

2003 MASEK

Round 10

Toss-up Questions

1. He secretly wants to be a folk singer and tried to kill his best friend while infected with lycanthropy. He has a wing of the orphanarium named for him, was made in Mexico, and lives in the Robot Arms Apartments with Fry. FTP, name this robot on the show Futurama who is known for his catchphrase, "Bite my shiny metal ass."

Bender or Bending Rodriguez

2. Featuring several lines from Tristan und Isolde, Gerontion was originally the prologue to this poem. Drawing heavily from the Holy Grail legend and dedicated to Ezra Pound, it includes the line "April is the cruellest month" and is divided into such sections as Death by Water and a Game of Chess. FTP, name this poem of despair about the search for spiritual peace by T.S. Eliot.

The Wasteland

3. The Frenchman who named them created the simplest nonlinear function version and early ones were generated when Gaston Julia created pixel images of complex polynomial functions. Their property of self-similarity makes their small parts identical to larger portions when magnified. Exemplified by the Koch Snowflake and Sierpinski's Triangle, they approximate clouds, galaxies and many other natural shapes. FTP, name these geometrical figures created by repeating patterns and discovered by Benoit Mandelbrot.

Fractals

4. Its main authors were George Hoars and George Edmunds and the maximum fines allowed for breaking it were one year's imprisonment and a \$5000 fine. The Robinson-Patman Act supplemented it and this act was mainly used against unions until its use against the Northern Securities Co. and Standard Oil. FTP, what is this American act passed in 1890 that made trusts and monopolies illegal and was followed by the Clayton Antitrust Act?

Sherman Antitrust Act

5. Billy is the only named character and dies fighting to reach safety while the others wait passively. One becomes watchman because he is too fat for physical exertion and their injured leader encourages them even though he is certain they will die. A sail made from a coat carries them nearly to the beach before they see a lighthouse is deserted; later, they jump into the sea and the captain, cook and correspondent make it to safety. FTP, name this short story by Stephen Crane about shipwreck survivors.

The Open Boat

6. It is the second deepest lake in North America and is known for its deep blue color. Near Pumice Desert Area, a national park was established here in 1902 and Wizard Island is in it. Located in southwestern Oregon, its location is also called Mount Mazama. FTP, name this lake that is in the cone of a volcano and is the site of the Hulk's fight with his evil dad.

Crater Lake

7. Financed by the Byzantine Emperor Michael VIII, it was preceded by the death of Frederick II and the inheritance of his southern territories by his bastard son, Manfred. The papacy supported Charles of Anjou and it lasted twenty years. Spurred on by the molestation of a young married girl going to pray on Easter by a French soldier, FTP, what was this war that happened on the island of Sicily?

War of the Sicilian Vespers

8. The swallowtail crenellation of its walls was outdated in Italy long before its construction. Its most elaborate towers are at corners and entrances and the greatest is the Savior, built by Milanese Pietro Solari and crowned later by Englishman Christopher Halloway. Solari also built the Faceted Palace, known for diamond shapes on its façade. More important interior buildings are the Cathedral of the Dormition, the czarist Great Palace and the Soviet Palace of Congresses. FTP, name this Moscow citadel that was formerly the Russian ruler's abode.

The Kremlin

9. Always below demand for a monopolist, it is negative when price elasticity is below unity, declines rapidly when elasticity is greater than one and equals AR for infinitely elastic demand. Equal to change in income from sales divided by change in quantity sold, it is used to find output and price levels for a firm because profit is maximized in perfect competition where its excess over marginal cost is zero. FTP, name this increment in total revenue gained by a seller through an increase in quantity sold.

Marginal Revenue

10. Its main product is crucial for brain development, so children are tested at birth for deficiency. Many Chernobyl residents developed cancer here because it concentrates a certain radioactive element so well. Also important for regulating calcium-phosphorus metabolism through calcitonin production, it is shaped like a butterfly. Spurred into action by the pituitary's production of TSH, it absorbs iodine to create T4 and will swell into a goiter if deprived. FTP, name this endocrine gland found on the throat.

Thyroid

11. She continues writing and serves as headmistress of Plumfield School after marrying her boring friend, Professor Bhaer. Her newspaper articles had earlier supported her family and she nearly let Amy drown after one of her beloved manuscripts was destroyed by that girl. A tomboy, she loves her family enough to sell her long hair to let Marmee nurse her chaplain father. She resents John Brooke for marrying Meg and is distraught after her sister, Beth, dies. FTP, name this second oldest March sister in Little Women, based on Louisa May Alcott.

Jo

12. He was known for his high-fluted voice and was the youngest person to make general since Napoleon. Originally wanting to join the navy, the aftermath of the Spanish-American War made him go into the army. Working with Petain to destroy Moroccan rebels, he then commanded the Spanish military academy. Stationed at the Canary Islands when the Spanish Civil War broke out, FTP name this Spanish caudillo who won the civil war and ruled for almost forty years.
Francisco Franco

13. It has one outlet in Egypt, two in Zambia, eight in South Africa, almost two thousand in Canada and more in 70 other countries. Founded in 1965 when 17-year-old Fred DeLuca asked Dr. Peter Buck how to earn money for college, its \$12,500 franchise fee makes its stores easy to start. Now the second largest fast-food chain in the world and biggest in America, its offerings include the cold cut trio, eponymous club and the sweet onion chicken teriyaki. FTP, name this chain of sandwich shops that slimmed down Jared Fogel.
Subway

14. Its value is negative for composites created in 2000, creating a focus on opposite sides of blocks and leading to hopes for incredibly good lenses. Its can be found with Hartman's formula and light slows as it increases. Found by dividing the speed of light by phase velocity, it can vary with dispersion and is very low for air and high for diamonds. FTP, name this concept that is the speed of light in a vacuum over the speed of a light in a medium.
Index of Refraction

15. The fourth movement has an English folk song and the last is done completely pianissimo for an aura of mystery. The first features vigorous melodies done by trumpets and horns, while the second is a delicate flute tune. The composer's first work without an Indian theme, he said of its seven parts "there is no program music in them, neither have they any connection with the deities of classical mythology;" instead, their significance is astrological. FTP, name this Gustav Holst work that includes Mars, the Bringer of War and Neptune, the Mystic.
The Planets, Suite for Orchestra, Op. 32

16. The title character may be based on Louise Pradier, the author's friend, although her creator implied that she stands for all whose dreams are shattered. Her interests are captured first by the Catholic rituals in her convent school, then by romantic novels, but her bourgeois husband proves his mediocrity to her when he botches an operation that might have gained him fame. Dissatisfied with life, she takes up with a young playboy and a lawyer before money problems bring on her suicide. FTP, name this Gustave Flaubert novel about an adulteress.
Madame Bovary

17. His philosophy divides history into three stages: the ancient Orient where only the ruler was free; Greece and Rome, where some were free; and the modern world where all are considered free. He postulated a view that a world soul develops out of and is known through a dialectical process in which a thesis inevitably generates its opposite antithesis, and the interaction of these leads to a synthesis. FTP, name this German philosopher who wrote *The Philosophy of Right* and *Phenomenology of the Mind*.

Georg Wilhelm Fredrich Hegel

18. It grows more efficient as frequency drops and the Van de Graaf generator is a DC version of it. Types of it are used in televisions, radios and stereos and it is driven by its namesake's spark-gap oscillator. Able to wirelessly power fluorescent bulbs 50 feet away with its discharge, it can increase 120vAC output to more than 1,000,000 volts. It works with a lower current than similar devices, but is best known for the special effects that its long electric arc provides in movies and parties. FTP, name this transformer created by a Croat inventor.

Tesla Coil

19. Muhammad called this man, who is buried at Najaf in Iraq, the "Father of Dust" and he was Muhammad's standard bearer in battle. He was the first male to convert to Islam and during his reign as caliph, he had to quell a rebellion led by Aisha. The husband of Muhammad's daughter, Fatima, FTP, who is this fourth caliph whose death led to the split in Islam between Sunnis and Shias?

Ali or Ali ibn Abi Talib

20. As only a guileless American can, Mr. Farraday forces a vacation on the protagonist, allowing him to dwell on the Nazi sympathies that led Lord Darlington to disgrace. He realizes he can't meet his own standards for a good butler because his employer was not honorable. The worst comes when he makes it to Cornwall and the divorcee Mrs. Kenyon says his rigid manner was what made their marriage impossible. FTP, name this Kazuo Ishiguro novel in which Stevens is advised to disregard the past and make the most of the title time period.

The Remains of the Day

21. The Americans had 17,000 soldiers and the British made the mistake of not crushing General Fellow's militia. The Americans avoided a fatal mistake because of the advance of Col. Wilkinson and this battle followed the Second Battle of Freeman's Farm. Gates commanded the Americans and the British were under Burgoyne. FTP, name this Revolutionary War battle in New York that convinced the French to enter the war.

Saratoga

22. He caused controversy by showing the seamier parts of history in a mural in Jefferson City and other pictures grace the Truman Library. Originally a modernist, he turned to painting regional scenes and often produced distorted,

cartoon-like figures. His masterpiece shows optimism and is called America Today, while other paintings are Cotton Pickers and Homestead. FTP, name this teacher of Jackson Pollack and greatest Missouri regionalist painter.
Thomas Hart Benton

23. This god was also called Yinepu and was seen in seals on tombs as standing over nine bows. The center of his cult was in Cynopolis and priests involved in the embalming process wore his mask. Although Osiris later took over the original roles of this deity, FTP, name this jackal-headed god who weighed the souls of the dead.

Anubis or Anpu

24. Occurring when a system's free energy is non-analytic for some variables, they are distinguished by a swift physical change brought about by a minor change in some thermodynamic variable. Formerly classified according to the Ehrenfest system, those of the first order involve latent heat. Two examples are Bose-Einstein condensation and the change from ferromagnetism to paramagnetism at the Curie point. FTP, name these changes seen when a thermodynamic system goes from one stage to another, exemplified by boiling and melting.

Phase Transitions

Bonus Questions

1. Answer these related questions from physics FTPE.

Equated as final energy of motion minus starting energy of motion, this is a force acting on an object to cause displacement.

Work

This concept of Rudolf Clausius is accumulated energy that is unavailable for work.

Entropy

The universe will suffer this when maximum entropy is reached and no more work is possible.

Heat Death

2. 5-10-15, name these characters from Wuthering Heights.

5-Cruelly treated in his youth, he returns after making his fortune to marry Isabella and take the mansion from Hindley.

Heathcliff

10-Heathcliff's youthful companion, she marries Edgar, but maintains a relationship with Heathcliff and lets him abuse her husband.

Catherine or Cathy Earnshaw

15-Isabella and Heathcliff's son, he is spoiled, weak and vile. He marries Catherine Linton and takes all her property for his dad's evil purposes.

Linton Heathcliff

3. Name the Supreme Court Cases FTPE.

It struck down an 1879 Connecticut law against the use of contraceptives and established the "right to privacy."

Griswold v. Connecticut

This case said that New York could not grant a steamboat monopoly and that federal regulation of commerce applied to the steamboat business.

Gibbons v. Ogden

This was a case that had the internment of Japanese-Americans during WWII declared acceptable.

Korematsu v. US

4. Answer these questions about the chemistry of gases FTPE.

This equation written $PV=nRT$ relates the behavior of a gas under specified conditions and describes many ordinary gases well.

Ideal Gas Law

This is the number of atoms needed to make the number of grams of a substance the same as its atomic mass. Equal to 6.022×10^{23} , it makes up 1 mole.

Avogadro's Number

Written P over T equals constant k , it says that pressure is proportional to temperature for fixed amounts of gases at fixed volumes.

Gay-Lussac's Law

5. Name the porno movie inspired by each of these famous films. You'll get five points for each and an extra five for all correct.

(Note to moderator: Please allow reasonable alternatives.)

5-Saving Private Ryan

Saving Ryan's Privates

5-The General's Daughter

The Genital's Daughter

5-Edward Scissorhands

Edward Penishands

5-Mission Impossible

Position Impossible

5-Star Wars: The Phantom Menace

Star Whores: The Phantom Anus

6. 30-20-10, name the ancient writer.

30-The Cyclops, Helena

20-Iphigenia at Aulis, Hecuba

10-The Trojan Women, The Bacchae

Euripides

7. Name the following about the largest islands FTPE.

This seventh largest island is the largest in the Japanese archipelago.

Honshu

This third largest island has the country of Brunei on it.

Borneo

Off the northwestern coast of Greenland, this Canadian island has the northernmost settlement in the world.

Ellesmere Island

8. Name these famous churches from descriptions FTPE.

Modeled on Justinian's Holy Apostles church, this Venetian cathedral's exterior was once covered with mosaics. Its Bronze Horses and Golden Altar are well-known.

St. Mark's

Henry Adams said this cathedral was the culmination of the Gothic style. A Latin cross, its unidentifiable figures-colonnes are the first medieval free-standing statues.

Chartres Cathedral

Christopher Wren's "Great Model" for it was highly original, but was greatly scaled down. Its huge dome was supported by concealed buttresses and a huge chain.

St. Paul's Cathedral

9. Answer the following about presidential assassinations 5-10-15.

5-Puerto Rican nationalists tried to kill this president who was staying in Blair House in 1950.

Harry S. Truman

10-The first attempt on Gerald Ford's life was made by this follower of Charles Manson.

Lynette "Squeaky" Fromme

15-This man attempted to kill FDR in 1933 in Miami. Roosevelt escaped, but Miami's mayor was not so lucky.

Joseph Zangara

10. Answer the following about those crazy asteroids FTPE. Hopefully, Bruce Willis will still be around when one is headed toward Earth.

NASA sent a probe called NEAR to this asteroid. It landed on February 14, 2001.

Eros

An asteroid may have been to blame for this 1908 explosion in Siberia that leveled entire forests.

Tunguska

These groups of asteroids lead and follow Jupiter in its orbit. There are as many as in the entire asteroid belt.

Jupiter Trojans or Jovian Trojans

11. Answer the following about the Jacobite Rebellion FTPE.

This was the son of James II who tried to invade England in 1715.

James Edward Stuart or the Old Pretender or Old Melancholy.

This was the act that barred the Jacobites from the English throne.

Act of Settlement

This was the battle in 1745 that ended the second Jacobite Rebellion. It was the last pitched battle fought on Great Britain.

Culloden Moor

12. Given descriptions, identify these classics of world literature that made the Publishing Triangle's 100 Best Gay and Lesbian Novel list FTPE.

This Thomas Mann has the great author Gustav von Aschenbach dreaming of a handsome Polish boy participating in Dionysian orgies before fates ends his lust.

Death in Venice

Written by Colette, its title character falls in love with an old whore named Lea de Lonval, but unhappily forsakes her to marry for money.

Cheri

Andre Gide's "masterpiece" is this tale of scholar Michel's abandonment of his wife and ideals for savagery and pedophilia.

The Immoralist

13. Answer these questions about a biological process FTPE.

Found in plants and bacteria, this three-step process consists of ATP generation, formation of organic molecules and rejuvenation of pigments.

Photosynthesis

The first step of photosynthesis is usually called by this name because a photon is necessary to start chlorophyll's electron moving in ATP synthesis.

Light Reactions

This primary goal of photosynthesis is met in dark reactions. An atmospheric gas is made into larger molecules with the energy of ATP and NADPH.

Carbon Fixation

14. Answer these questions about a composer and his works FTPE.

Made a baron and Master of the King's Musick, he broke a vow to cease composing with a hymn of prayer for George V's recovery. He also did Enigma Variations and Cockaigne.

Edward Elgar

These five marches were meant to prove marching music isn't all boring. The first, Land of Hope and Glory, gained fame as graduation music.

Pomp and Circumstance

This oratorio is based on the doctrine of Purgatory as related by Cardinal Newman. An unconventional attempt to portray a mystical vision, it failed in England, but was received well in Germany.

The Dream of Gerontius

15. Answer these questions about Stone Age art FTPE.

A Spanish girl first spotted this huge cave's bulls in 1879. Its greatest work is the series of animals painted on a roof, all multi-colored and some seven feet long.

Altamira

This 4 1/2-inch limestone figurine was found near the Danube in Austria. Its huge

breasts and buttocks have led to speculation that is a fertility totem.

Venus of Willendorf

The most famous painting area, this French cave was the site of many ages' work. Well preserved, it has little compositional arrangement and much superposition.

Lascaux

16. Answer these questions about an American writer FTPE.

A native of Chicago's South Side, this author of Annie Allen published poems in the Chicago Defender and collected them in A Street in Bronzeville.

Gwendolyn Brooks

The title poem in this Brooks work describes Mrs. Sallie's discovery of her daughter's murder. It also includes a street gang tribute in "The Blackstone Rangers."

In the Mecca

Including Brooks, Tom Dent and Ishmael Reed, goals of this literary movement were stated by Larry Neal in 1968 and focused on advancement of so-called social engagement.

Black Arts Movement

17. 30-20-10-5, name the philosophical work.

30-Its hero is the "good fool," a little man who knowingly foresakes wealth and power for a Christian life.

20-Thought to be modeled on Lucian, it portrays greedy, glory-seeking pre-Reformation churchmen as improper models for the pious.

10-The title character names herself man's greatest benefactor and her thoughts are echoed by Self-Love and Flattery until proven wrong.

5-It is the masterpiece of Desiderius Erasmus.

The Praise of Folly

18. Name the mythical beast from a description FTPE.

This monster was usually depicted as an animal with the tail of a dragon, the body of a she-goat, and the head of a lion.

Chimera

Mentioned by Marco Polo, these giant birds could carry off elephants and had eggs that could measure up to 50 paces.

Roc or Rukh

This beast which was involved in a pursuit in Arthurian legend had the head of snake, the body of a leopard, the back legs of a lion, and the hooves of a deer.

Questing Beast

19. Answer these questions about igneous rocks FTPE.

These igneous rocks all have phaneritic textures because they enter preexisting rocks and crystallize slowly underground.

Intrusive or Plutonic

This type of rock is the intrusive equivalent of basalt. Made of pyroxene, calcium,

feldspar and olivine, it is thought to underlie the ocean floor.

Gabbro

These igneous rocks composed of magnesium, iron and 40-50% silica are the most abundant in the crust. Basalt and gabbro are both types.

Mafic

20. Identify these famous inspirational poems from excerpts FTPE and name their authors FFPE.

10-...you can keep your head when all about you/
Are losing theirs and blaming it on you...
Yours is the Earth and everything that's in it,
And-which is more-you'll be a Man, my son!

If

5-Name the author of If.

Rudyard Kipling

10-It matters not how strait the gate,
How charged with punishments the scroll,
I am the master of my fate:
I am the captain of my soul.

Invictus

5-Name the author of Invictus.

William Ernest Henley

21. Answer the following about the kingdom of Kush FTPE.

This was the sandstone Butte that became a major site of worship of the god Amun.

Jebel Barkal

This became the capital of Kush in the seventh century BC after their defeat by the Assyrians. It was destroyed in 350 AD by Aksumite forces.

Meroë

22. Answer these related questions from psychology FTPE.

This branch of psychology studies how individuals react to structures and practices of workplaces and to their co-workers.

Industrial/Organizational or I/O Psychology

I/O psychologists began contributing to this field when well-trained soldiers were unable to operate new equipment. It is the science of designing machines for maximum efficiency.

Ergonomics or Human Factors Engineering

This effect was found when Illinois workers were seen to increase production with every change in lighting, simply because it made them pay more attention.

Hawthorne Effect

23. Answer the following about space exploration FTPE.

This mission came within 50,000 ft. of the moon. Eugene Cernan, John Young, and Thomas Stafford were the astronauts.

Apollo 10

This was the first woman in space. She flew in the Vostok 6 in 1963 for over 70 hours.

Valentina V. Tereshkova

This has been the name of Russian space missions since 1967.

Soyuz

24. Answer the following about a German king FSNP.

5-He ended revolts of his nobles and brother to control Germany by 941. He then took Italy from the Lombards and John XII made him Holy Roman Emperor.

Otto I or Otto the Great

5-Otto's most famous opponents were these Hungarian horsemen whose power was utterly destroyed at Lechfeld in 955.

Magyars

10-Otto had his son declared king at this 961 meeting which shares its name with a much more famous 16th century gathering convened by Charles V.

Diet of Worms

10-Progenitor of the Capetian line, this French ally of Otto was far more powerful than Louis IV and warred against him until he was excommunicated.

Hugh the Great (Do not accept Hugh Capet because that man was his son.)