

## Ark.2002 Martin Luther King Jr. Memorial Tournament

University of Michigan/Duke University

Tossups by Illinois A (Nicholas Rothfuss, Brent Henderson, Adam Malamen, and J.P. Lien), Encyclopedia Britannica Online, and Northwestern B (Jordan Burgess, John Etmekjian, Robert Flaxman, and Jason Selvey)

1. A major feature of this battle was the acoustic shadow, which left both commanders oblivious to the full force of the battle. The Confederate Army of Tennessee did succeed in roughing up one Union corps, but they were forced to retreat after their Braxton Bragg realized that the Union army of Don Carlos Buell was in command of an army twice the size of his own, ending the last serious Confederate bid for control of Kentucky. For 10 points - name this Civil War battle of October 8, 1862.

Answer: Perryville

**KAGAMIKE: ka-ga-me-ee-keh**

2. It was built for the third shogun of Ashikaga and it sits on the edge of a large pond named Kagamiike. In 1950 a monk in pursuit of aesthetic perfection burned down the original; a replica was built in 1955. Its three floors each represent a different style of architecture, palace style on the first, samurai-house style on the second, and Zen temple style on the third. For 10 points - name this Kyoto landmark taking its name from the metal inlaid on its exterior walls.

Answer: The Golden Pavilion

3. Called "she who shapes the sacred land," she has been unusually busy since 1983. She was pursued to her current home by her sister, whose husband she had seduced. She protected her other siblings, keeping one sister warm in her armpit during the sea journey. She settled on the Big Island, out of reach of the sea goddess and took many lovers, most of whom she killed by throwing lava at them. For 10 points - name this Hawaiian goddess of volcanoes.

Answer: Pele

4. She has a brother named Randolph and is the daughter of a wealthy businessman in New York state. Her closeness with a Mr. Giovanelli is one of many sources of gossip about her as she disregards the strict rules of the upper-class European society she is traveling through. While in Vevey she meets a Mr. Winterbourne, who ultimately rejects her, contributing to her death from fever. For 10 points - name this title character of a Henry James work.

Answer: Daisy Miller

5. Despite only existing for 6 years, this band was influential enough that Nirvana's Kurt Cobain admitted he had ripped them off in writing "Smells Like Teen Spirit". Led by Black Francis, the band's albums included "Doolittle" and "Trompe Le Monde", spawning hits like "Wave of Mutilation" and "Alec Eiffel". For 10 points - identify this band whose members went on to form Frank Black and the Catholics and the Breeders, among others.

Answer: The Pixies

6. The recipient of the first doctorate of engineering to be conferred in the U.S., he began to develop methods of calculating equilibriums of chemical processes while trying to improve the steam engine. In his namesake phenomenon, he studied the overshoot of Fourier Series, and in his namesake rule, he derived an algorithm for the number of degrees of freedom for a heterogeneous system in equilibrium. For 10 points -- name this American chemist.

Answer: Josiah Willard Gibbs

7. The central character shoots her lover, Dr. Schon, after he refuses to marry her and subsequently runs off to London with his son Alway. Later taking up residence with Papa Bromnier, she ultimately ends up walking the streets. Based on a play by Frank Wedekind, Louise Brooks plays the central character, a dancer named Lulu. For 10 points - name this 1928 G.W. Pabst silent classic taking its name from a possession of Epimetheus' wife.

Answer: Die Buchse der Pandora

English: Pandora's Box

8. A member of the moderate Radical party, he was elected President in 1999, but he has suffered the same fate as the most recent previous Radical President, Raul Alfonsin, as he was forced to resign before the end of his term in December of 2001. This was due mostly to high inflation, unemployment and rioting in the Buenos Aires. For 10 points - name this recently ousted president of Argentina.

Answer: Fernando de la Rúa

9. Methods of improving their performance include victims, multiple levels, and pseudo-associativity. Many architectures have separate ones for data and instructions and organization schemes range from direct to set-associative to fully associative. For 10 points - name these computer structures designed to exploit temporal and spatial locality in memory accesses, fast memories for holding frequently accessed data and instructions.

Answer: cache

10. This city, with population of 1.1 million, was founded by Catherine the Great after annexing the area from the Ottoman Empire. It is the hometown of writer Isaac Babel and includes the apartment where Russian poet Alexander Pushkin wrote during his exile. Another famous sight is the Potemkin stairs, the site of a famous scene from Sergei Eisenstein's film. For 10 points - name this Ukrainian port city on the Black Sea.

Answer: Odessa

11. He learned his trade working for William Bradford, and was a success before being imprisoned. Though the primary offender was writer James Alexander, in 1734 this founder of the New York Weekly Journal was accused by Governor William Cosby of libel under British law. He was defended by Andrew Hamilton and was acquitted because the jury believed what he had said was true. For 10 points - name this printer whose acquittal was a landmark freedom of the press decision.

Answer: John Peter Zenger

12. Its first model year was 1962, when it was introduced to combat the wave of compact cars such as the AMC Rambler and the Ford Falcon. Used extensively as a police car in the late 1970s, it was phased out in favor of the Citation in 1979. For 10 points - name this Chevrolet model, which was known in Argentina only as "Chevy" or "Chevy Special 70" because of the Spanish translation of its name.

Answer: Chevy Nova

Accept: Chevy II before "used extensively"

13. This economist's early works include 1926's *Monetary Theory and the Trade Cycle* and 1931's *Prices and Production*, in which he discussed the theory of economic fluctuation, expressing similar ideas as Keynes. In 1941, his *The Pure Theory of Capital* put forth ideas on how capital functioned in an economic society. He was awarded, along with Gunnar Myrdal, the 1974 Nobel Prize in Economics. For 10 points - name this Austrian economist, most famous for *The Road to Serfdom*.

Answer: Friedrich Hayek

14. He currently coaches the man the New York Knicks once traded him for. A 1979 graduate of the University of San Francisco, an elbow to the throat in his final pro season has reduced his speaking voice to almost a whisper. For 10 points - who was this center of Chicago's first three championship teams who recently replaced Tim Floyd as head coach of the Chicago Bulls?

Answer: Bill Cartwright

15. Maoist rebels recently bombed a Coca-Cola plant in their clash with national forces in this country, the site of a recent meeting between Indian Prime Minister Vajpayee and Pakistani President Musharraf. A rebellion has been going on here since 1996, with government troops having success keeping guerillas at bay until the June 2001 death of their leader threw things back into turmoil. For 10 points - identify this Asian nation, famous for its mountainous northern border with Tibet.

Answer: Nepal

16. He briefly flirted with Marxism but rejected it in 1900's *Historical Materialism and the Economics of Karl Marx*. He considered the natural sciences to be "pseudo-concepts", and in much of his work attempted to demonstrate their inferiority to the arts. In 1896 he wrote a book discussing how conceptually history related to art, and he noticed the lack of a philosophical foundation for aesthetics. For 10 points - name this man who claimed "art is intuition".

Answer: Benedetto Croce

**MASTOPHORA CORNIGERA: mast-toh-for-ah cor-ni-zhair-uh**

17. The female *Mastophora cornigera*, a type of bolas spider, emits a number of moth sex hormones. Similarly, the Merlin falcon imitates the flight of a woodpecker and the praying mantis imitates various plant structures. Consequently, male moths are attracted to the spider and prey of the falcon and mantis do not suspect danger. For 10 points - these are examples of what type of mimicry where a predator emits a signal either attractive or deceptive to its prey?

Answer: aggressive mimicry

**BRUCKE: broo-kuh**

18. It was founded by four architecture students with an interest in the works of Edvard Munch. Heavily influenced by Fauvism, it invited Henri Matisse to be one of its members, although he declined. Members included Fritz Bleyl, Karl Schmidt-Rottluff, Ernest Kirchner, and Emil Nolde. For 10 points - name this art movement, set up in 1905 in Dresden, who like the Blue Rider group was one of the major forces in German Expressionism.

Answer: Die Brucke

English: The Bridge

19. Europeans have been in this city since the late 1500s, but it wasn't until 1838 that Voortrekkers arrived and started armed conflict with the local Zulus. By then, however, it was already under official British control and had been renamed in 1835 after the Cape Governor. Before that it been named by Vasco da Gama himself as Rio de Natal, or the Christmas River. For 10 points - identify this South African city, the busiest port on the African continent.

Answer: Durban

20. One week after rejecting a \$6 billion hostile takeover offer from its main rival, this company announced its intentions to buy Georgia-Pacific's building products unit for more than \$3 billion on January 10. For 10 points - what is this leading timber company, 64 percent of whose stock Weyerhaeuser has tendered in support of its hostile bid?

Answer: Willamette Industries, Inc.

21. Born in Umbria around 254 B.C.E., twenty-one of his works survive. He engaged in an unsuccessful stint as a foreign trader and worked as a scene-shifter. He borrowed from Greek New Comedy, but took liberty in his adaptations, alternating lyrical monologues with standard dialogue, setting many scenes in Italy, and giving his works Latin titles, unlike Terrence whose works were Athens-set and had Greek names. For 10 points - name this author of *Amphitryon* and *Miles Gloriosus*.

Answer: Titus Maccius Plautus

22. Also called transitory forces, they are typically weaker than permanent forces with the exception of some molecules with large, diffuse electron clouds. They serve as an explanation for why under some conditions inert gasses can exist in a liquid state, and are also used to explain intermolecular forces in non-polar molecules. For 10 points - name these forces arising from the weak attraction of electrons of one atom to the nucleus of another atom.

Answer: London dispersion forces

Accept: dispersion forces

Do not accept: Van der Waals Forces

**BOUVINES: boo-veen**

23. His first triumph was the return of Picardy to the control of the French throne. Desiring to obtain the English possessions on the continent, he encouraged the sons of Henry II to revolt against their father. In 1189, he joined Richard I on the Third Crusade but soon returned and completed his re-conquest of Normandy. His victory at Bouvines in 1214 solidified his position as the preeminent monarch of Western Europe. For 10 points - name this French king.

Answer: Philip Augustus

24. Early movie appearances include an uncredited appearance in *Smokey and the Bandit* and a small role in *Stagecoach*, as well as the leads in *Cocaine Wars* and *Eddie Macon's Run*. He currently heads up Faithworks Productions, Inc, and provides the voice of Rick O'Connell on the animated series *The Mummy* and plays Jonathan Kent on the WB series *Smallville*. For 10 points - identify this versatile actor, best known for his role as Luke Duke on *The Dukes of Hazzard*.

Answer: John Schneider

25. It contains the globular cluster M15, perhaps the densest globular cluster in our galaxy, and the most prominent meteor shower associated with it peaks in late October. One of the largest constellations visible in the northern hemisphere, this neighbor of Andromeda has been in the news lately due to a Jupiter-sized planet within it which scientists now say has an atmosphere. For 10 points - identify this galaxy, said to resemble a winged horse.

Answer: Pegasus

26. His later novels composed a series called *Contemporary Chronicles* centered on the Pignatelli family. His experiences during World War I inspired *One Man's Initiation* -- 1917 and *Three Soldiers*. In the 1920's he wrote a number of plays using newsreel techniques, including *The Garage Man* and *Airways, Inc*. He is best known for a series of novels integrating newsreel scenes and biographies of noted figures. For 10 points - name this author of the U.S.A. trilogy.

Answer: John Dos Passos

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27. It was thought to take four months to travel from its northern border to its southern reaches, and slavery there reached its peak in the 14th century. Developing out of the kingdom of Kangaba, Sundiata founded this empire in 1230 and it reached its maximum extent under Mansa Musa 100 years later. By the fifteenth century, its power had waned, symbolized by the capture by nomad tribes of the trading city of Timbuktu. For 10 points - name this West African trading empire.

Answer: Mali

28. After studying at the University of Paris where he read translations of the Arabic and Greek texts of Aristotle, he began the task of examining the entire body of knowledge so far acquired by man, which is why he was made the patron saint of the natural sciences. His most famous student would perform an equally exhaustive task concerning everything humans know about God. For 10 points - identify this thirteenth century German Dominican, the teacher of Saint Thomas Aquinas.

Answer: Albertus Magnus

29. This anthropological doctrine is said to contain three distortions in perception and analysis of alien societies. These include treating society as an unchanging expression of basic essence, exaggerating the difference between familiar and strange societies, and portraying society non-Western societies radically separated from those of the West. For 10 points - name this belief system first brought to light by Edward Said in his book of the same name.

Answer: orientalism



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### **BRZEZINSKI: bruh-zhin-skee**

1. Identify the following about a very recently deceased statesman for 10 points each.

A. Name this man who served as Jimmy Carter's Secretary of State from 1977 to 1980.

Answer: Cyrus Vance

B. Vance resigned in 1980 in protest over this failed mission to rescue the U. S. hostages in Iran.

Answer: Desert One

A. Vance often clashed with this National Security Advisor, who favored a more strongly anti-Soviet line.

Answer: Zbigniew Brzezinski

2. Identify the works of Geoffrey Chaucer, none of which are Canterbury Tales, for 10 points each.

A. (10) Probably an elegy for Blanche of Lancaster, in it a poet dreams of meeting a knight who was introduced to and allowed to marry a perfect woman, only to have Fortune send her to death.

Answer: Book of the Duchess

B. (10) This unfinished work of comes in four parts, one centered at the Temple of Venus, the second two at the title location, and the fourth at the House of Rumor.

Answer: House of Fame

C. (10) This collection features nine tales of women who incurred misery or death due to their faithfulness in love and in most cases the evil of their men.

Answer: Legend of Good Women

3. Answer these questions about the origins of the Peloponnesian War for ten points each.

A. (10) The civil war in this tiny colony of Cocyra in 433 BC drew Athens into conflict with Corinth.

Answer: Epidamnus

B. (10) The revolt of this colony against Athens in 432 BC garnered support from Corinth, furthering their role in the conflict.

Answer: Potidaea

C. (10) Athens instituted an embargo against this state, an ally of Sparta that sided with Corinth, thus furthering the chance for conflict.

Answer: Megara

4. Answer these questions from number theory for 10 points each.

A. (10) The inequality states that the absolute value of the sum of two numbers is less than the sum of the absolute values of the two numbers.

Answer: triangle inequality

B. (10) His property states that for two positive reals  $a$  and  $b$ , there exists a positive number  $n$  such that  $n$  times  $a$  is greater than  $b$ .

Answer: Archimedes

C. (10) This statement, equivalent to the Archimedean property, states that a nonempty subset of the reals that has an upper bound has a least upper bound.

Answer: completeness axiom

5. Identify these Islamic sects for 10 points each.

A. (10) Members of this branch of Ismailism include the late Hafiz al-Asad of Syria. Followers believe that the sinful are reincarnated as Christians, and infidels as animals.

Answer: Alawi

B. (10) This fanatical sect was based in the Levant Mountains. The brought terror to enemies of the faith for over a century before being largely destroyed by the Mongols.

Answer: Assassins

C. (10) This sect arose from the followers of Sufi leader 'Adi ibn Musafir. Centered near Mosul in Iraq, followers practice a number of folk traditions as well as circumcision and baptism.

Answer: Yezidi

6. Identify the following movies written by David Mamet for 10 points each.

A. (10) Mamet's directorial debut, this 1987 movie featured Lindsay Crouse as a psychiatrist who agrees to lend her needy patient, Joe Montegna, some money.

Answer: House of Games

B. (10) Mamet wrote the script for this 1997 Mike Nichols movie about the political maneuverings of spin-doctors during an election year.

Answer: Wag the Dog

C. (10) Mamet wrote and directed this 1994 movie starring Willian H. Macy about an alleged case of sexual harassment.

Answer: Oleanna

7. If you're not on it already, get on the C-train and answer these questions about America's favorite antibiotic, Ciproflaxin, for ten points each.

A. (10) This drug company holds the patent for Cipro, which doesn't expire until 2003.

Answer: Bayer

B. (10) Cipro is also used to treat this inflammation of the bladder.

Answer: cystitis

C. (10) This newsman has publicly announced that he will not begin taking Cipro despite the fact that traces of Anthrax were found in his office.

Answer: Dan Rather

8. Name the abstract painter from works for ten points each.

A. (10) *No. 10 (1950)*, *Red on Maroon*, and *Orange and Yellow*

Answer: Mark Rothko

B. (10) *Composition, Painting 1948*, and *Yellow Grey Black*

Answer: Jackson Pollock

C. (10) *New York N.Y.*, *Untitled*, and *Painting Number 2*

Answer: Franz Kline

9. Identify these Prussian monarchs for 10 points each.

A. (10) Ruling from 1640 to 1688, he was known as "The Great Elector"

Answer: Frederick William

B. (10) Called "The Ostentatious," he was crowned king in 1701 as a reward for aiding the Holy Roman Empire in the War of the Spanish Succession

Answer: Frederick I or Elector Frederick III

C. (10) Called "The Soldier King," he succeeded his father in 1713 and made Prussia's army the largest in Europe.

Answer: Frederick William I

10. For 10 points each, identify these combatants in the Trojan War.

A. This son of Tydeus wreaks havoc in Book V of the Iliad, wounding both Ares and Aphrodite.

Answer: Diomedes

B. He falls into a pile of manure during a footrace at the Patroclus's funeral games. Later exploits include dragging Cassandra from the refuge of Athena's altar and raping her.

Answer: Ajax the Lesser

Accept Ajax the Locrian

C. This Lycian archer fighting the Trojans broke the truce after the dule between Helen and Menelaus.

Answer: Pandarus

11. Answer the following questions about Australian geography, for 10 points each.

A. (10) The principal river of Australia, this river flows west from the eastern mountains and enters the sea at the eastern edge of the Great Australian Bight in South Australia

Answer: Murray River

B. (10) The lowest point in Australia is this dry lakebed, which can fill with water if there is enough rain in the area. It shares its name with a Charlotte Bronte heroine.

Answer: Lake Eyre

C. (10) This lake in Western Australia marks the western edge of the Gibson Desert.

Answer: Lake Disappointment

12. Answer the following questions relating to Anne Sexton for 10 points each.

A. (10) First, name Sexton's third book of poetry, the one for which she won a Pulitzer Prize.

Answer: Live or Die

B. (10) Next name the Sexton collection including "The Death of the Fathers" sequence, "Angels of the Love Affair", and "The Jesus Affair".

Answer: The Book of Folly

C. (10) Name the play which shares its name with a Peter Gabriel song and is the subset of the name of one of her posthumous poetry collections.

Answer: Mercy Street

13. Answer these questions about the United States' presidential election of 1824.

A. (10) This man had the most electoral votes but didn't get a majority, sending the election to the House of Representatives.

Answer: Andrew Jackson

B. (10) This man finished fourth in electoral votes but decided the election when he gave his support to John Quincy Adams.

Answer: Henry Clay

C. (10) This Georgia senator finished ahead of Clay, in third place in electoral voting.

Answer: William H. Crawford

14. Identify the following genetic diseases for 10 points each.

A. (10) Symptoms of this disease, also known as Trisomy 18, include malformed ears, hernias, clenched hands, heart defects and mental disability.

Answer: Edwards Syndrome

B. (10) Victims of this disease, also known as Trisomy 13, rarely survive infancy. Symptoms include cleft palate, abnormal genitalia, spinal deformities and extra digits.

Answer: Patau's Syndrome

C. (10) This disease, arising from the deletion of part of the short arm of chromosome 5, derives its name from the animal-like sound commonly made by those afflicted

Answer: cri-du-chat Syndrome



15. Given some works, identify the philosopher for 10 points each.

A. *The Origins of Totalitarianism*

Answer: Hannah Arendt

B. (10) *Logical Inquiries, Thoughts Towards a Pure Phenomenology and Phenomenological Philosophy*

Answer: Edmund Husserl

C. (10) *Foundation of the Complete Theory of Knowledge*

Answer: Johann Gottlieb Fichte

16. Name the following about a school of economic thought, for 10 points each.

A. (10) This school derives its name from its belief that economic actors will always make economic decisions in a logical manner that can be anticipated.

Answer: rational expectations

B. (10) According to the rational expectations school economic actors act rationally and will correct any temporary lack of equilibrium. This name is given to this stabilizing factor.

Answer: market clearing

C. (10) Name any of the three economists who helped turn rational expectations theory into a macroeconomic model in the 1970's.

Answers: Robert Lucas, Thomas Sargent, or Neil Wallace

17. Identify these novels by Russell Banks for ten points each.

A. (10) This novel tells the story of John Brown from the perspective of his final living son.

Answer: Cloudsplitter

B. (10) One of Banks' books set in Jamaica, this 1995 novel depicts the coming of age of Chappie, a fourteen year old dooper looking for his long lost father.

Answer: Rule of the Bone

C. (10) Made into a movie for which Nick Nolte got an Oscar nomination, this novel concerns the disappearance of the narrator's older brother and the violence we inherit from our fathers.

Answer: Affliction

18. Answer the following questions on a famous hymn for the stated number of points.

A. (5) First, for five points, name this piece whose name translates as "Day of Wrath"

Answer: Dies Irae

B. (10) Next, for ten points, *Dies Irae* is traditionally sung during the mass for what holy day?

Answer: All Souls' Day

Prompt on: November 2

C. (15) Finally, for fifteen points, name the man believed to be the author of *Dies Irae*, who also wrote an early biography of St. Francis of Assisi

Answer: Thomas of Celano

19. For 10 points each, given the character from "All in the Family," name the actor.

A. (10) Archie Bunker

Answer: Carroll O'Connor

B. (10) Edith Bunker

Answer: Jean Stapleton

C. (10) Mike Stivic

Answer: Rob Reiner

**JONATHON: yon-a-ton**

20. Now that the Israeli-Palestinian conflict has heated up again, let's relive some of the glory years for 10 points each.

A. (10) In 1976, PLO gunmen hijacked an Air France plane and took it to this airport in Uganda. On July 3-4, Israel launched a daring commando raid, retaking the plane and killing all 7 gunmen.

Answer: Entebbe

B. (10) This commander of the Entebbe raid, killed during the raid, was the brother of an Israeli prime minister from the mid 1990's.

Answer: Jonathan Netanyahu

C. (10) Ariel Sharon is widely blamed for allowing Christian Lebanese militia to kill Palestinian refugees in two camps in Lebanon in 1982. Name either.

Answers: Sabra or Shatilla

21. For some reason or another, rappers have suddenly decided to make their own movies.

Answer questions about these movies for ten points apiece.

A. (10) The trend seem to really take off this year with the release of this movie starring Stephen Segal and DMX.

Answer: Exit Wounds

B. (5) In *Training Day*, Ethan Hawke and Denzel Washington are conflicted about how to deal with a drug-dealing gangster played by this rapper.

Answer: Snoop Dogg

C. (5/5) In *How High*, these two rappers play two brothers who smoke supernatural weed which allows them to ace their college exams, get into Harvard, and hook up with honeys.

Answers: Method Man and Red Man

22. Identify the scales for measuring natural phenomena for 10 points each.

A. (10) This scale named for a British admiral classifies wind speeds from 0 to 12.

Answer: Beaufort Scale

B. (10) This scale named for a late University of Chicago scientist rates tornadoes from F0 to F6, although no F6's have ever been confirmed.

Answer Fujita Scale

C. (10) This scale rates hurricanes from Category 1 to Category 5.

Answer: Saffir-Simpson Scale

23. Answer the following about pre-Columbian civilizations in the future United States, for 10 points each.

A. (10) This city was as large as contemporary London when it was at its peak circa 1250. Located near St. Louis, it contained ceremonial mounds as tall as 5 story buildings.

Answer: Cahokia

B. (10) The builders of the Serpent Mound in southern Ohio were members of this cultural group that flourished in the Ohio River Valley from approximately 400 B.C. to 600 A.D.

Answer: Adena

C. (10) This early Indian group of the American Southwest built cliff houses in Arizona and New Mexico, including the complex at Mesa Verde.

Answer: Anasazi

24. Answer the following questions on U.S. customary weights and measurements for ten points each.

A. (10) 40 rods make up one of these, and there are eight in a mile.

Answer: furlong

B. (10) The pint and quart have dry and liquid equivalents. Eight dry quarts make up one of this unit, of which there are four in a bushel.

Answer: peck

C. (10) In liquid as well as in dry measurement, there are two pints in a quart. But in liquid measure there are four of these units in a pint

Answer: gill

25. Answer the following questions about psychology, for 10 points each.

A. (10) This Swiss psychologist an author of *The Psychology of the Child* was an early trailblazer in the field of developmental psychology.

Answer: Jean **Piaget**

B. (10) According to Piaget, children in this phase of development can correctly judge whether fluid in two differently sized containers is really the same. It extends from approximately 7-11 years.

Answer: **concrete operations**

C. (10) Coming after concrete operations, children in this stage apply logic to statements of symbolic or verbal kind.

Answer: **formal operations**

26. Identify the following kinds of black holes, for 10 points each.

A. (10) These black holes have zero charge and zero angular momentum.

Answer: **Schwarzschild** black hole

B. (10) These have zero charge and nonzero angular momentum.

Answer: **Kerr** black hole

C. (10) These have both charge and angular momentum nonzero.

Answer: **Kerr-Newman** black hole

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27. Answer the following about chemical equilibrium for 10 points each.

A. (10) This rule states that a system whose equilibrium is disturbed will shift as to counteract the change.

Answer: **Le Chatelier's Principle**

B. (10) Le Chatelier was introduced in the chemical equilibrium of the reaction producing this substance, which was studied more effectively by Fritz Haber.

Answer: **ammonia**

C. (10) Nernst showed that ammonia could be produced more quickly by increasing this parameter in the reaction.

Answer: **pressure**

28. Answer the following questions about Chomskyan syntactic theories, for ten points apiece.

A. (10) Chomsky's *Syntactic Structures* founded this school of linguistic analysis based on the idea that linguistic items may undergo movement from one place to another during a syntactic derivation.

Answer: **Transformational Grammar/Syntax**

B. (10) This theory is based around the idea that all languages are built on the same axioms and only differ syntactically by their values for those different axioms.

Answer: **Principles and Parameters Theory**

C. (10) This program was established by a book of the same name in 1995. Its chief goal is to reduce syntactic theory to its least stipulative, most economic form based on theoretical values.

Answer: **The Minimalist Program**

29. On the morning of April 6, 1862, the Confederate Army of the Mississippi surprised the Union Army of the Tennessee at Shiloh. Answer these questions about the Battle of Shiloh.

A. (10) This future commander of all Union armies led the Army of the Tennessee.

Answer: Ulysses S. **Grant**

B. (10) A bullet hit this Army of the Mississippi commander in the leg causing him to bleed to death.

Answer: Albert **Johnston**

C. (10) The Union won the battle because of the arrival of the Army of the Ohio led by this man.

Answer: Don Carlos **Buell**