

ACF Winter 2010: Temporary Autonomous Zone

Finals Packet 1, written by the Editors (Andrew Hart, Rob Carson, Trevor Davis, Dennis Jang, and Eric Mukherjee) and Eric Kwartler, Ryan Westbrook, and Evan Nagler

Tossups

1. One account of the formation of these entities is the subject of a chapter of Frazer's *Folklore in the Old Testament*, in which Frazer treats the myth of the Cholula pyramid and claims that Hermes created these entities for the Greeks. The Sumerian account of Enmerkar tells of how Enki is begged to unify these entities in the "Hymn of Nudimmud," after which Enmerkar devises a new method of recording them atop the *E-ana* ziggurat. In another system, these entities were first differentiated as a result of residents of a plain in Shinar who improved their mud-brick-firing skills. In that story, these entities were created because of to punish humankind for showing hubris in trying to reach into heaven. For 10 points, name these entities that the Bible holds were confused after the destruction of the Tower of Babel.
ANSWER: languages [accept tongues or other equivalents]
2. In one instance, this character's boss is glad to have him back from vacation because a mint-pilfering temp "just wasn't working out at all." In response to this character putting up ringtones on his company's website, his boss switches to a ringtone that begins "a-ring-ity-ding-dong-doo," and that boss's idea of a bang-up slogan is "They're the Bees' Knees." This character panics when his boss suggests conducting a trust exercise in which the boss falls and this character catches him. This character sheepishly questions "fancy a crisp?" after accidentally spending his boss's first-earned dollar. For 10 points, name this green spokesman who wants you to save money on car insurance.
ANSWER: the Geico Gecko [prompt on partial answer]
3. Elizabeth's running with Ann in pursuit results in the trodding on of the title figure in "The Use and Abuse of Toads," which was written by this author, who also wrote, "The chestnut casts his flambeaux, and the flowers" in another poem. This author wrote about those who "followed their mercenary calling / And took their wages and are dead" in "Epitaph on an Army of Mercenaries," while this author also wrote a work in which a dead character asks, "Is my girl happy," one whose title character "eats [his] victuals fast enough," and one whose narrator is advised to "Give crowns and pounds and guineas / But not your heart away." "Is my team ploughing," "Terence, this is stupid stuff," and "When I was one and twenty" were written by, for 10 points, which author of *A Shropshire Lad*?
ANSWER: Alfred Edward Housman
4. The Bell series of this function is equal to one minus x over 1 minus px, while the partial sums of this function show that its average order is equal to 3n divided by pi squared, a result which can be used to find the number of lattice points visible from the origin. The Dirichlet convolution of the identity function N and the Mobius function gives this function, and if a number has r distinct odd prime factors, 2 to the r divides this function of the number. Summing this function over the divisors of a number n gives n. It gives the number of elements in the group Z_{n^*} , and for a prime number p this function returns p minus 1. Also used in its namesake's generalization of Fermat's Little Theorem, for 10 points, name this function that returns the number of integers less than and relatively prime to the input.
ANSWER: Euler phi function [or Euler totient function]
5. One ruler of this kingdom was born to a hunchbacked woman and refused to walk for the first seven years of his life despite prophecies that he would be a great warrior. This empire referred to its territories as the Twelve Tinkurus, or Twelve Doors. The first ruler of this kingdom was driven to exile in the Mena kingdom, according to a history that was often recounted by griots. That first ruler of this kingdom returned to win a devastating victory over the Sosso ruler Sumanguru at the Battle of Kirina. At the height of this empire, its ruler took such a lavish pilgrimage to Mecca that he devalued gold all along his route. For 10 points, name this West African empire whose great leaders included Mansa Musa and the legendary Sundiata, centered on Timbuktu.
ANSWER: Mali

6. Leopold Godowsky composed a passacaglia with 44 variations on the opening theme of this work, most later scores of which seem to be based off of the score published by Spina rather than the original monograph. Most drafts omit the sustained B pedal in the first horn and second bassoon at bar 109 in this piece, which open in the cellos and basses before its theme is brought in by the winds. A solo clarinet entrance brings in a second theme before passing to the oboes in the second movement of this work, during which its composer began composing the “Wanderer” Fantasy as well. It was first premiered by Johann Herbeck, who also added a third movement as a finale. For 10 points, name this eighth work by Schubert, so named for only containing two complete movements.

ANSWER: the Unfinished Symphony

7. One briefly-ruling pope of this name was murdered by the holder of the Cadaver Synod, Stephen VI. Another pope of this name was a puppet of the Crescentii family who ordered the murders of Benedict VI and John XIV. A pope of this name crowned Ladislaus of Naples and succeeded Urban VI as the opponent of antipope Clement VII. One of them forced the resignation of his predecessor Clement V, and objected to the imprisonment of Bernard Saisset with *Ausculda Fili*. That pope of this name was imprisoned at Anagni by Guillaume de Nogaret, and he earlier forbade taxation of the clergy in the bull *Clericis Laicos* as part of his feud with Philip IV of France. For 10 points, give this papal name whose eighth holder asserted the supremacy of the spiritual over the secular with the bull *Unam Sanctam*.

ANSWER: Boniface

8. One story about this artistic piece says that its creator was disgusted by the criticism of his local barber, so he set up a large marble vase in front of his barbershop to block his view of this work. Above a niche on the left of this work, a statue by Andrea Bergondi depicts Agrippa supervising construction of the Aqua Virgo. This piece also contains two allegorical depictions of Abundance and Health by Filippo della Valle, as well as a central sculpture by Pietro Bracci which contains figures often called the “agitated horse” and the “placid horse.” It was originally moved to face the Quirinal Palace by Bernini, but its current form resulted from a contest held by Pope Clement XII and won by Nicola Salvi. For 10 points, name this construction on the Piazza Poli in Rome, a fountain known for collecting coins.

ANSWER: Trevi Fountain (Fontana di Trevi)

9. A namesake protein component of this structure is detected by Toll-like Receptor 5. Tg737, whose mutation causes polycystic kidney disease in mice, is responsible for transport within this structure, which is also dependent upon complexes of IFT proteins. *Y. Pestis* uses a structure homologous to these to inject virulence factors into host cytoplasm, known as the Type III secretory system. They have a P, L, and MS ring in gram-negative bacteria, and in all organisms their central body is called the axoneme. In Eukaryotes, they contain a 9+2 set of microtubules around a central pair and use dyenin and ATP hydrolysis to power their whipping motion. Similar to cilia, for 10 points, name these projections used by cells to swim.

ANSWER: flagellum [or flagella]

10. This man imprisoned José María Callava and then successfully defeated a writ of *habeas corpus* issued by Eligius Fromentin. This man asked the president to send him tacit support in a letter from John Rhea, and he sent Edmund P. Gaines to destroy the so-called “Negro Fort.” This man hung two British citizens in the Arbuthnot-Ambrister affair, and he was the victor at the Battle of Horseshoe Bend. Congress granted this man the right to use the army to ensure tariff collection with the Force Bill, and one of his programs was championed by Senator Thomas Hart Benton and by his Treasury Secretary, Levi Woodbury. For 10 points, name this president who issued the Specie Circular and vetoed the attempted re-charter of the Second Bank of the United States.

ANSWER: Andrew Jackson

11. This man referred to those living on Banks Islands when discussing the “illusion” of the title entity in one work, while he compares how various groups in British Columbia related to the title Swaihwé object in another work. This author also discussed the Jivaro in his *The Jealous Potter*, but this author of *The Way of the Masks* may be better remembered for opposing Radcliffe-Brown with his “alliance theory” and for writing a work that opens by discussing the story of “The Macaws and Their Nest.” That work is part of a longer one which studies the transformation of South American folk tales. For 10 points, name this French structural anthropologist and author of *Triste Tropiques*, *Elementary Structures of Kinship* and *Mythologies*, which includes *The Raw and the Cooked*.

ANSWER: Claude Levi-Strauss

12. A librarian is saved from death via self-caused pneumonia in France, but the arrival of the Baroness leads to their relationship in this author's *The Confession of a Fool*, while Frederick's mother jumps out the window of the burning house while Frederick and his wife embrace each other at the end of another of his works. This author also wrote about Indra's visit to Earth in another work, while Hummel attempts to set up his daughter with the student Arkenholz in another work. This author of *The Pelican*, *A Dream Play*, and *The Ghost Sonata* may be better known for a work about Laura's struggle over how to raise Bertha, as well as one about Jean's relationship with the count's daughter. The author of *The Father* and *Miss Julie*, this is, for 10 points, which Swedish dramatist?

ANSWER: August **Strindberg**

13. In one version of this effect, allowing higher order multipole transitions diminishes its energy. When it emits energy proportional to 3 times the incident frequency plus or minus the frequency of a transition, it's called "hyper." Techniques based on this effect include a spatially-offset method, and another method involves adsorbing molecules to a rough metal and is enhanced by incident radiation hitting plasmons. Only molecules which undergo a change in polarization via this effect are visible in its namesake form of spectroscopy, which often employs a continuous-wave laser. Emission occurs when the molecule either has a net gain or loss in energy, giving the Stokes and anti-Stokes lines. For 10 points, name this inelastic scattering of light by a molecule, named for an Indian physicist.

ANSWER: **Raman** effect

14. At one point in this novel, Doctor McGuire declares, "He's being saved for Congress" after the protagonist survives being run over by a wagon carrying the Hilliards' groceries. Multiple characters in this novel frequent a brothel in Eagle Crescent, from which one character is carried nightly by his son Steven. The death of the protagonist's brother Grover impels his family to return from St. Louis, after which he attends a school run by Margaret Leonard. As a child he is forced to hawk the *Saturday Evening Post* with his brother Luke, and later in life his heart is broken by Laura James after a summer she spends at his mother's boarding house in Altamont, North Carolina. The protagonist sees a vision of his dead brother Ben before going off to Harvard at the conclusion of, for 10 points, what novel about Eugene Gant by Thomas Wolfe?

ANSWER: **Look Homeward, Angel**

15. One historian wrote that the victor of this battle later sought purification from a Spaniard named Aegyptus after locking his wife in a hot bath to die. Another account says that the losing commander's body was sunk into the mud the following day, and the mere sight of his head convinced the people to turn away from him. The events leading up to this battle include the death of Ruricius Pompeianus, the praetorian prefect who'd served as a key general for the loser. Prior to the battle, the victor may have crafted a labarum – composed of a straight pike and transverse beam draped by a silken cloth – after witnessing the inscription "In hoc signo vinces" in the sky. For 10 points, name this victory over Maxentius in 312 AD, which allowed the rise of Constantine the Great and is named for a structure near the Tiber River.

ANSWER: Battle of the **Milvian Bridge**

16. Total internal reflection microscopy is often used in the single-molecule version of this technique, which popularly uses a maleimide-based reaction to tag cysteine residues. Its efficiency is directly proportional to an overlap integral dependent on the fourth power of wavelength, and that calculation usually assumes an orientation factor of 2/3, meaning freely rotating dipoles. Cy3 and Cy5 are a popular pair used in this technique, which even more commonly uses CFP and YFP. Dipole-dipole coupling allow transfer of an excited chromophore's energy to an acceptor chromophore in this technique, causing a detectable shift in color when two molecules are close together. For 10 points, name this technique commonly used to screen for protein-protein interactions, in which two molecules are labelled with different dyes and then imaged.

ANSWER: **FRET** or **[Forster Resonance Energy Transfer; or Fluorescent Resonance Energy Transfer]**

17. This work attempts to discuss a "contradictory movement" that occurs "behind the backs" of the two main parties described within it. One section of this work delves into conditions during the fifteenth and sixteenth century, during which the discovery of gold in the Americas and the driving of peasants off the land accelerated a "primitive" process. This work provides a "general formula" in a chapter that distinguishes between the C-M-C and M-C-M forms of circulation. This work terms the monetization of social relationships as "commodity fetishism." It sets out a system of value in which an object is worth the amount of work put into it, the labor theory of value. For 10 points, name this economic work edited by Engels and written by Karl Marx.

ANSWER: *Das* **Kapital** [or **Capital**]

18. This man's large-lipped wife became the model for many of his works, including a painting in which she is cloaked in red as a red dove lands on a branch above her head, a rendition of Boccaccio's muse. This artist of *A Vision of Fiammetta* also painted a work in which a red dove clutches a yellow flower in its beak below a sundial on the hands of a praying woman who shuts her eyes and motions skyward. That painting by this artist is his depiction of Dante's lover as his own wife, Elizabeth Siddel. For 10 points, name this painter of the *Beata Beatrix* and writer of the sonnet sequence *The House of Life* and the poem *The Blessed Damozel*, one of the founders of the Pre-Raphaelite Brotherhood.

ANSWER: Dante Gabriel **Rossetti**

19. A "reconciliatory" type of this practice is permitted, but not obligatory, when one wishes to "soften the hearts" of the other side. This doctrine is invoked to derive that it is *haram* to kill a human being to save one's own life, since it is forbidden when it would lead to the death of an innocent person. It is permitted by a sura in Quran 3:28, and it can lead to a situation called *hudna*. This practice, which is similar to *ketman*, was taken up by a religion that does not allow converts, which allows members of the Druze to be very secretive about their beliefs. For 10 points, name this Shi'ite practice of hiding or concealing one's faith during times of imminent danger.

ANSWER: **taqiyya** [or **taghiyeh**; prompt on **hiding**; or **concealment**; or equivalents]

20. Arthur Brown gives Dulcie and Mrs. Poulter two of the title objects, one of which his brother Waldo will not accept, in one novel by this author. The main character appears as the guises of Eudoxia, Eddie, and Eadith in one of this author's novels, while this author of *The Solid Mandala* also wrote about the lives of the Holocaust survivor Mordecai Himmelfarb and the spinster Mary Hare in another novel. This author of *The Twyborn Affair* and *Riders in the Chariot* may be better known for novels about the fame achieved by painter Hurtle Duffield and the transcontinental taken by Harry Roberts, Laura Trevelyan, and the title German explorer. For 10 points, name this author of *The Vivisector* and *Voss*, who hails from Australia.

ANSWER: Patrick **White**

21. Late in his reign, this emperor constructed a secret central police force headed by Count Pergen, who also designed the education system under him. Around the same time, in a very sickly condition, this emperor commanded an army that famously confused the word "Halt!" for "Allah!" on the eve of battle, resulting in his infantry attacking his cavalry, firing shots in a drunken stupor. His first wife Isabella of Parma died of smallpox long before that blunder in the Battle of Karansebes. His quarrels with Pope Pius VI originated when he attempted to dissolve all contemplative monasteries in his kingdom, though he's better known for issuing the Patent of Religious Toleration and edicts on freedom of the press. For 10 points, name this emperor who also abolished serfdom after succeeding Maria Theresa as Holy Roman Emperor.

ANSWER: **Joseph II**

22. In one section of this work, one character recounts the chanting of "Go home" and the use of fire to banish the Sitting Ghost, while paranoia of "Mexican Ghosts" leads to the institutionalization of one character in another part. The characters "Crazy Mary" and "Pee-A-Nah" are described in another section of this work which also describes its protagonist's pulling at another character's hair in order to make her speak. This work, whose sections include "A Song for a Barbarian Reed Pipe" and "Shaman," also discusses the author's aunt, the No-Name Woman, and the comparison between getting straight A's and the exploits of Fa Mu Lan, the title character. Five talk-stories by Brave Orchid comprise, for 10 points, which autobiographical novel by Maxine Hong Kingston?

ANSWER: *The* **Woman Warrior**

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Bonuses

1. This player earned the NCAA Player of the Year as a freshman, but was picked number two behind Greg Oden. For 10 points each:
[10] Name this small forward who played his college ball at Texas and now wears number thirty-five for the occupants of the Ford Center.
ANSWER: Kevin Wayne **Durant**
[10] Kevin Durant plays for this basketball team whose other exciting young talents include former UCLA combo guard Russell Westbrook and Georgetown standout Jeff Green.
ANSWER: the **Oklahoma City Thunder** [accept either underlined part]
[10] The Thunder also traded a first-round pick to the Bulls to acquire this lanky defensive stopper, the only Swiss-born player currently in the NBA.
ANSWER: Thabo Patrick **Sefolosha**
2. This man clashed with Pedro Fages, the military commander of the district in which he worked. For 10 points each:
[10] Name this Jesuit priest who headed up missions up and down Alta California during the 1700s.
ANSWER: Fra Junipero **Cerra**
[10] Cerra is perhaps best known for founding the namesake mission of this large California city, which was the first mission founded in Alta California.
ANSWER: **San Diego**
[10] This acolyte of Cerra's was peppered full of arrows when he walked towards a crowd of hostile native Americans saying "love god, my children!" He thus became the first martyr in the Alta California missions.
ANSWER: Luis **Jayme** [accept Melchor **Jayme**]
3. This river flows into a South Australian lake that empties into the Indian Ocean. For 10 points each:
[10] Name this river that receives the Darling as a tributary along its course.
ANSWER: the **Murray** River
[10] The Murray flows into this lake, which was named after the name of Queen Victoria when she was a princess. More notably, it is likely inhabited by the Muldjewangk, an aboriginal lake monster.
ANSWER: Lake **Alexandrina**
[10] The Murray flows into the Lake Alexandrina, and then the Indian Ocean, near the eastward limits of this large open bay that dominates the continent's southern coast.
ANSWER: the **Great Australian Bight** [prompt on partial answer]
4. A ten movement requiem was written by this composer due to a request by the Minister of the Interior to honor those who died in the July Revolution. For 10 points:
[10] Name this French Romantic composer who composed the operas *Benvenuto Cellini* and one that ends with the saving of Marguerite, *The Damnation of Faust*.
ANSWER: Hector **Berlioz**
[10] Berlioz is probably best known for composing this orchestral work, depicting the episodes in the life of an artist and including such sections as "March to the scaffold" and "Dream of a witches' Sabbath."
ANSWER: *La **Symphonie Fantastique***
[10] This other Berlioz opera is based on the *Aeneid* and features a "Boxing fight" dance in its first act preceding the entrance of Andromache and following the ceremonial march of the title group.
ANSWER: *Les **Troyens***

5. With his brothers Hyperion, Coeus, and Crius, this figure held down Ouranos while Kronos castrated him. For 10 points each:
 - [10] Identify this Titan whose sons with an Oceanid named either Clymene or Asia include Menoetius, Prometheus, and Epimetheus.
 - ANSWER: **Iapetus** [accept **Iapetos** or **Japetus**]
 - [10] Iapetus's fourth and final son was this father of Calypso and the Pleiades who was forced to bear the heavens and the sky on his shoulders as punishment for siding against the Olympians in the Titanomachy.
 - ANSWER: **Atlas**
 - [10] Erytheia is one of this group of Atlas's daughters, who live in a garden far in the west and are thus sometimes known as "sunset goddesses." The dragon Ladon guarded the orchard where their golden apples grew.
 - ANSWER: the **Hesperides**

6. The Australian government ponied up to buy this man's *Blue Poles*. For 10 points each:
 - [10] Name this painter who also created works like *Full Fathom Five* and *Lavender Mist* while dripping his way into America's heart.
 - ANSWER: Paul Jackson **Pollock**
 - [10] This fellow Abstract Expressionist was fond of mixing turpentine with his paint in order to create shadowy brushstrokes. He painted a series of works dominated by black bands, the *Elegies to the Spanish Republic*.
 - ANSWER: Robert **Motherwell**
 - [10] This foreign-born Abstract Expressionist blotted out the hands of his mother in his shockingly planar self-portrait as a child with her. His colorful canvases like *The Liver is the Cock's Comb* are sure to turn heads.
 - ANSWER: Arshile **Gorky** [or Vostanik Manoog **Adoyan**]

7. Elizabeth Bates is angered by her husband Walter's evening absence only to find out that he was killed in a mining accident. For 10 points each:
 - [10] Name this story in which Elizabeth's changing attitude toward her marriage is represented by her reaction to the titular flower.
 - ANSWER: "**Odour of Chrysanthemums**"
 - [10] "Odour of Chrysanthemums" is a story by this author of *Aaron's Rod* and *Lady Chatterley's Lover*.
 - ANSWER: D.H. **Lawrence**
 - [10] In this other Lawrence novel, Paul Morel's affection toward Miriam Leivers is stymied by his overbearing cancer-ridden mother, whom he euthanizes at the end of the novel.
 - ANSWER: **Sons and Lovers**

8. This bill attempted to enforce an Ironclad oath on the former Confederate states, but it was pocket vetoed by Abraham Lincoln. For 10 points each:
 - [10] Name this 1864 bill sponsored by two Radical Republicans in an attempt to set reconstruction policy.
 - ANSWER: **Wade-Davis** Bill
 - [10] Lincoln's reconstruction plan instead called for a state to be readmitted to the union once the number of voters who swore an oath of allegiance passed this benchmark.
 - ANSWER: **ten percent**
 - [10] The Radical Republicans were led in the Senate by this Massachusetts politician who decried the Kansas-Nebraska Act as the "crime against Kansas," inspiring Preston Brooks to beat him with a cane.
 - ANSWER: Charles **Sumner**

9. Discussions about the chronology of this statement with respect to one made by Friedrich Kluge are still unresolved. For 10 points each:
 - [10] Name this law that describes the voicing of voiceless fricatives when directly following an unstressed syllable in the same word, attributed to its namesake Danish linguist.
 - ANSWER: **Verner's** law
 - [10] Verner's law was a modification of this law. It described the changes in certain consonants over time and was written by a man who also wrote some fairy tales with his brother.
 - ANSWER: **Grimm's** law
 - [10] Grimm's law was thought to apply to this language, whose existence has been agreed upon by linguists such as Franz Bopp. The Kurgan hypothesis proposes its origins lie on steppeland north of the Black Sea.
 - ANSWER: **Proto-Indo-European** [accept **PIE**]

10. The SLAC Deep Inelastic Scattering experiments lent support to this theory, which posits that its subject particles have arbitrarily weak interactions at arbitrarily large energies. For 10 points each:
- [10] Name this theory of the strong force that posits quarks as color-charged fermions that interact in a certain way.
ANSWER: **QCD** [or **quantum chromodynamics**]
- [10] One property of QCD is the fact that the force between quarks doesn't diminish when they are separated, meaning free quarks should be rare. That property is given this name.
ANSWER: quark **confinement**
- [10] Non-perturbative formulations of QCD often rely on this quantity, which is the trace of a path-ordered exponential of a gauge field around a closed line.
ANSWER: **Wilson loop**
11. This work claims that one can find a distinct number of "lexia" in the work it treats. For 10 points each:
- [10] Name this work that distinguishes between the hermeneutic, proairetic, semic, symbolic, and referential codes of a literary work that stars "La Zambinella."
ANSWER: **S/Z**
- [10] S/Z is this philosopher's structuralist analysis of Roland Barthes's "Sarrasine." You may also know him for writing *Writing Degree Zero*.
ANSWER: Roland **Barthes**
- [10] Barthes wrote this seminal essay in which he theorizes that a text is like a network of fibers instead of a linear progression of events. In it, he calls for a birth of the scriptor to parallel the title event.
ANSWER: "The **Death of the Author**"
12. Answer the following about the career of Pope Sixtus IV, for 10 points each.
- [10] Sixtus' nephew Giralamo Riario was advanced as the candidate to take the place of Lorenzo de Medici as part of this failed 1478 conspiracy.
ANSWER: **Pazzi** Conspiracy
- [10] The Pragmatic Sanction of Bourges was championed in opposition to Sixtus in 1438 by this French king. At home, this son and successor of Charles VIII battled the League of the Public Weal.
ANSWER: **Louis XI** of France
- [10] Sixtus sent a fleet under Oliviero Carafa to stop Ottoman expansion and briefly captured this city in 1471. This Turkish city on the Aegean was transferred to Greek administration by the Treaty of Sevres in 1920.
ANSWER: **Smyrna** [or modern **Izmir**]
13. One owner of this play's title object was killed along with four hobos when a mob set fire to a boxcar. For 10 points each:
- [10] Name this play by August Wilson in which Boy Willie and Berniece argue over whether to sell the title instrument.
ANSWER: *The **Piano Lesson***
- [10] Trumpet player Levee's frustration with the conservative style of this Wilson play's titular blues singer culminates in his stabbing of the band's piano player, Toledo.
ANSWER: **Ma Rainey's Black Bottom**
- [10] In this final Pittsburgh Cycle play, Harmond Wilks's real estate development project in the Hill District is impeded by the presence of a historic mansion that originally belonged to a priestess named Aunt Ester.
ANSWER: **Radio Golf**
14. CD14 and CD68 are used to detect these cells via flow cytometry assays, and these cells usually differentiate from monocytes that migrate to tissues. For 10 points each:
- [10] Name these leukocytes, which are similar the Kupffer cells and microglia, which are responsible for engulfing opsonized bacteria and foreign particles.
ANSWER: **macrophages**
- [10] The inflammasome in the macrophage is assembled with the help of the first version of these proteins, which are cysteine proteases responsible for cleaving a bunch of targets during apoptosis.
ANSWER: **caspase**
- [10] Speaking of inflammation, phospholipase A2 is responsible for synthesizing this long carboxylic acid, which in turn is processed to prostaglandins and thromboxanes.
ANSWER: **arachidonic** acid

15. Its narrator tells the story of his brother Nikolai to Burkin and Alekhin while seeking shelter from a storm. For 10 points each:
 [10] Name this story in which Nikolai Ivanich's idealism is represented by the titular fruit.
 ANSWER: "**Gooseberries**"
 [10] Dr. Ragin is confined to the titular medical facility along with his former patient Gromov after a run in with the postmaster and Dr. Khobotov in this other story
 ANSWER: "**Ward No. 6**"
 [10] "Gooseberries" and "Ward No. 6" are stories by this Russian author of "The Lady with the Dog" and some plays.
 ANSWER: Anton **Chekhov**
16. Answer some questions about radiative transfer in astronomy, for 10 points each.
 [10] This quantity, which occurs in both Planck and Rossland varieties, is the sum total of the effects of absorption and radiation. It's the measure of impenetrability of a medium to radiation.
 ANSWER: **opacity**
 [10] Opacity due to brehmsstrahlung can be modeled as proportional to the negative 3.5 power of the temperature according to a law named for this man, who also partly names formulas relating the real and complex part of any function that is holomorphic in the upper-half plane.
 ANSWER: Henrik Anthony **Kramers**
 [10] This scientist names an approximation that sets the intensity as a linear function of cos theta. He also names a quantity above which a star has intense stellar wind due to radiation force exceeding gravity.
 ANSWER: Arthur Stanley **Eddington**
17. It features the aria *Grossmachtige Pinzessin*, which is sung by Zerbinetta to the title character. For 10 points each:
 [10] Name this kickass meta-opera, divided into the prologue and the opera, in which a commedia dell'arte troupe attempts to cheer up the titular abandoned classical figure
 ANSWER: **Ariadne auf Naxos** [or **Ariadne on Naxos**]
 [10] *Ariadne auf Naxos* is an opera by this composer of *Elektra* who frequently collaborated with Hugo von Hofmannstahl.
 ANSWER: **Richard Strauss**
 [10] Kiekobad, King of the Spirits, mandates that unless his daughter, the Empress of the Southeastern Islands, acquires the titular accompaniment within three days she will be dragged home in this complex Strauss opera, which Strauss dubbed his "Child of Woe."
 ANSWER: *Die **Frau ohne Schatten*** [or *The **Woman without a Shadow***]
18. Legislation engineered by this prime minister included Forster's Education Act, the Irish Land Act, and the Ballot Act of 1872. For 10 points each:
 [10] Name this four-time liberal prime minister, the rival of Benjamin Disraeli.
 ANSWER: William **Gladstone**
 [10] Gladstone managed to win an 1880 election over Disraeli, largely due to the success of this campaign began in a namesake Scottish town. In it, Gladstone criticized Disraeli's support of the Ottoman Empire during the "Bulgarian Atrocities."
 ANSWER: **Midlothian** Campaign
 [10] Disraeli supported the Ottoman Empire due to their wars with Russia, which resulted in this 1878 treaty. Disraeli was able to secure more favorable terms for the Ottomans when it was revised at the Congress of Berlin.
 ANSWER: Treaty of **San Stefano**
19. This author's most famous work became the basis for Maxwell Anderson's *Lost in the Stars*. For 10 points each:
 [10] Name this South African author who wrote about Stephen Kumalo's attempt to find his son Absalom, who is sentenced to death for Arthur Jarvis's murder, in *Cry, the Beloved Country*.
 ANSWER: Alan **Paton**
 [10] The rugby player and police lieutenant Pieter van Vlaanderen, the protagonist of this Paton novel, faces ruin as he is attracted to the black South Afrikaaner Stephanie.
 ANSWER: **Too Late, the Phalarope**
 [10] This Paton short story collection features such works as "Sponono" and one about Paton's friend, Todd Matshikiza, accepting an invitation from a white man to share the title entity, "A Drink in the Passage."
 ANSWER: **Tales from a Troubled Land**

20. Invented to Roy Plunkett and currently manufactured by Dupont, its current manufacture relies on its monomers being created from dimerization of difluorocarbene. For 10 points each:
[10] Name this substance that repels van der Waals interactions, giving it its non-stickiness.
ANSWER: **Teflon** [or **polytetrafluoroethylene**; or **PTFE**]
[10] Carbon-fluorine bonds are very stable when they're in this conformation, which viewed through a Newman projection means the bonds are staggered, with a 60 degree angle between them.
ANSWER: **gauche**
[10] The polarity of the carbon-fluorine bond is due to this property of fluorine. Fluorine has the highest value of this periodic table property, which can be measured on the Pauling and Allred-Rochow scales.
ANSWER: **electronegativity**
21. One of the attendees at this agreement, Austen Chamberlain, referred to it as the dividing point between peace and war. For 10 points each:
[10] Name this set of treaties signed in Switzerland in 1925, which allowed evacuation of the Rhineland and included defense pacts between France and Poland and France and Czechoslovakia.
ANSWER: **Locarno** Pact [or Treaties of **Locarno**]
[10] Germany was represented at Locarno by this foreign minister, who a year earlier had negotiated majority approval of the Dawes Plan, and who was succeeded by Julius Curtius upon his death in 1929.
ANSWER: Gustav **Stresemann**
[10] Stresemann was awarded the Nobel Peace Prize alongside this other foreign minister, the French delegate at Locarno who three years later attempted to outlaw war.
ANSWER: Aristide **Briand**
22. One character in this work is called an "uncircumcised dog" after saving another character from being raped by Ward Minogue, only to rape her himself. For 10 points each:
[10] Name this novel which ends with Frank Alpine, the title character, offering to pay for Helen's college tuition in part for his earlier actions involving the robbing of her father's grocery store.
ANSWER: *The **Assistant***
[10] *The Assistant* is a novel by this author, whose other works include the collection *The Magic Barrel* and a novel inspired by the trial of Mendel Beilis, *The Fixer*.
ANSWER: Bernard **Malamud**
[10] This Malamud novel follows the story of baseball player Roy Hobbs and his career with the fictional New York Knights. An illness that strikes him the day before the final game of the season results in the Judge bribing him to throw the game.
ANSWER: *The **Natural***