Napoleon had declared himself emperor, he defaced the title page and renamed the work.

**Ludwig van Beethoven**

- 10: He experimented with compositions based on electronic sounds such as Kontakte and helped to found the electronic music studio in Cologne in 1953.

**Karlheinz Stockhausen**

### TOSSUP 4

It originated in a 1967 Writers Rebellion in which writers and artists banded together to protest the censorship under president and Communist party leader Antonin Novotny. Its leaders called for socialism with a human face and implemented a series of economic reforms and relaxation of censorships between January and August of 1968. It was put down suddenly, despite a massive nationwide passive resistance movement, on August 22, when Soviet leader Leonid Brezhnev ordered an invasion of the city. For ten points, name this 1968 Czechoslovak resistance movement led by reformer Alexander Dubcek.

**Prague Spring.**

### BONUS 4

BONUS: FTPE answer the following questions relating to the Cold War.

- 10: This comic was first published in 1961 for MAD Magazine by Antonio Prohias, a Cuban refugee. Its main characters engage in a wordless battle of booby traps and bombs in each strip.

**“Spy vs. Spy”.**

- 10: This term literally means self-published in Russian and refers to the underground publishing movements in the USSR, in which a writer would make copies of a work and pass them to friends who would in turn pass on more copies.

**samizdat [sam-IZ-dat].**

- 10: He was arrested and tried in 1951 for disclosing valuable secrets to the KGB regarding the Manhattan Project and other U.S. defense efforts, and was later executed with his wife, Ethel, after both were found guilty under the 1917 Espionage Act.  
**Julius Rosenberg.**

TOSSUP 5

Pencil and paper ready. A 2 kilogram block is traveling at 6 meters per second across a frictionless surface. It collides inelastically with another block of unknown mass. The velocity of the center of mass of the two-block system is 4 meters per second. Keeping in mind that conservation of linear momentum requires that the product of the total mass of the system and the velocity of the particles in the system remains constant, FTP, what is the mass of the second block?

**1 kilogram**

BONUS 5

Tell whether these physical quantities are conserved quantities, vector quantities, both, or neither FTPE.

- 10: Angular momentum  
**Both**
- 10: Torque  
**Vector**
- 10: Electric field  
**Vector**

TOSSUP 6

It was first published in serial form between 1823 and 1831, and was compiled into a single volume in 1833. In 1879 it was adapted into an opera by Peter Ilich Tchaikovsky, and in 1964 Vladimir Nabokov published a 4-volume translation of the work into English. The story describes the romantic tensions between the wealthy title character and the bookish young Tanya Larina. FTP name this novel, written in the unusual form of iambic tetrameter verse, by Russia's national poet, Alexander Pushkin.

**Eugene Onegin** [yoo-GEEN oh-NYEH-gin]

BONUS 6

FTPE identify the Russian writer from his/her works.

- 10: The Lady with the Dog , The Seagull , Three Sisters .  
**Anton Chekov.**
- 10: Heart of a Dog , The White Guard , The Master and Margarita .  
**Mikhail Bulgakov.**
- 10: The Nose , Dead Souls , The Inspector General .  
**Nikolai Gogol.**

## TOSSUP 7

Dynamic ones may be implemented as trees. Static ones are made of a contiguous block of allocated memory with a pointer to the first index, so element lookups require only that an offset be added to the pointer to it. Random-access lookup is possible in  $O(1)$  [oh of one] time, but insertion and removal require  $O(n)$  time. FTP, identify this fundamental data structure, a linear list of data elements.

### Array

## BONUS 7

Identify these data structures FTPE.

- 10: Elements are pushed onto the top of this data structure, then popped off in reverse order.

### Stack

- 10: Elements are inserted onto the end of a list, and removed from the front in the same order they went on.

### Queue

- 10: These structures consist of nodes containing data and a pointer to the next node; they may be unidirectional, bidirectional, and circular.

### Linked list

## TOSSUP 8

Pencil and paper ready. Bob received an diving cylinder on his birthday, but no other diving gear. He sees that the tank has a pressure of about 200 psi at 27 degrees celsius. Bob decides to heat the tank to 127 degrees celsius. Remembering that by Gay-Lussac's Law pressure is proportional to temperature in kelvin, and 0 celsius is equal to 273 kelvin, what is, FTP, the pressure in the tank after Bob heats it up?

**800/3 psi or 267 psi**

## BONUS 8

FTPE, describe what happens to the volume of a gas originally at STP when...

- 10: Pressure triples.

**One third original volume. [accept variations]**

- 10: Temperature doubles.

**Doubles original volume. [accept variations]**

- 10: Moles of gas becomes 2/3 original amount.

**Two thirds original volume. [accept variations]**

TOSSUP 9

Shocked by his discovery of his father's infidelity, he doesn't graduate from high school, loses his UVA scholarship, and whiles away time on correspondence courses. He eventually leaves home, wandering from job to job, but is haunted by kleptomaniacal tendencies. After failing to secure money to start a sporting goods venture with his brother, he confronts his father with the failure of his dreams. FTP, name this former football star, the older son of Willy Loman in *Death of a Salesman*.

**Biff Loman**

BONUS 9

Name these characters from *Death of a Salesman* FTPE.

- 10: Biff's younger brother, he buys in to Willy's dreams of success and delusions of grandeur.

**Happy Loman**

- 10: Willy's older brother, he "walked into the jungle" as a seventeen-year-old and made a fortune in diamond mines.

**Uncle Ben Loman**

- 10: Overshadowed by Biff when they were in high school together, he grows up to be a successful lawyer, much to Willy's chagrin.

**Bernard**

TOSSUP 10

Pencil and paper ready. Paco is planning a meeting and wants to know the number of ways the seven people attending the meeting can sit around a round table. He realizes that since the table is round, he realizes that only a seventh of the possible permutations are actually distinct arrangements. FTP, how many different ways can the seven people sit around the table?

**720 (prompt on 6!)**

BONUS 10

Paco decides that only three of the other six people really need to be at the meeting. FTPE:

- 10: How many permutations of 3 people out of the six are there?

**120**

- 10: How many combinations are there?

**20**

- 10: How many seating arrangements are there for the four people around the table once they have been chosen?

**6**

#### TOSSUP 11

Studies have shown that .3 gallons of blood can be stored in it. Because of its frailty, surgery is rarely performed on it if it is ruptured and a common side effect of its removal is iron deficiency. Its major functions as the largest lymph node in the body include filtering the blood and storing white blood cells. FTP, name this spongy organ found behind in the lower abdomen behind the stomach.

#### Spleen

#### BONUS 11

FTPE, name these complications that can cause inflammation of the spleen.

10: This is an autoimmune disease that degenerates cartilage in the joints and causes inflammation.

#### Rheumatoid Arthritis

10: Graft Versus Host Disease is the most common complication associated with a treatment for this disease that afflicts the bone marrow.

#### Leukemia

10: This disease is most commonly found in African Americans and results in morphed red blood cells that create buildups on arterial walls.

#### Sickle Cell Anemia

#### TOSSUP 12

They used the mansabdar system to generate land revenue, which involved promises of soldiers to the ruler in exchange for land. One ruler tried to create his own religion, which mixed among others Christianity, Zoroastrianism, and Sufi Islam, but it failed. Their fifth ruler was Jahangir, who fathered a more famous emperor who built a famous tomb for his dead wife. FTP, name this empire, founded by Babur, which controlled the Indian subcontinent and whose most famous ruler was Akbar.

#### Mughal Empire

#### BONUS 12

Identify the following Mughal rulers based on descriptions, FTPE.

10: This son of Babur and father of Akbar lost his kingdom early but eventually conquered it back and even expanded the empire.

#### Humayun

10: This son of Shah Jahan was known for his cruelty to non-Muslims, and it was during his reign that the Jizya tax was reinstated.

#### Aurangzeb

10: This last Mughal emperor was deposed by the British and exiled to Burma in 1858.

#### Bahadur Shah II (accept Bahadur Shah Zafar)

### TOSSUP 13

Geographers have divided them into five regions. They contain rich mineral deposits, especially in the Middle region. The other regions are the South, North, Subarctic or Pre-polar, and Arctic or Polar. The South is well-populated and has a few national reserves. The Northern contains a site with seven stone "idols" near the river Pechora. The Arctic is almost entirely tundra and is nearly uninhabited. The range was formed when a continent containing Siberia collided with a combination of Laurasia and Gondwanaland. FTP, name this Russian mountain range that separates Europe from Asia.

**Urals (also accept Ural Mountains or Riphean Mountains)**

### BONUS 13

Name these other Russian geographic features FTPE.

- 10: This body of water is not a sea as the name would suggest, but the largest lake on Earth.

**Caspian Sea**

- 10: This river flows through Russia, Belarus, and the Ukraine and into the Black Sea.

**Dnieper River**

- 10: This strait flows between Cape Dezhnev in Russia and Cape Prince of Wales in Alaska.

**Bering Strait**

### TOSSUP 14

It was voted as the 77th greatest book ever written by the Modern Library, even though the author also holds the number one and three positions on the list. It is heavily idiosyncratic, and even the main character doesn't keep the same name throughout, but tends to prefer the initials HCE. The most famous quote is the first sentence, which begins "riverrun, past Eve and Adam's, from swerve of shore to bend to bay...", and is also the last sentence. FTP name this last, most complex work of James Joyce.

**Finnegans Wake**

### BONUS 14

Identify these other James Joyce works FTPE.

- 10: This book held the number one position on the Modern Library's list and describes a day in the life of Leopold Bloom.

**Ulysses**

- 10: This collection of 15 short stories was meant to be a satire on the Irish middle classes.

**Dubliners**

- 10: The number three work on the list was this semi-autobiographical work depicting the life of Stephen Dedalus.

**A Portrait of the Artist as a Young Man**

TOSSUP 15

This man served as governor for the Indiana Territory, but was elected to the Senate in Ohio. He once called Tecumseh “one of those uncommon geniuses who spring up occasionally to produce revolutions.” Following this statement, he led his troops to victory in the Battle of Tippecanoe. FTP, name this man, who served only 30 days as the ninth president of the United States.

**William Henry Harrison**

BONUS 15

Harrison first gained national recognition during the war of 1812. FTPE, name these figures who also became famous during the war.

- 10: His most memorable battle was that of New Orleans, which actually occurred after the war was over.

**Andrew Jackson**

- 10: This man witnessed the bombing of Fort McHenry, and was inspired to write the “Star-Spangled Banner”.

**Francis Scott Key**

- 10: He defended the Great Lakes from British takeover, but refused any political position.

**Oliver Hazard Perry**

TOSSUP 16

The third ruler of his dynasty, he took the throne at age 20 and ruled for 67 years. In the fifth year of his reign he crossed the Orontes River in an attempt to maintain control of his empire, but the battle against the Hittites ended in a stalemate. His mummy is one of the most well-preserved. FTP, name this ancient Egyptian king who became famous for constructing more monuments and temples than any other Pharaoh, notably Abu Simbel.

**Ramesses II (accept Ramesses the Great)**

BONUS 16

FTPE, name these other Pharaohs of Ancient Egypt.

- 10: He is credited with building the Great Pyramid at Giza, the tallest and oldest of the Giza Pyramids.

**Khufu (accept Cheops)**

- 10: He unified Upper and Lower Egypt into a single kingdom.

**Menes (accept Narmer)**

- 10: She was the first female Pharaoh of a united Egypt.

**Hatshepsut**



#### TOSSUP 17

His first career was as a stockbroker, but he lost his livelihood in the crash of 1882. Freed from this obligation, he focused full-time on his art, creating works that abandoned linear perspective and shaded color. It was later in his career that he painted his famous works featuring the natives of Tahiti in an idealized jungle setting. FTP, identify this post-impressionist and primitivist of the late nineteenth century.

**Paul Gauguin**

#### BONUS 17

Gauguin's most famous Tahiti painting asks three questions in its title.

- 5-5- For five points each and a five point bonus for all correct, what are the  
10: three questions asked in the title of that 1897 painting, which is 12 feet long and depicts several vignettes of Tahitian natives?

**Where do we come from?, What (who) are we?,  
Where are we going? (Accept reasonable equivalents; it's in translation after all.)**

- 10: For ten points, another famed Gauguin work is what painting of a boldly-outlined, unnaturally colored Jesus on the cross?

**The Yellow Christ**

#### TOSSUP 18

It occurs at a party celebrating Agathon's victory in the Dionysia of 416 BCE. Eryximachus begins the conversation by saying that since he's a doctor, he recommends that those still recovering from hangovers ought not imbibe now. The climax occurs when Alcibiades barges in drunkenly to describe how Socrates refused him sex one night. FTP name this Platonic dialogue discussing educational pederasty and love.

**Symposium**

#### BONUS 18

FTP name these other Platonic dialogues.

- 10: It describes the speech given by Socrates at his trial, attempting to defend himself from accusations that he had corrupted the youth of the city.

**Apology**

- 10: An account of Socrates' last days, it relates his contention that his soul will outlive his body and go places.

**Phaedo**

- 10: The eponymous speaker relates the story of Atlantis in this dialogue.

**Critias**

TOSSUP 19

Calculated during a physicist's voyage to Britain, this value was derived using Einstein's theory of special relativity and principles of quantum mechanics. The approximate value is  $3 \times 10^{30}$  kilograms, about 1.44 times the size of our sun. FTP, give the name of this value, the upper bound to the mass of a white dwarf star.

**Chandrasekhar limit**

BONUS 19

BONUS FTPE answer the following questions about Subrahmanyan Chandrasekhar.

- 10: Chandrasekhar was the nephew of this other Nobel-prize winning physicist, who won in 1930 for his work on the scattering of light.

**C.V. Raman**

- 10: This astrophysicist opposed Chandrasekhar's ideas. He was also the person who announced Einstein's theory of general relativity to the English-speaking world.

**Arthur Stanley Eddington**

- 10: If the Chandrasekhar limit is broken, a white dwarf may become one of this kind of stars, which are formed after supernovae.

**Neutron star**

TOSSUP 20

First published privately in 1931, the original edition was written by a housewife mourning the suicide of her husband. It has been in print continuously since 1936 and has sold more copies than any other book in its genre. It contains over 4,500 recipes, including directions for preparing moose, muskrat, mincepie, and raccoon. FTP name this classic cookbook by Irma S. Rombauer.

**The Joy of Cooking .**

BONUS 20

FTPE identify the chefs from clues.

- 10: This woman was famous for introducing French cooking techniques to the American mainstream through her cookbooks and television shows.

**Julia Child.**

- 10: This French man has appeared on many cooking shows, including "Julia Child's Kitchen," and is the author of 18 books.

**Jacques Pepin.**

- 10: Also known as "The Naked Chef," this man is known for his recent work in improving the eating habits at British schools.

**Jamie Oliver**