



ACADEMIC COMPETITION FEDERATION

2014 ACF NATIONALS
FINALS I BY THE EDITORS

TOSSUPS

1. One character in this essay tells a long, embarrassing anecdote about covering his wife's nude body with a sombrero so a plumber can help her after she is sucked into a toilet by a powerful sewage system, which turns out to be a terrible set-up for a one-line joke. In one scene in this essay the stuck-up Mona deceitfully tells a waiter that it's her birthday even though it's actually the birthday of her tablemate Alice. An essay by Frank Conroy is quoted throughout this work to explicate an attitude dubbed "pampering." This essay ends with the narrator going into a visionary trance during the performance of a cruel hypnotist named Nigel Ellery. Its narrator attends a lecture given by Scott Peterson in the Rainbow Room and becomes infatuated with the maid Petra while staying in Cabin 1009. This essay begins with the narrator waiting at Fort Lauderdale airport to board the *Zenith*, which is renamed the *Nadir* in a footnote. It was originally published in *Harper's* as "Shipping Out." For 10 points, name this essay about a horrible seven-day cruise by David Foster Wallace.

ANSWER: "A SUPPOSEDLY FUN THING I'LL NEVER DO AGAIN"

2. Early in his career, this man surrendered while serving as battalion commander at Boland's Mills, but his death sentence was rescinded because he'd been born in America. After three years of being out of office, this politician regained power largely because a crisis over the "Mother-and-Child Scheme" toppled the Inter-Party government of John Costello. This man was the main author of a constitution that controversially guaranteed freedom of religious worship in its 44th Article and banned divorce. His outrage over the Treaty Ports led him to resign and rebel against the government of W.T. Cosgrave. As a result, he formulated his idea of "External Association" to oppose the "Treaty of 1921," which made him a rival of the faction led by Michael Collins. Under his new constitution of 1937, he created and accepted the position of "Taoiseach" [pronounced: TEE-shuck]. For 10 points, name this politician who founded the Fianna Fail party and began ruling a free government in Ireland in 1932.

ANSWER: Eamon de VALERA

3. This religious sect holds that the world originated when a deity created a white pearl, placed it in the mouth of a white dove named Enfer, and then waited forty thousand years. This sect teaches that its believers can never dwell in any place where lettuce is grown. One of their holy figures wept for 7,000 years and filled seven jars with his tears, which put out the fires of hell. Their writings include collections of hymns known as *kawls* and a central book which tells of the Seven Mysteries, the most important of whom is the Peacock Angel, a blue peacock who watches over the world at God's command. Followers of this sect perform a pilgrimage to the tomb of Sheikh Adi, and are often seen as devil worshippers. Their name seems to derive from the second caliph of the Umayyad Dynasty who succeeded Muawiyah. For 10 points, name this religious sect recognized by the Kurdish community, especially around Mosul in Iraq.

ANSWER: YAZIDI [or YEZIDI, AZIDI, ZEDI, IZDI, YAZIDISM or YAZIDIYYA]

4. The integral from which this quantity is sometimes calculated can contain infinite terms known as Van Hove singularities, which occur when the group velocity is zero. The oscillation in this quantity, and therefore all quantities that depend on it, such as magnetization, is induced by increasing the degeneracy of Landau levels via an increasing applied magnetic field in the de Haas-van Alphen effect. In the Debye model of heat conduction, this quantity for phonons is proportional to the square of the frequency, while in the Einstein model it is given as the sum of delta functions of the frequency. For electrons in a semiconductor, this quantity in three dimensions is proportional to the effective mass to the 3/2 power, times the square root of the difference between the energy and the minimum band energy. This quantity is defined as the derivative of the multiplicity function with respect to energy, and integrating the product of this function and the distribution function over all energies

gives the particle number. For 10 points, identify this quantity, which specifies the distribution of the possible occupancy as a function of energy.

ANSWER: DENSITY OF STATES

5. Note: type of piece and composer needed. In one of these pieces, a spooky theme in its scherzo is reprised with the left hand playing staccato while the right plays legato, offset half a beat. Another of these pieces contains a theme with octave intervals with frequent sforzandi, nicknamed “The Beast,” which is defeated by the other theme, “The Beauty.” The *Andante favori* movement of one of these pieces was discarded and published separately. In his series of lecture-recitals on these pieces, Andras Schiff defended the traditionally-disliked Op. 54 F major one. The second movement opens with a recitative-like arpeggio resting on B-flat major in another of these pieces, which contains three tempo changes on the first page and according to the composer’s biographer Anton Schindler was inspired by a Shakespeare play. Repeated pianissimo chords open another of these pieces, followed by a three- and four- note descent. A huge three-voice fugue in triple meter closes another of these pieces, the composer’s op. 106 in B-flat major. For 10 points, name these thirty-two pieces, such as the *Tempest*, *Waldstein*, and *Hammerklavier*, composed by Beethoven for a solo keyboard instrument.

ANSWER: BEETHOVEN’S PIANO SONATAS [prompt on PIANO SONATAS, but accept it after Beethoven has been read]

6. The American philosopher Alexander Bryan Johnson proposed an “operational” theory of this concept, which partly titles his 1854 work about this idea. In his *Mind and the World Order*, C.I. Lewis outlined four modes of this concept, which he further divided between “holophrastic” and “analytic” instantiations. Michael Dummett published two essays both asking in the title, “What is a theory of,” this concept, in which he argued against the truth-conditional theory of this idea. In a 1957 paper titled only by this concept, H.P. Grice argued that in order to fully understand this concept, the utterer’s intentions must be taken into account. Hilary Putnam’s “Twin Earth” thought experiment was intended to show that this concept “ain’t just in the head,” a position known as semantic externalism. For 10 points, identify this property of a sentence which indicates the content the speaker wishes to express, and which, used twice, completes the title of Putnam’s “Twin Earth” paper.

ANSWER: MEANING [prompt on “semantics”]

7. Women who live in this place always carry, during summer, feathered plumes the same color as their pubic hair and wear clothes corresponding to the season. Clocks are banned from this location, which prohibits any attempt to tell time or count hours. A long injunction forbidding attorneys, usurers, bigots and “fat chuffcats” from admission is inscribed on this location’s entrance gate. Fortifications called Arctic, Anatole, and Mesembrine are among the six giant towers built on the six corners of this hexagonal building, which was constructed as a reward for a man who helped win a war against King Picrochole of Lerne. In opposition to the religious vows of chastity, poverty, and obedience, this institution allows its inhabitants to wed, become rich, and live freely, but its constitution has only one clause, “Do what thou wilt.” This cloister was built along the Loire River for Friar John of the Funnels by Grandgousier’s son, the giant Gargantua. For 10 points, name this Utopian monastery from *Gargantua and Pantagruel* that embodies Rabelais’s humanist ideals.

ANSWER: Abbey of THÈLÈME [prompt on abbey]

8. This thinker wrote that Jews flourished in science because living within Christian societies made them more skeptical of established ideas in his essay “The Intellectual Preeminence of Jews in Modern Europe.” This thinker argued that ownership began when warriors in primitive societies started habitually seizing female captives in essays such as “The Beginnings of Ownership.” He wrote that the relative lateness of Germany’s industrialization enabled it to borrow knowledge from Britain without being hampered by existing obsolete infrastructure, an example of what he called “penalty of taking the lead.” This economist argued that business leaders keep prices artificially high by sabotaging production, in contrast to industrial workers such as engineers motivated by the “instinct of workmanship.” He pioneered institutional economics in books such as *Imperial Germany and the Industrial Revolution* and *The Theory of Business Enterprise*. For 10 points, name this American economist who coined the phrase “conspicuous consumption” in his book *The Theory of the Leisure Class*.

ANSWER: Thorstein Bunde VEBLÉN

9. This general once demonstrated his point by asking a great warrior to pull out the tail of an old horse, and when he failed, he showed that even a weak man can prevail by pulling one hair at a time. This general was always followed by his pet white fawn, which he claimed allowed him to speak with the goddess Diana. He suffered early defeat when his officer Julius Salinator was

slain by Caius Annius, but soon after, he won a victory at the Baetis River. Along with his lieutenant Hirtuleius, he overthrew the governor Quintus Metellus Pius, and then was joined by Marcus Perpenna, though Perpenna eventually had this man murdered at a banquet. Mithridates VI sent envoys to this man, flattering him as the “Hannibal” to his “Pyrrhus”. This man was invited by the Lusitanian peoples to lead them in revolt against the regime of Sulla, which he did for eight years, fighting against the army of Pompey. For 10 points, name this Roman general who rebelled from 80 BCE to 72 BCE by setting up a government in Hispania.

ANSWER: Quintus SERTORIUS

10. The original derivation of this result was based on a variational principle termed the “principle of least dissipation of energy.” One of this result’s first applications was to replicate the work of Bridgman and Lorentz on the Nernst and Ettinghausen effects. The original article deriving this result noted that in the cases of phenomena such as the Righi-Leduc effect and the Hall effect, resulting from the influence of Coriolis and magnetic forces, this result will fail to hold. These equations were derived using their namesake’s regression hypothesis, and provided the theoretical explanation for the relationship between the Peltier and Seebeck coefficients. For 10 points, identify these equations, often heralded as the “fourth law of thermodynamics,” which state that the kinetic coefficients for reversible non-equilibrium processes are symmetric, the development of which won the 1968 Chemistry Nobel for their Norwegian namesake.

ANSWER: Casimir-ONSAGER RECIPROCAL relations [accept either underlined answer, accept word forms of reciprocal]

11. Howard Barnstone and Eugene Aubry were hired to help finish this building after an argument with the original architect. Outside this building there is a Cor-Ten steel sculpture dedicated to Martin Luther King Jr. that was removed from Washington DC in 1967 for resembling a fragmented Washington Monument. Barnett Newman’s *Broken Obelisk* sits next to a reflecting pool created by Philip Johnson outside this one-story brick building, which was designed as an irregular octagon with four wider primary walls alternating with four shorter diagonal walls. Commissioned by the heirs to the Schlumberger oil fortune, this building sits beside the Cy Twombly Gallery and the Byzantine Fresco Chapel on the Houston campus of the Menil Collection. Its interior features eight moveable benches, a baffled skylight, and grey stucco walls specifically designed to display three triptychs and five panels that are all painted black but lightly color-hued. For 10 points, name this non-denominational religious sanctuary named for the Russian Abstract Expressionist who painted its murals.

ANSWER: ROTHKO CHAPEL

12. This character discusses a future time “when priests are more in word than matter” and “bawds and whores do churches build” in a strange oracular speech that concludes “This prophecy Merlin shall make, for I live before his time.” In his first scene this character asks, “May not an ass know when the cart draws the horse?” after singing “the hedge-sparrow fed the cuckoo so long / That it had its head bit off by its young.” This character was notably omitted in Nahum Tate’s version of the play, and he responds to another man’s silly declaration “We’ll go to supper in the morning” by delivering his final line, “and I’ll go to bed at noon,” before suddenly disappearing in scene six, Act Three. This character mistakes Tom O’Bedlam for a spirit when he is sent to investigate a hovel by his master, whom he repeatedly calls “nuncle,” after Kent leads them through a storm. Often believed to be dual-cast as Cordelia, for 10 points, name this mysterious character who serves as King Lear’s wise-cracking jester.

ANSWER: King Lear’s FOOL

13. The creator of this structure claims he built it as an homage to his “Sweet Sixteen,” perhaps a reference to the 16-year old girl Agnes Scuffs who rejected his marriage proposal before he contracted tuberculosis. This structure is home to the Moon Fountain, a pool with a six-pointed star in the middle, which sits in front of the North Wall capped by the “Thirty Ton Stone,” designed to model the King’s Chamber of Khufu’s Great Pyramid. It was originally called Rock Gate Park, referring to a nine-ton gate at this place, so perfectly balanced on its axis that it can be pushed open with one finger. Its creator claims he built this structure with a “perpetual motion machine” after his TB was cured by magnets, and its entrance features a sign that reads “You will be seeing unusual accomplishment.” Its creator Edward Leedskalnin, an immigrant from Latvia, made this structure out of oolitic limestone after buying a plot of land north of the Everglades. For 10 points, name this castle in Florida, a tourist attraction which appears to be made out of the namesake marine material.

ANSWER: CORAL CASTLE [accept “Rock Gate” or “Rock Gate Park” before it’s mentioned - also accept just CORAL after Castle is read]

14. This kingdom was split in two by the Gianti Agreement, with its eastern half led by king Pakuvwono III and the western half by Mangkubumi. The most powerful king of this polity set up a royal burial complex at Imogiri. Its first king Senopati established this state by conquering the Pajang kingdom in the north. The so-called “Old” version of this polity began when a linga was erected by king Sanjaya in 732 AD; that “old” version merged with the Sailendra kingdom. Both versions of this kingdom had its capital at Kota Gede, a booming silver town, though it also had a thriving center at Yogyakarta. The greatest ruler of this kingdom, Sultan Agung, fought against the Dutch East India Company by launching several failed sieges of Batavia. For 10 points, name this Islamic sultanate which ruled from the 1500s through the 1700s, the last great empire on Java prior to colonization.

ANSWER: MATARAM Sultanate or Kingdom [or MEDANG, the ancient kingdom is called “Old Mataram”]

15. A 1997 article by McNamara, Webb, et al., demonstrated a general method for calculating these from decision-making errors. The ideal free distribution model developed by Fretwell and Lucas is an example of this concept, and Parker and Macnair derived one of these for the scramble competition as applied to inter-brood competition. Grafen relied on this concept to construct a model of Zahavi’s handicap principle, and demonstrated that under certain assumptions, honest signaling had this property. This concept was first formalized in a paper by George Price and John Maynard Smith titled “The Logic of Animal Conflict,” and William Hamilton and Robert May argued against Vero Wynne-Edwards’ hypothesis that populations regulate by dispersing less-fit individuals by demonstrating a dispersal pattern modeled by this type of strategy. For 10 points, identify this strict subset of Nash equilibria, strategies which are those that, when adopted by a population, cannot be invaded by an alternative strategy via natural selection.

ANSWER: EVOLUTIONarily STABLE strategy [accept ESS, prompt on “Nash equilibrium”]

16. Three of these beings partook in an inauspicious footrace, after which one was gored by a bull and another was turned into an ivy plant after climbing a tree. A god once attached cymbals to his ship during a long voyage for the sole purpose of waking these beings up. One of these beings describes Europe, Asia, and Africa as mere islands in a large ocean. One source claims that rather than Athena, it was one of these beings that slew Enceladus, and posits that the rest of the Gigantes were scared away when the animals that these beings arrived with made unusual sounds. Astraeus was the chief of a legion of these beings that accompanied an expedition to India. Priapus’s rape of Lotis was prevented by the braying of a donkey belonging to one of these beings. Another of them picked up the aulos that Athena abandoned, and later lost a music contest to Apollo, resulting in his flaying. Midas received the golden touch as a reward for hospitably treating another one who drunkenly wandered into his garden. For 10 points, name these creatures, including Marsyas and Silenus, that lustily chased nymphs when they weren’t attending to Dionysus.

ANSWER: SATYRS [or SATYROI; or SATYROS]

17. Note: type of piece and artist needed. One of these works by this artist shows a woman sitting at a table whose countertop and stools are shaped like tambourines. The artist borrowed a term from Pierre Loti’s novel *Madame Chrysanthème* to title a work in this genre that centers on a young girl wearing a dress with boldly contrasting orange and blue patterns who sits in a cane chair holding an oleander. Another one shows a man who ran a painting supplies shop sitting front of a colorful background of Japanese prints showing Kabuki dancers and cherry trees. Three of these works depict the color grinder Père Tanguy, and the most famous one shows the title figure resting his elbow on a table next to purple foxgloves with a wearied look on his face that was described as “the heartbroken expression of our time.” Subjects of this group of works include a girl nicknamed *LaMousmé*, the peasant Patience Escalier, and the family of Joseph Roulin, who worked as the postmaster of Arles. For 10 points, name this group of paintings by a Dutch Post-Impressionist that includes depictions of Paul Gauguin and Dr. Gachet.

ANSWER: the PORTRAITS by Vincent VAN GOGH [prompt on “portraits”; prompt on specific answers]

18. HUVECs contain mRNA for an unusual protein of this kind that is localized to the secretory granules of immune effector cells. Alcian blue is commonly used to stain for these proteins. Swelling pressure and transparency in the cornea mostly depends on the activity of the small, leucine-rich type of these proteins. Tenascin mediates the interaction of different types of these proteins in perineuronal nets. Decorin and agrin are two of them that don’t follow the usual naming convention of these proteins. Some of these proteins sequester FGFs and TGF-beta, then present the bound molecules to their corresponding receptors. One of these proteins, at a whopping 2316 amino acids, is one of the largest macromolecules known, and is named for its ability to form 4mm long aggregates. Chondroitin sulfate is usually present in cartilage as part of one of these proteins.

These proteins contain a serine linkage between their two component parts: a core protein and one or more GAGs. For 10 points, name these heavily glycosylated proteins found in the extracellular matrix.

ANSWER: PROTEOGLYCANS

19. One character in this novel fixates on the absurdity of an apartment that has two lamps in the lavatory and none in the stairs where people actually bump into one another. At a job interview, the protagonist of this novel bullshits his way through a conversation about Graham Greene's *The Heart of the Matter*, and later storms out of a meeting yelling "you may cut off my two legs if you find them here again." At the age of eleven, the protagonist of this novel feels guilty about participating in wartime propaganda, so he writes a naively apologetic letter to Hitler. In this novel, the attractive secretary Marie Tomlinson spies on the main character for his boss Mr. Green, and the protagonist first meets his girlfriend on a boat ride returning home from England, where he was studying law on a scholarship. This novel opens with the protagonist's trial for bribery before backtracking to show him becoming progressively overwhelmed by payments for both his loan to the Progressive Union and an abortion for his low-caste *osu* lover, Clara. For 10 points, name this novel about the corrupt Igbo civil servant Obi Okonkwo, Achebe's sequel to *Things Fall Apart*.

ANSWER: NO LONGER AT EASE

20. The youngest man to ever hold this political office allied with Chief Justice David Terry to try to overcome a crisis that started under his predecessor John McDougall. A period of Republican domination in this office ended when Frank Merriam was defeated by noted atheist Culbert Olson. Its fourth holder J. Neely Johnson was a member of the Know-Nothing Party. Merriam defeated a candidate for this office who wrote the book *How I Ended Poverty: A True Story of the Future*, though after he lost his bid for this office, he wrote a book subtitled "How I Got Licked." That candidate ran on the EPIC platform, which was based on his idea for Helicon Hall. This office was also held by the man who led the Irreconcilables opposed to Woodrow Wilson, Hiram Johnson, and a man who held this office while running for vice president with Thomas Dewey in 1948. For 10 points, name this office held from 1943 to 1953 by Earl Warren, and more recently by such men as Jerry Brown, his father Pat Brown, Pete Wilson, and Ronald Reagan.

ANSWER: GOVERNOR OF CALIFORNIA [the failed candidate is Upton Sinclair]

TIEBREAKER

21. A philosophical article by Fred Feldman distinguished between the "propositional" and the "sensory" forms of this concept, and was titled "Two Questions about" this phenomenon. In section 84 of *A Theory of Justice*, John Rawls argues that this concept cannot constitute the single rational end that is intended to guide deliberations. In his *Theory of Moral Sentiments*, Adam Smith argued that nothing generates this phenomenon quite like observing in others "a fellowfeeling with all the emotions of our own breast." Henry Sidgwick argued that the only thing that the various instances of this phenomenon had in common was that they were all desirable, and thus proposed to define a measure of this phenomenon in terms of individual preferences in his *The Methods of Ethics*. Robert Nozick's argument against utilitarianism relied on our purported hesitation to plug ourselves into an "experience machine" that produced this phenomenon in unlimited amounts. Increasing the prevalence of this phenomenon was the basic idea behind Bentham's felicific calculus. For 10 points, identify this human emotion promoted by hedonistic philosophies.

ANSWER: PLEASURE

BONUSES

1. He created a golden chain long enough to stretch from heaven to earth, and then he climbed down the chain, carrying with him a bag containing a snail shell, a white hen, a black cat, and a palm nut. For 10 points each:

[10] Name this orisha called the “King of the White Cloth” who used those items to create land on Earth, and then shaped clay into humans, which had life blown into them by the supreme god Olorun.

ANSWER: OBATALA [or Obbatalla]

[10] The place where Obatala landed and created the first humans was this ancient Nigerian city, which thus became the first village, from which all Yoruban culture spread.

ANSWER: IFE [or IFE-IFE, pron. “ee-FAY”]

[10] Olorun sends this creature down to check on the progress of Obatala. In Bantu religions, this creature is sent by God to tell humans they will live forever, but a lizard makes it to Earth faster and tells humans they will die. God then gave this creature the ability to change its color to match its environment, so it can hide on Earth.

ANSWER: CHAMELEON

2. This disease is often diagnosed according to the Rotterdam criteria. For 10 points each:

[10] Name this disease in which excessive androgen production in affected women can cause hirsutism and acne, undesirable side effects which are combated by taking oral contraceptives.

ANSWER: POLYCYSTIC OVARY SYNDROME [or PCOS]

[10] The ratio of this endocrine hormone to FSH is elevated in women with polycystic ovary syndrome. It aids the development of the corpus luteum and surges during ovulation.

ANSWER: LH [or LUTEINIZING HORMONE]

[10] Women with the disease do poorly on this test, in which patients are given a sweet drink and have their blood taken every half hour to check blood concentration of the namesake substance. A similar test is given to pregnant women to screen for gestational diabetes.

ANSWER: oral GLUCOSE TOLERANCE test [or OGTT]

3. Answer the following about Lithuanian politicians of the early 20th century, for 10 points each.

[10] In December of 1917, this son of a Polish aristocrat born in Vilnius was appointed by Lenin to be Commissar for Internal Affairs and the head of Cheka. He employed Yakov Peters as his deputy and remained chief of Cheka’s operations even after it was converted into the GPU, a branch of the NKVD.

ANSWER: Felix Edmundovich DZERZHINSKY [or DHERZINSKY]

[10] Vincas Mickevicius-Kapsukas was the leader of the Lithuanian Soviet Socialist Republic starting in 1918. That republic was chased out of Vilnius by the Polish army, and had to set up a base in this current capital of Belarus, before it was chased out of there too.

ANSWER: MINSK

[10] This publisher of the paper *Lithuania’s Echo* became the first president of the Republic of Lithuania in 1919. He returned to power a second time in a coup in 1926, and ran a one-party authoritarian state in Lithuania from 1926 to 1940, when he tried and failed to oppose the invading Soviet army.

ANSWER: Antanas SMETONA

4. Answer the following about experimental jazz, for 10 points each.

[10] This composer included a DJ scratching on a turntable in his influential crossover hit “Rockit.” He pioneered jazz-funk in his band the Head Hunters.

ANSWER: Herbie HANCOCK

[10] Albert Ayler helped pioneer this type of jazz in the 1950s that was based on improvisation instead of established harmonies or chords. It took its name from an album by Ornette Coleman, who pioneered it in albums such as *The Shape of Jazz to Come*.

ANSWER: FREE jazz

[10] This saxophonist combined free jazz and traditional Jewish melodies in his ensemble Masada. He reworked music by Ennio Morricone in his album *The Big Gundown* and led the avant-garde band Naked City.

ANSWER: John ZORN

5. Lafcadio Hearn relates that this woman spared the woodcutter Minokichi despite him committing the cardinal sin of telling his future wife about this woman. For 10 points each:

[10] Name this succubus from Japanese folklore, who uses her frost breath to finish off people who were unlucky enough to get trapped in snowstorms in the first place.

ANSWER: YUKI-ONNA [accept any of the following: YUKI-MUSUME, YUKI-ONAGO, YUKIJORO, YUKI ANESA, YUKI-OMBA, YUKINBA, YUKIFURI-BABA; prompt on “snow girl” and any number of sexist synonyms]

[10] Yuki-onna belongs to a subset of Japanese spirits, or yokai, that lack these body parts, a common trait of Japanese ghosts. Consequently, kabuki actors depicting them had to use extra-long kimonos or pulleys.

ANSWER: FEET [or LEGS]

[10] This other species of yokai hangs out in rivers and ponds, and sucks out the souls of its victims through their rectums. They have scaly skin, webbed hands, and a permanently-wet cranial plate.

ANSWER: KAPPA [or KAWATARO; or KOMAHIKI; or KAWAKO; or HYOSUBE]

6. This character gives a dazzling speech on the history of fortifications in his first appearance in Antwerp’s Central Station, and the narrator later learns he is an art history professor obsessed with monumental public buildings. For 10 points each:

[10] Name this title character of a 2001 novel who was adopted by a Welsh minister’s family, but goes to Prague to investigate his parents’ fate under Nazi rule after having an epiphany in the Ladies’ Waiting Room of Liverpool Station.

ANSWER: Jacques AUSTERLITZ

[10] Jacques Austerlitz is the title character of a novel by this German author who is known for using black-and-white photographs in his novels such as *The Rings of Saturn* and *The Emigrants*.

ANSWER: Winfrid Georg SEBALD

[10] One notable part of *The Rings of Saturn* concerns searching for the skull of this 17th-century English writer in the medical museum of the Norfolk and Norwich Hospital.

ANSWER: Sir Thomas BROWNE

7. In a classic example of this technique, 1-chlorooctane and aqueous sodium cyanide fully react in 2-3 hours, instead of doing nothing together for days, if a quaternary ammonium salt is added. For 10 points each:

[10] Name this technique that speeds up reactions by bringing reactants from the organic to the aqueous layer or vice versa.

ANSWER: PHASE-TRANSFER CATALYSIS [accept word forms; accept PTC; prompt on partial answer]

[10] Phase transfer catalyses are difficult to perform in reactions with this ion, a basic anion whose concentration is often expressed as 14 minus the pH.

ANSWER: HYDROXYL ion [or HYDROXIDE ion; or OH-]

[10] The illustrious Polish chemist Mieczyslaw Makosza elucidated this PTC mechanism, in which an organic acid is deprotonated at the boundary between the aqueous and organic layers, before being brought into the organic phase.

ANSWER: INTERFACIAL mechanism

8. This theory aims to prevent crime, especially in high rise apartment buildings, by using an environmental design that gives community residents a sense of personal responsibility for their own neighborhood, such as by installing resident surveillance systems. For 10 points each:

[10] Name this criminological theory formulated by architect Oscar Newman in 1972 in a namesake book, which says that urban planners must design cities to create the eponymous crime-free environment.

ANSWER: DEFENSIBLE SPACE theory

[10] Defensible space is tied to this urban planning movement that sprung up in cities like Detroit and Cleveland around 1900 together with the Garden City movement in Britain. The McMillan Plan for Washington DC is part of this movement, which stresses creating parks and grandiose governmental buildings to install civic virtue in people.

ANSWER: the CITY BEAUTIFUL movement

[10] The inspiration and showcase of the City Beautiful movement was this 1893 event, where a grand scale White City filled with streetlights was created in Chicago. This event also featured the original Ferris Wheel.

ANSWER: World’s COLUMBIAN EXPOSITION [or World’s Fair: Columbian Exposition or Chicago’s WORLD’S FAIR]

9. Hesychius of Alexandria writes that these persons were never able to acquire full citizenship, and Thucydides writes that a notable colony of them was stationed at Lepreon. For 10 points each:

[10] Give this term which was used in Sparta to describe helots who were awarded their freedom, usually as a result of serving as hoplites in the Spartan army.

ANSWER: NEODAMODEIS [neo-damo-DICE, or neodamodes]

[10] The term neodamodeis may have originated to refer to those freed after taking part in the expedition of this Spartan commander. This great general of the Archidamian War routed the Athenian general Cleon at the Battle of Amphipolis, though both he and Cleon died in the process.

ANSWER: BRASIDAS

[10] This Greek historian writes that Agesilaus and Lysander took a force of two thousand Neodamodeis on the expedition to Asia in his *Hellenica*. He also wrote about the Persian expedition of Cyrus in his *Anabasis*.

ANSWER: XENOPHON [Xenophon of Athens]

10. Two of these works named for the same English Lord are given the appellations Small Cowper and Large Cowper, while the “Sistine” one features two cherubs that often appear on postcards. For 10 points each:

[10] Name this group of workson the same subject by the same artist that includes paintings titled after the Tempi, Alba, and Aldobrandini families.

ANSWER: MADONNAS BY RAPHAEL Sanzio [prompt on partial answer; prompt on VIRGINS by Raphael; prompt on SANZIO; accept MADONNAS by RAFFAELLO]

[10] Raphael painted this Madonna for the marriage of Lorenzo Nasi. It takes its name from the animal symbolizing Christ’s Passion that baby Jesus strokes in the foreground.

ANSWER: MADONNA OF THE GOLDFINCH [or MADONNA DEL CARDELLINO]

[10] Raphael’s 1507 painting of the Madonna and Child with St. John the Baptist at the Louvre is best known by this name. This work is usually considered the highpoint of Renaissance Madonnas and was completed by Ridolfo del Ghirlandaio after Raphael left it unfinished.

ANSWER: La BELLE JARDINIERE

11. This poet repeated the image of “a Jew in a newspaper hat / that dances weeping down the ward” in a poem that ends every stanza by describing the “man that lies in the house of Bedlam.” For 10 points each:

[10] Name this poet who based “Visits to St. Elizabeth” on trips to Ezra Pound’s asylum. This poet began onework, “Oh, but it is dirty!” and ended another poem with a stanza declaring, “*too pretty, dreamlike mimicry!*”

ANSWER: Elizabeth BISHOP

[10] Elizabeth Bishop wrote this villanelle whose speaker uses four different lines ending with the word “disaster” and repeats a refrain that asserts “losing isn’t hard to master.”

ANSWER: “ONE ART”

[10] In this Bishop poemthe speaker recalls a “sensation of falling off the round, turning world” as a six-year old girl while she was looking at the cover of *National Geographic*. This poem is set during the speaker’s visit to the dentist’s office with her aunt Consuelo in Worcester, Massachusetts.

ANSWER: “IN THE WAITING ROOM”

12. Cooper’s method is an algorithm to eliminate these symbols from formulas and can be used to show the decidability of Pressburger arithmetic. For 10 points each:

[10] Identify these symbols which are used to extend the propositional calculus to include concepts like “for each” and “there exists.”

ANSWER: QUANTIFIERS [accept UNIVERSAL and EXISTENTIALQUANTIFIERS]

[10] Quantification is allowed over properties as well as over individual variable terms in this type of logical system.

ANSWER: SECOND ORDER logic

[10] It can be shown that second order logic, unlike first order logic, does not have this property, the converse of soundness, with respect to standard model-theoretic semantics, though it does have it with respect to Henkin semantics. This property means that every sentence that is a tautological consequence of the premises is deducible from those premises.

ANSWER: COMPLETENESS

13. For much of his life, this composer entertained Sunday congregations at Sainte-Clotilde by playing improvisations on the organ. For 10 points each:

[10] Name this composer who rocked the musical world with a beautiful melody played by an English horn over harps and strings in the allegretto of his *Symphony in D minor*.

ANSWER: Cesar FRANCK

[10] An opening oboe cantilena is brought back at the end of this most famous organ piece by Franck, in which a powerful “Lent” section bridges the first two of the three namesake parts.

ANSWER: “PRELUDE, FUGUE, AND VARIATION,” Op. 18.

[10] This composer stormed off after premiering Franck’s *Piano Quintet*, jealous that he had been rebuffed by Franck’s close female friend Augusta Holmes. His most famous symphony is his third, which features the pipe organ.

ANSWER: (Charles)-Camille SAINT-SAENS

14. This essay praises Carnap’s *The Logical Structure of the World* for its development of the “conceptual” side of the title discipline, and argues that the “observation sentence” is key to the relationship between concept and doctrine. For 10 points each:

[10] Identify this philosophical paper which argues that the title branch of philosophy should be seen “as a chapter of psychology... and hence of... science.”

ANSWER: “EPISTEMOLOGY NATURALIZED”

[10] “Epistemology Naturalized” was written by this Harvard philosopher, who argued against the analytic-synthetic distinction in “Two Dogmas of Empiricism.”

ANSWER: Willard Van Orman QUINE

[10] In “Epistemology Naturalized,” Quine argues that the Vienna Circle did not take this concept seriously enough; according to Quine, despite Duhem’s observation that “theoretical sentences have their evidence... as larger blocks of theory,” we should not abandon this concept. This concept holds that a sentence has meaning only if the proposition it expressed was analytic or could be empirically confirmed.

ANSWER: VERIFICATION principle

15. The literary style associated with this concept is juxtaposed against a style exemplified by Dante that tries to give language physical solidity. For 10 points each:

[10] Name this concept that a novelist outlined as the guiding principle of his artistic method in the first of his *Six Memos for the Next Millennium*, which he defined as “the subtraction of weight.”

ANSWER: LIGHTNESS

[10] This Italian author discussed “lightness” in the first of his Norton Lectures, which he died before delivering. He illustrated “lightness” in the stories from his collection *Cosmicomics*.

ANSWER: Italo CALVINO

[10] Calvino describes lightness by quoting this poet’s aphorism, “One should be light like a bird, and not like a feather”. This poet collected his sayings in his diaries titled the *Cahiers*, and went through a nineteen-year period of “silence” when he did not publish any poetry.

ANSWER: Paul VALERY

16. Answer the following about the uppity Mapuche tribes of Chile, for 10 points each.

[10] The long-term opposition to Spanish conquest by the Mapuche is referred to as this war, which included battles at Caupolicán and Galvarino. It began when conquistador Pedro de Valdivia attempted to invade a namesake area and was killed.

ANSWER: ARAUCO Wars

[10] This page boy became the greatest chief of the Mapuche during the Arauco War, leading them to victories at Tucapel Fort and the siege of Concepción. His name was later used by Venezuelan revolutionary Francisco de Miranda as the name for a secret society of “rational knights” that worked for independence.

ANSWER: LAUTARO

[10] During the wars, the Mapuche destroyed this many Spanish cities south of the Bio-Bio River, the same as the number of gold-rich cities of Cibola which were futilely sought by Coronado.

ANSWER: SEVEN

17. The Rayleigh-Benard form of this process occurs in a horizontal liquid under the influence of gravity that is heated from

below. For 10 points each:

[10] Identify this process which, in the Rayleigh-Benard situation, results in the formation of closed cells that perform it. This process is the transfer of heat by means of fluid flow.

ANSWER: CONVECTION

[10] During Rayleigh-Benard convection, this quantity undergoes a branching at a critical value of the Rayleigh number. This dimensionless quantity represents the ratio of heat transfer via conduction to the heat transfer via convection.

ANSWER: NUSSELT number

[10] Convection flow occurs at liquid interfaces as a result of the Marangoni effect, which arises because this quantity is dependent on temperature.

ANSWER: SURFACE TENSION [accept SURFACE STRESS]

18. Name these Dickens antagonists, for 10 points each.

[10] This convict was the man who left Miss Havisham at the altar in a scheme to steal her inheritance, and he ultimately drowns in the Thames while wrestling Abel Magwitch who he got arrested.

ANSWER: COMPEYSON [or COMPEY]

[10] This one-eyed character is deported to Australia for trying to hide Madeline Bray's will as revenge against Nicholas Nickleby for rebelling against his harsh regime as schoolmaster of Dotheboys Hall.

ANSWER: Wackford SQUEERS

[10] This servant from *Our Mutual Friend* gets the nickname "The Golden Dustman" after he inherits his master's fortune through a legal technicality, but he becomes a miser under the advice of the evil Silas Wegg. Ultimately he gives the fortune to its rightful heir, Bella Wilfer.

ANSWER: NICODEMUS Boffin

19. Answer the following about the "back-to-the-land" movement, for 10 points each.

[10] This man's 1907 book *Three Acres and Liberty* is credited with launching the "back-to-the-land movement" in the United States. This Henry George disciple founded the New York Tax Reform Association, and the community of Free Acres in New Jersey.

ANSWER: Bolton HALL

[10] Charles Pack, a proponent of the movement, founded a commission in 1917 to encourage people to grow tracts of vegetables and fruits in their own backyard or public parks, in order to bolster the public food supply. Those tracts were known by this patriotic term.

ANSWER: VICTORY GARDENS [or WAR GARDENS or FOOD GARDENS FOR DEFENSE]

[10] The movement was torn over this 1942 Supreme Court case, which held that the Interstate Commerce Clause allowed the namesake Secretary of Agriculture to penalize the growing of wheat in excess of national quotas, even though the respondent, an Ohio farmer, was only growing the wheat for his personal consumption.

ANSWER: WICKARD V. FILBURN [both parts required, accept either order, prompt on partial answers]

20. Recent studies of these programs at scale in Tulsa and Boston found evidence of sustained cognitive gains. For 10 points each:

[10] Name this type of program which many states have strengthened in recent years. Longitudinal studies of the Perry and Abecedarian projects showed dramatically improved outcomes for people in these programs.

ANSWER: PRE-KINDERGARTEN [or PRESCHOOL; or EARLY CHILD EDUCATION]

[10] The research on early child education inspired this mayor of New York City to propose a universal pre-Kindergarten program. This Democrat succeeded longtime mayor Michael Bloomberg.

ANSWER: Bill DE BLASIO

[10] This University of Chicago economist found that every dollar invested in early education can save up to seven dollars later on in social costs. He also developed a namesake two-stage method to correct for selection bias.

ANSWER: James HECKMAN

EXTRA BONUS

21. This novel's protagonist concludes that the "only fate of man is survival," soon after he jams a bayonet into the heart of a wounded Indian. For 10 points each:

[10] Name this novel, most of which is a letter addressed to Mary Waldegrave, whose title character realizes that Clithero was not responsible for the death of Mary's brother, and that he had been sleepwalking the whole time.

ANSWER: EDGAR HUNTLY, Or, Memoirs of a Sleepwalker

[10] This early American gothic novelist wrote *Edgar Huntly*, and revealed that the bilquist Carwin was responsible for a whole host of supernatural occurrences in his novel *Wieland*.

ANSWER: Charles Brockden BROWN

[10] This novelist incorporated Gothic elements in his account of the shittiness of life in Philadelphia, titled *The Quaker City*, which was the first muckraking novel and the best-selling American novel before *Uncle Tom's Cabin*.

ANSWER: George LIPPARD