

Cardinal Classic XII

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Friday - Round 3

Tossup Questions

1.) In mathematics, this letter refers to the canonical line bundle of top-degree differential forms on a manifold, and also to a cohomology theory of vector bundles on which the Atiyah-Singer Index theorem is based. In physics, it refers a particle consisting of a down quark and an anti-strange quark that decays in a way violating parity conservation. FTP, name this letter also used to refer to the force constant of a spring and to Boltzmann's constant.

Answer: **K**

2.) As the main character, a dance critic, is leaving the titular location for the last time, a fire breaks out in the warehouse where Yoko is watching a movie. Shinamura makes just three trips to the hot springs in two years, and Komako falls in love with him even though she realizes that their relationship will never extend beyond that of a geisha and her client. FTP, name this novel by Yasunari Kawabata.

Answer: **Snow Country (Yukiguni)**

3.) Having withdrawn his country from NATO, he lost power in the last of several referenda he put forward requiring voters to choose between one of his reform proposals and his resignation. The author of a 1934 book opposed to the Maginot line, he was sentenced to death in absentia after fleeing to England in 1940. FTP, name this leader who ended the Algerian War after designing the Fifth French Republic, who earlier led the Free French Forces during World War II.

Answer: Charles de **Gaulle**

4.) A 1983 movie with this title is a 3-D comedy featuring Steve Guttenberg as a State Department employee who discovers an invisibility potion. The same title was used by a 2001 movie in which the man that Frankie Riedenschneider defends in the Creighton Tolliver murder case had actually killed Ann Nirdlinger's husband after discovering his wife Doris' infidelity. FTP, name this film featuring Billy Bob Thornton as barber Ed Crane, the most recent offering of Ethan and Joel Coen.

Answer: **The Man Who Wasn't There**

5.) Members of this order do not have acid-producing glands in the stomach and have a cloaca with just one external opening. Members of the subclass Prototheria, they are confined to Australia and New Guinea, and the first stuffed specimens brought to England were assumed to be fakes made by mixing reptile and mammal remains. Consisting of *Ornithorhynchus anatinus* and two-species of echidna, FTP, what is this order of teatless, egg-laying mammals?

Answer: **Monotremata** (or **monotremes**)

6.) Rick James, Phyllis Diller, and Frugal Gourmet Jeff Smith all cameo in the video for this band's recent single, appearing alongside drummer Pete McNeal and [*] trumpeter Vincent di Fiore. Though guitarist Greg Brown defected to Deathray, their latest album, *Comfort Eagle*, has maintained the success they found with songs like "Sheep Go to Heaven" and a remake of "I Will Survive." FTP, name this band whose *Fashion Nugget* featured the hit "The Distance," whose most recent single is "Love You Madly."

Answer: Cake

7.) In this play's second act, a naive lab assistant named Miller punches the corrupt industrialist Fayette in the face for suggesting that he spy on his superiors. The play begins with Harry Fatt assuring a committee that President Roosevelt is looking out for their interests, after which Joe says that the title character has "more guts than a slaughterhouse." The title character has been killed and hence never appears in, FTP, what play based on a taxi strike by Clifford Odets?

Answer: Waiting for Lefty

8.) This artist's animal-themed works include "Self Portrait with Monkey" and "The Little Deer," in which an animal with her face and a deer's body is pierced with several arrows. Influences on her painting included a bus accident in which a metal handrail drove through her stomach as well as her numerous affairs with the likes of Andre Breton's wife, Leon Trotsky, and her husband. FTP, name this unbrowed wife of Diego Rivera.

Answer: Frida Kahlo

9.) In a subplot, Bradley Headstone and Eugene Rayburn vie for the love of Lizzie Hexam, whose father Gaffer had found and misidentified the corpse of a ship's mate. Wooden-legged, blackmailing Silas Wegg works for Noddy Boffin, who adopts the formerly-betrothed Bella Wilfer after inheriting a dust-heap fortune. FTP, name this last completed novel by Charles Dickens, in which the title character is the disguised heir John Harmon.

Answer: Our Mutual Friend

10.) Books 8 and 9 deal with friendship, while books 2 through 5 deal with moral virtue, whose numerous types are all distinguished by a disposition to reject excess and deficiency in favor of the mean. The last book insists that happiness in the highest sense is the contemplative life, but acknowledges the importance of legislation, a problem to be taken up in the *Politics*. FTP, name this work on ethics edited by and named for Aristotle's son.

Answer: Nicomachean Ethics (Ethica Nicomachea)

11.) The author based this work on an experience of his roommate Dr. Sugden, who found a corpse in the cabin of the Olive May, a derelict steamer on Lake Lebarge. After the death of the title character, who hails from Plumtree, Tennessee, the persona realizes that "A pal's last need is a thing to heed" and hence hauls the body to the lake in his sleigh in order to perform the titular action. FTP, name this poem about gold miners in the Yukon by Robert Service.

Answer: "The Cremation of Sam McGee"

12.) It was given its current name by poet Ludwig Rellstab, having been published some 30 years earlier as "Quasi una Fantasia" with a dedication to Countess Giulietta Guicciardi. An urban legend arose that the Beatles song "Because" is this four-movement work played backwards because of a shared C-sharp minor key and a similar chord structure. FTP, name this work, the 14th and most famous piano sonata by Beethoven.

Answer: Sonata in C-Sharp Minor, Opus 27, No.2, "Moonlight"

13.) When this ruler executed servant Gian Rinaldo Monaldeschi on suspicion of espionage, her French hosts pulled out of a conspiracy which would have given her the throne of Naples. She lived most of the second half of her life in Rome, where she and Cardinal Decio Azzolino were lovers, having shocked Europe by her abdication in 1654. Often blamed for the death of Rene Descartes, FTP, who is this queen of Sweden?

Answer: Queen Christina Vasa

14.) In April 2000, obsessed 19-year old student Karen Burke held this professor at the University of Warwick hostage in her own home. Author of a 1991 book about menopause entitled *The Change*, she criticizes the efforts of the health industry to manage women's bodies in her most recent book, *The Whole Woman*, which serves as a sequel to the 1970 book which made her famous. FTP, name this Australian-born feminist who railed against female sexual passivity in *The Female Eunuch*.

Answer: Germaine Greer

15.) In 1961, Hilary Putnam objected to this theory on the grounds that it is Turing-equivalent. It was initiated with work on kernel and nonkernel sentences by Zellig Harris, and was modified in 1965 with the incorporation of semantic, phonological, and syntactic components and the assignment of both surface and deep structure analyses to each sentence. FTP, name this theory of a system of rules which produces grammatical sentences, most associated with Noam Chomsky.

Answer: transformational-generative grammar (either "transformational grammar" or "generative grammar" is enough)

16.) Applicable only to Holomorphic functions, it can be defined for complex functions by the Cauchy integral formula. Simplifying operations like integration and differentiation such that they may be done on a computer, the form may be taken over any number of real variables and may include a Cauchy or Lagrange remainder. Containing a special subset about the origin called Maclaurin series FTP name this series expansion of a function about a point named for a British Mathematician.

Answer: Taylor Series

17.) She founded the Central Hindu College at Varansi in 1898 and organized the Indian Home Rule League. She was elected president of the Indian National Congress in 1917. In 1879, the courts took away her children in response to her unconventionality and atheism. FTP, name this noted theosophist, who, in 1926, proclaimed the Indian mystic Jiddu Krishnamurti the new messiah.

Answer: Annie Besant

18.) In 1923, he won both the U.S. and the PGA Championship, and is one of 5 men to earn a career grand slam. Inventor of the sand wedge, his most spectacular shot came at the Masters, when, in 1935, he holed out a 4-wood on the par-5 15th hole. For several years, he along with Sam Snead and Byron Nelson were the opening pairing at the Masters, and he played that tournament every year until his death at the age of 97. FTP, who is this golf legend, nicknamed the Splendid Squire?

Answer: Gene Sarazen

19.) Its second owner was Sergeant Major Morris, who came into possession of it upon the death of its first owner. Morris gave it to Mr. White of Lakesname Villa, who shortly thereafter received a payment of 200 pounds as the result of the death of his son Herbert. Its purpose was "to show that fate ruled people's lives, and that those who interfered with it did so to their sorrow." FTP name this title object from the short story by W.W. Jacobs.

Answer: The Monkey's Paw

20.) A rumor persisted that he was the illegitimate son of Philip II, rather than of Lagus. His account of Alexander the Great's conquests is lost to us, but was widely read by historians in the Ancient world.

After Alexander's death he hijacked Alexander's corpse and buried him in Alexandria. FTP name this Macedonian general and founder of the Greek dynasty that ruled Egypt until Cleopatra's death.

Answer: Ptolemy I (Ptolemaios)

21.) Sony has announced that by the end of 2003, they will use them as field emitters for a flat panel television. In 2001, IBM placed gates on them, making them transistors in the world's most efficient logic circuit. Easy to fabricate from a high voltage discharge in the presence of hydrocarbons, they were not isolated until the 1990s, when their remarkable mechanical and electrical properties quickly made them the object of worldwide research. FTP, what are these narrow, rod-shaped objects?

Answer: Carbon Nanotubes

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Bonus Questions

1.) Name these inflammatory conservative columnists, FTP each:

A. This HIV-positive senior editor of The New Republic recently drew controversy for an article entitled "While Clinton diddled..." that blamed the September 11 attacks on Clinton's neglect of the terrorist threat.

Answer: Andrew Sullivan

B. This editor of FrontPage magazine stirred up controversy on numerous campuses, including UW-Madison, by submitting a full-page ad opposed to slavery reparations to hundreds of college newspapers in early 2001.

Answer: David Horowitz

C. On September 12, this syndicated columnist infamously wrote, in reference to people who celebrated the attacks, "We should invade their countries, kill their leaders, and convert them to Christianity."

Answer: Ann Coulter

2.) Answer the following about the mapping of the human genome, FTP each:

A. What Biotech company completed its rough draft of the human genome prior to the International Human Genome Project?

Answer: Celera Genomics

B. What type of genome map divides each chromosome into non-overlapping blocks of identifies the common patterns of genetic variations that occur in each block?

Answer: Haplotype Map

C. What 3-word term, often abbreviated as SNP, describes places along the human genome where genetic variations commonly occur?

Answer: single nucleotide polymorphisms

3.) Answer the following about a sociological concept, FTP each:

A. In contrast to *Gemeinschaft* (Guh-mine-shahft) and usually translated as "society," this ideal type of social organization is found in industrial societies and features impersonal, indirect human relations.

Answer: Gesellschaft (Guh-zell-schahft)

B. This German sociologist developed the idea of *Gesellschaft* in his 1887 book, *Gemeinschaft und Gesellschaft*.

Answer: Ferdinand Tonnies

C. According to Tonnies, whereas *Gemeinschaft* is a manifestation of natural will, *Gesellschaft* is based on this type of will, which is a conscious choice of means to a specific end.

Answer: **rational** will (or **kürwille**)

4.) Name these sculptures by Constantin Brancusi, FTP each:

A. This 1908 work, sharing its title with an Auguste Rodin sculpture, features two blocklike figures joined in an embrace.

Answer: *The **Kiss***

B. Brancusi executed numerous sculptures with this title between 1919 and 1940, one of which led him to be accused of clandestinely transporting an industrial part into the United States.

Answer: ***Bird in Space***

C. Brancusi's experiments with egg-shaped sculptures culminated in this virtually featureless work of the early 1920's which he described as "sculpture for the blind man."

Answer: *The **Beginning of the World***

5.) Identify the following from Mayan mythology, FTP each:

A. This book, written in Quiché in the 1550s, is the main source of knowledge of ancient Mayan mythology.

Answer: **Popol Vuh**

B. With a name meaning "Iguana House," this ruler of heaven, day, and night was the most important Mayan deity.

Answer: **Itzamná**

C. Some Mayan reliefs depict this feathered-serpent god, known to the Aztecs and Toltecs as Quetzalcoatl.

Answer: **Kukulcán**

6.) Name these figures of speech, FTP each:

A. This is conscious understatement in which emphasis is achieved by negation, as in "no mean feat."

Answer: **litotes** (lie-toe-tees)

B. This is a rhetorical device involving the repetition of a word or phrase at the start of several consecutive sentences or clauses.

Answer: **anaphora**

C. This is a type of metonymy in which the part is used to imply the whole or vice versa, as in the use of "hired hands" to refer to employees.

Answer: **synecdoche**

7.) Name the state from a description of its flag, FTP each:

A. Shaped like a swallowtail, it has five stripes and a triangular blue field with 17 stars surrounding concentric white and red circles.

Answer: **Ohio**

B. The state seal, which features a portrait by Gilbert Stuart, lies at the center of a green field.

Answer: **Washington**

C. Four groups of four rays each extend from a red circle, intended to represent the sun, at the center of a yellow field.

Answer: **New Mexico**

8.) Name the following types of speciation, FTP each:

A. Also called geographic speciation, this type occurs when two populations of a species become reproductively isolated as a result of being split into geographically separate habitats.

Answer: **allopatric** speciation

B. Similar to allopatric speciation, this type occurs when populations relocate into distinct but contiguous habitats.

Answer: **parapatric** speciation

C. This type of sympatric speciation results from a genetic event such as polyploidy or heterozygote disadvantage which results in the reproductive separation of two populations.

Answer: **stasipatric** speciation

9.) Name these novels by Willa Cather, FTP each:

A. Cather's second novel, it deals with Swedish immigrant Alexandra Bergson and her family's life on a Nebraska farm.

Answer: **O Pioneers!**

B. This novel features Thea Kronberg, a Nebraska-born girl who develops into an opera star.

Answer: *The Song of the Lark*

C. This novel deals with Claude Wheeler, who is obliged to leave college for the sake of the family farm but then finds direction after enlisting to fight in World War I.

Answer: *One of Ours*

10.) Answer the following about the Great Wall of China, FTP each:

A. This first Ch'in emperor used the labor of hundred of thousands of soldiers and conscripted workers starting in 214 B.C. to link pre-existing wall segments together to form the Great Wall.

Answer: Ch'in Shih Huang-ti

B. The Great Wall was built largely to guard against invasions from this nomadic group, which often attacked China in forces of as many as 300,000 horsemen before disappearing in the 5th century.

Answer: Hsiung-nu

C. The Wall's current state of disrepair results largely from the fact that this dynasty, which succeeded the Ming dynasty, was more interested in assimilating other nationalities than in keeping them out.

Answer: Ch'ing (or Manchu) Dynasty

11.) Name these players in the Enron fiasco, FTP each:

A. This former CEO and chairman of Enron resigned his post on January 23.

Answer: Kenneth Lay

B. This accounting firm served as Enron's auditor and is under scrutiny for shredding documents related to Enron's financial status.

Answer: Arthur Andersen, LLP

C. This man, who was Arthur Andersen's chief auditor until he was fired, recently invoked the fifth amendment when asked in a recent Congressional hearing whether he ordered the destruction of Enron documents.

Answer: David Duncan

12.) Name the following novelists of 18th century Britain, FTP each:

A. This Scot is known for his translation of *Don Quixote* and also for picaresque novels about such characters as *Roderick Random* and *Peregrine Pickle*.

Answer: Tobias Smollett

B. This inventor of the epistolary novel is best known for two novels with female titular characters whose main male characters are Mr. B and Lovelace.

Answer: Samuel Richardson

C. This woman wrote influential novels of manners such as *Evelina*, *Cecilia*, and *Camilla*

Answer: Fanny Burney

13.) Norway has announced the creation of an international \$1 million math prize. Answer the following about it, FTP each:

A. The prize is named after what famous 19th century Norwegian mathematician?

Answer: Niels Henrik Abel

B. In addition to his work on elliptic integrals, Abel is famous for proving the impossibility of a general algebraic solution to what type of equation?

Answer: quintic or 5th order or 5th degree

C. The Abel Prize was first proposed in 1902, the centennial of Abel's birth, by what king of Norway?

Answer: Oscar II

14.) Given some major terms of an international treaty which ended a war, identify the treaty FTP each:

A. France acknowledged Queen Anne's succession in England and ceded Canadian islands to Britain; Britain won the Asiento; Britain recognized Philip V of Spain.

Answer: Treaty (or Peace) of Utrecht

B. Manchuria to be ruled by China; Japan to have Korea; Port Arthur ceded to Japan by Russia.

Answer: Treaty of Portsmouth

C. Vietnam to be partitioned between Communist North and non-communist South, a unification election to be held in 1956.

Answer: Geneva Conference (or Accords)

15.) The following three differential equations from physics are each named after two people. Name them FTP each, or for five if you can only name one of the namesakes:

A. This second-order equation is obtained by minimizing the action functional in classical

mechanics. It is equivalent to a system of first order equations which is named for William Hamilton.

Answer: Leonhard Euler-Joseph-Louis Lagrange

B. This system of equations describes the velocity and pressure of fluids. Setting the viscosity equal to zero in these equations yields the so-called Euler equations.

Answer: Claude-Louis Navier-George Stokes

C. This third order nonlinear partial differential equation is used to model waves in shallow water. Its "soliton" solutions are of considerable interest to PDE theorists.

Answer: Diederik Johannes Korteweg-Gustav de Vries (accept just "KdV equation")

16.) Name these Golden Age Spanish authors, FTP each:

A. This author of *Fuente Ovejuna* and *The Gentleman from Olmedo* is known mainly for his enormous productivity, writing some 1800 plays as well as 21 volumes worth of poetry.

Answer: Lope Félix de Vega y Carpio

B. This Baroque author of *Fable of Polyphemus and Galatea* and the collection *Soledades* is known for a convoluted, overly decorated style that is now named for him.

Answer: Luis de Góngora y Argote

C. This associate of St. Teresa of Avila wrote intense mystical poems such as "Spiritual Canticle."

Answer: St. John of the Cross (or San Juan de la Cruz or

17.) Given a signer of the Declaration of Independence, identify which colony that signer represented, FTP each:

A. Button Gwinette

Answer: Georgia

B. Alexander Hamilton

Answer: New York

C. Josiah Bartlett

Answer: New Hampshire

18.) The recent playoff game between the Patriots and the Raiders featured a controversial overturn of a fumble by instant replay. FTP each:

A. Name the referee who ruled that the fumble was in fact an incomplete forward pass.

Answer: Walt Coleman

B. Patriots fans viewed this year's game as redemption for a 1976 playoff loss to Oakland in which this quarterback led the Raiders to victory thanks to a phantom roughing the passer call

Answer: Ken Stabler

C. The snowy conditions during the game brought back memories of the infamous snowplow game of Dec. 12, 1982. Name the work-release convict whom Ron Meyers directed onto the field to clear a foothold.

Answer: Mark Henderson

19.) During the gold rush, today's silicon valley thrived as a mining region for mercury, since mercury was required for refining gold (hence the San Jose Mercury News).

A. F5P, name the ore that provides well over 90% of the world's mercury.

Answer: Cinnabar

B. F5P, what is the common name for the lead sulfide ore that is the chief source of the world's lead?

Answer: Galena

C. FTP, what element, known as columbium until 1950, was discovered in 1802 in the ore Columbite?

Answer: Niobium

D. FTP, the name of this element, also found in columbite, is mythologically related to that of niobium because it took chemists 42 years to realize that they were different elements.

Answer: Tantalum

20.) Identify the following battles whose names start with "N" FTSNOP.

A. F5P--on August 1, 1798 Nelson sank the French fleet in Egypt, stranding Bonaparte far from France.

Answer: Battle of the Nile (prompt on Aboukir Bay)

B. FTP--on October 20, 1827, the French, British, and Russian fleets sank the Egyptian navy in the harbor, aiding the Greek revolution.

Answer: Navarino

C. F15P--after suffering defeat at Mylae, Octavian and Agrippa defeated Sextus Pompey at this battle in 36 BCE.

Answer: **Naulochus**