



# ACADEMIC COMPETITION FEDERATION

2014 ACF NATIONALS  
PACKET BY YALE

## TOSSUPS

1. It's not sulfur, but in a poorly-understood mechanism, this element strongly poisons low temperature shift catalysts. In a common industrial process, this element continually oxidizes ammonia and amino acids, until the breakpoint is reached, past which its residual is freely available. One atom of this element appears in a protecting group which is removed by piperidine in a manner that does not disrupt the peptide-resin linker, in solid-phase peptide synthesis. Carbon-13 NMR uses a deuterated compound primarily consisting of this element as a solvent. Two atoms of this element flank a carbonyl group in phosgene, and it is present in both compounds that make up Lucas's reagent. Among elements of its group, it has the second-highest reactivity in a free-radical transformation in which it is added to alkanes. The most commonly-used "thionyl" compound replaces alcohols with this element, four atoms of which are present in a noted tetrahedral compound abbreviated "carbon tet." For 10 points, name this halogen, which along with fluorine is present in CFCs.

ANSWER: CHLORINE

2. A study of this era's marriage institutions was written by Berkeley professor William McCullough, whose wife Helen translated texts from this period. The verbal exclamation "*aware*" [ah-wah-reh], used to indicate a sad sensibility, originated in this period. The *Shokuyuki* recounts a violent disruption of this era. A group of police commissioners called *kebiishi* began patrolling during this period. Starting in this period, proprietors called *ryoke* would hand money to government inspectors to preserve the tax-free status of their *shoen* estates. During this period, abdicated officials would occupy the office of *in-no-chō* under a system of *insei*, or "cloister government." Its end was hastened after Go-Shirakawa failed to prevent a clan feud from erupting at Uji and the naval battle of Dan-no-Ura, where Taira warriors lost. For 10 points, name this era dominated by the Fujiwara clan, and ended by the Genpei war, which began after Japan's capital moved from Nara to the city now called Kyoto in 794.

ANSWER: HEIAN period

3. In this play's final scene, the main character is infuriated when a Christian woman tells him he will only find salvation through "the blood of the Lamb", leading him to slice his chest with a knife and cover his face in blood. In one subplot, Reuben Mercer admits he broke a promise to his dying friend Eugene and sold his pigeons to a man who killed them in a ritual. One character in this play claims a "shiny man" gave him the power to perform the "Binding Song" that joins two people. Rutherford Selig is called the "People Finder" and is hired to locate a man's missing wife Martha Pentecost. In this play's opening scene, Seth Holly rents a room in his boardinghouse to the protagonist and his daughter Zonia and complains about Bynum Walker's bloody voodoo rituals. For 10 points, name this play whose title comes from a song about a mythical slave-trader who enslaved Herald Loomis for seven years, the second play in August Wilson's Pittsburgh Cycle.

ANSWER: JOE TURNER'S COME AND GONE

4. A character in this film exclaims that Hemingway's writing was the "premature ejaculate of the 20th century!" Its title character reminisces about girls sitting on straw sacks, who were impossible to console in a camp at Gurs. During its opening, a man walks down a road at nighttime and drops a flashlight as he is shoved into a truck. Near its end, this film's protagonist ends a lecture with the phrase "when the chips are down," which she had earlier misspoken as "when the ships are down." A stroke leaves Heinrich Blucher bedridden in this film, whose supporting characters include an assistant named Lotte and the Zionist Kurt Blumenfeld. The editorial board of the *New Yorker* complains that Americans can't handle too much philosophy in this film, which is interspersed with real footage of Gideon Hausner talking to a man in a glass box, and also stars Klaus Pohl as the protagonist's lover Martin Heidegger. For 10 points, name this 2013 biopic by Marguerite von Trotta, in which the

title political thinker goes to Israel to report on the Eichmann trial.

ANSWER: HANNAH ARENDT

5. This religious group within a specific nation includes experts known as *kyai*. This national religious group came about via a possibly-nonexistent missionary named Sunan Kalijaga. This faith tradition is taught to children in low-cost boarding schools known as *pesantren*. This national faith includes the traditionalist *santri*, who reject the syncretic tendencies of *abangan* and the even more syncretic ancestor worship of *kebatinan*. Members of this national faith group make pilgrimage to the graves of nine saint-like figures in Banten. This is the largest national group within the Shafi'i *madhab* for whom the *qibla* direction points northwest. These believers were compared to their Moroccan counterparts in a Clifford Geertz study about their underlying religion *Observed*. In their home country, radical members of this majority religious group planned a failed 1985 bombing of Borobudur. For 10 points, name this faith based in a Southeast Asian nation which includes islands like Sumatra and Java.

ANSWER: INDONESIAN MUSLIMS [or INDONESIAN ISLAM; accept JAVANESE ISLAM or JAVANESE MUSLIMS to be nice; accept any answer indicating SUNNIS in INDONESIA; prompt on partial answers; prompt on “folk Islam”]

6. In one of this author's novels, the protagonist gazes into the Orvieto fresco until the figures in the painting turn and begin to speak to him, and another character says “Listen. I want you to hear my story. This is my story,” all spelled backwards. In that novel by him, a series of castaways with six toes on each foot and a red cross on the shoulder hand the main character green bottles containing manuscripts. This author used all three narrative points of view in a book whose main character rapes, but then falls in love with, Regina, and schemes to get his hands on the properties of a dying landowner by marrying his daughter Catalina. He wrote a complicated novel that shifts from Paris in 1999 to the Spanish court of Philip II, and penned a book in which a business tycoon recalls the Mexican Revolution and other incidents in flashbacks. For 10 points, name this Mexican author of *Terra Nostra* and *The Death of Artemio Cruz*.

ANSWER: Carlos FUENTES [Macias]

7. Before these events took place, a participant argued that the ZOMO's attitude caused some street disturbances near St. Brigid's Church. A letter written by one participant in these events noted that Church representatives like Cardinal Glemp would be present in the “miscellaneous” category and proposed a Council for National Understanding. During the last one of these events, the televised feed was paused behind a static image while music played for three hours after the speaking order was challenged by the leader of the Alliance of Trade Unions. These events took place after a massive wave of strikes, including one at the July Manifesto coal mine in Upper Silesia. Culminating in an agreement which opened all Senate seats and thirty-five percent of the Sejm (“saem”) to free election, they resulted in a series of constitutional amendments called the April Novelization. One of those curtailed the power of Party Secretary General Jaruzelski. For 10 points, identify these 1989 negotiations between the coalition government faction and Solidarity in Communist Poland.

ANSWER: Polish ROUND TABLE TALKS [accept “TALKS between Polish COMMUNISTS and SOLIDARITY” before mention]

8. This quantity dropped precipitously during the early Cretaceous as part of the Cenomanian-Turonian event, during which the “shadow zone”, in which this quantity is minimal, expanded. That event was also accompanied by the formation of black shale. Early-Proterozoic disruption of the chemocline, below which this quantity was low, may have caused massive releases of hydrogen sulfide to the atmosphere. When this property of a body of water is very low, bacterial denitrification is likely to begin. This quantity is very low in monolimnions, since those layers do not convectively mix with the upper layers of a meromictic lake. By titrating a sample with a manganese(II) salt, iodide, and base, one can perform the Winkler test to measure this quantity. Since this quantity is very low in the deepest parts of the Baltic Sea, that region is classified as a dead zone. Algal blooms cause a sharp decline in this substance's concentration, leading to fish kills, since fish are aerobes. For 10 points, the concentration of what substance, necessary for aerobic respiration, is low in anoxic waters?

ANSWER: the concentration of dissolved OXYGEN in a body of water [be amazingly generous and accept anything that refers to an amount of OXYGEN; accept OXYGENATION]

9. At one point in this symphony's first movement, two trumpets play a double-dotted A Major scale fragment before playing the high notes “E G-Sharp B” over the chords “A Major, E Major add6 (“add-six”), B Major add6.” The recapitulation of this symphony's slow movement begins after a soft, slow glissando in the violins from a high D to a C two octaves below. The

scherzo of this symphony opens with the horns playing a solo that end with the notes “B C-Sharp D F-Sharp B,” followed by both a landler and a waltz. This symphony’s fourth movement is played only by the strings and harp. This symphony, which begins in C-Sharp Minor and ends in D Major, features an very difficult opening trumpet solo in its first movement funeral march. Its fourth movement *Adagietto* may have been intended as a love song to the composer’s new wife Alma. For 10 points, name this Mahler symphony which immediately precedes his *Tragic* symphony.

ANSWER: Gustav MAHLER’s Symphony No. 5 [accept equivalents like MAHLER’s FIFTH; just FIFTH or 5 needed after “Mahler” is read, but prompt on it before]

10. The Heston model generalizes an earlier model by allowing this quantity to become stochastic rather than constant. Arbitrage on this quantity is implemented via strategies that use a delta-neutral portfolio consisting of an option and its underlying asset. The leverage effect manifests as an inverse correlation between asset returns and this quantity. In one model, the instantaneous return is given as this quantity times the differential of a Brownian variable, plus drift times differential time; that model exhibits geometric Brownian motion. The sensitivity of an instrument’s price to this parameter is denoted by the letter *nu* and is called “vega”. In equity markets, this quantity is minimized “at the money.” Hence, graphs of this quantity versus strike price form a “smile.” Financial beta is also called the “correlated relative” type of this quantity. The VIX is a measure of this property for options on the S&P 500. Like a standard deviation, this quantity, denoted “sigma”, is the square root of the return variance in the Black-Scholes model. For 10 points, give this name for a number of related measures of the variability in the price of a financial instrument over time.

ANSWER: VOLATILITY [or word forms; accept IMPLIED VOLATILITY]

11. The gene encoding loricrin, a major protein component of a cell type in this organ, is mutated in Vohwinkel’s syndrome. Recovery from a transplant of this human organ entails plasmatic imbibition followed by inosculation. A micrographic surgical technique consisting of alternating surgical and pathological steps, called Mohs surgery, is used to treat cancers of this organ, one type of which originates in the trichoblast. Some disorders of this organ exhibit the Koebner phenomenon, in which lesions arise at sites of injury; in other situations, lesions of this organ can undergo processes like lichenification, induration, and maceration. This organ, which is the target of procedures like cryosurgery and electrodesiccation, is also where the Mantoux test for tuberculosis is performed. Though less common than basal cell carcinomas, melanomas are more common in this organ than in any other, and are primarily caused by ultraviolet radiation. For 10 points, name this component of the integumentary system that is inflamed in dermatitis.

ANSWER: SKIN [prompt on “epithelium” n.b. under no circumstances should you look up Vohwinkel’s syndrome]

12. This architect designed a building with a hose-drying tower, inscribed with a gold No. 4, in the middle separating the equipment and living quarters, so the whole structure looks like an overturned number four. One building by this architect has a window shaped like a 1930s radio speaker and features a huge number nine beside the front door. This architect created Fire Station No. 4 in Columbus, Indiana while another design puts a basket-weave pattern on a flat-roofed museum addition and includes a wooden “ironic column” inside. This architect of the Lieb House argued for “ugly and ordinary architecture” in a work that divided buildings into “ducks” and “decorated sheds.” He created a house that exposes its chimney with a long split gable, and he bunched pilasters to create a concertina-like effect on the façade of a museum addition co-designed with his wife Denise Scott Brown. This architect of the Sainsbury Wing of the British National Gallery built a powder-blue house in Philadelphia for his mother Vanna. For 10 points, name this postmodern architect who designed the Seattle Art Museum and quipped “Less is a bore.”

ANSWER: Robert Charles VENTURI Jr.

13. A ruler of this polity besieged the city Jaén three times, finally succeeding with the help of Paio Peres Correia. This polity agreed on its northern boundary with the treaty of Almazora. A law code from this state, the *Fuero Juzgo*, mainly consisted of a translation of the *Liber Iudiciorum*. One prince from this polity killed the son of Guzmán the Good while besieging the Castle of Tarifa during a rebellion against this polity’s king Sancho the Brave. This polity fought with Portugal to win the Battle of Río Salado against the Marinids. Henry of Trastámara took over this polity after the death of its ruler Peter the Cruel in its civil war. One ruler of this polity, who wrote the songbook *Cantigas de Santa Maria* and introduced the *Siete Partidas* law code, was Alfonso the Wise. This state formed when Ferdinand III became ruler of both its namesake kingdom and León. For 10 points, name this state whose queen Isabella married Ferdinand II of Aragon.

ANSWER: Crown of CASTILE

14. The protagonist of this novel looks so similar to the Christ figure in the painting *Jesus Walking on the Waters* by Karl Macrowitch that his friends make him stand side-by-side with it. The protagonist is annoyed to attend a viewing party for that painting at the newly-purchased mansion of the Prince de Carlsbourg hosted by his old boss, who made fifty million in six weeks while he only made \$500, 000 from the Moroccan debt insider trading. The main character of this novel sleeps with the prostitute Rachel after resigning his job at the Northern Railway, and spies on his wife cheating with the Minister of Foreign Affairs, Laroche-Mathieu, and then marries Suzanne. The title character of this novel receives his nickname from Laurine, his lover Madame de Marelle's daughter, and he gets a job as a journalist at *La Vie Française* with the help of his friend Charles Forestier after having dinner with the newspaper's owner Monsieur Walter. For 10 points, name this novel about the womanizer Georges Duroy by Guy de Maupassant.

ANSWER: BEL-AMI

15. The first public discussion between these two thinkers was organized by Giovanna Borradori. These two men collaborated on a letter warning that "the avant-gardist core of Europe must not wall itself off into a new Small Europe," which was partly named for the protest-heavy date February 15 and drew on previous work from one of them about the "postnational constellation." One of these thinkers wrote a 1985 "Excursus" accusing the other of "leveling the genre distinction between philosophy and literature," and of having no framework to distinguish reason from unreason. After both of these non-Americans were in New York on 9/11, they collaborated on *Philosophy in a Time of Terror*. These two academics wrote a 2003 "Plea for a Common Foreign Policy" calling for a unified Europe against George W. Bush, and eventually a "global public sphere" free of Eurocentric privileging. For 10 points, name these two philosophers, a Frenchman who took an "ethical turn" after writing *Specters of Marx*, and a German who warmed up to that deconstructionist after blaming 9/11 on a failure of his theory of communicative action.

ANSWER: Jacques DERRIDA and Jürgen HABERMAS

16. These devices are used to balance Kerr nonlinearities with dispersion nonlinearities when used with a Raman emitter to produce a namesake soliton laser. The mandrel wrapping technique is used to attenuate high-order modes in these devices. Impurities or geometrical defects in these devices result in cladding modes that do not decay exponentially. These devices are typically manufactured in step-index and gradient-index variants, and they can be doped to create a W-shaped refractive index profile that is useful as a gain medium in lasers. Charles Kao's pioneering work in telecommunications using these devices won him part of the 2009 Nobel Prize. Photons entering these waveguides must lie within the acceptance cone, whose opening angle is given by Snell's law, since these devices confine light by total internal reflection. For 10 points, name these cylindrical structures consisting of a glass core surrounded by a cladding, that permit the transmission of light over long distances with minimal loss.

ANSWER: OPTICAL FIBERS [or FIBER-OPTIC (whatevers); prompt on "fibers"]

17. One character in this novel postulates that in the year 2288, the people from his time will only be remembered for their craftsmanship of china dogs. Near its end, the main characters begin to cry when the word "two" is sung in a rendition of "Two Lovely Black Eyes." One character in this novel buries his nose in the mud when he finally decides to attack a steaming kettle he'd been eying aggressively. Another character in this novel recalls alienating twenty people by insisting on taking a right at every opportunity as they followed behind him inside a maze. Its protagonists listen to four different people claim that they caught a trout in a display-case, but as one of them goes to take a closer look, the fish shatters, revealing that it was made of plaster-of-paris. The preface to this novel describes its characters as "things of flesh and blood... especially George, who weighs about twelve stone." Narrated by a man with every ailment besides housemaid's knee, this novel depicts a journey from Kingston to Pangbourne with such companions as Montmorency the fox terrier. For 10 points, name this funny travelogue along the Thames by Jerome K. Jerome.

ANSWER: THREE MEN IN A BOAT (To Say Nothing of the Dog)

18. Near the beginning, this speech refers to "Reverend Galamison, I guess you've heard of him." It claims that it's "not an accident" that the papal conclave takes place "in a closet" so outsiders can't hear the proceedings, and mentions a huge marked-up map on the wall of a deliberating legislature. The man who gave this speech emphasized his use of the word "reciprocal," but said he tried not to deal with "big words," and dismissed his foes as "handkerchief-heads." The giver of this speech used

the sentence “If we have differences, let us differ in the closet” to address the matter of religion, and likened a future political change to “running from the wolf to the fox.” Louis Lomax spoke before this address, which was given at the Cory Methodist Church in Cleveland. This speech imagined “the most explosive year America has ever witnessed” and a crowd descending on Washington with “one-way tickets.” For 10 points, name this 1964 speech which predicted violence if full voting rights didn’t come for blacks, and was given by Malcolm X.

ANSWER: “The BALLOT OR THE BULLET” speech

19. This god is sometimes depicted in vase paintings playing an improvised wedding song for Zeus and Europa. After Euphemus accepts a gift from this god, who appeared to him in the guise of Eurypylus, he has a dream in which he has sex with this god’s daughter. The *Aeneid* reports that an erstwhile ally of Hector named Misenus was killed by this god after losing to him in a contest. A festival in which girls ceremonially battled each other to the death commemorates the accidentally deadly fight between this god’s two foster daughters, Pallas and Athena. This god guides the stranded Argonauts back to the Mediterranean after they get lost in his namesake lake in Libya. He was accompanied by several daimones who had two horse-legs in place of arms, who were known by either a plural form of this god’s name, or as Ichthyocentaurs. This god’s shoulders were adorned with sea shells, and he sounded his conch to control the waves. For 10 points, name this son of Amphitrite and Poseidon, a merman who carried a similarly-named three-pronged spear.

ANSWER: TRITON

20. This artist used whitish tones to depict St. Christopher and St. Anthony Abbot as statues in alcoves on the backside of one work. In the front center panel of that triptych, a man kneels while wearing a collar of gilt roses, demonstrating his Yorkist allegiance as Jesus crumples a page in the Virgin’s book and reaches toward a pear. The manger behind the Virgin in his *Adoration of the Magi* features a circular room with stone arches, and he used multiple 90-degree turns to generate hook patterns in his namesake carpets. Tommaso Portinari kneels naked in a golden pan while a red-caped Christ rests his feet on a golden ball in another painting. This student of Rogier van der Weyden showed the life of a Breton princess on a miniature gilt reliquary shaped like a gothic chapel in the *Shrine of St. Ursula*. For 10 points, name this Bruges-based Netherlandish artist who showed a gold-armored Archangel Michael weighing souls at the center of his *Last Judgment*.

ANSWER: Hans MEMLING [or MEMLINC]

#### TIEBREAKER

21. One technique named for one of these objects begins by identifying some number of numbers such that their squares mod  $n$  are smooth with respect to the factor base, where  $n$  is the input to the technique. That technique, developed by Pomerance, proceeds by finding the modular roots of the quadratic polynomial “ $x$  squared minus  $n$ ”, often using the Tonelli-Shanks method. A powerful algorithm named for one of these objects has an asymptotic runtime of the form “exponential of cube root log  $n$  times two-thirds power of log log  $n$ ”, with a constant factor equal to “the cube root of sixty-four ninths”. That algorithm is the best known classical factoring algorithm for arbitrary numbers besides prime powers, and is known as the “quadratic” variant of this object. The prototypical object of this name, a variant of which was developed by Atkin, is constructed by iteratively marking off multiples of prime numbers. For 10 points, give this term that describes an invention of Eratosthenes.

ANSWER: SIEVE

## BONUSES

1. This posthumously-collected work argues that we have no access to the “essences” of substances, and argues for dissolving many Aristotelian problems by accepting Epicurean atomism. For 10 points each:

[10] Identify this work, which is divided into sections on “Logic,” “Physics,” and “Ethics,” and was compiled under the direction of Henri de Montmor, the author’s patron, after its author’s death in 1655.

ANSWER: SYNTAGMA PHILOSOPHICUM

[10] The *Syntagma Philosophicum* is the masterwork of this philosopher, whose interest in Epicurus was also reflected in his *Animadversiones*, which consists of a translation with commentary of Book 10 Diogenes Laertius’ *Lives of the Philosophers*.

ANSWER: Pierre GASSENDI

[10] Gassendi devoted much of his philosophical scholarship to empiricist arguments against the positions of this contemporary author of *Meditations on First Philosophy* and *Discourse on Method*.

ANSWER: Rene DESCARTES

2. This task may be performed “top-down” using the Earley algorithm. For 10 points each:

[10] Name this task, in which a string of symbols is converted to structured data according to the rules of a formal grammar. Yacc and Bison are tools that generate programs that perform this task.

ANSWER: PARSING [or word forms]

[10] The parsers generated by Yacc are LR parsers augmented with the ability to perform this action, in which the parser views tokens past its current position.

ANSWER: LOOKAHEAD

[10] The context-free languages with this property are exactly the languages recognized by ordinary LR parsers. A language is in P if there exists a Turing machine with this property that decides the language in polytime.

ANSWER: DETERMINISTIC [or word forms]

3. The day on which this case’s ruling came out became known as “White Monday.” For 10 points each:

[10] Name this case which overturned *Adkins v. Children’s Hospital* and upheld a Washington State law securing minimum wages for women.

ANSWER: WEST COAST HOTEL Corp v. PARRISH [accept either underlined part alone]

[10] Abe Fortas used this proverb-esque phrase to describe Owen J. Roberts’ last-second decision to side with the majority in *West Coast Hotel v. Parrish*. That decision gave the court an unexpected pro-New Deal tilt in March 1937 and stymied FDR’s court-packing plan.

ANSWER: the “SWITCH IN TIME that saved nine” [or “a SWITCH IN TIME saves/serves nine”]

[10] One of the conservative “Four Horsemen” of the Supreme Court, Willis Van Devanter, retired in June 1937 after opposing the court-packing plan. Earlier, Van Devanter had been Chief Justice in this U.S. state, which in 1925 elected the first female governor, Nellie Ross.

ANSWER: WYOMING

4. Sometimes stories exist within novels. Answer the following about that, for 10 points each.

[10] The sexual shenanigans of Lady Fanny Vane made their way into this novel as *Memoirs of a Lady of Quality*. The protagonist of this Tobias Smollett novel is raised by Commodore Trunnion and whores his way across Europe.

ANSWER: The Adventures of PEREGRINE PICKLE

[10] The riveting “Slawkenbergius’s Tale,” about the neo-Latin author of the monograph “On Noses,” opens the fourth volume of this Laurence Sterne book, whose protagonist’s own nose is damaged by forceps during his delivery by Doctor Slop.

ANSWER: The Life and Opinions of TRISTRAM SHANDY, Gentleman

[10] In an interpolated tale within this novel, the dwarf Hercules Lapith marries the equally diminutive Filomena, but they commit suicide after they produce a normal-sized son. In it, the New Age author Mr. Barbecue-Smith writes 1500 words every day after gazing into an electric desk-light to hypnotize himself.

ANSWER: CROME YELLOW

5. This country controls the Saint Brandon archipelago, Agalega, Rodrigues, and its namesake island. For 10 points each:

[10] Name this Indian Ocean republic to the east of Madagascar with capital at Port Louis.

ANSWER: Republic of MAURITIUS

[10] Together, the islands of Mauritius, Rodrigues, and La Réunion form this island group, which was named for a Portuguese navigator.

ANSWER: MASCARENE Islands or archipelago [or MASCARENHAS]

[10] This other overseas department of France in the Indian Ocean is composed of islands known as Grand-Terre and Petit-Terre. It is the most southeasterly member of the Comoros Islands, which disputes its status as an administrative unit.

ANSWER: MAYOTTE [or Maore or Mohori]

6. One character in this opera instructs his cousin to pose as a notary for a marriage contract, and has to sing “Figliol non mi far scene” to get Ernesto to shut up as the title character is on the cusp of being hoodwinked. For 10 points each:

[10] Name this opera buffa in which the title old bachelor disinherits his nephew Ernesto, who is in love with Norina, and consults with the roguish physician Dr. Malatesta to find a wife so that he can father his own heir.

ANSWER: DON PASQUALE

[10] This composer of *Don Pasquale* included the aria “Una furtiva lagrima” in his opera about a glorified bottle of Bordeaux wine, *The Elixir of Love*.

ANSWER: (Domenico) Gaetano (Maria) DONIZETTI

[10] *Don Pasquale*’s Norina is a quintessential role of this kind, a stock coy and conceited female character. Sopranos with light voices and mid-range tessituras, who are just starting out, often sing these roles.

ANSWER: SOUBRETTE

7. Similar to *res judicata*, the “collateral” form of this doctrine is also known as issue preclusion, and is used to prevent litigants who had a full and fair opportunity to argue an issue from re-litigating that issue in a future case. For 10 points each:

[10] Name this equitable legal doctrine, which is raised as a defense. It holds that a litigant is prevented from denying the truth of something that he has already, by his own act, admitted.

ANSWER: ESTOPPEL [or “estopped”]

[10] Another variety of estoppel, called “promissory”, allows a promise to be enforced even when one of these official legal agreements was not made. These legal agreements must be accompanied by a meeting of minds and an intent to create legal relations.

ANSWER: CONTRACTS

[10] This legal doctrine says that certain types of contracts are only enforceable if they are memorialized by a signed writing. The most common type of contracts that need to be in writing under this doctrine are contracts for the sale of land, contracts that can’t be performed within one year, and contracts exceeding a certain dollar value.

ANSWER: STATUTE OF FRAUDS

8. Avoid being the next Andy Watkins by answering these questions about planning organic syntheses correctly before doing them, for 10 points each.

[10] If you want to synthesize complicated molecules like dendrimers, you might opt for this strategy in which yields decline exponentially more slowly than in linear synthesis, since components need not be added sequentially.

ANSWER: CONVERGENT synthesis

[10] You might want to improve the efficiency of your reaction by throwing together all the reactants in this kind of approach, instead of isolating the intermediates.

ANSWER: ONE-POT reaction

[10] One of the hardest parts of any synthesis is to ensure that molecules with the correct configuration of this property are formed, instead of having to be separated out from a racemic mixture. A molecule has this property if it cannot be superimposed onto its mirror image.

ANSWER: CHIRALITY

9. Dylan Thomas introduced this novel to a wider audience by writing a 1952 review in the Observer in which he called it “brief, thronged, grisly, and bewitching.” For 10 points each:

[10] Name this novel whose protagonist saves a young girl from a family of Skulls and marries her on his quest to find the dead tapster so he can replenish his supply of alcohol.

ANSWER: The PALM-WINE DRINKARD and His Dead Palm-Wine Tapster in the Dead's Town

[10] Tutuola's *Palm-Wine Drinkard* was initially unpopular with African audiences because its writing had this quality, which people thought conveyed an image of African backwardness. American authors who made heavy use of this quality in the dialogue of their novels include Mark Twain and Zora Neale Hurston.

ANSWER: DIALECT [or NON-STANDARD ENGLISH; or PIDGIN ENGLISH; or CREOLE ENGLISH; accept BROKEN ENGLISH and plenty of other impolite synonyms; accept African American VERNACULAR ENGLISH, AAVE, and EBONICS even though they don't apply to *The Palm-Wine Drinkard* for obvious reasons]

[10] Later in the book, the drinkard alleviates a famine by placing a wish-granting object of this kind underwater to produce a cornucopia of food. It works well until people break this object in their haste to take food.

ANSWER: a magic EGG

10. Answer the following about the aristocrats, for 10 points each.

[10] This scandal, orchestrated by Jeanne de la Motte, was set in motion when the prostitute Nicole d'Oliva met the Cardinal de Rohan in a dark garden and convinced him to buy the namesake item on Marie Antoinette's behalf.

ANSWER: AFFAIR of the Diamond NECKLACE

[10] In the Affair of the Poisons, it was revealed that several French nobles were hitting up female fortune-tellers to buy black-market drugs. The most notable aristocrat implicated was this French king's mistress, the Madame de Montespan.

ANSWER: LOUIS XIV of France [or Louis the Sun King, prompt on "Louis the Great"]

[10] While he was Prince of Wales, the future king Edward VII of England was revealed to have played this illegal game in 1890 at Tranby Croft, the country house of Arthur Wilson. Edward was then forced to appear in court as a witness because his fellow player Sir William Gordon-Cumming was accused of cheating.

ANSWER: BACCARAT [or the "Royal Baccarat Scandal", prompt for more specific on cards or "a card game"]

11. This god cultivated his powers by retreating to a mountain cave and undergoing 3,200 trials, each lasting 3 million years, enabling him to defeat a foolish evil god who merely underwent 3,000 such trials. For 10 points each:

[10] Name this head of the celestial bureaucracy, who nonetheless reports to the Three Pure Ones.

ANSWER: JADE EMPEROR [or YU HUAN; or TIAN GONG; or HEAVENLY GRANDFATHER; or August EMPEROR OF JADE]

[10] The Jade Emperor once separated his daughter, the Weaver Girl, from her lover, the Cowherd, by summoning a river symbolizing this astronomical body. Its name may be a reference to the Greek myth in which it was created when Hera pushed away the breastfeeding Heracles.

ANSWER: MILKY WAY

[10] This legate of the Jade Emperor, an old man who represented the planet Venus, babysits Sun Wukong during the Monkey King's stint as a stableboy in heaven. In a later story, he frees the Jade Dragon from captivity because in his near-blindness he mistakes the popping of popcorn for the blooming of golden beans.

ANSWER: TAIBAI JINXING [accept either; or TAIBAI Hesperus; or GRAND WHITE; or "GREAT WHITE METAL STAR," or METAL LORD of the West; prompt "Vesperus"]

12. This artist depicted a shawled, barefoot girl sitting on a concrete bench with a violin on her lap in a painting titled *The Bohemian*. For 10 points each:

[10] Name this artist who won the Prix de Rome at the age of 25 with *Zenobia Found by Shepherds on the Banks of the Araxes* and showed the title goddess in the middle of the ocean surrounded by a crowd of adoring nymphs and centaurs in his 1879 painting *The Birth of Venus*.

ANSWER: William-Adolphe BOUGUEREAU

[10] Bouguereau was a leading practitioner of this style of art, which favored idealized, allegorical subjects and the polished style taught in formal art training. Other artists of this style include Paul Delaroche and Jean-Leon Gerome.

ANSWER: ACADEMIC ART [or ACADEMICISM; or ACADEMISM]

[10] Critics used this derisive term, literally translating "fireman art," for academic painting, whose name refers to the classical Greek helmets that characters always wear in allegories or history paintings.

ANSWER: l'ART POMPIER [or POMPIER ART]

13. This good was being carried to Egypt by the caravan which bought Joseph from his brothers and took him to Egypt in the book of Genesis. For 10 points each:



[10] Name this resinous healing substance derived from aromatic plants. During Biblical times, it was created in a region split by the Jabbok river east of the river Jordan.

ANSWER: BALM in GILEAD [or BALM of GILEAD; or BALM from GILEAD; prompt on “balm,” “balsam,” or “balsam of Mecca”]

[10] This “weeping prophet” asked “Is there no balm in Gilead?” to lament the health of the Israelite people in his namesake Old Testament book.

ANSWER: JEREMIAH [or YIREMIYAHU]

[10] This German scholar noted that the style and date of Jeremiah was “Deuteronomist” in his *Prologue to a History of Israel*. He argued that the Deuteronomist, or D-source, was redacted into the Pentateuch with the J, E, and P sources in his groundbreaking documentary hypothesis.

ANSWER: Julius WELLHAUSEN

14. One year after Matt Jackson dies in this poem, his brother, David, dreams that he turns into a pile of clothes. For 10 points each:

[10] Identify this epic poem in which W.H. Auden insults Michael’s verse in capital letters and a group of fourteen batlike creatures who champion science elect a spokesman called 741, who is renamed Mirabell.

ANSWER: The CHANGING LIGHT AT SANDOVER

[10] James Merrill and his partner David Jackson used a homemade version of this device to communicate with spirits like Mirabell the peacock while writing *The Changing Light at Sandover*.

ANSWER: OUIJA board [prompt on “spirit board;” prompt on “talking board”]

[10] The first section of *The Changing Light at Sandover* is titled for “the book” of this sassy Greek Jew from 39 BC who responds to the poet’s Ouija board question, “Who’s There?”

ANSWER: EPHRAIM

15. Answer the following about Urbino in the year 1500, for 10 points each.

[10] This condottiero only appears in portraits from the left side because he had his right eye poked out before ruling as duke of Urbino, starting in 1444, where he commissioned a massive library. Known as the “Light of Italy,” his son Guidobaldo was married to Elisabetta Gonzaga.

ANSWER: Federico III da MONTEFELTRO

[10] This father of Cesare Borgia supported the move to chase Guidobaldo out of town. This pope oversaw the Treaty of Tordesillas after putting out the bull *Inter Caetera*.

ANSWER: Pope ALEXANDER VI [or RODRIGO Borgia or Roderic Llancol I de Borja]

[10] Although he was sometimes called the “father of English history” for his book *Anglica Historia*, this humanist scholar was born in Urbino and served under Guidobaldo da Montefeltro and Pope Alexander VI. His history greatly influenced Raphael Holinshed and he wrote a collection of proverbs called the *Adagia*.

ANSWER: Polydore VERGIL [or Pilidoro Virgili or Polydorus Vergilius or CASTELLEN or CASTELLENSIS]

16. The biosynthesis of BL, which is the most common variety of this compound in nature, was first investigated in *C. roseus* cell cultures. For 10 points each:

[10] Name these abscission-inhibiting compounds which are synthesized from campesterol via the early and late C-6 oxidation pathways. Along with gibberellins, they are believed to promote pollen tube elongation.

ANSWER: BRASSINOSTEROIDS

[10] Mutation of brassinosteroids results in a severe instance of this phenomenon in *Arabidopsis thaliana*. In humans, it can result from achondroplasia or a deficiency in growth hormone.

ANSWER: DWARFISM

[10] In brassinosteroid signalling, BSU1 inactivates BR-insensitive 2 by dephosphorylating one of these residues. Catecholamines are derived from this amino acid, whose polar side chain has an aromatic ring.

ANSWER: TYROSINE [or Tyr; or 4-HYDROXYPHENYLALANINE]

17. In this work, Madame Valmonde is astonished by the appearance of a child attended by the turbaned wet nurse Zandrine. For 10 points each:

[10] Name this short story in which Madame Valmonde’s adopted daughter is compared to La Blanche and disappears into

the bayou after her husband Armand forces her to leave L'Abri.

ANSWER: "DESIREE'S BABY"

[10] This author of "Desiree's Baby" also wrote "The Story of an Hour", but is better known for a novel in which Leonce's wife willingly allows herself to drown.

ANSWER: Kate CHOPIN

[10] In another story the lawyer Mr. Paxton walks by this beautiful housewife every morning on the way to work and encourages her to separate from her abusive husband who has been absent six months.

ANSWER: MADAME CÉLESTIN [prompt on CÉLESTIN]

18. At this piece's premiere, Heather Harper substituted for the Russian soprano Galina Vishnevskaya on only 10 days' notice. For 10 points each:

[10] Name this non-liturgical composition, which incorporates poems like "The End" and "At a Calvary near the Ancre," and was composed for the consecration of the reconstructed Coventry Cathedral.

ANSWER: WAR REQUIEM, op.66

[10] This British composer's most famous non-operatic pieces are the *War Requiem* and *The Young Person's Guide to the Orchestra*.

ANSWER: (Edward) Benjamin BRITTEN, Baron Britten

[10] Britten instructed the bells and cymbals to be tuned to C and F-sharp so that they can play this interval that is incredibly prominent in both the "Introit" and the "Agnus Dei" of the requiem.

ANSWER: TRITONE [or AUGMENTED FOURTH; or DIMINISHED FIFTH; or SEMIDIAPENTE; or SEMITRITONUS; or ELEVENTH HARMONIC]

19. Lev Landau developed the theory of these substances by working out the spectrum of quasiparticle excitations within them. For 10 points each:

[10] Identify this class of substance in which the de Broglie wavelength corresponding to the thermal motion becomes comparable to the atomic separation distance; this general class of substances do not necessarily lack all viscosity.

ANSWER: FERMI LIQUIDS [or FLUID]

[10] A Fermi liquid, and consequently a superfluid, can only form from a substance for which this value for individual constituent atoms or molecules is one-half. Particles with a value of one-half for this property obey Fermi-Dirac statistics.

ANSWER: SPIN

[10] For a Fermi liquid, this property, which at temperatures above absolute zero exists in both isothermal and adiabatic forms, is proportional to the square of the Fermi momentum, times one plus a function of the angle of interaction. In general, this quantity is given by the derivative of volume with respect to pressure.

ANSWER: COMPRESSIBILITY

20. Answer the following about colonial times in British West Africa, for 10 points each.

[10] This style of colonial governance, popularized by Sir Frederick Lugard in Nigeria, allowed pre-colonial tribes and peoples to continue controlling local affairs with a layer of imperial supervision at the top.

ANSWER: INDIRECT rule [or NATIVE ADMINISTRATION]

[10] This local leader in Nigeria was sold into slavery at age twelve, after which he learned to outsmart everyone in the palm oil trade and founded the city of Opobo with his wealth. Eventually, the British had him arrested for violating colonial trade restrictions and shipped him to the West Indies.

ANSWER: King JAJA of Opobo [or JAJA; or JUBO Jubogha; or Mbanaso OKWARAOZURUMBA]

[10] After most of its court including King Prempeh was exiled to the Seychelles, this empire continued to war against the Brits under the Queen-Mother of Ejisu. That war was named for this empire's holy throne, the Golden Stool, first held by Osei Tutu.

ANSWER: ASHANTI Empire [or Asante or Akan]

EXTRA BONUS

21. Henry Wood completed this task in 1915, but refused to perform the resulting composition in deference to a better known rendition. For 10 points each:

[10] Name this task accomplished by a Serge Koussevitzky-commissioned piece, which uses piccolos and high strings to represent “chicks in shells,” and omits the movement following “Two Jews, Rich and Poor.”

ANSWER: Maurice Ravel’s ORCHESTRATION OF PICTURES AT AN EXHIBITION [prompt on partial answer, accept orchestral ARRANGEMENT OF PICTURES AT AN EXHIBITION]

[10] The original Pictures at an Exhibition was composed for the piano by this Russian, also known for his *Night on Bald Mountain*.

ANSWER: Modest Petrovich MUSSORGSKY

[10] This man was dissatisfied with the Ravel arrangement, so he embarked upon his own, dumping both the Tuileries and Limoges movements because he had a suspicion that Rimsky-Korsakov might have composed them. He conducted his first wife Olga Samaroff in a performance of Tchaikovsky’s first piano concerto.

ANSWER: Leopold Anthony STOKOWSKI