

Cardinal Classic XIII: The Legend of Zwarte Piet
Finals Round 1

Packet by Stanford (mostly Joon Pahk) with borrowings from Cornell and NYU

Tossups

1. The Parisian action of this novel centers on the Club, a social group whose members include Babs, Ronald, and Gregorovius. The Buenos Aires action sees the philosophical decadence of the main character developed in his relations with his friend Traveler, and Traveler's wife Talita. The central scene, in Paris, is the death of the baby Rocamadour, who was the child of La Maga. FTP, identify this novel whose main character is Horacio Oliveira, the masterwork of Julio Cortazar, whose English title is derived from its disjointed, skipping narrative.

Answer: Rayuela or Hopscotch

2. This German leader was almost constantly at odds with the Church, and he was excommunicated by Pope Alexander III after helping to set up an antipope. He succeeded Conrad III as Holy Roman Emperor in 1155, and the diets of Bescanon and Roncaglia centered on his power struggles with the Vatican. Decisively defeated by the Lombard League at Legnano in 1176, FTP, name this Hohenstauffen king who drowned in Cilicia while on the Third Crusade.

Answer: Freidrich (Frederick) I Hohenstauffen or Barbarossa

3. The symptoms of fragile X, Angelman, and Prader-Willi syndromes are all influenced by the genomic type of this process, in which certain genes are marked according to the gender of the individual in which they reside, allowing the effects of an allele on offspring to vary depending on whether it is from the mother or father. FTP, identify this term which, in psychobiology, refers to a form of learning first described by Konrad Lorentz in which a newborn animal learns to follow a real or foster parent.

Answer: imprinting (accept genomic imprinting before "genomic type")

4. This river has the greatest discharge of any in its nation, and 35 dams on this river produce most of its nation's hydroelectric power. Navigable from its delta to Tortosa, its upper course flows through La Rioja wine region. Beginning in the Cantabrian Mountains, it flows south and east for 565 miles, passing through Zaragoza before emptying into the Mediterranean in the Tarragona province. FTP, name this longest river of Spain.

Answer: Río Ebro

5. He grabbed two rebounds and missed his only shot in his first NBA game, but broke out a month later with a 30-point, 16-board effort against Dallas. He makes light of his impending acting career, saying "I don't think they can find a stunt double for me," and thinks that perhaps Shaq refused his dinner invitation because his "refrigerator isn't big enough." Both of these quotes were issued through Colin Pine, his full-time interpreter, who has been trying to impress on him the magnitude of starting in the All-Star game. FTP, who is this rookie center for the Houston Rockets, formerly of the Shanghai Sharks?

Answer: Yao Ming

6. The source of contention was the "Left Wing Manifesto" published in *The Revolutionary Age* newsletter, and the eventual result was a reversal of the Supreme Court's stand in *Barron v. Baltimore* ninety-two years earlier. A conviction under a state criminal anarchy law was obtained against the manifesto's radical socialist author because it advocated the violent overthrow of government. FTP, identify this 1925 Supreme Court case in which, although the conviction was upheld, the Court ruled that the Bill of Rights does apply to state governments.

Answer: Gitlow v. New York

7. "Around an empty grave" is a parody of Garcia Marquez, particularly *Chronicle of a Death Foretold*. "On the carpet of leaves illuminated by the moon" satirizes modern Japanese writers like Kawabata, and "Looks down in the gathering shadow" is reminiscent of trippy Beat writers. All of these stories and seven others are read by the main character of this novel, namely You, the Reader, and are ostensibly the first chapters to ten different novels by ten different authors. FTP, this describes what experimental novel by Italo Calvino?

Answer: If on a winter's night a traveler... or Se una notte d'inverno un viaggiatore

8. One was a daughter of Tityus and the mother of Euphemus, helmsman of the Argo. The better-known woman of this name was a daughter of Agenor who married Asterius after being given three gifts: a javelin which never missed its mark; a dog, Laelaps, which never failed to catch its quarry; and the bronze man Talos to act as her guardian. These gifts came from her lover, to whom she bore the three sons Sarpedon, Rhadamanthys, and Minos. FTP, who is this queen of Crete, whom Zeus ravished in the form of a bull?

Answer: Europa

9. Deviations in this law become noticeable when the partial pressure goes over one atmosphere and the solute concentration increases. The molar solubility of a gas can be determined by multiplying the partial pressure of the gas above the solution with the inverse of this law's namesake constant. First proposed by a British chemist in 1800, it explains the phenomenon of Caisson's disease or the bends. FTP, identify this chemical law which states that the concentration of a solute gas in a solution is directly proportional to the partial pressure of that gas above the solution.

Answer: Henry's law

10. This scholar enrolled at the New School for Social Research in 1919, writing *The Concept of the Guardian Spirit*, a thesis on a widespread theme in native North Americans, in 1923. Eleven years of field work resulted in 1931's *Tales of the Cochiti Indians* and 1935's *Zuñi Mythology*. Better known for *Patterns of Culture* and a work in which she analyzed the culture of Japan, FTP, name this anthropologist, author of *The Chrysanthemum and the Sword*.

Answer: Ruth Benedict

11. Most of its 63 poems are in iambic tetrameter and identified only with a roman numeral and by first line, such as "With rue my heart is laden" and "On Wenlock Edge." Exceptions include the first poem, entitled "1887" and beginning "From Cleve to heaven the beacon burns," and poem nineteen, "To an Athlete Dying Young." Originally called *Poems by Terence Hearsay*, that title was scrapped, but the fictional narrator survives in the book's penultimate poem, "Terence, this is stupid stuff." FTP, name this 1896 collection by A.E. Housman.

Answer: A Shropshire Lad

12. Rulers of Romania and Portugal during the late 19th and early 20th century can trace their ancestry to this line. The current Bulgarian prime minister hails from this royal house; he succeeded Boris III during World War II. So do Albert II of Belgium and every Belgian royal since Leopold I came to the throne in 1831. Begun in England when Albert, son of Ernest I, married Queen Victoria, FTP, name this royal house, whose name in was changed by Edward VII to Windsor.

Answer: Saxe-Coburg-Gotha

13. The painting is divided into two zones, representing the heavenly and the terrestrial, with the Virgin Mary and John the Baptist in the top and center of the painting. The figure on the far right of the painting is Andrés Núñez, a friend and patron of the artist and the parish priest of the church where the painting is stored. The artist painted himself into the work as well, and he can be seen directly above the head of St. Stephen, and his son, Jorge Manuel, who points at a corpse being interred. FTP, name this El Greco oil painting which concerns the funeral of a nobleman.

Answer: The Burial of Count Orgaz or El Entierro del conde de Orgaz

14. He proved that the simple conditions of positive energy and probability density, causality, and Lorentz invariance required that particles of integer spin obey Bose-Einstein statistics and particles of half-integer spin obey Fermi-Dirac statistics. He derived a 2-dimensional representation of the rotation group, known as his spin matrices. He explained the missing energy and angular momentum in the spectrum of beta decays by hypothesizing the "neutron," although it later became known as the neutrino. FTP, who is this quantum physicist best known for his statement that no two fermions can occupy the same quantum state?

Answer: Wolfgang Pauli

15. First, there was a void. Later came the sky and the sea, and, as the book says, "then came the word, which came in the form of a bolt of lightning." The creator figure in this story says, "Let it be done," and the plants put forth shoots, and all the living creatures emerged from the sea. Man is not made of the dirt, but of nonhuman germs; woman is not made of his rib, but of zibaque (zi-BA-kay) reeds. In addition, the two ancestors of man, Hunahpu

(hoo-NAH-phoo) and Xbalanqué (Sh-bal-an-KEH) destroy arrogant deities who refuse to adore the creator gods. Famously translated into Spanish by Miguel Asturias, FTP, name this, the sacred text and creation story of the Incas.

Answer: Popol Vuh

Mayan

16. At the end of this play the main character admits that he always hated his faithful wife Evelyn for being too forgiving of his drunkenness and adultery, and decided to "liberate" her by killing her. His remarkable confession is repeatedly interrupted by his best friend, who exclaims, "Who the hell cares? We want to pass out in peace!" That sentiment is echoed by drunks like Larry Slade and Don Parritt, who are busy admitting to themselves that they have been living a lie. FTP, what is this play set in Harry Hope's saloon, in which Hickey is taken away by the cops, the masterpiece of Eugene O'Neill?

Answer: The Iceman Cometh

17. The majority of the opera is done in *Sprechstimme*, a German term translating into "speaking voice," which is a vocal style halfway between singing and speaking. The plot concerns the titular character, a private in the Austrian army, ridiculed by his superiors for his common-law marriage and illegitimate son. Unable to support his family, he submits himself for experiments to a doctor, and his dissatisfied lover deceives him with another man. He stabs her to death in a fit of jealousy, throws the murder weapon into a pond, and dies in the pond while searching for the knife. A masterpiece of atonal composition, FTP, identify this opera by Alban Berg.

Answer: Wozzeck (not Woyzeck, but you won't be able to tell from the pronunciation anyway)

18. First created as a satellite of the Ottoman Empire, it fought a brief war with the United States in the 1800s. Famous for being one of the first nations to use mass bombings as a weapon in a war of independence, a coup toppled its first president, Ahmad Ben Bella, in 1965. It established itself as a Islamic Democratic state upon gaining its independence. A military coup later toppled the democratic regime, and in 1978 it had a "second revolution" that resulted in a more genuine democratic process, while its own independence movement nearly tore asunder its colonizing power. FTP, name this former French colony, situated in North Africa.

Answer: Algeria

19. Some of this author's short stories include "The Potato Elf," "Tyrants Destroyed," "Spring in Fialta," and "The Vane Sisters." The latter two involve heavy wordplay, and "The Vane Sisters" ends with an acrostic—appropriate, since this author created the first crossword puzzle in his native language. Wordplay also features in his character names, which include Hugh Person, Cincinnatus C, and anagrammatic pseudonyms such as Adam von Librikov and Vivian Darkbloom. FTP, name is this author of *Pnin*, *Ada* [AH-da], or *Ardor*, and *Lolita*?

Answer: Vladimir Vladimirovich Nabokov

20. Solutions to this equation have no local minima or maxima, and the value of one at any point is equal to the average value at the points around it. The inhomogeneous form of it is called Poisson's equation and can be solved for a specific geometry by calculating the Green's function and integrating it over the boundary. The boundary conditions can be either Dirichlet conditions, where the function value is known on the boundary, or Neumann conditions, where its normal derivative is known. With solutions known as harmonic functions, FTP, what is this differential equation stated simply as $\Delta \phi = 0$, and named for a deterministic French scientist?

Answer: Laplace's equation

21. William Harvey accused the author of this work of a manipulative and political tone. The author guards against things that would hinder the pursuit of knowledge or true understanding, such as illusions founded in human nature, in the individual and his associates, and most of all, illusions founded by philosophers of old. The blind zeal of religion has hampered scientific research, as has the adherence to the old ways of ancient thinkers. He claims that the best way to go about scientific inquiry is the way of the bee, which, unlike the spider or the ant, takes existing material and uses it. FTP, name this 1620 attack on Aristotelian philosophy and the scientific method, the second part of Francis Bacon's work *The Great Instauration*, whose title comes from the Latin for "new instrument."

Answer: Novum Organum or The New Organon

Finals Round 1
Bonuses by Stanford

1. Questions from electromagnetism FTPE.

A) What vector, symbolized capital S and equal to $\mathbf{E} \times \mathbf{B}$ over μ_0 , is a measure of the energy flow in a system of dynamical fields?

Answer: Poynting vector

B) Which of Maxwell's equations can be stated in differential form as "the curl of \mathbf{E} is equal to minus the partial derivative of \mathbf{B} with respect to time"?

Answer: Faraday's Law

C) What type of transformation, consisting of adding the gradient of a function to the vector potential and subtracting its time derivative from the scalar potential, leaves the physical fields invariant?

Answer: gauge transformation

2. Name these American poetry collections FTPE.

A) It includes "Elizabeth" and "The Saga of King Olaf," but this 1863 collection is probably best remembered for "Paul Revere's Ride."

Answer: Tales of a Wayside Inn (Longfellow)

B) This volume, taking its title from the repeated refrain of Longfellow's "My Lost Youth," was the first book of poetry published by Robert Frost. It includes "Into My Own," "Love and a Question," and "My November Guest."

Answer: A Boy's Will

C) The title poem of this 1953 Theodore Roethke collection is a villanelle which declares, "I learn by going where I have to go."

Answer: The Waking

3. Answer the following about a Prussian military commander FTPE.

A) Chief of the Prussian and German General Staff from 1858 to 1888, he modernized the Prussian army and is credited as the first military man to appreciate the value of railroads in the deployment of troops across a wide front.

Answer: Helmuth von Moltke

B) Moltke's tactics proved successful in the Seven Weeks' War against Austria, culminating in this 1866 battle.

Answer: Koniggratz or Sadowa

C) On September 1, 1870, Moltke led 200,000 Germans to victory against Marshal MacMahon in this decisive battle.

Answer: Sedan

4. Name the following relating to a Japanese art form FTPE.

A) This art form consists of paintings, woodblock prints, and books which represented genre scenes of life within the licensed pleasure districts of major cities in the Edo period.

Answer: ukiyo-e or pictures of the floating world

B) This ukiyo-e master is also known for his nature scenes like *In the Well of the Great Cave of Kanagawa* and *36 Views of Mt Fuji*.

Answer: Katsushiko Hokusai

C) This writer's novel *An Artist of the Floating World*, about the artist and night-life connoisseur Masuji Ono's struggle to find his place in life, was short-listed for the Booker Prize.

Answer: Kazuo Ishiguro

5. Chemistry rules! Or perhaps I should say *chemistry* rules! Get it? GET IT?? Identify these rules from organic chemistry FTPE, sucka.

A) This rule states that in a regioselective reaction, the most stable possible alkene product is the major product. Thus, the major product tends to be the most highly branched alkene.

Answer: Saytzeff's rule

B) This rule to determine aromaticity states that a molecule must have a cyclic pi electron cloud above and below the plane of a molecule containing $4n+2$ pi electrons.

Answer: Hückel's rule

C) This rule states that a double bond cannot be placed with one terminus at the bridgehead of a bridged ring system unless the rings are large enough to accommodate the double bond without excessive strain.

Answer: **Bredt's rule**

6. Name the following about one of the coolest Norse gods FTPE.

A) Sometimes known as the white God with golden teeth, or Gullintani, this sharp-eyed sentinel stood watch over the rainbow bridge Bifrost.

Answer: **Heimdall**

B) Name either Heimdall's trusty steed, or the feasting hall located at the center of Bifrost, whose name means "cliffs of heaven."

Answer: **Gulltop** (horse) or **Himinbjorg** (hall)

C) Heimdall founded the races of serfs, peasants and warriors when he went out walking in the form of this god, whose name simply means "ruler." It's unclear who was watching over Bifrost while he did this.

Answer: **Rig**

7. Name these works by Elizabethan dramatists not named Shakespeare FTPE.

A) This play is the source of the famous quote, "Was this the face that launched a thousand ships,/And burnt the topless towers of Ilium?" The title character is then granted a kiss from Helen and is promptly dropped into hell for all eternity.

Answer: The Tragical History of (the Life and Death of) **Doctor Faustus** (Marlowe)

B) The title character of this Thomas Dekker, subtitled "A Pleasant Comedy of the Gentle Craft," is Rowland Lacy, who disguises himself as a craftsman in order to win the hand of Rose Otley.

Answer: The **Shoemaker's Holiday**

C) Sir Politick Would-Be is one of the few characters not named for an animal in this farce, which deals with the greedy machinations of a old, but not quite dying, rich man.

Answer: **Volpone** or, the Fox (Jonson)

8. Stuff about ancient history, FTPE.

A) This empire, founded by a general of Alexander the Great had two capitals, one of which was Antioch. At its peak, it comprised almost the whole of the conquests of Alexander with the exception of Egypt.

Answer: **Seleucid**

B) In 250 B.C. led by Arsaces, these fellows freed themselves from the Seleucids and formed an empire which in the 1st century B.C. extended from the Euphrates to the Indus.

Answer: **Parthians**

C) The Parthians got conquered in 226 by this Persian dynasty led by Artaxerxes.

Answer: **Sassanids**

9. Name the following about an opera FTPE.

A) The title character of this opera is Cio-cio-san [cho cho san], a young geisha who falls in love with and marries an American naval officer named Pinkerton.

Answer: **Madama Butterfly** or **Madam Butterfly** (Puccini)

B) Pinkerton has this fair-haired child by Butterfly, but returns to his ship before he is born and leaves for three years. At the play's end Butterfly wraps him in an American flag and sends him outside so she can commit suicide.

Answer: **Trouble**

C) The two primary supporting roles in the opera are Butterfly's faithful servant, a mezzo-soprano, and the US Consul at Nagasaki, a baritone, who tries to help Butterfly because he knows Pinkerton has abandoned her. Name either character.

Answer: **Suzuki** or **Sharpless**

10. Identify these highly abundant materials in biochemistry after one clue F15P or after a second clue F5PE.

A) 15: The most abundant organic compound on Earth, it is a polymer of glucose in the Beta ring formation.

5: It is the major component of cell walls in plants.

Answer: **cellulose**

B) 15: The most abundant protein in animals, it forms strong fibers in the extra-cellular matrix. It is the only protein known to contain a large amount of hydroxyproline.

5: It is found extensively in connective tissues, tendons, ligaments, dentin, and cartilage. When placed in boiling water, it turns to gelatin.

Answer: **collagen**

11. Name these characters from the Gospels FTPE.

A) There are actually two men with this name. One figures in Luke's parable of the rich man who does not heed the word of the prophet. The other is a brother of Mary and Martha in Bethany who figures prominently in the 11th chapter of John.

Answer: Lazarus

B) This apostle, called Didymus (which means "twin"), was not with the rest of the disciples when Jesus first appeared to them through the closed door after the resurrection, and refused to believe their story until he had put his hand in Jesus' side and his finger in the holes in Jesus' hands and feet. He got his wish the next week.

Answer: Thomas

C) This servant of the high priest appears in each of the gospels, though only John mentions his name. His zeal at Jesus' arrest is quenched when Peter strikes off his ear with a sword.

Answer: Malchus

12. Name these things about Marcel Proust's masterpiece, *Remembrance of Things Past*, FTSNOP.

A) The standard English translation was done in the 1920s by one man, and then thoroughly revised by another after a new French edition was published in 1954. F5PE, name these two translators.

Answer: C.K. Scott Moncrieff, Terence Kilmartin

B) Moncrieff actually gave the novel the standard English title by which we know it today, a line taken from one of Shakespeare's sonnets. F5P, give the original French title, which translates as "In search of lost time."

Answer: À la recherche du temps perdu

C) The overture to the novel discusses the two paths leading in either direction from the narrator's childhood home, which serve as the titles of the first and third books of the series. 10 for one, 15 for both, name them.

Answer: Swann's Way or Du côté du chez Swann and The Guermites Way or Le côté de Guermites

13. Identify the following related paintings FTP each.

A) In this David painting, the title character points upward with his left hand as he grabs a bowl, which probably contains hemlock juice.

Answer: The Death of Socrates or La Morte de Socrates

B) In this Benjamin West painting, the title character expires in the midst of a crowd of concerned British soldiers and a pensive Indian.

Answer: The Death of General Wolfe

C) This Brueghel painting, located in the Prado, depicts the ravages of war, as skeletons kill, pillage, and loot a village.

Answer: The Triumph of Death or some kind of Flemish equivalent

14. Name these morons who somehow lucked into jobs covering professional sports FTPE.

A) This ESPN baseball columnist's entire life consists of finding the most useless facts he can think of and putting them in his "Useless info" column. Seriously, I'm not kidding here.

Answer: Jayson Stark

B) This Fox NFL broadcaster helpfully informed us that the referee who ignored Bill Cowher's last-second timeout in the AFC Divisional Playoffs was a professional golfer during the off-season, as if we cared. A former defensive end for the Raiders, he also periodically subjects viewers to a painfully awkward series of Radio Shack commercials with Teri Hatcher.

Answer: Howie Long

C) Not only is this guy an opinionated buffoon, he also has an incredibly irritating voice. It doesn't help that he has a nationally-syndicated sports radio show nicknamed "The Jungle" as well as a daily TV show on Fox Sports Net.

Answer: Jim Rome

15. Name these sorting algorithms FTPE.

A) This algorithm uses the namesake data structure, which is a binary tree such that the key in each node is larger than the key in either of its children.

Answer: heap sort

B) This algorithm only works when the range of the inputs is known. It takes the array and puts each element into an interval which covers one nth of the input range; then it sorts the elements in each interval and concatenates them.

Answer: bucket sort

C) This linear-time algorithm only works when the keys of the items to be sorted lie in a small fixed range and are unique. It consists of setting up one "container" for each value of the key, and then examining each element in turn and placing it in the correct container.

Answer: bin sort

18. Name the following about a statesman FTSNOP.

A) [10] This man served as Secretary of State under TR and is best-remembered for negotiating a series of treaties regarding the construction of the Panama canal.

Answer: John Hay

B) [5,5] Hay was also a talented writer; unlike, say, Disraeli, however, he actually had talent. Name his 1871 poetry collection featuring "Little Breeches" and his 1883 novel, published anonymously, about the landowner Arthur Farnham.

Answer: Pike County Ballads and The Breadwinners

C) [10] Hay also wrote non-fiction, publishing with John Nicolay a first-rate biography of this President.

Answer: Abraham Lincoln

17. Novel from chapter titles, FTPE.

A) Lena Lingard, The Pioneer Woman's Story, Cuzak's Boys

Answer: My Antonia

B) Et in Arcadia Ego, A Twitch Upon the Thread

Answer: Brideshead Revisited

C) Gabriel's Resolve, Departure of Bathsheba

Answer: Far from the Madding Crowd

18. Name the following men related to Eleanor of Aquitaine FTSNOP.

A) FTPE, the two kings she married.

Answer: Louis VII of France and Henry II of England

B) FSPE, her two sons by Henry II who ruled England in turn.

Answer: Richard I or the Lion-Hearted or Coeur de Lion and John I or Lackland

19. 30-20-10, name the country.

(30) Its largest lake is Lake Karakul, which is located at an elevation above 13,000 feet. Its Lake Sarez was formed in 1911 by a mudslide, which dammed the Murgab River.

(20) The upper courses of the Amu Darya and Syr Darya run through it, and the Panj (PYANDZH) River forms much of its southern border.

(10) Dominated by the Tien Shan and the Pamirs, this nation's mountains include Lenin and Communism Peaks.

Answer: Tajikistan

20. Recent goings on in the Ivory Coast, FTP each.

A) 2500 troops from this nation had been patrolling a cease-fire line in the Ivory Coast until Laurent Gbagbo agreed to peace terms in Marcoussis.

Answer: France

B) This former Ivorian prime minister will head the effort to oversee fair elections and disarmament of fighting parties.

Answer: Seydou Diarra

C) Members of this largest rebel faction want control of the ministries of the interior and defense, claiming that only then will they have the security to disarm.

Answer: Patriotic Movement of Ivory Coast or MPCI