1. This technology was first successfully demonstrated in May 1960. This device is made of a gain medium located inside a highly reflective optical cavity, as well as an energy source. It currently has applications in medicine, entertainment, and industry. The concentrated light in this device is monochromatic. FTP name this process to produce monoch.

## A: LASER accept Light Amplification by Stimulated Emission of Radiation

2. This man was able to obtain five ships with the money he received from King Charles V of Spain for his expedition. Off the coast of South America, the commander of the San Antonio, one of his ships, attempted two mutinies. The offending commander was marooned in Patagonia. Killed at the Battle of Mactan in the Philippines, this explorer's ships were sailed back to Spain by Juan Sebastián Elcano. FTP identify this Portuguese-born explorer, whose expedition was the first to circumnavigate the earth.

A: Ferdinand Magellan
3. Their walls are composed of only a single cell thick layer of endothelial tissue, in sharp contrast to their neighbors, which have a three layered wall structure. The thickness of this wall, however, serves an important purpose in the body, as it allows diffusion by osmosis between this vessel and surrounding tissues. Arterioles and venules diverge into these thinnest blood vessels. FTP, name these sites of gas and nutrient exchange between body tissues.

## A: Capillary

4. His obsession with death and Hell is most evident in his works from Weimar such as Totentanz, the Dante Symphony, and the Faust Symphony. He is credited with the invention of the symphonic poem and the piano recital. His unrivaled mastery of the piano is evident in his Sonata in B Minor, Paganini Etudes, and Transcendental Etudes. FTP name this Hungarian pianist who composed the Hungarian Rhapsodies.

## A: Franz Liszt

5. This conflict began when the eldest daughter of Emperor Charles VI attempted to take the throne but was opposed because of Salic law. The later stages of this European counterpart to King George's War saw several victories by the Prussians including the battles of Hohenfriedberg and Kesselsdorf and it ended with the Treaty of Aix-la-Chapelle of 1748. FTP name this conflict that began when Maria Theresa attempted to take the Habsburg throne in keeping with the Pragmatic Sanction.

## A: War of the Austrian Succession

6. Its armies under Batu were poised to attack Western Europe, but were drawn back in 1241 at the news of the death of Ogadai, its overlord. One of its rulers, Berke, was the first khan to convert to Islam and waged war on the Il-Khans in Persia. Its capital was located at Saray, on the Volga. In 1380, it sacked Moscow, but was then defeated at the battle of Kulikovo. FTP name this colorful Mongol khanate which was eventually destroyed by the Muscovites.

## A: Golden Horde Accept Khanate of Kipchak

7. Following lines with the slope at chosen points to approximate a solution to a differential equation is known as his method. While his apocryphal mathematical proof of the existence of God to Diderot at Catherine's court is noticeably flawed, his number is concerned flawless, as it is defined by an infinite series yet related to trigonometry and complex numbers in his equation. FTP, name this mathematician whose number is approximately 2.718 .

A: Léonard or Leonhard Euler Do not accept or prompt on $\mathbf{e}$
8. This river's tributaries include the Ghaghra and the Jumna, which joins it near Allahabad. Other cities on it include Kanpur, Patna, and Benares. Its namesake plain lies to the north of the Vindhya Range and the Deccan Plateau. The Brahmaputra River joins its delta, which empties into the Bay of Bengal south of Calcutta. FTP identify this Indian river.

## A: Ganges River

9. The title characters of this novel meet when one goes to see the other after begging enough to satisfy his cruel father. After they trade clothes, Edward is thrown out of his home and later meets Miles Hendon while wandering. Miles and Edward are imprisoned, giving Edward a chance to learn about his country's laws, while Tom Canty gradually grows accustomed to royal life. FTP name this Mark Twain novel in which Edward returns home just in time to be crowned king.

## A: The Prince and the Pauper

10. The game franchise starring this character is the $16^{\text {th }}$ best-selling franchise of all video games. His fourth game appearance was a racing game where a player could drive as him, his sister, or many of his old enemies like Ripper Roo. His sister Coco did not appear until the second game and was not playable until the third game of the series. This character's major attack is a move where he spins rapidly, knocking his opponent away; however he can also jump on top of his enemies or slide under them. FTP name this marsupial whose main nemesis is Dr. Neo Cortex.

## A: Crash Bandicoot

11. One of these was issued to integrate the defense industries on June 25, 1941. Another by the same president, Number 9066, resulted in the internment of Japanese-Americans after its issuance in 1942. Often issued in wartime, Lincoln used one to suspend habeas corpus in various areas and allow for arrest by military authorities. FTP, name these presidential decrees which can be used to circumvent Congress, if speed and cooperation is necessary.

## A: Executive Orders

12. A schoolgirl named Venetia Burney suggested its name following its discovery in 1930. Its discoverer, a student from Kansas named Clyde Tombaugh, was able to find it by comparing two photos from January of that year. It is expected to be visited by the New Horizons probe in 2015, which will be its first close up
examination. Its second and third moons, Nix and Hydra, were discovered in 2005, but both are much smaller than its largest, Charon. FTP, name this object which was considered the ninth planet until demotion to the status of dwarf planet in 2006.

## A: Pluto

13. In Acts, this man's body splits open and his bowels spill out after he buys a field. This field was then known as the Field of Blood. Part of his name probably references a town in Judea, and he was the only non-Galilean among the Twelve Disciples. In Matthew's Gospel, this man returns the money given him by the priests and goes to hang himself. In the Inferno, the final pit in Hell is named for him. FTP name this man, the betrayer of Jesus.

A: Judas Iscariot Accept partial name
14. The second refers to angular momentum; the third relates the magnetic field resulting from momentum to orientation. While the fourth may hold one of only two values, the first, or principal, has four possibilities, each of which determines the set of values the second and third may take. A set of four values may not repeat, and the fourth of these denotes opposing spin values. FTP, name this set of four numbers, which enumerate the shell, sublevel, orbital, and spin of an electron.

## A: Quantum Numbers

15. This troubled Post-Impressionist painted over 2000 works and lived temporarily with Paul Gauguin. He may be best known for a work painted while he was in an asylum in the town of Saint-Remy, and also painted Wheatfield with Crows, as well as a depiction of his physician, the Portrait of Dr. Gachet and The Potato Eaters. FTP name this Dutch painter who cut off his left ear and painted The Starry Night.

A: Vincent Willem Van Gogh
16. This novel begins as Tom returns home after serving a prison sentence for manslaughter, meeting a former preacher on the way. After a trip west during which Tom's grandparents die, that preacher is arrested for knocking out a policeman. The preacher, Jim Casy, is later killed by police in front of Tom, who retaliates and continues organizing the migrant workers while in hiding. FTP name this novel about the Joad family by John Steinbeck.

## A: The Grapes of Wrath

17. "So-people a thousand years from now-this is the way we were in the provinces north of New York at the beginning of the twentieth century.-This is the way we were: in our growing up and in our marrying and in our living and in our dying." This quote said by the Stage Manager in Act I highlights one of the key themes in this American play. FTP name this play in three Acts set in Grover's Corners by Thornton Wilder.

## A: Our Town

18. The psychological phenomenon that creative writers are more susceptible to mental illness was named after her and in 1963, she published her only novel under the
pseudonym Victoria Lucas a month before she committed suicide. Known for her dark and feminine poems such as Lady Lazarus, FTP name this American poet married to Ted Hughes who became the first to posthumously receive a Pulitzer Prize in 1982, the author of The Bell Jar.

A: Sylvia Plath Accept Victoria Lucas before mentioned
19. A copy of this mural in the United Nations was covered when Colin Powell spoke in favor of the Iraq War in 2003. The tongues of several figures were replaced with daggers to suggest screaming, and a soldier's severed arm can be seen under the horse in the center. At the left are a bull and a woman holding her dead child. FTP name this work set in a Basque town depicting a German bombing during the Spanish Civil War by Pablo Picasso.

## A:Guernica

20. These organic molecules are characterized by a fused carbon skeleton of one cyclopentane and three cyclohexanes. The largest type of this molecule contains twenty-seven carbon molecules, an example of which is cholesterol. Common functions of these lipids in vertebrates include sex differentiation, metabolic regulation, and anabolism. FTP, name this class of hormones that can be used to increase muscle mass.
$\mathrm{A}:$ Steroid

## STOP HERE

You have reached the end of the round. Do not continue reading unless a question was thrown out or the game is tied.
21. Even though the voting in this nation occurred on March 29, the results have still not been provided, especially since a High Court hearing has officially requested a recount in a number of provinces. The election has been fraught with bad news for the incumbent, with a split ruling party divided through the rise of Simba Makoni and the rise in inflation far above $1,000 \%$. Thus, Morgan Tsvangirai's MDC party has been widely declared the winners both in the parliamentary and presidential struggle. FTP; name this nation who may soon see the unseating of their current ruler, Robert Mugabe.

## A: Republic of Zimbabwe

## Bonuses

1. Name these figures from the Protestant Reformation FTPE.
1) This German monk posted his 95 Theses in 1517, leading an unprecedented attack on Catholic doctrines and practices including the sale of indulgences and wealth of the clergy.
A: Martin Luther
2) This French reformer set up a theocracy in Geneva and wrote the influential book Institutes of the Christian Religion.

## A: John Calvin

3) This Swiss reformer debated with Martin Luther at the Marburg Colloquy over the Real Presence of Christ in the Eucharist.
A: Huldrych Zwingli
2. FTPE, name these influential psychologists.
1) This Swiss psychiatrist proposed the ideas of the collective unconscious, archetypes, psychological types, synchronicity, and neurotic complexes.
A: Carl Jung
2) This Russian physiologist caused a psychological stir with his work involving classical conditioning. He famously conditioned dogs to drool when a bell was rung despite the bell having no intrinsic connection with food.

## A: Ivan Pavlov

3) This American psychologist's books include Motivation and Personality and Toward a Psychology of Being. He is most famous for his hierarchy of needs.
A: Abraham Maslow
3. FTPE, answer these questions about aquatic mammals from descriptions
1) This is the name for the order of mammals that spends all of its time in the water. Common examples include whales and dolphins.
A: Cetacea accept Cetaceans
2) Cetaceans can be further classified by the presence of this material instead of teeth. It is used to catch small animals for some of the largest whales.
A: Baleen
3) The mammal with the longest lifespan is this species of whale, which is a popular tourist attraction at Sea World.
A: Orca accept Killer Whale
4. FTPE identify the following galaxy types.
1) Named for the two-armed structures that extend from their bulges into disks are found mainly in low-density areas and are made of rotating stars, gas, and dust.
A: Spiral
2) Generally found in the cores of galaxy clusters and composed of older stars, the stars of these galaxies move in a radial fashion.
A: Elliptical
3) Galaxies with no particular shape are classified as this.

A: Irregular or Peculiar
5. FTPE name the following genetic disorders.

1) This recessive form of anemia is named for the abnormal shape it causes in red blood cells. Those who suffer from it are immune to malaria.
A: Sickle cell anemia or Sickle cell disease
2) This disorder resulting from an extra chromosome 21 causes a wide variety of effects that may include distinctive physical features, a high risk of heart defects,
and mental retardation.
A: Down's Syndrome Prompt on Trisomy 21
3) The Duchenne variety of this disorder is recessive and linked to the $X$ chromosome.

## A: Muscular Dystrophy

6. For fifteen points each, name these places where American Indians asserted their rights by retaking U.S. lands.
1) A 71 -day siege here in 1973 between the Federal Government and a group of primarily Oglala Sioux resulted in two Indian deaths. The U.S. Army massacred a group of Sioux here in 1890.
A: Wounded Knee
2) Members of the American Indian Movement took over this California island between 1969 and 1971 and governed themselves.

## A: Alcatraz

7. FTPE answer the following about the French and Indian War.
1) In 1754, this 21-year-old Major with a background in surveying was sent to negotiate borders with the French before the war began.

## A: George Washington

2) This fort was hastily built by Washington in the presence of the sudden outbreak of war.
A: Fort Necessity
3) This General was shocked by the French and Indian's use of guerrilla warfare and critically defeated in 1755 . He was shot in the foot and bled to death.

## A: Edward Braddock

8. FTPE identify the following about a writer of short stories.
1) This man known for his surprise endings wrote The Last Leaf as well as Cabbages and Kings.
A: O. Henry Accept William Sydney Porter
2) This O. Henry story tells the tale of Della and Jim, a couple who both sell their prized possessions to buy the other a Christmas gift.
A: The Gift of the Magi
3) The Gift of the Magi appears in this collection of 25 short stories whose title references the actual population of New York City at the time.
A: The Four Million
9. FTPE, name these Eastern religions.
1) Its origins can be traced to the teachings of Siddhartha Gautama and among its most notable beliefs is the practice of the Eight-fold Path to achieve Nirvana.
A: Buddhism Accept word forms
2) The fifth-largest religion in the world, most of its followers live in the state of Punjab. Its teachings were established by 10 Gurus, Nanak being the first.
A: Sikhism Accept word forms
3) The followers of this religion founded in Ancient India are vegetarians and like

Buddhists, attempt to balance Karma to achieve Moksha. They refrain from any form of violence and are recommended to spend a portion of their lives as monks.
A: Jainism Accept word forms
10. FTPE, name these Iraqi cities.

1) The capital of Iraq, it lies on the Tigris River.

A: Baghdad
2) This northern city lies on the Tigris near the ruins of Nineveh.

A: Mosul
3) The southernmost major city in Iraq, it is on the Shatt-al-‘Arab.

A: Basra
11. FTPE name these things related to works of James Fenimore Cooper.

1) This collection of five novels includes The Pioneers and The Prairie.

A: The Leatherstocking Tales
2) The second of the series in order of subject matter, it concerns the daughters of Colonel Munro and the two namesake Indians, and is set in the region around Lake George.
A: The Last of the Mohicans
3) This is the hero of the Leatherstocking Tales, who is also called Hawkeye, Pathfinder, Leatherstocking, or Deerslayer.
A: Natty Bumppo Accept partial name
12. FTPE, name these units of measure from a description.

1) Applied to both energy and work, this unit is equal to one Newton meter.

A: Joule
2) This unit is not an SI unit, and is used to express the lengths of very small objects such as atoms
A: Angstrom
3) This pressure unit is equal to that of the air at sea level and equals approximately 101.3 kPa .

A: Atmosphere or atm [A-T-M]
13. FTPE name these Richard Wagner operas.

1) This massive cycle of four operas is largely based on Norse mythology.

A: The Ring of the Nibelung Accept The Ring Cycle Prompt on Ring
2) This opera tells the story of a Cornish knight who drinks a love potion and has an affair with his Queen.
A: Tristan and Isolde
3) The title character of this opera is a sea captain doomed to sail the ocean until he finds a wife who will be faithful to him.

## A: The Flying Dutchman

14. FTPE name the following movies featuring the late Heath Ledger.
1) Ledger played Mel Gibson's son in this 2000 film about the Revolutionary War.

A: The Patriot
2) This deliberately anachronistic 2001 comedy features Paul Bettany as Geoffrey Chaucer.

## A: A Knight's Tale

3) Ledger appears as the Joker in this latest installment of the Batman franchise, slated for release in July 2008.
A: The Dark Knight
15. FTPE identify these Jane Austen novels.
1) This novel follows the quest of Mrs. Bennett to marry off her five daughters. She is fairly successful in the end, and Elizabeth marries Darcy.
A: Pride and Prejudice
2) The sisters Elinor and Maryanne Dashwood embody the titular characteristics.

A: Sense and Sensibility
3) The titular matchmaker sets out to find a husband for her friend Harriet Smith and herself ends up marrying Knightley.

## A: Emma

16. Identify these social classes in early Kiev, FTPE.
1) This lowest class was made up of the farmers and peasants.

A: Serfs
2) These aristocrats formed the landed nobility. They also existed in Moscow, and were oppressed by Ivan the Terrible.
A: Boyars
3) Both the kingdom which was ruled over by Kiev and the ruling class had this name, which led to the name of a modern nation.

## A: Kievan Rus

17. FTPE identify the following paintings.
1) This Realist painting by Gustave Courbet depicts two men of the title profession.

A: The Stone Breakers
2) This altarpiece by Jan and Hubert Van Eyck consists of 24 scenes.

A: Ghent Altarpiece Accept Adoration of the Mystic Lamb or Lamb of God
3) A Paris nightclub can be seen in a mirror behind a barmaid in this Manet work.

A: A Bar at the Folies-Bergere
18. FTPE answer these questions about Charles Dickens' A Christmas Carol.

1) The first spirit to visit Scrooge is truly this former partner rather than the Ghost of Christmas Past.
A: Jacob Marley Accept partial name
2) This employee of Scrooge is Tiny Tim's father.

A: Bob Cratchit Accept partial name
3) This nephew of Scrooge always invites Ebenezer to his Christmas party.

A: Fred
19. FTPE identify the following art styles and periods.

1) Pioneered by Picasso and Braque, this style with analytic and synthetic varieties
depicts scenes from many angles at once.
A: Cubism Accept word forms
2) This period named from the Portuguese for pearl took place after the Renaissance. Works of the period include Las Meninas by Diego Velazquez.
A: Baroque
3) This French style takes its name from the word for decorations made from rocks or shells. Fragonard's The Swing is one example.
A: Rococo
20. FTPE, name these legal terms.
1) This document requires a witness to come to court and, if of the "duces tecum" [DOO-case TAY-coom] variety, often requires the witness to bring records.
A: Subpoena
This term may refer to either the document or the assembly of the Grand Jury to hear charges on a person; there is a mandatory time limit between an arrest and one of these.
A: Indictment Prompt on word forms
Lawyers use this two-word Latin phrase to denote they are waiving fees "for the good of the people".
A: Pro Bono
