2003 MASER Round 15

Toss-up Questions

- 1. Georgi and Glashow's unified theory requires it to be quantized. Symbolized lower-case e for protons and equal to 4.803207 x 10 to the negative tenth power of its units, its value for a macroscopic object is the sum of individual particles. Always conserved, it is symbolized Q and its CGS unit is the esu (ee-ess-you). Its interactions are described by Coulomb's law and those of its like variety repel one another, while unlike ones attract. FTP, name this attribute of electricity that Ben Franklin divided into positive and negative types, possessed by you after rubbing feet on carpet in winter.
- 2. It depicts deformed gnomes in halting brass and string rhythms, while basses announce the arrival of rich Goldenburg, with only muted trumpets for impoverished Schmuyle. It includes the Ballet of the Unhatched Chicks, based on costume design sketches for the Ballet Trilbi, and the Great Gate of Kiev, based on plans for a monument to Alexander II. Written as a commemoration of an artist who was a close friend of the composer, FTP, identify this suite of Modest Mussorgsky pieces that musically illustrates a series of Viktor Hartmann paintings.

Pictures at an Exhibition

- 3. An order in his name was created by Catherine I, abolished in 1917 and revived in 1942. He was accused of being a traitor when he submitted to the Tatars after their 1252 invasion of Russia, though in the long run this action helped preserve Russian autonomy. FTP, name this canonized Russian hero who successfully defended Russia against invasion by both the Livonian Brothers of the Sword and the Swedes, the latter in the Battle on the Ice. Alexander Nevsky
- 4. The swamps between them became cemeteries and the gods decreed which would be paramount by sending six birds to fly over it. A small Sabine settlement was found on the Quirinal, while the Viminal is the smallest. The Esquiline was the home of Trajan's Thermae and the others include Capitoline, Caelian, Aventine, and Palatine, where the original city was built. FTP, these are the names of what geographic features upon which the Eternal City was built? The Seven Hills of Rome
- 5. The story begins with Fiver's premonition that the Owsla is in danger. Fiver is unable to persuade Chief Thearah that a danger exists, but Fiver's brother Hazel leads a group out of the warren. The novel climaxes with the clash between Hazel's forces and those of the Efrafa warren, led by the tyrannical General Woundwort. This describes events that occur in, FTP, what Richard Adams work about rabbits in search of a home?
 Watership Down
- 6. Its impossibility past .5 millimeters in distance and massive weight of

exoskeletons prevent giant insects from evolving. Gills aid it by enlarging surface area and raising concentration differences, while alveoli help it with tissue thinness. All animals depend on it because active capture is too costly. It is driven by differences in partial pressures and, the greater the difference, the faster it happens, so most protists can depend entirely on this for gas exchange. FTP, name this random movement of oxygen and carbon dioxide molecules to areas of lower concentration.

Diffusion

7. A native of Savannah, Georgia and alum of the College of Charleston, he was the son-in-law of the influential Missouri Senator Thomas Hart Benton. His relationship with Benton allowed this man to lead surveying expeditions to the Oregon Trail, the Great Basin, and the Sierra Mountains. Although it led to his court-martial, he may be most famous for his appointment as California's first governor. Nicknamed "the Pathfinder", FTP, name this first presidential candidate of the Republican Party.

John C. Fremont

- 8. His poem Sunday Morning contains the line "death is the mother of beauty" and stresses the poet's view that religious faith cannot be a source of comfort or constancy. He spent nearly forty years working for the Hartford Accident and Indemnity Company and once broke his nose in a Key West bar fight against Ernest Hemingway. FTP, name this poet whose most famous poems include Anecdote of the Jar and The Emperor of Ice Cream.

 Wallace Stevens
- 9. Richard Feynman once described adherents of these religions as creating a replica of an airport and wearing bamboo antennas. Many adherents believe in a messianic figure known as Jon Frum, who is thought to be a compilation of Santa Claus, Uncle Sam, and other icons of Western culture. FTP, name these sects of Pacific island people who believed that errant military materials of the United States that washed ashore during and after World War II were divine gifts that can be summoned again by emulating the practices of the servicemen.
 Cargo Cults
- 10. The ball may be a childhood toy of the artist and the cow is seen in many of his works. The bottom shows a hand holding a flowering branch, while the top right shows the artist's hometown, in which both women and houses are upside down. The green figure on the right side is thought to be the artist, while the left side shows a milkmaid layered over a lamb's head. An attempt to portray the artist's childhood in Vitebsk, Russia, FTP name this most famous work of Marc Chagall.

I and the Village or Me and My Village

11. Unlike the evaporation used for most instant coffee, freeze-dried coffee is produced when tiny, frozen granules are subjected to it. Accounting for

shrinkage of old ice cubes, it occurs because surface molecules are not bonded in every direction. The same term refers to the process in the opposite direction and it is seen in frost formation and the breakdown of dry ice at room temperature. FTP, name this transition of a solid to a gas without going through liquid form.

Sublimation

- 12. Once holding a washing fountain with the words "Cleanse our sins, not only our faces" legible in both directions, it represents the first use of pendentives in monumental construction. Its four minarets rise strikingly out of the outer corners of the structure and were added after its initial construction. Though its floor and wall mosaics were cemented over after its 1453 capture by Ottoman forces, they are being carefully excavated. Located in Istanbul, FTP, name this prime example of Byzantine architecture that led its patron Justinian to proclaim: "Solomon, I have surpassed you!"
- 13. Scanlon is an Acute who has fantasies about blowing things up. George Sorenson is a former seaman who is nicknamed Rub-a-Dub George for his obsession with cleanliness. Dale Harding voluntarily committed himself in order to keep others from discovering his homosexuality. These characters, as well as Randle McMurphy, Nurse Ratched, and Chief Bromden all appear in, FTP, what Ken Kesey novel about life in a mental hospital?

 One Flew Over the Cuckoo's Nest
- 14. The Family Research Council claims that its author instructed his interviewers to intimidate subjects of the study and that the validity of its almost exclusively white, middle-class, college-educated sample is also suspect. The Indiana University Institute for Research in Sex, Gender, and Reproduction is named after its author. FTP name this groundbreaking compilation of research that suggested that nearly everyone masturbates and that at least 37% of American men have had a homosexual experience, put into book form in 1948 as Sexual Behavior of the Human Male. The Kinsey Report
- 15. Her priestesses had the title Melissa and she is often shown with several breasts or nipples. She became so jealous of her nymph, Callisto, for becoming pregnant by Zeus that Zeus turned Callisto into Ursa Major for safety. She put so high a premium the secrecy of her baths that when the hunter Actaeon spied on her bathing with her nymphs, she turned him into a stag and sent his hounds to tear him to shreds. FTP, name this twin sister of Apollo whose devotees sacrificed symbols of virginity when they married, the goddess of the hunt. Artemis
- 16. Based on Vicki Baum's novel, Joan Crawford's character can't decide between careers in office work and prostitution. John Barrymore plays Baron

Felix von Geigern, a penniless jewel thief, and Lionel Barrymore is Kringelein, a factory clerk who wants to live the good life one time before he dies. Greta Garbo is the suicidal Russian ballerina, Grusinskaya. These are all guests staying at, FTP, what Berlin auberge where "people come, people go, nothing ever happens" that is the title of this 1932 Edmund Goulding film classic? **Grand Hotel**

- 17. Albert Camus tackled the problem of this philosophical belief system in his essay The Rebel, in which he described how metaphysical collapse ends in profound hatred and destruction. The best known literary treatment of this philosophical system is through the character Bazarov in Ivan Turgenev's novel Fathers and Sons. FTP, identify this belief system that claims that nothing can be known or communicated, perhaps best summarized in Mikhail Bakunin's statement that "...the passion for destruction is also a creative passion!" Nihilism
- 18. The seventh is incomplete, while the first long one occurs where the 4s is filled before the 3d and 4p levels are completed and extends from potassium to krypton. Hydrogen and helium can be said to make one, but elements lithium through neon are generally called the first short one. They arise from progressive filling of outer shells and are arranged in order of ascending proton numbers. FTP, name these horizontal rows of the table of the elements. Periods
- 19. He was the original actor cast as the Tin Man in the Wizard of Oz, but was forced to give up the role to Jack Haley after developing an allergy to the makeup's aluminum dust. He began his career performing vaudeville with his sister Vilma before he danced in the 1936 movie Captain January with Shirley Temple. FTP, name this actor who passed away in 2003, but not before achieving his greatest fame on television as Jed Clampett, the patriarch of the Beverly Hillbillies.

Buddy Ebsen

- 20. His epic Africa celebrated the virtues of the Roman Republic and his friendship with Cola de Rienzi inspired his ode Italia Mia. At his death he begueathed to Boccaccio money to buy a new cloak and he met his favorite subject at the church of Saint Clair. His line "To be able to say how much you love is to love but little," was one of many inspired by her, as was his Canzoniere. FTP, name this Italian poet known for his sonnets and his love for Laura. Francis Petrarch or Francesco Petrarca
- 21. It is often a closed curve known as a limit cycle in oscillating systems and conservative systems lack it. If it is a single point, the system will reach a state that is fixed and not dependent on time. The Lorenz type was created by a meteorologist to explain atmospheric movements and also appears in models of lasers. It is most famous as an open, non-repeating curve, the strange version

known from chaos theory. FTP, name this point in phase space toward which a changing system moves over time. Attractor

22. She died while standing as a conservative candidate for parliament and a statue in her memory stands in Westminster Abbey. She was once released from jail following a hunger strike, but was put back following her recovery due to the Cat and Mouse Act that allowed for temporary discharge of prisoners for health reasons. The group she founded was known for screaming at MPs from boats anchored in the Thames and chaining members to railings. FTP, name this founder of the Woman's Social and Political Union, the most famous British suffragist.

Emmeline Pankhurst

23. A perennial best-seller in Japan, they were published in the United States in 1920 in Henry Ford's Dearborn Independent. Adolf Hitler claimed that they were conclusive proof of the sinister nature of Jews, but the investigations of Phillip Graves led to proof that they were a fictional concoction of the Russian secret police. FTP name these forged documents about a fictional meeting of Jews during the 19th Century in which a Jewish conspiracy to overthrow Christianity was hatched.

Protocols of the Elders of Zion

24. The zeks include Tiurin, former leader of the 104th squad who was discharged for his class background, as well as Alyosha the Baptist and Kolya, a former university student who now works in the dispensary. The title character is serving time for allegedly spying for the Germans and spends much of his day hoarding food and counting the hours remaining in his sentence. The title character's alternate name is Schukov in, FTP, what most famous work of Alexandr Solzhenitsyn about life in a Soviet gulag? One Day in the Life of Ivan Denisovich

Bonus Questions

 Answer the following about works of Irish literature given some clues FTPE. In this 1729 pamphlet, Jonathan Swift suggests that an effective way to cure hunger in Ireland would be for the poor to raise children to be slaughtered for food.

A Modest Proposal

In this "significant" play by Oscar Wilde, the main character learns that his name is not Jack Worthing, but is instead the name that appears in this play's title.

The Importance of Being Earnest

Answer either one of the following questions about James Joyce's Ulysses FTP. You may only answer one question.

- 1. Ulyses takes place on June 16th of this year.
- Or
- 2. This main character of A Portrait of the Artist as a Young Man is also a central

character in Ulysses.

1904 or Stephen Daedalus

2. Answer the following about military conflicts that took place in the early history of the United States FTPE.

This Ottawa Indian chief had a massive 1763 uprising named after him, though historians disagree on the extent of his involvement.

Pontiac

The chief of the Wampanoag Indians was given this derisive nickname by British colonists, poking fun at his wish to be treated as an equal with the King of England. Maybe they took him a little more seriously after he led a devastating war in New England.

King Phillip

In this 1794 battle, General Anthony Wayne defeated the forces of Little Turtle. Fallen Timbers

3. Answer these questions about waves FSNP.

5-This is the distance between two points on a wave in which identical behavior is seen.

Wavelength

5-This is the rate at which periodic waves will produce sections of same wavelength.

Frequency

10-This type of wave is a pulse moving at definite speed and usually definite shape through a medium.

Traveling Wave

10-This sort of traveling wave has particles of its disturbed medium moving perpendicular to it.

Transverse Wave

Answer the following creations of Wagner FTPE.

In this Wagner opera, a seaman from the Netherlands is doomed to sail the Cape of Good Hope for eternity until the day he finds a wife who is willing to sacrifice everything for him.

The Flying Dutchman

This opera describes a minnesinger of medieval Germany. In a singing contest, this title character's tribute to Venus is so pagan that it offends the local God squad. The title character is then forced leave his girlfriend Elizabeth behind in order to get a papal pardon.

Tannhauser

Wagner created a new, conical version of this instrument. The sousaphone is the most common type of this brass instrument, but it has many shapes. Tuba

5. Identify the following figures associated with the British Empire FTPE. This British military leader captured South India from the French and served as

Governor of Bengal from 1765-67 before being accused of embezzlement. Although he was acquitted, declining health and the shame of the accusations prompted him to commit suicide.

Robert Clive

Though he is more famous for his role as commander of British forces during the American Revolution, he also served as Governor General of India from 1786-1794 and worked to reform the civil service and judicial system of British India. Charles Cornwallis

This lieutenant governor of Java founded both Singapore and the London Zoo. Sir Stamford Raffles

6. Given characters, name the Dickens works FTPE.

Josiah Bounderby, Thomas Gradgrind

Hard Times

Mr. Wickfield, Uriah Heep, Tommy Traddles, Betsey Trotwood

David Copperfield

Abel Magwtich, Pip, Uncle Pumblechook

Great Expectations

7. Identify the following artists who have images of famous people in their works FTPE.

A student of Peter Paul Rubens, this Flemish artist served as court painter to Charles I of England. During this time he created many portraits of the King, most notably Charles I, King of England, at the Hunt.

Anthony Van Dyke

This German-born American painter created numerous pictures of historic events, the most famous of which is Washington Crossing the Delaware. Emanuel Leutze

This Renaissance German is best known for his depictions of Martin Luther. He also did woodcuts for the first German Bible and The Rest on the Flight to Egypt. Lucas <u>Cranach</u> the Elder

Name these related concepts from biology FTPE.

These bright hues are found on animals with poisons, bites, stings or other lethal defenses.

Warning Coloration or Aposematic Coloration

This is seen when species without natural defenses have aposematic coloration that is nearly identical to well-protected types.

Batesian Mimicry

This sort of mimicry occurs when several unrelated species with natural defenses resemble each other to achieve collective protection.

Mullerian Mimicry

 Answer the following about mountains of the Eastern United States FTPE.
 This state's Franconia Mountain was most famous for its Old Man of the Mountain before it collapsed over the Summer of 2003.

New Hampshire

This North Carolina Mountain is the highest peak east of the Mississippi River. Mount Mitchell

This chain of mountains in Northeastern New York is a southern extension of the Canadian Shield and is independent of the Appalachian System. Among the attractions of these mountains is the village of Lake Placid, which surrounds Mirror Lake.

Adirondack Mountains

10. Answer the following about institutions that attempted to foster European unity FTPE.

Also known as the Common Market, this organization was established by a treaty signed by Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany. Its chief feat was to abolish internal tariffs between its member nations and fix an external tariff.

European Community or EEC

The European Community changed into this organization in 1993 after the ratification of the Maastricht Treaty. It includes 15 countries and is responsible for the same economic functions of the EC, but engages in more comprehensive political activity.

European Union or EU

Including most Soviet bloc countries, it was the Communist world's answer to the European Community. Increasing trade by 400% among members in its first 15 years, its leaders often put their own countries' interests over free trade interests and it was dissolved in 1991.

COMECON or Council for Mutual Economic Assistance

11. Answer the following about a famous author FSNP.

10-This work features the characters Carlo Marx, who is modeled after Allen Ginsberg, and Dean Moriarty, who is supposed to be Neal Cassady. The narrator, Sal Paradise, is modeled after the author.

On the Road

5-Name the author of On the Road.

Jack Kerouac

15-This Kerouac work describes the characters Japhy Ryder and Ray Smith in their quest to experience harmony despite the worldly distractions of San Francisco. The character Alvah Goldbook is modeled after Allen Ginsberg and reads a poem called "Wail".

The Dharma Bums

12. Answer the following questions about Catholic orders FTPE.

Founded by St. Ignatius of Loyola, this order is known primarily for its missionary work and emphasis on education. Institutions such as Fordham, Georgetown, and St. Louis Universities are administered by this order.

Society of Jesus (Accept Jesuits.)

This order's monastery at Montecasino served as a symbol of monasticism. The

73 rules of the saint who founded this order are also used by the Cistercians and stress moderation and common sense.

Benedictine

This began as a Benedictine group, but gained independence from lay control and launched a huge reform movement. Centered at a French abbey, it zealously supported medieval popes, especially Gregory VII.

Cluniac Order

13. Identify the following people associated with the comedy classic Tommy Boy FTPF.

On a "fill in the first name" U.S. history exam, Tommy Callahan incorrectly guessed that this jazz musician made the first and most prominent signature on the U.S. Constitution.

Herbie Hancock

Though more famous in recent years for playing Bobby Knight on the ESPN movie Season on the Brink and Willy Loman in Death of a Salesman, this heartburn product huckster achieved full cinematic glory in his portrayal of Tommy's father, Big Tom Callahan.

Brian Dennehy

This star of 10 played Tommy boy's gold digging mother-in-law, who hoped to steal the titular character's inheritance after the death of Tom Senior. Bo Derek

14. Identify the following theories of acids and bases FTPE.

This theory states that acids produce hydrogen ions in aqueous solutions, while bases produce hydroxide ions.

Arrhenius Theory

This theory states that an acid is a proton donor, while a base is a proton acceptor.

Bronsted-Lowry Theory

This theory states that an acid accepts a share in an electron pair, while a base donates a share in an electron pair.

Lewis Theory

15. Identify the following leaders of the Black Power movement FTPE.

Currently known as Jamil Abdullah Al-Amin, he was sentenced to life in prison for killing a sheriff's deputy near Atlanta. Former head of the National Ummah, he was a principal figure in the Student Non-Violent Coordinating Committee.

H. Rap Brown

He spent most of his last thirty years in Guinea and at the time of his 1998 death he was known as Kwame Toure. He coined the term "black power" and served as a SNCC organizer before becoming an honorary prime minister of the Black Panther Party.

Stokely Carmichael

His 1968 book Soul on Ice became Black Power's philosophical foundation and he later became a Republican, running unsuccessfully for the nomination for U.S.

Senate in California. He also became a born-again Christian and discussed his conversion in Soul on Fire.

Eldridge Cleaver

16. Answer the following about an anthropologist on a 15-10-5 basis.

15-Name the African-American anthropologist whose work, Tell My Horse, is a study of the practices of Haitian Voodoo.

Zora Neale Hurston

10-Zora Neale Hurston studied under this pioneer of cultural relativism who falsified data in debunking head meaurement studies. He wrote The Mind of Primitive Man and besides teaching Hurston, also taught Margaret Mead and Ruth Benedict.

Franz Boas

5-Zora Neale Hurston's most famous work is this 1937 novel about Janie Stark. Their Eyes Were Watching God

17. Identify the following artists associated with Venice FTPE.

His painting Tempest shows a woman holding a baby next to an elaborately clothed man with city gates and a storm in the background.

Giorgione

This Venetian painter's works include Sacred and Profane Love and Venus of Urbino.

Titian

This 18th century Venetian artist was known for his picturesque scenes of Venice, the most famous of which is The Stone Mason's Yard.

Canaletto

18. Answer the following about countries and the fathers of those countries FTPE.

Although he began his career as a full supporter of the Indian National Congress and Muslim-Hindu unity, he grew disillusioned with the Congress and led Pakistan to independence, becoming the father of that country.

Muhammad Ali Jinnah

Kwame Nkrumah led Gold Coast to independence and, with him as its first President, Gold Coast changed its name to this.

Ghana

Author of Suffering Without Bitterness, he was imprisoned by the British for his involvement in the Mau Mau uprising, but later became the first president of Kenya.

Jomo Kenyatta

19. Answer these questions about states of matter FTPE.

This is the temperature above which a gas cannot liquefy.

Critical point

This is the temperature at which three states of matter are equal on a phase diagram.

Triple point

This term refers to the resistance to the flow of a liquid.

Viscosity

20. Identify the following figures important in the colonial history of America FTPE.

He bought Manhattan from the Indians for \$24 worth of trinkets.

Peter Minuit

He founded Boston in 1630 and claimed it would be a "shining city set on a hill". John Winthrop

He claimed Louisiana for the French in 1682.

Robert La Salle

21. Answer the following questions about Australian literature F15PE. During the late 19th century, this group of Australian poets began to produce distinctively Australian literature. Perhaps the most famous member was Banjo

Patterson, who wrote Australia's unofficial national anthem, Waltzing Matilda.

Bush Balladeers

This Australian author is known for his works dealing with life in the outback such as the Tree of Man and Voss. He won the 1973 Nobel Prize in Literature. Patrick White

22. Identify the following concepts of particle physics FTPE.

The decay of strange particles can only be understood if the weak force violates this. It is the production of an opposite process or thing, like reflection in a mirror. Parity

Not yet discovered, this carrier boson can give mass to elementary particles through its interactions with them.

Higgs Boson

This property says that protons and neutrons can be seen as different states of a single basic nucleon, differentiated by an internal property with a value of plus or minus one half.

<u>Isospin</u>

23. F15PE, identify the following German philosophers.

15-She is most famous for her attempt to analyze the crimes of the Third Reich in Eichmann in Jerusalem. This work, subtitled The Banality of Evil, stated that Adolf Eichman was a mindless bureaucrat who was incapable of comprehending the evil of his deeds.

Hannah Arendt

This Idealist often changed his perspective and is famous for his Philosophy of Nature and influence on American Transcendentalists. He thought faith necessary to find truth and tried to determine how consciousness comes from insentient nature.

Friedrich Wilhelm Joseph von Schelling

24. Answer the following about a literary movement FTPE.

This movement originated in Latin America during the 1960s. Works are characterized by a mixture of familiar situations and settings with the mystical, mythological, and fantastic. Miguel Asturias and Gabriel Garcia Marquez are two authors writing in this genre.

Magical Realism

This Chilean author is the niece of a former president. Her most famous work is the House of the Spirits, a work that tells the story of four generations of a family. Isabel <u>Allende</u>

This Czech author is often placed in the Magic Realist camp. He is most famous for his novel The Unbearable Lightness of Being, in which he sends the reader through the life and dreams of Tomas, Teresa, Gerhart, and Sabina. Milan Kundera