ACF Regionals 2017

Edited by Andrew Hart, Stephen Liu, Benji Nguyen, Adam Silverman, Cody Voight, Nathan Weiser Tossups by Berkeley A (Eric Chen, Aseem Keyal, Bruce Lou, Justin Nghiem), WUSTL A (Patrick Butenhoff, Seth Ebner, Charles Hang, Collin Nadarajah), Northwestern A (Dylan Minarik, Greg Peterson, Max Rong), and Michigan B (Siddhant Dogra, Saul Hankin, Mark Karabajakian, Peter Jiang)

1. This man idolizes the "intellectual and virginal manliness" exemplified by St. Sebastian and lives by the motto "Durchhalten," or "persevere," which he borrowed from Frederick the Great. A barber tells this man that "we are all as old as we feel, but no older," in an effort to sell him hair dye. A boatman who ferries this man but refuses to tell him the cost, instead only ominously saying "you will pay," is one of several redheaded men who menace him. He has a dream about the "stranger god" after becoming obsessed with a guest at the hotel in which he is staying. After seeing Jasiu (YAH-shoo) win a fight on the beach, this man dies of cholera contracted from overripe strawberries. For 10 points, what character lusts after the Polish boy Tadzio before perishing in Thomas Mann's novella *Death in Venice*?

ANSWER: Gustav von Aschenbach [accept either underlined portion]

2. This condition occurs with a coagulation deficiency in Hermansky-Pudlak syndrome. Mutations in the P protein lead to this condition, which is why it is often a symptom of Prader-Willi (PRAH-dur vill-ee) syndrome. The copper-dependent enzyme absent in this condition hydroxylates and then oxidizes tyrosine to give a quinone. People with this condition have no RPE layer in their retinas. The *opposite* phenotype to this condition occurs in patients with Addison's or Cushing's disease because they overexpress melanocyte-stimulating hormones. The oculo taneous (ock-yoo-lo-TAY-nee-us) form of this condition often leads to deafness, vision trouble, and susceptibility to skin cancer. For 10 points, name this recessive condition in which the body can't produce melanin, which causes unpigmented skin.

ANSWER: albinism [or word forms such as albino; or hypopigmentation; accept oculotaneous albinism; prompt on descriptive answers]

3. A 1989 speech compares this man's story to that of Vietnamese refugees who greeted an American sailor with the cry "hello, freedom man." One of his speeches describes four different kinds of love before concluding that an ideal community is "knit together by the bonds of love." This man's notebooks, which were discovered and published by Noah Webster, detail his ideological split with John Wheelwright over the concept of "Free Grace." During the Antinomian Controversy, this man presided over the blasphemy trial of Anne Hutchinson. While traveling aboard the ship *Arabella*, he gave a sermon claiming "the eyes of all people are upon us." For 10 points, name this governor of Massachusetts Bay Colony whose sermon "A Model of Christian Charity" coined the phrase "city upon a hill."

ANSWER: John Winthrop

4. A player of this instrument wrote the songs "Peace" and "Sister Sadie" for the album *Blowin' the Blues Away* and another song whose bossa nova-inspired ostinato is quoted in Steely Dan's "Rikki Don't Lose That Number." A player of this instrument released the best-selling solo jazz album in history, a recording of an hour-long improvised performance in the Cologne opera house. This was the instrument played by the composer of "Song for My Father," Horace Silver. A player of this instrument released "Ruby My Dear" and "Epistrophy" on one of his many EPs titled *Genius of Modern Music*. That player of this instrument composed "Straight, No Chaser" and "Round Midnight." For 10 points, name this primary instrument of Keith Jarrett, Thelonious Monk, and Duke Ellington.

ANSWER: piano [or pianoforte]

5. With Michael Maccoby, this thinker studied the social character of peons, free campesinos, and entrepreneurs in a Mexican village. E. O. Wilson adopted this thinker's term "biophilia," which this thinker claimed was one of three orientations that produce all human forces in his book On Being Human. He argued that Marx's thought was centered on humanist existentialism in Marx's Concept of Man. Another book by this thinker lists authoritarianism, destructiveness, and conformity as mechanisms of performing the title action. He distinguished self-love from egocentrism or arrogance in a book arguing that the activity of love is a skill that can be developed. For 10 points name this member of the Frankfurt School who wrote *The Art of Loving* and Escape from Freedom.

ANSWER: Erich **Fromm** [or Erich Seligmann **Fromm**]

6. Asymmetric induction occurs with Felkin-Anh selectivity or by a mechanism named for this process. This process can explain why, all else equal, the stability constant beta-1,1 ("beta one one") is usually greater than beta-1,2 ("beta one two"). The effect named for this process explains why siderophores (sih-DER-oh-fores) have such low K-sub-m values. The chirality of propeller compounds formed by this process is labeled lambda or delta. Complexometric titrations rely on titrants that can effect this process, which, unusually, is controlled by entropy. Ethylene·di·amine, or "en," and its tetra-acetic ("tetra"-ah-SEE-tik) acid derivative E·D·T·A facilitate this process because they're polydentate. For 10 points, what process, in which metals are surrounded by a clawlike ligand, is often used to treat heavy metal poisoning?

ANSWER: <u>chelation</u> [or <u>chelation</u> control; or the <u>chelate</u> effect; prompt on "<u>binding</u>" to metals or similar answers; prompt on "coordination"]

7. The leader of this political party released staged photos with kittens on the pseudo-lifestyle blog "Notes of Hope." After a failed 2015 attempt by this party to oust one of its members via a national mail vote, its executive committee met in secret to oust that man anyway. This party changed its symbol to a blue rose as part of its "de-demonization" strategy. The leader of this party vowed to "ruin the government's life" while mobilizing opposition against a refugee camp nicknamed "the Jungle." In 2015, this party expelled its founder after he referred to the Holocaust as a "historical detail." In advance of an April 2017 presidential election, the leader of this party is polling ahead of rivals Benoit Hamon and François Fillon (ben-WAH hah-"MOAN" and frahn-SWAH fi-YOHN). For 10 points, what right-wing French party is led by Marine Le Pen?

ANSWER: National Front [or Front National; or FN]

8. In this story, a man who states that "love is a dunghill . . . and I'm the cock that gets on it to crow" reminisces about a woodcutter's house in the Gauertal (GAO-er-tahl), where a deserter with bloody feet was given socks so that he could hide from the police. A woman in this story repeatedly offers "Tommy-ram broth" to her husband, who calls her a "rich bitch" but resolves not to be cruel after he realizes he is dying. Its preface mentions a mysterious "dried and frozen carcass of a leopard." In this story, a man suggests that death can "have a wide snout like a hyena" and imagines that Compton is flying him up to the "square top" of the title location instead of taking him to Arusha. For 10 points, name this Ernest Hemingway story about the writer Harry, who dies of gangrene on the slopes of an African mountain.

ANSWER: "The **Snows of Kilimanjaro**"

9. A revolutionary from this country was inspired to create its flag after a late-night conversation about the philosophy of color with Johann Wolfgang von Goethe. A secret society called the Lautaro Lodge was founded by that man from this country, whose term as president of its first republic was undermined by an 1812 earthquake. José Antonio Páez defeated a Spanish army in this country at the Battle of Carabobo. A revolutionary from this country briefly secured its independence after the Admirable Campaign and wrote a letter soliciting European support while exiled in Jamaica. Revolutionaries from this country include Francisco de Miranda and a man who served as dictator of Gran Colombia. Simón Bolívar was born in, for 10 points, what modern-day country's capital of Caracas?

ANSWER: Venezuela [or Bolivarian Republic of Venezuela; or República Bolivariana de Venezuela]

10. This book argues that, while the sciences of nature were born from the practices of investigation, the sciences of man arose from examination. This book claims that the change it traces was "completed" on January 22, 1840, with the opening of a place called Mettray. This book examines the history of mechanisms derived from leper colonies and the division of plague-ridden towns after its opening section, which describes how six horses failed to draw and quarter Robert-François Damiens (dahm-YEN). A structure discussed at length in this book "assures the automatic functioning of power" by imposing "a state of conscious and permanent visibility." Jeremy Bentham's "Panopticon" symbolizes the modern society of surveillance in, for 10 points, what book about "the birth of the prison" by Michel Foucault?

ANSWER: *Discipline and Punish*: The Birth of the Prison [or *Surveiller et punir*: Naissance de la prison]

11. The first drafts of this piece were set to sections from Psalm 9 chosen with the help of Ivan Sollertinsky. This piece unusually features two harps, which first play in its second movement, originally titled "Memories." The coda of this piece's *allegro non troppo* final movement quotes the opening theme of Anton Bruckner's Eighth Symphony. A section of this piece contains a pastiche combining a theme from the composer's earlier Nikolai Leskov-inspired opera with the song "You'll Find Me at Maxim's" from Franz Lehhár's *The Merry* Widow; that section of this piece is a 22-bar march that repeats twelve times, with each instance adding more instruments and volume. For 10 points, what Dmitri Shostakovich symphony contains a theme representing the invasion of the title Soviet city?

ANSWER: Leningrad Symphony [or Dmitri Shostakovich's Seventh Symphony; or Symphony no. 7 in C Major by Dmitri Shostakovich; accept Seventh Symphony or Symphony no. 7 after "Shostakovich symphony"]

- 12. A frequency for these particles contains a factor of the cube root of "six pi squared times number density." Their spectrum has dips due to the presence of a Fermi surface in the Kohn anomaly. Rudolf Peierls ("PIE-earls") demonstrated that momentum isn't conserved in a scattering process that involves three of these particles and is balanced by a nonzero k-space vector. Their interactions with electrons lead to the formation of Cooper pairs in BCS theory. On a plot of frequency versus wavevector, the dispersion curves that touch the origin correspond to "acoustic" particles of this type. Imposing a cutoff frequency for these particles leads to a temperature-cubed dependence for heat capacity at low temperatures in the Debye (deh-"BYE") model. For 10 points, what quasi-particles are the quanta of energy for lattice vibrations? ANSWER: **phonon**s
- 13. In a reimagining of this poem, the speaker warns that "hunger shall make thy modest zone / and cheat fond death of all but bone" and offers the addressee "peace and plenty, bed and board, / that chance employment may afford." This poem's speaker states that "we will sit upon the rocks" and look upon "shallow Rivers to whose falls melodious birds sing madrigals." In a reply to this poem, its addressee refuses offers of a "belt of straw and ivy buds" and "coral clasps and amber studs." Cecil Day-Lewis's response to this poem incorporates its two closing lines, which mention "these delights thy mind may move." Sir Walter Raleigh wrote a "nymph's reply" to, for 10 points, what pastoral poem by Christopher Marlowe in which the title character urges "come live with me and be my love"?

ANSWER: "The Passionate Shepherd to His Love"

14. According to Diego Durán, the Aztecs beheaded and flaved people of this type every September in honor of a goddess of corn named "seven serpent," or Chicomecoatl (chee-koh-meh-koh-AH-tul). The question of whether Arianrhod (ar-YAHN-rohd) could replace Goewin (go-win) in a seat reserved for people of this type was answered when she stepped over a magic wand belonging to Math, who was required always to rest his feet on people of this type. A select group of people of this type could be buried alive at the Evil Field, or Campus Sceleratus (skeh-leh-RAH-tus). In medieval legend, only people of this type had the ability to tame unicorns. The epithet "Parthenos" denotes Athena as a goddess of this type. Women tasked with maintaining the hearth of Vesta were, for 10 points, what type of people who, like the hunt goddess Diana, were characterized by their chastity?

ANSWER: virgins [accept maidens; accept voung women before "Arianrhod"; prompt on "women"; prompt on "<u>voung women</u>" after "Arianrhod"]

15. This king forged a papal order in order to kidnap a reformed courtesan named La Brognina (la brohn-YEE-na) from a convent. A bread-and-egg soup was supposedly invented to feed this king after he was defeated in battle. On his orders, troops carried out the executions of religious dissenters in the Massacre of Mérindol (MAY-reen-dohl). Jean de La Forêt ("de la" for-AY) negotiated an alliance between Suleiman the Magnificent and this king, who woke to find an anti-Catholic poster on his bedroom door, sparking the Affair of the Placards. He wrote to his mother, Louise of Savoy, that "all is lost to me save honor and life" after he was captured at the Battle of Pavia. This king held a summit with a northern rival at the Field of the Cloth of Gold. For 10 points, name this Valois king of France, a contemporary of Charles V and Henry VIII.

ANSWER: Francis I of France [or François I of France; prompt on "Francis" or "François"]

16. This book advises the reader not to be surprised by oppression of the poor because "one official watches over another official, and there are higher officials over them." This book echoes Isaiah with its line "for who can make that straight, which he hath made crooked." In Hebrew, the first word of this text is "hevel," and it concludes with the admonition to "fear God" and "keep his commandments." This book observes that "the heart of the wise is in the house of mourning; but the heart of fools is in the house of mirth." This book opens with a preacher identified as "the Son of David, King in Jerusalem," who is later addressed as Koheleth, proclaiming "vanity of vanities, all is vanity." For 10 points, name this contemplative book of the Old Testament that is attributed to Solomon.

ANSWER: **Ecclesiastes** [accept **Koheleth** or **Kohelet** before "Koheleth"]

- 17. For u and v in a real vector space, a combination denoted by this term is the set "one minus lambda" times u plus "lambda times v," where lambda is between zero and one, and is a special case of an affine combination. Functions with this property have a positive semi-definite Hessian. If a function has this property on an interval, Jensen's inequality requires the function's value at the midpoint of the interval to be less than or equal to the average of the function's values at the endpoints. The set of all combinations denoted by this term forms a "hull" also denoted by it. It's possessed by a function if the second derivative is not negative on the interval "a comma b," or if a line segment connecting a and b lies above the function's graph. For 10 points, what property of a function is equivalent to being concave upward? ANSWER: convex [or obvious equivalents, such as convexity; accept concave upward before "concave"; do not accept or prompt on "concave" or "concavity" or "concave down(ward)"]
- 18. This man's chief patron, Amadeo dal Pozzo, commissioned a two-part series on the Book of Exodus that includes *The Adoration of the Golden Calf.* The final chapter of Erwin Panofsky's *Meaning in the Visual Arts* discusses the ambiguity of a scene painted by this man that was earlier depicted by Guercino. The landscape surrounding Philip Johnson's Glass House was inspired by this man's *The Funeral of Phocion* (FOH-kee-on), an original of which hangs in the building itself. At the top of one of this man's paintings, Aurora guides Apollo's chariot on a dark cloud across the sky. Poverty, Labor, Wealth, and Pleasure stand in a circle with locked hands in this man's A Dance to the Music of Time. For 10 points, what French Baroque artist depicted shepherds examining a tomb in his Et in Arcadia ego?

ANSWER: Nicolas **Poussin** (poo-SAHN)

19. A character nicknamed after this animal narrates his rise from poverty in a Booker-winning novel framed as a letter to Chinese premier Wen Jiabao. One of these animals, which travels with a smaller companion to an island made of algae and populated by meerkats, takes its name from two separate victims of shipboard cannibalism. Aravind Adiga created a character named Balram in a novel titled for a "white" one of these animals. One of these animals infiltrates Akela's wolf pack as part of an attempt to hunt Mowgli. One of these animals named Richard Parker spends 227 days on a lifeboat with the title character of Yann Martel's The Life of Pi. The villain of The Jungle Book, Shere Khan, is, for 10 points, what type of big cat that, proverbially, cannot change its stripes?

ANSWER: tigers [or Panthera tigris; or P. tigris; accept The White Tiger; prompt on "big cats"]

20. The day before this battle, the winning commander received François Gérard's (zheh-RAHRD's) portrait of his young son, which that commander set up outside his tent for his generals to admire. Auguste de Caulaincourt (koh-lahn-KOOR) died in a cavalry charge that captured this battle's central defensive structure, the Raevsky ("rye"-EV-ski) Redoubt. This battle marks the final narrowing prior to the color change in an infographic created by Charles Joseph Minard. Arrowhead-shaped earthworks called *flèches* ("flesh") were created for this battle by Pyotr Bagration, who was mortally wounded during it. One commander's refusal to commit his Imperial Guard may have been a critical mistake in this battle, which was a pyrrhic victory over Mikhail Kutuzov. For 10 points, name this 1812 battle that marked the climax of Napoleon's invasion of Russia.

TB. In one of this author's poems, the speaker compares a "catafalqued (KAT-ah-falk'd) king" and a "solitary man of war / among these frail vegetables" to the title "torpedo from the ocean" that is "navigating now / the waters of death." Another of his poems concludes about the title objects that "beauty is twice / beauty / and what is good is doubly / good." This author of poems dedicated to a tuna and his own socks wrote another poem calling a lover a "cemetery of kisses" and a "pit of debris" who is "standing like a sailor at the prow of a vessel." At the end of that poem by this author, the speaker proclaims "it is the hour of departure" after lamenting "in you everything sank!" For 10 points, what poet wrote the collections *Elemental Odes* and *Twenty Love Poems* and a Song of Despair?

ANSWER: Pablo Neruda [or Ricardo Eliécer Neftalí Reves Basoalto]

ANSWER: Battle of **Borodino**

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1. The doctrine of "total depravity" extends this belief by arguing that all individuals are incapable of following God without God's grace. For 10 points each:

[10] Name this belief that Adam and Eve's actions in the Garden of Eden left humanity in a permanently fallen state.

ANSWER: original sin [or ancestral sin]

[10] This heresy denied original sin and held that mortal will could choose good or evil without divine help. It was named after a British monk born in the 4th century.

ANSWER: Pelagianism [or Pelagian heresy; accept word forms such as Pelagianist]

[10] The concept of original sin can be traced to the writings of this bishop of Lugdunum, now Lyon, who formulated a theory of sin and redemption in his anti-Gnostic treatise Against Heresies.

ANSWER: Saint Irenaeus

2. This weapon was often called the *tanegashima* (tah-nay-gah-shee-mah) because Tokitaka, the lord of Tanegashima Island, was the first to reverse engineer its design. For 10 points each:

[10] Name this matchlock firearm introduced to Japan by the Portuguese in 1543. Oda Nobunaga made heavy use of this weapon during his campaign against the Takeda clan.

ANSWER: arquebus (AR-kweh-bus) [or harquebus; or harkbus; or hackbut; or archibugio; or haakbus]

[10] Despite lacking firearms, this general from the Takeda family overran Tokugawa Ieyasu's arquebusiers at Mikatagahara (mih-kah-tah-gah-hah-rah), forcing the latter to escape the battlefield with just five men. This military genius was probably in a sexual relationship with his favorite lieutenant, Kosaka Masanobu.

ANSWER: Takeda Shingen [accept Takeda Katsuchiyo or Takeda Harunobu; accept any answer in reverse order]

[10] While the first arguebuses arrived in Japan via Portuguese trade with Tanegashima, a more substantial portion of Portuguese trade during the Sengoku period took place in this port city. The U.S. dropped an atomic bomb on this city three days after Hiroshima.

ANSWER: Nagasaki

- 3. In one appearance, this character holds a pool party at his villa to see if Ying Chan has three moles on her left side. For 10 points each:
- [10] Name this judge who searches for successive reincarnations of his friend Kiyoaki in a series of four books called the Sea of Fertility tetralogy.

ANSWER: Shigekuni Honda [accept either underlined portion; accept names in reverse order]

[10] This Japanese writer introduced Shigekuni Honda in Spring Snow, the first novel of his Sea of Fertility tetralogy. He also wrote *The Temple of the Golden Pavilion*.

ANSWER: Yukio Mishima [or Kimitake Hiraoka; accept either set of names if given in reverse order] [10] This American imagined meeting Mishima in the realm of Devachan in a set of 1972 "reflections" on Mishima's death. Nearly 30 years earlier, he penned a memoir of a cross-country road trip titled *The* Air-Conditioned Nightmare.

ANSWER: Henry Miller [or Henry Valentine Miller]

- 4. A series of paintings set in this town prompted the reaction that their artist reduced "everything, places and figures and houses, to geometric schemata." For 10 points each:
- [10] Name this French town, the setting of a painting of "houses" that inadvertently inspired the name of a Cubist movement when critic Louis Vauxcelles (voh-"SELLS") described it.

ANSWER: L'Estaque (leh-"stack") [accept *Houses at l'Estaque* or *Maisons à l'Estaque*]

[10] This Frenchman painted *Houses at L'Estaque* in addition to several paintings of the viaduct at L'Estaque.

ANSWER: Georges **Braque** (zhorzh "brock")

[10] Braque's L'Estaque paintings were inspired by the work of this Postimpressionist painter, a one-time resident of L'Estaque, whose works include *The Card Players*, *The Bathers*, and many views of Mont Sainte-Victoire.

ANSWER: Paul **Cézanne**

- 5. The fight-or-flight response is regulated by an axis composed of this gland, the pituitary, and the adrenal glands. For 10 points each:
- [10] Name this gland, found in the diencephalon ("die"-en-SEF-ah-lon) of the midbrain, that gets its name from being just below the thalamus. It regulates the pituitary gland by responding to signals for hunger and thirst. ANSWER: hypothalamus

[10] For instance, upon stimulation by ghrelin (GREL-in), the arcuate (ARK-yoo-ate) nucleus of the hypothalamus is activated to synthesize this peptide neurotransmitter, which stimulates food intake. This compound is highly correlated to obesity in rats.

ANSWER: **neuropeptide Y** [or **NPY**; prompt on "Y"]

[10] Ghrelin itself is synthesized in the uncommon epsilon cells of these cellular clusters found in a different body organ. Alpha cells found in these structures synthesize glucagon.

ANSWER: **islet**s of Langerhans [or pancreatic **islet**s; prompt on "Langerhans"; do not accept or prompt on "pancreas"]

- 6. The namesakes of this effect were inspired to research it after hearing about a bank robber who thought he could evade recognition by applying lemon juice to his face. For 10 points each:
- [10] Name this doubly eponymous effect in which low-skilled individuals suffer from illusory superiority and assess their ability as much higher than it actually is.

ANSWER: **Dunning-Kruger** effect [accept names in either order]

[10] The Dunning-Kruger effect is an example of these cognitive inclinations. Heuristics are considered a subset of them, and the "confirmation" example is a tendency to interpret information in such a way as to verify one's preconceptions.

ANSWER: cognitive **bias** [or cognitive **bias**es; accept **confirmation** bias]

[10] In this cognitive bias, people give high accuracy ratings to descriptions of their personalities that they believe to be specifically tailored to them, even though the ratings are actually vague enough to apply to a large range of people.

ANSWER: **Barnum** effect [or **Forer** effect]

- 7. This man is known as the "Marquis" in a story in which his victims include an opera singer who performed the part of Isolde, the model for Odilon Redon's The Evening Star Walking on the Rim of Night, and a fashionable Romanian countess. For 10 points each:
- [10] Name this evil folk character who is central to Angela Carter's "The Bloody Chamber"; in that story, this man takes the narrator's virginity in a bedroom whose walls are lined with a dozen mirrors.

ANSWER: Bluebeard [or Barbe bleue]

[10] In a sonnet by this poet, Bluebeard indignantly reveals that his secret chamber is really empty, "cobwebbed and comfortless." She wrote "all I could see from where I stood / was three long mountains and a wood" at the beginning of her poem "Renascence" (ree-NAY-"scents").

ANSWER: Edna St. Vincent Millay

[10] This author's novel Bluebeard is about the abstract expressionist Rabo Karabekian, who keeps his painting Now It's the Women's Turn locked away in a windowless potato barn. He also wrote Slaughterhouse-Five.

ANSWER: Kurt Vonnegut [or Kurt Vonnegut Jr.]

- 8. During the aria "Amour sacré de la patrie" (ah-MOOR sah-KRAY "de la" PAH-tree), audience members viewing a performance of *La Muette de Portici* (lah moo-et deh por-tee-chee) left the opera house to participate in the riots that began this event. For 10 points each:
- [10] Name this revolution that resulted in the Treaty of London of 1839, which broke up the United Kingdom of the Netherlands. Due to French intervention, William I's Ten Days' Campaign failed to suppress this revolution.

ANSWER: <u>Belgian</u> Revolution [accept any answers indicating a war in which <u>Belgium</u> revolted or won its independence]

[10] In 1789, a revolution named for this region of Belgium resulted in the short-lived creation of the United Belgian States, but infighting between the Statist and Vonckist factions led to a quick Austrian recovery.

ANSWER: **Brabant** [accept **Brabant** Revolution or **Brabantine** Revolution]

[10] After the Battle of Blenheim in this war, the duke of Marlborough broke through a defensive network called the Lines of Brabant. It was fought over who should follow the childless Charles II as king of an Iberian country.

ANSWER: War of the **Spanish Succession**

- 9. In the current industrial synthesis of Tamiflu, this reaction is followed by hydrolysis to produce the free amine that reacts with phosphoric acid in the last step. For 10 points each:
- [10] Name this reaction that was once used to sequence polypeptides. In this reaction, the alkyl group on one side of a carbonyl migrates to attack a nitrogen on the other side, forming an isocyanate by evolving nitrogen gas.

ANSWER: **Curtius** rearrangement

[10] The other nitrogen in Tamiflu is amidated by reacting it with the acetic example of these compounds. These compounds consist of two carbonyls linked by a single oxygen. They are formed by dehydrating carboxylic acids.

ANSWER: carboxylic acid **anhydride**s [or acid **anhydride**s]

[10] Adding the azide to Tamiflu is accomplished by opening an aziridine with a combination of sodium azide and this acid as a catalyst. This very strong diprotic acid has formula H_2SO_4 (H-"two"-S-oh-"four").

ANSWER: <u>sulfuric</u> acid [do not accept or prompt on "sulfurous acid"]

10. This composer included Iowa and Iroquois melodies in his *Indian* Suite. For 10 points each:

[10] Name this American Romantic composer who wrote two piano concertos and the piano suite *Woodland Sketches*, which opens with the short piece *To a Wild Rose*.

ANSWER: Edward MacDowell [or Edward Alexander MacDowell]

[10] Roses from the South is a piece of this type by Johann Strauss Jr., known as the "king" of this 3/4 ("three-four") dance. Strauss's other pieces of this type include Tales from the Vienna Woods and The Blue Danube.

ANSWER: waltzes [accept Waltz King]

[10] This composer's *mélodies* for voice and piano include "Les roses d'Ispahan" (lay "rose" deece-fuh-hahn) and "Après un rêve" (ah-PRAY oon REHV). This mentor of Maurice Ravel wrote a requiem in D minor.

ANSWER: Gabriel Fauré [or Gabriel Urbain Fauré]

- 11. On an H–R diagram, the branch named for these stars occurs after the sub-giant branch, when the outer layers of the star become fully convective. For 10 points each:
- [10] Low-mass main sequence stars, such as our sun, evolve into what stars with cool surface temperatures? ANSWER: **red giant**s [accept **red-giant** branch; do not accept "red supergiants"]
- [10] The red-giant branch ends with the onset of the burning of this element. A "flash" named for this element can occur if electrons in the core are completely degenerate, resulting in a runaway thermonuclear reaction! ANSWER: <u>helium</u> [or <u>He</u>; accept <u>helium</u> flash]
- [10] As a star progresses along the red-giant branch, the first example of this phase occurs due to a deepening of convection zones. Stars on the "thermally pulsing asymptotic giant branch" experience the third example of this process, which can lead to "hot bottom burning."

ANSWER: **dredge up** [accept **dredging** up or **dredge**]

12. In the first section of the epic named for this man, the gods kill Geshtu-E (GESH-too-AY) and use his blood to create humans, who are meant to replace the Igigi (ih-GEE-gee) gods as slave laborers. For 10 points each:

[10] Name this mythical figure who survives a seven-day worldwide flood at the end of that Akkadian epic because Enki sends him a dream instructing him to build a large boat. His name means "very wise."

ANSWER: Atra-Hasis

[10] This Mesopotamian flood survivor was king of Shuruppak before humanity was wiped out by Enlil (EN-leel). He tells a hero from Uruk how he became immortal before challenging that man to stay awake for seven days.

ANSWER: **Utnapishtim** (oot-nah-PEESH-teem) [or **Utanapishtim**]

[10] This hero visits Utnapishtim during his quest for immortality. In his namesake epic, he befriends Enkidu and kills both Humbaba and the Bull of Heaven.

ANSWER: **Gilgamesh** [accept **Epic of Gilgamesh**]

13. This soldier designed an innovative breech-loading rifle that, while powerful, fell out of use because of its prohibitive cost and propensity to break down in battle. For 10 points each:

[10] Name this British officer who apocryphally refused to snipe George Washington in the back at the Battle of Brandywine Creek. His body was desecrated after he was killed at the Battle of King's Mountain.

ANSWER: Patrick <u>Ferguson</u> [accept <u>Ferguson</u> rifle or <u>Ferguson</u> riflemen]

[10] In the Little Egg Harbor Massacre, Ferguson killed 50 sleeping Patriot soldiers under the command of this Polish exile. This Polish nobleman died leading a cavalry charge during the 1779 siege of Savannah.

ANSWER: Casimir **Pulaski** [or Kazimierz Michal Wladyslaw Wiktor **Pulaski**]

[10] The Little Egg Harbor Massacre took place in this state, which was also the site of the Battle of Princeton. George Washington crossed the Delaware River into this state to surprise the Hessians at the Battle of Trenton. ANSWER: New Jersey

14. In a dramatic work by this author, the playwright Mr. Puff explains that the best scene in his play is one in which an actor enters the stage, sits down, comes forward, shakes his head, and then leaves. For 10 points

[10] Name this author of *The Critic*, in which actors rehearse a play-within-a-play called *The Spanish Armada*. His other plays include *The Rivals* and *The School for Scandal*.

ANSWER: Richard Brinsley **Sheridan** [or Richard Brinsley Butler **Sheridan**]

[10] George Villiers's play *The Rehearsal* uses the character of Bayes to satirize this author, who wrote *The* Conquest of Grenada. In retaliation, this man portrayed Villiers as Zimri in one of his poems.

ANSWER: John **Drvden**

[10] In this contemporary playwright's *Noises Off*, Dotty Otley and Brooke Ashton rehearse a bedroom farce directed by Lloyd Dallas. His other plays include *Democracy*.

ANSWER: Michael Frayn

15. This labor leader directed a "lightning" strike that began on April Fools' Day of 1972. For 10 points each: [10] Name this labor leader who conducted that strike while the Supreme Court considered a challenge to the "reserve clause" that affected the contracts of the workers he represented.

ANSWER: Marvin Miller [or Marvin Julian Miller]

[10] Miller was the head of the "players association" of the athletes who played for this professional sports league, which the Supreme Court granted an antitrust exemption in part because it recognized this league's status as the steward of the "national pastime."

ANSWER: Major League Baseball [or MLB]

[10] Miller successfully challenged the reserve clause with the help of Andy Messersmith, who refused to sign a new contract with this team. In 1966, Don Drysdale held out against this team and became, with a left-handed teammate, the first pitcher ever to make over \$100,000 a year.

ANSWER: Los Angeles Dodgers [accept either underlined portion; accept L.A. Dodgers; prompt on "Los Angeles" or "L.A."; do not accept or prompt on "Brooklyn Dodgers"]

- 16. This philosopher believed in "one god greatest among gods and men, not at all like mortals in body or in thought." For 10 points each:
- [10] Name this pre-Socratic philosopher who argued against anthropomorphizing deities by stating that, if cattle and horses could paint, they would depict the gods in the forms of cattle and horses.

ANSWER: Xenophanes of Colophon

[10] In the *Sophist*, Plato describes Xenophanes as the founder of this school named for a city in Magna Graecia (GREE-shee-ah). This school, which included Parmenides and Melissus as members, held that the universe was one and unchanging.

ANSWER: <u>Eleatic</u> school [or <u>Eleatic</u>s; accept answers mentioning <u>Elea</u>]

[10] Perhaps the most enduring contribution of the Eleatic school is this set of problems devised by Zeno of Elea. One of these problems purports to show that Achilles will never catch up to a tortoise.

ANSWER: Zeno's **paradox**es

17. Richard Arkwright founded one of this city's earliest cotton mills at Shudehill, and Peter Drinkwater's Piccadilly Mill in this city was the first to use a steam engine to power machinery. For 10 points each: [10] Name this city that became known as "Cottonopolis" due to its status as the center of England's textile industry during the Industrial Revolution.

ANSWER: Manchester

[10] This term is given to the Lancashire textile workers who gathered in Manchester in 1817 to march on London before they were dispersed under the Riot Act. The name comes from the objects that the marchers carried with them.

ANSWER: **Blanketeer**s [accept **Blanket** March]

[10] This event took place in Manchester two years after the Blanket March, when cavalry attacked a massive crowd that had gathered to hear Henry Hunt speak. This event resulted in the passage of the Six Acts and the founding of the *Guardian*.

ANSWER: **Peterloo** Massacre

- 18. This parameter is represented by capital lambda and defined as "four pi over three" times "number density" times "the cube of the Debye (deh-"BYE") length." For 10 points each:
- [10] Name this parameter equal to the number of particles contained in a Debye sphere. It is much less than one for strong coupling and much greater than one for weak coupling.

ANSWER: plasma parameter [do not accept "coupling parameter"]

[10] Except near the boundaries, plasmas have what property in which the densities of ions and electrons are approximately equal?

ANSWER: **quasi-neutral**ity [or obvious equivalents]

[10] In a weakly coupled plasma, collisions named for this French physicist are negligible. This physicist devised an inverse-square law for the electrostatic force.

ANSWER: Charles-Augustin de <u>Coulomb</u> [accept <u>Coulomb</u>'s law]

- 19. Berenice Abbott worked to popularize Eugène Atget's (oo-ZHEN aht-ZHAY's) photographs of this city, whose "old" sections he documented in proto-surrealistic images of deserted streets and reflective storefront display windows. For 10 points each:
- [10] Name this city that was modernized by Baron Haussmann, prompting Atget to photograph what was left of its heritage. In a photo taken in this city, a man jumps over a pool of water behind its Gare Saint-Lazare (gahr-sahnt-lah-zar) train station.

ANSWER: Paris

[10] *Behind the Gare Saint-Lazare* was shot by this French photographer, who founded Magnum Photos with Robert Capa and several other artists. He used a Leica 35mm ("LIE"-kah "35 millimeter") camera for much of his career.

ANSWER: Henri Cartier-Bresson

[10] Cartier-Bresson explained his artistic approach in the title essay of this book; the essay argues that a photographer must be able to recognize and capture specific instants in time when visual elements are in balance.

ANSWER: The <u>Decisive Moment</u> [or <u>Images à la sauvette</u>; accept <u>Images on the Sly</u>]

20. For 10 points each, answer the following about Slavic nationalist literature.

[10] A 19th-century movement to revive this language was led by Josef Jungmann (YUNG-mahn) and Josef Dobrovský and produced such works as *The Grandmother*, which depicts country life at the Old Bleachery. ANSWER: **Czech** [or čeština; or český jazyk]

[10] This Polish national epic by Adam Mickiewicz (mih-CAVE-itch) describes the feuding Soplica and Horeszko (soh-PLEET-sah and hoh-REZH-koh) families. This work, composed of 13-syllable Polish alexandrines, opens "Lithuania, my fatherland!"

ANSWER: <u>Pan Tadeusz</u> (pahn TAH-day-oosh) [or <u>Sir Thaddeus</u>; or <u>Master Thaddeus</u>]

[10] One author with this surname wrote a nationalist ballad about Potok, who falls asleep in the 10th century, awakens in 16th-century Moscow, and awakens again in 19th-century St. Petersburg. Another author with this surname wrote *Anna Karenina*.

ANSWER: <u>Tolstoy</u> [accept Leo <u>Tolstoy</u> or Lev Nikolayevich <u>Tolstoy</u> or Aleksey Konstantinovich <u>Tolstoy</u>]

Extra. Theophanes (thee-AH-fen-eez) the Confessor stated that Muslim forces established a bridgehead on this island shortly after an emperor was beaten to death with a bucket while bathing. For 10 points each: [10] Name this Mediterranean island. In 668, Constans II was killed on this island for trying to move the Byzantine capital to its city of Syracuse.

ANSWER: **Sicily** [or **Sicilia**]

[10] Due to rising controversy, Constans issued an edict banning debate over this religious doctrine. This doctrine, which was championed by Patriarch Sergius I and encouraged by Heraclius, claimed that Christ had two natures but only one will.

ANSWER: monothelitism (muh-NOTH-uh-luh-tizm) [accept word forms]

[10] After the Aghlabid (AG-luh-bid) dynasty set up an emirate in Sicily, the island was ruled by Arab Muslims until its conquest by these people. These people included the Hauteville (oh-tuh-VEEL) family of Roger Bosso, Sicily's first count.

ANSWER: **Norman**s [or **Normand**s]