

2003 MASER
Round 2

Toss-up Questions

1. Every one is a single, giant, covalently-linked molecule and they are about 3.3 billion years old, although meteorites contain microscopic fragments from 5 billion years ago. Most of their atoms come from the mantle, but some contain biological isotopes. They display a face-centered cubic lattice structure and have perfect cleavage in four directions. They are metastable and the entire lattice must be broken down to convert to other allotropes, so they never change to graphite. FTP, name these forms of carbon that rank 10th on the Mohs scale.

Diamonds

2. Its heroine has a journal of a China trip on her table, prompting her cousin to ask if she is planning a visit there. She is the only member of the household with the convictions to refuse the acting of a play while her uncle, Sir Thomas, is doing business in Antigua. Once her cousins are gone, Henry falls in love with her, but fails to win her heart by getting her brother promoted. In the end, she gains the love of Edmund when he gives up on the frivolous Mary Crawford. FTPE, name this Jane Austen novel about Fanny Price's travails in the Bertram household.

Mansfield Park

3. He served as Tennessee's first member of the House of Representatives and fiercely criticized Washington for supporting Jay's Treaty. He beat Richard Lawrence nearly to death after that man shot him, but the bullet from a duel lodged next to his heart caused him lifelong pain. His treaty with the Creeks gained three-fifths of Alabama for the U. S. and only a "corrupt bargain" between his opponents, Clay and Adams, kept him from the White House in 1824. FTP, name this South Carolina-born president, hero of the Battle of New Orleans.

Andrew Jackson

4. The 1974 film Mahler has the composer singing, "No longer a Jew boy, now you're a Goy," to it as he converts to Christianity. It's featured in Birth of a Nation, Rebel Without A Cause, Fantasia 2000, The Blues Brothers and the Bugs Bunny cartoon "What's Opera, Doc?" where it accompanies Elmer Fudd's "Kill da wabbit, kill da wabbit!" Heard first thing in the third act of its opera, its rhythms describe the rush of wind, battle cries and galloping of flying horses. FTP, name these Wagner piece in which the daughters of Wotan gather on a mountaintop after battle, blasted at the Vietcong in Apocalypse Now.

The Ride of the Valkyries

5. It has both the world's biggest soccer stadium and biggest hydroelectric dam. It is the eighth-largest economy and produces the most iron. However, much of it is wilderness and it also has a quarter of ~~the~~ all primate species, 68 in all. Its highest point is the Pico da Neblina and most of its people are of European ancestry. Headed by President Lula Da Silva, its flag is a globe filled with 27 stars and the motto "Order and Progress." The largest city by far is Sao Paulo. FTP, name this Portuguese-speaking country, the biggest in South America.

Brazil

6. Its illustrator, Robert Seymour, killed himself after a few months, leaving the author on his own. Mr. Wardle's fat, greedy servant, Joe, often falls asleep standing, having the first literary case of ^{narcolepsy} sleep apnea. Very different is the titular character's man, Sam Weller, a clever Cockney. Accompanied by his three friends, a romantic, a lover and sportsman, the hero visits several English cities before Mrs. Bardell takes him to court over a marriage proposal and not even the great lawyer Serjeant Buzfuz can keep him out of Fleet prison. FTP, name this first Charles Dickens work, consisting of reports filed by Phiz and his friends.
Pickwick Papers or The Posthumous Papers of the Pickwick Club

7. It was actually discovered by Cavendish, who failed to publicize it. A short circuit results if its equation has a value of 0 for resistance and an open circuit if voltage is 0. Formulated when its namesake discovered a long, thick wire passed more current than a short, thick one, its equation states that voltage equals current multiplied by resistance, or $V=IR$. FTP, name this idea that the amount of current passing through a wire is inversely proportional to its length and directly proportional to the cross sectional area of the wire.
Ohm's Law

8. Sonless French aristocrats had their left testicles cut off because this thinker taught that boys are produced solely by the right organ. An Ionian, he was a member of the Eleatic school and taught that nothing in the universe has a start or ending; "all things were together" opened one of his books. He believed mind to be a free, autonomous substance that animates people and creatures and his student Pericles saved him from condemnation over his claim that the sun is a glowing rock. FTP, name this Greek thinker, the first to teach in Athens.
Anaxagoras

9. He is thought to be the first to translate the Latin "libertas" as "freedom" in English, a language he required all young men to read and write. Alleged to have sent an embassy to India, he reorganized his militia so that half the men were ready to fight while the other half farmed or manned his navy, England's first. His victory at Edington forced the submission of his enemies and their acceptance of Christianity. FTP, name this king of Wessex who overcame the Danes.
Alfred the Great

10. The figures completely dominate the foreground and their faces, stitching and pitchfork are all totally composed of vertical lines, as is the house's "board and batten" siding. It was roundly criticized as anti-American, but the artist claimed it was a tribute to rural values depicting "tintypes from my family album." Modeled on the artist's sister and dentist, it actually depicts a father and daughter, not a husband and wife. The title comes from the style of window used on the Iowa house shown behind them. FTP, name this Grant Wood work

depicting a farm couple in front of their house.

American Gothic

11. The Egyptians used it in war, but it was used only by women in Greece and Rome, while the Chinese version was said to have been invented by a woman. A twelfth-century Pope declared it a symbol of honor, but the first English users were sprayed with mud by cabbies who found it a threat to their livelihoods. It finally replaced the sword as a symbol of aristocracy and takes its name from Italian for "little shade." FTP, name this object held over the head when it is raining.

Umbrella

12. Its name means "Book of the Mat" and it begins with creation myths, showing how the first beings, made from wood by Hurakan, are disloyal and torn to pieces by birds. The Great White Pig and other luminaries finally make true men from cornmeal. Later sections tie contemporary rulers to the gods; one episode has the Hero Twins descending to the underworld to defeat the Lords of Death in a ball game similar to basketball after the Lords kill their father and uncle in a pickup game. FTP, name this Mayan tome about the Quiche people.

Popul Vuh

13. They broke up when the lead singer put a knife to the drummer's throat, but reunited for one night when inducted into the Rock & Roll Hall of Fame in March 2003. The most famous member was a ditch digger who liked striped sweaters and the group name was coined for all the free publicity attendant to it. Debuting with Outlandos D'Amour in 1979, their song Synchronicity II concerns Jungian themes, while their most famous tune is about a stalker. FTP, name this group composed of Stewart Copeland, Andy Summers and Sting, creators of Every Breath You Take.

The Police

14. Its first successful use was in taking the height of the ionosphere. Marconi suggested its military potential and Charles Townes correctly warned the Air Force that a system would fail because water vapor would absorb 1.25 centimeter wavelengths. American and Japanese navy proposals to develop it before World War II went nowhere, leaving the German version best developed. It has now been largely supplanted by microwave ranging systems. FTP, name this device which detects objects by bouncing radio waves off them.

Radar

15. His hobby was blacksmithery, which caused laughter in his court and many fights with his wife. Ignorant, lazy and shy, his child-bride controlled him but did not aid him with his financial difficulties. He later allied himself with the conservative faction of his brother, the comte d'Artois, thinking unrest would quickly blow over. His greatest troubles began when nobles wouldn't allow him to eliminate their pensions or tax their lands, instead forcing him to call the

America's Cup

4. Answer these questions about a famous opera FTPE.

Its three courtiers, Ping, Pang and Pong, try to dissuade suitors from solving the riddle of the titular Chinese princess, but Calaf finally wins her.

Turandot

Name the composer of Turandot. He died before it was complete and also wrote La Boheme and Tosca.

Giacomo Puccini

Franco Alfano finished Turandot, but decided that he couldn't make a more beautiful aria than this, so just repeated the theme. Its name refers to the decree that no one sleeps until Calaf's name is discovered.

Nessun Dorma

5. FSNP, answer these questions about an epic poem.

5-Mentioning elves, orcs and ents, this Old English tale describes a Geat's defeat of evil monsters and death at the claws of a dragon.

Beowulf

5-This descendant of Cain lives with his mom and has his arm ripped off by Beowulf.

Grendel

10-This king's great hall, Heorot, is terrorized by Grendel until Beowulf arrives.

Hrothgar

10-This sword, borrowed from Unferth, proves useless in killing Grendel's mom.

Hrunting

6. Name these modern African leaders FTPE.

It was said that he could turn invisible and change into a leopard at will. He deposed Patrice Lumumba in 1960 and raped Zaire with a sandpaper condom until 1997.

Mobutu Sese Seko or Joseph Desire Mobutu

Unlike Mobutu, he was reputedly able to change into an owl every night and fly anywhere in the world. He was still killed by Angolan government troops in 2002.

Jonas Savimbi

His name means "soldier of the 7th" because the 7th Battalion of the King's African Rifles came from his village. He has been "president" of Uganda since 1986.

Lt. General Yoweri Kaguta Musveni

7. Name these related terms from physical chemistry FTPE.

This is the increase in a system's available energy as moles of one substance are added, with temperature and pressure constant.

Chemical Potential

Chemical potential can be defined as the partial derivative of this factor with respect to the number of particles. It is defined as internal energy minus temperature and entropy.

Helmholtz Free Energy

This condition comes about when the free energy of system is at a minimum and no spontaneous change in its status will take place.

Equilibrium

8. Identify these Chinese architectural masterpieces FTPE.

This Ming creation covers 250 acres was the imperial residence. Once housing 70,000 eunuchs, it was built in strict accord with feng shui, having a stream surrounding and a man-made hill in back.

The Forbidden City or Zijin Cheng

Never yet opened, this first emperor's tomb contains many treasures and servants, as well as a great map of China with rivers and seas of mercury and pearl stars set in a copper sky.

Qin Shi Huang or Shi Huang Di

It expresses the belief that all power flows from above. Actually a massive garden and series of altars on a north-south axis, most familiar is its round Shrine for Annual Prayers.

The Temple of Heaven or Tian Tan

9. Answer these questions from classical physics FTPE.

This law says an object at rest remains at rest and an object in motion remains in motion unless an external force acts on it.

Newton's First Law of Motion

Newton's first law defines this and applies to objects in it. The best approximation is motion relative to distant stars i.e. that of the earth.

Inertial Frame of Reference

If a body is in uniform motion, an observer in an inertial frame of reference at rest relative to it will find its acceleration and force equal to 0. How much will they equal for an observer in any other reference frame?

0

10. Answer these questions about famous firsts in American theater, 5-10-15.

5-Why Marry? by Jesse Williams was the first play to win this prize. It was created with money willed by the New York World publisher.

Pulitzer Prize

10-This work was the first musical to win a Pulitzer. Written by the Gershwins and Simon Kaufmann, it tells of a president's promise to marry a beauty queen.

Of Thee I Sing

15-In 1732 this Irish writer's The Recruiting Officer was America's first play done by professional actors. He is known for The Beaux Stratagem.

George Farquhar

11. Answer these questions about American involvement in WWI, 5-10-15.

5-Recipient of the first GI serial number, 01, he also fought in Mexico. His insistence on sending only the well-trained caused Americans to arrive late.

Pershing

10-This June 1918 battle's site was later renamed Forest of the Marines. A fouragere (for-ah-jhair) awarded for it is one of the few unit devices allowed on Marine uniforms.

Belleau Woods

15-This May 1917 law was the first draft legislation since the Civil War. It forced all men between 18 and 45 to register and no one was allowed to buy his way out.

Selective Service Act

12. Name these geologic periods FTPE.

Lasting from 208 to 144 million years ago, it was dominated by reptiles on land and saw the rise of the Sierra Nevada.

Jurassic

Lasting from 505 to 438 million years ago, trilobites and other invertebrates dominated and the first fish arose. No vascular plants yet existed.

Ordovician

Lasting from 408 to 360 million years ago, it saw the first insects and forests arise. Land was largely desert and the Urals and Carpathians formed. Damn, those are some old mountains.

Devonian

13. Answer these questions about an English authoress FTPE.

Her work has been translated more than any English author except Shakespeare. Her first novel was the Mysterious Affair at Styles and she also wrote The Mousetrap.

Agatha Christie

Christie based this novel's Dr. Leidner on Sir Leonard Woolley, whom she met at Ur in 1928. It tells of a nurse's killing at an excavation in Iraq.

Murder in Mesopotamia

33 of Christie's novels featured this Belgian detective whose "little grey cells" more than compensated for his small stature.

Hercule Poirot

14. Name these famous banking families from European history FTPE.

Their name is the origin of our term pettifogger for a person who argues over details. They dominated 16th century finance, bankrolling the campaigns of Emperors Maximilian and Charles V.

Fuggers

Cosimo expanded the bank founded by his father and they used offices in many cities to gather intelligence. Based in Florence, they were the papal financiers.

Medicis

This house was founded by Mayer in 1744 in Frankfurt. His sons opened branches in European capitals and made a fortune bankrolling the Napoleonic wars, even receiving the first report of Waterloo's outcome.

Rothschild

15. Name these people and things from the first Thanksgiving FTPE.

First man to use the term Pilgrim, this leader replaced John Carver in 1621 and governed Plymouth colony for more than 30 years.

William Bradford

Bradford made Thanksgiving possible by signing a treaty with this Wampanoag chief who feasted with the colonists for three days.

Massasoit

Massasoit's brother, Quadequina, introduced this native delicacy to the colonists and the entire wider world, bringing several deerskin bags of it.

Popcorn

16. Name these 1st century Roman emperors FTPE.

160,000 slaves and criminals were slaughtered in public for his AD 37 inauguration. The Praetorian Guard had to kill him in AD 41 after he tried to make his horse a consul and forced armies to collect seashells for him.

Caligula or Gaius Caesar Augustus Germanicus

Son of Vespasian, he succeeded his brother, Titus, and killed St. John. He also strictly enforced morality laws, having four Vestal Virgins executed for forgetting their job's prerequisite.

Domitian

His favorite pastime was disguising himself and stabbing solitary pedestrians to death. The arts flourished during his AD 37-68 reign, but Rome burned down near the end.

Nero

17. 5-10-15, answer these related questions about logic.

5-This is the term from logic for an error of reasoning. The formal variety seems to be valid reasoning, but is not, while the informal type results from some other type of mistake.

Fallacy

10-This is a type of fallacy that results when it is assumed future results will be like past results or, conversely, a new pattern must soon emerge. It is often seen around roulette wheels.

Gambler's Fallacy or Monte Carlo Fallacy

15-This involves arguing to a conclusion with no relevance to the issue at hand and considering a point settled.

Ignorantio Elenchi

18. Name these elements of the money supply FTPE.

This largest part of the money supply consists of amounts people and firms keep in checking accounts.

Demand Deposits

This broad measure consists of all assets that can be easily converted to cash, including all M3 and short-term securities.

C

This is all currency and demand deposits minus foreign checking deposits.

M1A

19. Name these national parks FTPE.

The largest national park in the lower 48 states, it is bounded by Telescope Peak and Dante's View and includes Badwater, lowest place in the hemisphere.

Death Valley N.P.

This Utah national park contains more than 2,000 of the titular objects, including the well-known Delicate one.

Arches N.P.

This very popular Washington park is centered on a 14,000 foot snow-covered volcano and contains much old-growth forest.

Mount Ranier N.P.

20. 5-10-15, name these bones.

5-Also called the thigh bone, this cylindrical bone is the longest and strongest in the body.

Femur

10-Containing the lower teeth, it consists of a body with two rami attached at the sides.

Mandible or Lower Jaw or Inferior Maxillary Bone

15-The Egyptians thought this aptly-named bone was holy because it protected the source of semen in the spinal cord.

Sacrum or Tail Bone

Chem/Biochem

21. Answer these questions about a poet F15PE.

An ethnic German, his mother called him Sophie and gave him long hair and dolls until age five. He wrote The Book of Hours and The Duino Elegies.

Rainer Maria Rilke

This Rilke work is the jottings of a Danish poet in Paris. He flees from love and dies in an unspecified but horrible manner.

The Notebooks of Malte Laurids Brigge

22. Identify these stars FTPE.

The second brightest star in the sky, it was used as a guide for navigating spacecraft.

Canopus

Along with Vega and Altair, it makes up the Summer Triangle. Its name means tail in Arabic because it is that part of the constellation Cygnus.

Deneb

The buckle of Orion's shoe, this star is one of the rare blue supergiants. It is 40,000 times brighter than the sun.

Rigel

23. Answer these questions about a twisted artist F15PE.

Raised on an Irish stud farm, his father was shocked to discover his

Estates-General in 1789. FTP, name this husband of Marie Antoinette who lost his head in January 1793.

Louis XVI

16. From 1974 to his 1982 death, he was possessed by an alien that arrived in his head on a beam of pink light and all his later works concern that experience. The short-lived television series Out of This World was based on his story "Impostor" and other works have been adapted into *Screamers*, *Paycheck*, *Total Recall* and *Minority Report*; however, his greatest book, *The Man In The High Castle*, has never been filmed. FTP, name this author whose novel *Do Androids Dream of Electric Sheep?* became the movie *Blade Runner*.

Philip K. Dick

17. The experiment demonstrating it was suggested by Hendrik Lorentz and had already failed for Faraday. Light seen in the experiment was similar to sunspots, showing those objects to be intensely magnetic. Showing that electrons are affected by a magnetic field, it proved light and magnetism are connected and helped determine that atoms are composed of charged particles. FTP, name this physical effect through which it was discovered that the tripling of spectral lines was caused by the altering of electron spins.

Zeeman Effect

18. All symbols of military rank were abolished as consequence of it. Pedicab passengers were forced to pedal while drivers relaxed and women on the street had their heads shaved and lipstick scrubbed off. Schoolchildren bayoneted LBJ masks at recess and streetlights were derided because their red meant stop. People not "red" enough were covered with flour and marched through the street. Lin Biao's compilation, the Little Red Book, was carried by everyone. FTP, name this 1966-75 wrecking of Chinese society by Mao Ze Dong.

The Great Proletarian Cultural Revolution or Wen Hua Da Ge Ming

19. He wanted to play the lead in the rock opera *Tommy* and his later films, including *Mr. Arkadin* and *Touch of Evil*, showed how money and power destroy men. His second-best film, *The Magnificent Ambersons* features an opening montage of a man trying on many suits of clothing and a tacked-on happy ending. That was added to avoid having others edit the movie, as happened to his greatest film, for which he supervised every other element down to sewing costumes. FTP, name this director who was brought to Hollywood with his Mercury Theatre to make *Citizen Kane*.

Orson Welles

20. "You're fuggin ay," one character is told, leading Tallulah Bankhead to greet its author as "the guy who doesn't know how to spell fuck." Its conflict between a fascist demanding obedience and an educated liberal who wants true democracy mirrors the American condition. Though Red, Martinez, Croft and the other men form one unit, their many flashbacks reveal that they still carry all the divisions

and hatreds of civilians. In the end, Lieutenant Hearn obeys General Cumming's order to attack the rear of Anopei. FTP, name this Norman Mailer novel about the thoughts of Marines fighting the Japanese.

The Naked and the Dead

21. He is not Pyrrhus, but his name signifies a victory accompanied by great losses. His wedding was one of two attended by the gods, but the fury of Ares caused his whole family but Polydorus to suffer. He and his wife became snakes and his daughter Semele was raped by Zeus, so he became the grandfather of Dionysus. His crime was killing a sacred dragon, found while searching for his sister Europa. The men who sprang from its teeth told him, "Meddle not in our war," and killed each other until five were left. FTP, name this Phoenician who introduced the alphabet and whose five warriors were the first citizens of Thebes.
Cadmus

22. The most famous is the Hog Island variety, but they were produced in many yards. They were destroyed so quickly at first that one complete voyage was considered a successful career. Actually called EC2s, FDR nicknamed them "ugly ducklings." The wife of Henry Wallace sponsored the first one, the Patrick Henry, which sailed to Alexandria, Egypt. Designed by Henry Kaiser and built in as little as four and a half days, they were replaced after 1943 by the bigger and faster Victory types. FTP, name these famous prefabricated vessels of World War II.

Liberty Ships

23. Only a small number of elderly women speak their language, which is similar to Turkic and Altaic tongues. Their culture is linked to the Jomon and focused on hunting and fishing before agriculture was forced on them. Their religion centers on sacrifice of a bear, who returns from death with gifts of fur and food. Samurai are thought to be descended from them, giving noble Japanese slightly distinct facial features. They can't now be distinguished by appearance, though they once sported round eyes, mustache-like tattoos on women and heavy beards on men. FTP, name these indigenous people of Japan.

Ainu

24. Ubiquitous genes that protect against them may have arisen from prehistoric cannibalism. They have the same amino acids that cell proteins have, but theirs are folded differently and one theory says the host's normal proteins are slowly converted to their forms. Named by Stanley Prusiner, they cause a number of neuron-destroying brain diseases. FTP, name these agents of infection responsible for mad cow disease.

Prions (pree-ahns)

25. He published a one-act comedy, *The Broken Straws*, at 22, but then became a stockbroker for security. His final work, *Paris in the 20th Century*, was not released until 1994 and Mendeleev died listening to his *Voyage to the North*

Pole. His 1901 work Village in the Treetops has French and American explorers finding ape-men called Wagddis living in Africa and his The Mysterious Island foresaw scuba gear, television and submarines. His first success came at age 35 when he wrote Five Weeks in a Balloon. FTP, name this French author of A Journey to the Center of the Earth and Twenty Thousand Leagues Under the Sea.

Jules Verne

Bonus Questions

1. Answer these questions about the family of Jacob FSNP.

5-Jacob married Rachel and Leah, daughters of this man of Haran. Since he was Jacob's uncle, Jacob's wives were also his first cousins.

Laban

5-This huntsman brother of Jacob gave up his birthright for lentil soup. The color of the soup lead to his alternate name: "Edom," or "red."

Esau

10-Jacob's sons, Simeon and Levi, avenged the rape of this sister by killing all the males in Shechem when the pain of circumcision had laid the Shechemites low.

Dinah

10-This first-born son of Jacob lost his birthright when he slept with Jacob's concubine, Bilhah. On his deathbed, Jacob cursed him with inferior status.

Reuben

2. Name these Greek-letter societies FTPE.

This academic honor society was founded at William and Mary in 1776 and is America's oldest Greek organization.

Phi Beta Kappa

This group was organized at what is now De Pauw University in 1870 and was the first sorority.

Kappa Alpha Theta

This first social fraternity was created in 1833 and held secret meetings in the top floor of the very first frat house.

Kappa Alpha Society

3. Answer these questions about a famous American FSNP.

5-He is America's largest private landowner, but is more famous as "The Mouth of the South" and founder of CNN.

Robert Edward "Ted" Turner III

5-Turner is married to this former North Vietnamese anti-aircraft gunner.

Jane Fonda

10-This huge company is the parent of CNN and merged with AOL in 2001.

Time Warner

10-Turner piloted the yacht Courageous to victory at this annual sailing competition in 1977 and showed up drunk at the awards ceremony.

homosexuality and had him horse-whipped by his stableboy lovers. He specialized in distorted human forms, such as those in Three Studies for Figures at the Base of a Crucifixion.

Francis Bacon

This Francis Bacon work pays homage to Velazquez, but has the titular screaming figure trapped in a cage. It is the only painting not destroyed at the art museum in Batman.

Pope Innocent X or Screaming Pope