

Cardinal Classic XIII: The Legend of Zwarte Piet
Round 11

MIT - Questions by Chris Luhrs, Mike Usher, Ahmed Ismail, Peter Stone, Jeff Cohen, Steven Sivek
Additional contributions by Erik Nielsen

1. The first resulted in Cirrha's destruction. The second was fought over Phocian control of an important city. The fourth was fought over rededication of spoils from the Persian war while the third allowed Phillip II to gain Hellenic status by fighting on the side of the god. For ten points give the collective name of these four wars, all of which were fought over alleged sacrileges against Apollo.

ANSWER: The Sacred Wars

2. Apparently born in Liverpool, he vanishes for three years to parts unknown. When he returns, he marries Isabella, encourages the debauchery of Hindley, and arranges the marriage of his late beloved's daughter and his own son Linton, giving him control over both Thrushcross Grange and the title location. Nevertheless, his plot backfires due to Cathy's attraction to Hareton Earnshaw, and he dies still haunted by his rejection by Catherine. FTP, name this brooding main character of *Wuthering Heights*.

ANSWER: Heathcliff

3. This class of compounds can be compared to a magnetic system with a zero-dimensional order parameter. The star variety of these compounds can contain five or more "arms" of varying lengths. Phase transitions exhibited by them include the helix-coil transition and the theta-transition. When comprised of two or more different basic chemical units, they can form lamellae. Identify, for ten points, this general class of macromolecules made up of repeat units.

ANSWER: polymers

4. Both his wives went insane and five of his mistresses committed suicide. He claimed that he was inspired by a praeterhuman intelligence called Aiwass to write *The Book of The Law*, in which he described the tenets of his cult Ordo Templi Orientalis. For ten points name this self-proclaimed "wickedest man in the world" and author of *Magick in Theory and Practice*.

ANSWER: Aleister Crowley

5. Complaining that most men fail to understand the underlying connection between seemingly unrelated things, he posited that most men live as dreamers with a false view of the world. This Ephesian was dubbed "the obscure philosopher" because of the difficulty of his works. Claiming that "all things tending apart are actually being brought together," he posited an ever-changing universe, in which a man could not step twice into the same river. He then turned to a substance described as "kindling and being extinguished in measures" as the manifestation of logos. FTP, identify this philosopher who believed that the basis of the universe is fire.

ANSWER: Heraclitus

6. Its highest point is Mount Tomanivi at 3,000 feet. Some of its smaller islands include Lomaiviti, Lau, and Yasawa. The Draketi River is on its second largest island, Vanua Levu. Surrounding the Koro Sea, north of Auckland, New Zealand, FTP name this country with its capital on Viti Levu at Suva.

ANSWER: Sovereign Democratic Republic of Fiji (accept Viti Levu before "smaller islands")

7. In the middle ages it was associated with the Antichrist in artwork and later with the papacy by Protestants. Its natural enemies are the weasel, who is immune to its most powerful weapon, and the cock, who can kill it by crowing. Born of spherical yolkless eggs, laid by seven-year old roosters, during the days of the sirius, and hatched by a toad, FTP, what are these fearsome lizards whose gaze could turn a human to stone?

ANSWER: Basilisks

8. In this work, belief in a "preternatural interposition in the sequence of events" is argued to be a common thread in the subjects of chapters 11 and 12, "The Belief in Luck" and "Devout Observances," which are held to antedate the "predatory culture" out of which the titular entity grew. Higher learning, canons of taste, and dress are all related to pecuniary standards of living in, FTP, what work in which the term "conspicuous consumption" was coined by Thorstein Veblen?

ANSWER: *The Theory of the Leisure Class*

9. This author assembled 200 brief sketches, mostly just a few sentences long, to form his 1996 *Echoes of an Autobiography*. He adapted the style of Sir Walter Scott's historical romances to his earliest works, such as *The Struggle of Thebes*, but he showed more sophistication in works like *The Thief and the Dogs* and *Children of the Alley*, the latter of which earned him a fatwa. FTP, name this author of *Sugar Street*, *Palace of Desire*, and *Palace Walk*, which comprise the *Cairo Trilogy*.

ANSWER: Naguib Mahfouz

10. Krzysztof Penderecki's setting of this text improbably calls for a septet of male vocal soloists, and a bass solo for the "Fecit potentiam" section. Arvo Pärt ["pairt"]'s haunting setting for women's voices is filled with minor seconds. Vaughan Williams's setting, in English, uses a flute to portray the Holy Ghost. Based on the Gospel of Luke, the text is Mary's response to Elizabeth's awed greeting. For ten points, identify this text whose best-known setting is by Bach, a canticle whose English translation begins "My soul doth magnify the Lord."

ANSWER: Magnificat *anima mea Dominum* (prompt on English translation)

11. Stanford's Bob Laughlin won a Nobel Prize for explaining one version of this effect. Earlier, Klaus von Klitzing had used the quantum version to accurately measure electric resistance. Laughlin's explanation of the fractional quantum version involved an incompressible quantum liquid, but the basic version simply says that V is equal to the length of the conductor times the velocity times the magnetic field strength. Named for its Johns Hopkins University discoverer, FTP, identify this effect, the generation of a voltage difference perpendicular to the direction of the magnetic field.

ANSWER: Hall effect (accept quantum Hall effect or fractional quantum Hall effect on early buzz)

12. Gustave Arosa, his legal guardian, established him as a stockbroker. A one-time roommate of Vincent van Gogh and a student of Pizarro from 1875 on, he founded the Pont-Aven school and coined the term "synthetism" to describe his work. Important paintings in the development of his mature style include 1888's *Vision after the Sermon* and *Old Women of Arles*. For ten points, name this French painter of *Who are we? where do we come from? where are we going?*, best known for his "primitivistic" works and self-imposed exile in Tahiti.

ANSWER: Paul Gauguin

13. Located at 55 Sullivan Place at Bedford Avenue, its capacity was 25,000 when opened in 1913. Measuring only 297 feet down the right-field line, it featured a scoreboard sponsored by Schaefer Beer in which the "h" of Schaefer lit up for a hit and an "e" for an error. The site of the first televised baseball game in 1939, it was also home to the World Series champs in 1955, but was left empty after September 24, 1957 and demolished in 1960. FTP, name the home stadium of Jackie Robinson and the rest of the Brooklyn Dodgers.

ANSWER: Ebbets Field

14. He joined Sweden's Foreign Ministry in 1963, eventually becoming its head 15 years later. He joined the International Atomic Energy Agency in 1981 one year after campaigning for Sweden to retain its nuclear energy program. In 2000 he was appointed successor to Richard Butler as head of U.N. Monitoring, Verification and Inspection Committee. FTP identify this leader of U.N. weapons inspections in Iraq.

ANSWER: Hans Blix

15. He gained considerable power during the rule of Gheorghe Gheorghiu-Dej, eventually securing a powerful position in the Politburo. By 1967 he had become head of both his country's state council and Communist Party and in 1974 he was elected his country's first president. Known for creating the Securitate which stifled political dissent and free speech, FTP identify this man, executed on Christmas Day 1989, ruler of Romania from 1967 to 1989.

ANSWER: Nicolae Ceausescu

16. One night, having discovered a door guarding a place "for madmen only!" and finding himself unable to upon it, the protagonist is presented with a description of his emotions which deepens his suicidal urges. The formerly unapproachable Magic Theater becomes opened, and entering it sends him on a journey through his mind at whose conclusion he stabs his mentor, Hermine, and learns about life from Mozart. FTP, name this novel in which Harry Haller learns how to face life, written by Herman Hesse.

ANSWER: Steppenwolf

17. Their lead vocalist, Keith Relf, died of electrocution only a few years after their breakup. When this group broke up, Jimmy Page simply replaced the band on some of their approaching tour dates with the hastily assembled Led Zeppelin. Jeff Beck had plenty of success on his own, and Eric Clapton would be immensely popular as a member of Cream and as a solo artist. FTP, name this band whose greatest success occurred in 1965 with the hit "For Your Love."

ANSWER: The Yardbirds

18. When untreated, it can lead to seizures and mental retardation, but it seldom goes undetected and can be successfully treated with dietary restrictions such as avoidance of high protein foods and, in many cases, products such as soda. FTP, name this disorder in which a mutation on chromosome 12 prevents the body from properly producing PAH, the enzyme needed to synthesize tyrosine from phenylalanine.

ANSWER: Phenylketonuria (or PKU)

19. Born near a Texas city that shares his name, this man taught grade school and then became the secretary to a Congressman, but eventually became a Congressman from Texas himself. He rapidly climbed to high-level party positions after being elected Senator in 1949. He became Democratic leader in the Senate in 1953. He was chosen to balance a Presidential ticket. For ten points, name the man who became President after JFK.

ANSWER: Lyndon Baines Johnson or LBJ

20. After his wife brought his brother the golden hide of a lamb intended for Artemis, he unknowingly agreed that the next king should be the owner of the hide. Zeus and Hermes intervened and gave him the throne, but in revenge he modified a tactic his grandfather had used and fed his nephews to his brother. FTP, name this son of the once-eaten Pelops, the king of Mycenae and founding member of a rather cursed family.

ANSWER: Atreus

21. The ideal gas law states that PV is proportional to nT , but that law is not correct, due to the volume taken up by gas molecules and the tendency of gas molecules to attract one another. This is corrected by adding a term to the pressure and subtracting one from the volume, resulting in this equation. For ten points, name this equation, which is named for the same person as forces of attraction between molecules or atoms other than chemical bonds.

ANSWER: van der Waals equation

Bonuses by MIT

1. Identify the following women who were powerful in Roman politics for ten points.

a) This wife of Claudius wanted her son to be on the throne so she allegedly poisoned her husband with mushrooms.

ANSWER: Agrippina the younger

b) The second daughter of a famous general, she educated her two sons, Gaius and Tiberius Gracchus, influencing their political views.

ANSWER: Cornelia

c) The second wife of Septimus Severus, she may have been the real power during the reigns of her sons Caracalla and Geta.

ANSWER: Julia Domna

2. For ten points each, identify these terms from chemical kinetics.

a) In a chemical reaction with multiple elementary steps, one of which is much slower than the others, this name is given to the slow step.

ANSWER: rate-determining step

b) This equation, useful in chemical kinetics, states that a reaction's rate constant is equal to a constant times e raised to a power that is the opposite of the result of dividing the activation energy by the product of the universal gas constant and the Kelvin temperature.

ANSWER: Arrhenius equation

c) This approximation, which is that concentrations of intermediates in a chemical reaction remain roughly constant throughout the reaction, is useful for finding rate laws when no one step is rate-determining.

ANSWER: steady-state approximation

3. Identify the following beings from early Norse Mythology for ten points each.

a) This primeval cow was created from the melting ice at the beginning of time. The Giant Ymir fed on her milk.

ANSWER: Audhumla

b) The first man in Norse mythology, he was created when Audhumla licked a salt block into his shape.

ANSWER: Buri or Bor

c) Buri had three sons. Odin was one of them. Name either of the other two.

ANSWER: Vili and Ve

4. Identify these three sci-fi or fantasy novels for ten points each.

a) The third book in the Bean series by Orson Scott Card, it features Bean killing Achilles (Ah-sheel) at last.

ANSWER: Shadow Puppets

b) The tenth book in the *Wheel of Time* series by Robert Jordan. Not much happens, but Perrin, Mat, and Rand all make appearances in its seven-hundred-plus pages.

ANSWER: Crossroads of Twilight

c) This very long, posthumously-published work describes the origins of Sauron, the rings of power, and its title gemstones.

ANSWER: The Silmarillion

5. Name the following Marxist social theorists, FTP each:

a) This German wrote *The Condition of the Working Class in England* and *On Social Relations in Russia*, but is better known for his collaborations.

ANSWER: Friedrich Engels

b) This writer's *Eros and Civilization* attempted to link sexual and political repression, but he is probably better known for arguing against the mass materialism of American culture in *One-Dimensional Man*.

ANSWER: Herbert Marcuse [mar-KOO-zuh, or something]

c) This Marxist structuralist argued that ideology was more important than material power in maintaining bourgeois authority in such works as *For Marx* and *Machiavelli and Us*. He also strangled his wife to death.

ANSWER: Louis Althusser

6. Name the following characters from the *Mahabharata*, FTP each:

a) The Pandava whose actual father is Indra, he is the hero of the *Bhagavad-Gita*.

ANSWER: Ariuna

b) Arjuna's moral doubts before the Battle of Kurukshetra lead this charioteer, an avatar of Vishnu, to counsel him

ANSWER: Krishna

c) The wife held in common by the five Pandavas, she incites them to fight the Kauravas instead of agreeing to a pact. She is eventually married to Arjuna.

ANSWER: Draupadi

7. Name these 17th century Dutch painters, FTP each:

a) Little-recognized during his life, most of this painter's 35 works are intimate interior scenes like *The Art of Painting* and *Young Girl with a Flute*, though he may be best known for *View of Delft*.

Answer: Jan Vermeer

b) He painted landscapes like *Jewish Cemetery* and *Wheatfields* before taking up medicine late in life.

Answer: Jacob van Ruisdael

c) Influenced by fellow Haarlem resident Franz Haals, this woman's works include *A Boy and a Girl with a Cat and an Eel* and *The Flute Player*.

Answer: Judith Leyster

8. Answer the following about three British poets and diplomats, FTPE.

a) This author of the *Areopagitica* put aside his poetry to serve as Cromwell's Latin Secretary; only after the Restoration did he write his great epic.

ANSWER: John Milton

b) Milton's assistant in the office of the Latin Secretary, his political verse includes *The Last Instructions to a Painter* and *Horatian Ode upon Cromwell's Return from Ireland*.

ANSWER: Andrew Marvell

c) Marvell in turn hired this man, a future political rival of his who would write *Annus Mirabilis* and *The Hind and the Panther*.

ANSWER: John Dryden

9. Identify these Greek sculptors from works, ten points each.

a) *Hermes Carrying the Infant Dionysos*

ANSWER: Praxiteles

b) The temple of Artemis at Ephesus and the Mausoleum at Halicarnassus

ANSWER: Scopas

c) *Doryphoros* ("The Spear Bearer")

ANSWER: Polyclitus

10. Identify the following rivers in Africa for ten points each.

a) Stretching 2,900 miles, this second longest river in Africa rises in Zambia and empties into the Atlantic at Banana.

ANSWER: The Congo

b) With a name meaning "great river," it includes Victoria Falls along its path.

ANSWER: The Zambesi

c) Stretching 1,300 miles it forms the southern limit of the Kalahari and bisects the Namib Desert.

ANSWER: The Orange

11. Time to go for baroque . . . orchestras. FTPE:

a) Baroque composers wanting to use a flute had to specify "flauto traverso," as a composer who asked for a "flauto" would end up with this instrument instead.

ANSWER: recorder

b) Before the advent of the cello, these six-stringed, fretted instruments were often used as *continuo* instruments.

ANSWER: viola da gamba(s)

c) Ironically, in baroque times, this instrument was referred to as a "bass trumpet" because it often contained a metal funnel shaped like trumpet bells near its air hole.

ANSWER: timpani or kettledrum

12. Identify the following terms from number theory for ten points each.

a) It refers to an element x of a ring such that if x divides a times b , then either x divides a or x divides b .

ANSWER: **Prime**

b) It refers to an element x of a ring whose only divisors are units and its conjugates.

ANSWER: **Irreducible**

c) A domain in which all primes are also irreducible is called one of these.

ANSWER: **Unique Factorization Domain** (accept UFD)

13. Answer the following about a well-known class of reagents.

a) These reagents are usually prepared in a nitrogen atmosphere, and have chemical formulas $RMgX$, where R is an alkyl chain and X is a halogen.

ANSWER: **Grignard** reagents

b) The chemical behavior of a Grignard reagent is similar to this class of compounds with a negatively charged carbon atom.

ANSWER: **carbanions**

c) Grignard reagents cannot react with this class of compounds where a nitrogen atom is bonded to three different alkyl groups.

ANSWER: **tertiary amines** or **tert-amines**

14. Answer the following about a 1985 movie, FTPE.

a) This Michael Ritchie film starred Chevy Chase as a wisecracking journalist who gets caught up in an international drug ring.

ANSWER: **Fletch**

b) *Fletch* was based on a series of novels by this man.

ANSWER: Gregory **MacDonald**

c) This rotund actor played Fat Sam in *Fletch*; he's better known for spending 11 years as a drunk on TV.

ANSWER: George **Wendt**

15. Identify the historical figure, 30-20-10

30) He published *Thesis on American Commercial Relations with England* after his exile during the French Revolution brought him to both of these countries.

20) He split with Napoleon after the Treaty of Tilsit was signed, realizing that he could no longer influence him.

10) He was France's main ambassador to the Congress of Vienna.

ANSWER: Charles Maurice de **Talleyrand** Perigord

16. Identify these terms having to do with RLC series circuits for ten points each.

a) This quantity associated with an RLC series circuit is equal to the circuit's resistance plus i times the total reactance. Its complex magnitude gives the ratio of voltage and current.

ANSWER: **Impedance**

b) This is the term for the frequency at which an RLC series circuit has the greatest current and at which the inductive reactance and the capacitive reactance are equal.

ANSWER: **Resonant** frequency

c) This quantity is the result of dividing the resonant frequency by the full width at half maximum. It gives a measure of the degree of resonance.

ANSWER: **Quality factor**

17. Identify these 2004 Democratic Presidential hopefuls FTPE.

a) This Connecticut Senator's name has appeared on a Democratic Presidential ticket before.

ANSWER: Joseph **Lieberman**

b) Winner of the 1988 Iowa presidential caucus, this Missouri Democrat has close connections to organized labor.

ANSWER: Richard **Gephardt**

c) Opposing national gun control and getting an A rating from the NRA, this doctor signed the Vermont civil unions law and describes himself as the only Democratic candidate who has balanced a budget.

ANSWER: Howard **Dean**

18. Identify the following Jewish holidays FTPE.

a) This holiday commemorates the Maccabee family's resistance movement against the Syrian king Antiochus, who had outlawed the practice of Judaism and required idol worship. They successfully reclaimed and rededicated the Temple in Jerusalem.

ANSWER: **Hanukkah**

b) This festival is celebrated with a reading from the book of Esther. Esther, the Jewish queen of Persia, risked her life convincing King Achashverosh (Ahasuerus) to save the Jews of the land from the prime minister Haman's plot to kill them.

ANSWER: **Purim**

c) This festival beginning on the 15th of Tishri is sometimes referred to as Zeman Simkhateinu, or "the season of our rejoicing." Its name is Hebrew for "booths."

ANSWER: **Sukkot**

19. Identify the animal phylum given a brief description FTPE.

a) These organisms have flexible, segmented bodies covered in varying quantities of bristles, or setae. The phylum includes earthworms and leeches.

ANSWER: **Annelida** (annelids)

b) These creatures have a tough outer cuticle and are generally microscopic. Common parasitic examples include heartworms, pinworms, and trichina, which causes trichinosis.

ANSWER: **Nematoda** (nematodes)

c) These soft-bodied "horseshoe worms" differ from other wormlike phyla because their guts do not pass through the entire body but rather end close to their ciliated mouths. Only about ten species are known.

ANSWER: **Phoronida** (phoronids)

20. Identify the playwright from works, 30-20-10.

30: MacBett, Thirst and Hunger

20: Exit the King, The Lesson

10: Rhinoceros, The Bald Soprano

ANSWER: Eugene **Ionesco**