



ACADEMIC
COMPETITION
FEDERATION

ACF NATIONALS 2018

TIEBREAKER ROUND 1

to be read to break ties in preliminary brackets

packet by
WUSTL

authors

Charles Hang, Patrick Butenhoff, Cyrus Zhou

Tossups

1. *Description acceptable.* Legal historian N. E. H. Hull wrote a book-length study of this case, which analyzes a pamphlet later published by government attorney Richard Crowley on his arguments in this case. In the wake of this case, Senator Matthew Carpenter issued a resolution, praising the efforts of attorney Henry R. Selden, and calling for the impeachment of Judge Ward Hunt because he ordered the jury to issue a directed verdict and refused to poll them. The losing side in this case used the “new departure” theory, an expansive view of the Privileges and Immunities Clause. After this case was moved to the Canandaigua (“cannon”-DAY-gwah) Courthouse to avoid jury prejudice, Millard Fillmore was a daily spectator. The argument used in this case was rejected two years later by the Supreme Court in *Minor v. Happersett*. This case resulted in a 100-dollar fine being levied against the convicted that was never paid. For 10 points, name this 1873 criminal proceeding concerning a certain woman who tried to vote in Rochester, New York.

ANSWER: trial of Susan B. Anthony [or *United States v. Anthony*; accept any answer mentioning Susan Brownell Anthony and the idea of a trial or prosecution or similar (for attempting to vote)]

2. A modification of this technique contains a surfactant such as SDS concentrated above the CMC to produce a micellar pseudo-stationary phase. Transient ITP is commonly used as a preconcentration step in this technique. Bubble cells or z-cells may be implemented to increase path length in this technique, which can use field-amplified sample stacking to improve peak sharpness. Vessels for this technique are often coating with polyimide, a portion of which must be burnt off to produce a window. This technique is often run with arrays of 16 or 96 units simultaneously. Unlike a rounded laminar-flow profile, this technique results in a flat-plug flow profile characteristic of electroosmosis. Setups for this technique link a sample and destination vial with the namesake vessels, separating analytes based on ionic mobility. For 10 points, name this technique in which a microfluidic channel or a tube with an extremely small diameter transports an analyte in an electrolyte solution under the influence of a voltage.

ANSWER: capillary electrophoresis [accept capillary zone electrophoresis or CZE; prompt on “electrophoresis” or “gel electrophoresis”]

3. This composer conducted *Julius Eastman and the Fires of London* on one of his own pieces in a 1970 recording for Unicorn. In an orchestral piece by this composer, the concertmaster’s solo is “interrupted” multiple times by wayward brass, representing a drunken party where the first fiddle can barely hold the band together. That piece by this composer ends with a bagpiper dressed in full Scottish regalia entering from offstage. This composer founded the St. Magnus Festival in his adopted home in collaboration with local poet George Mackay (muh-KYE) Brown, whose work formed the basis for his chamber opera *The Martyrdom of St. Magnus*. This composer of *An Orkney Wedding, with Sunrise* also composed a melodrama for a baritone with an extended range of five octaves, which requires the musicians to play in giant bird cages, like George III’s pet bullfinches. For 10 points, name this British composer of *Eight Songs for a Mad King*, who passed away in 2016.

ANSWER: Peter Maxwell Davies

4. Sacrifices of cows and oxen are prohibited during celebrations of this figure’s birthday on lunar April 26th, which are often accompanied with incense and fireworks. One account of this figure’s birth states that his mother, Andeng (ahn-dung), lay with a dragon, which is why he is sometimes shown with the head of a dragon but the face of a man. This figure made an accidental discovery when a bush caught on fire and the wind blew leaves and twigs into a tripod cauldron. This figure died from consuming a poisonous yellow weed and failing to take a tea antidote in time. This mythical figure is the traditional author of *The Classic of Herbal Medicine*, which was likely compiled in the 2nd century AD. This figure’s common name means “god-peasant.” He taught such skills as acupuncture and using fire to clear fields in his role as the second of the Three Sovereigns, along with Fuxi (foo-shee) and the Yellow Emperor. For 10 points, name this Chinese agriculture deity who was also known as the “God of Five Cereals.”

ANSWER: Shennong [or Wugushen or Wuguxiandi; accept answers that refer to a God of Five Grains or God of Five Cereals before the “Five”]

5. A miner named Joel Sullivan calls a woman of this profession “a dream / my daughter won’t give up” in a poem whose last section features the husband of that woman saying that “afterwards she was everywhere.” Gabrielle Calvocoressi (kahl-voh-koh-RESS-ee) wrote a poem in which ten people describe the last time they saw a person with this job. James Tate imagined a man in this profession telling him that “misfortune / placed these worlds in us” in a poem about his father titled for a “lost” one of these people. In another poem, one of them recalls how he “balanced all, brought all to mind” and states “my country is Kiltartan Cross, my countrymen Kiltartan’s poor” after admitting that “those that I fight I do not hate, those that I guard I do not love.” This is the profession of a man who, driven by a “lonely impulse of delight,” meets his fate “somewhere among the clouds above.” For 10 points, name this profession of an Irishman who “foresees his death” in a W. B. Yeats poem.

ANSWER: **aviator**(s) [accept synonyms such as **aviatrix**(es) or **pilot**(s) or **airman** or **airmen**; accept “The **Lost Pilot**” or “An **Irish Airman Foresees His Death**”]

6. This scientist was inspired by the Austro-Hungarian Polar Expedition to formulate a simplified expression for the thickness of sea ice proportional to the square root of time. This scientist invented the diathermometer to perform the first accurate measurements of the thermal conductivity of gases. A different device named for this scientist consists of a tube with a bath of volatile liquid at the bottom, which is allowed to evaporate and be carried away by flowing gas in order to determine diffusion coefficients. He names a class of boundary value problems in which the boundary between phases is variable. With Maxwell, he co-names a theory of diffusion in multicomponent systems. A constant sometimes named exclusively for this man has a value of “5.67 times 10 to the eighth watts per meter squared per Kelvin to the fourth,” and that constant appears in an equation that is derived by integrating the Planck distribution over all wavelengths. For 10 points, what Austrian physicist of Slovenian descent co-names the equation for the total radiation of a blackbody with his student, Ludwig Boltzmann?

ANSWER: Josef **Stefan** (yo-sef steh-FAHN) [accept **Stefan** problems or Maxwell-**Stefan** diffusion or **Stefan**’s constant; accept **Stefan-Boltzmann** equation or **Stefan-Boltzmann** constant after “Boltzmann”; prompt on answers mentioning “**Stefan-Boltzmann**” before “Boltzmann”]

7. One leader of this regime gave a speech in which he smashed three bottles of blood on the ground in a town square to intimidate opponents. The ruling body of this regime began with three representatives from each of its 40 nominating units, and the creation of a body called the Provisional Office for Mass Organization Affairs to promote education. One of its early leaders issued a slogan promising “for every revolutionary killed, a thousand counter-revolutionaries executed,” which targeted several members of the movement known popularly as MEISON (MAY-sahn). This regime launched a resettlement program known as villagization, possibly partly funded by Western aid. The song “Do they know it’s Christmas?” was written in response to a famine under this regime, and led to the Live Aid concert. For 10 points, name this military junta led by Mengistu Haile Mariam (meng-GIS-too HYE-lee MAR-ee-um) that ruled Ethiopia after overthrowing Haile Selassie.

ANSWER: **Derg** [or Common **Derg**, or **Dergue**, or **Coordinating Committee of the Armed Forces, Police and Territorial Army**]

8. This artist earned his most powerful admirer after painting a work showing the “queens of Persia at the feet of Alexander,” his *The Tent of Darius*. A 2013 fire damaged the Hôtel Lambert, which contains this painter’s Gallery of Hercules, executed while he was also painting works in Vaux-le-Vicomte, the home of a wealthy superintendent of finances. With the financial backing of another political ally, this artist reshaped the workshop previously run by Charles de Comans and Raphaël de la Planche into a tapestry manufactory called the Gobelins (goh-beh-lanz). This painter, who was heavily influenced by Nicolas Poussin, took control of two of France’s major art academies with the help of Jean-Baptiste Colbert. This man painted *The King Governs Alone* as the central ceiling panel for the Hall of Mirrors in his role as the main decorator of the Palace of Versailles. For 10 points, what 17th-century French “first painter to the king” originated the “Louis XIV (“the 14th”) style”?

ANSWER: Charles **Le Brun**

9. A work in this genre that notes that apes are not transformed by the “mirror” of a book appears in the fourth volume of a set of notebooks labeled ‘A’ through ‘L’. The electrical-discharge figures discovered by their author are depicted on the cover of the NYRB Classics edition of *The Waste-Books*, a collection of pieces of this type by Georg Christoph Lichtenberg. A book of annotated pieces of this genre expanded from about 800 entries to over 4,000 in editions published over the last 40 years of the life of its editor, Erasmus. François Rabelais published an edition of works of this type by Hippocrates, one of which draws a contrast between “short” life and “long” art. The idea that self-love is the cause of all actions is the overriding theme of a collection of these pieces that a nobleman published anonymously in 1665. François de La Rochefoucauld is best known for his collection of these statements. For 10 points, Horace’s “carpe diem” is an example of what statements of pithy observation or advice?

ANSWER: aphorisms [or maxims; accept adage or proverbs; prompt on “sayings” or similar answers indicating “pithy statements”]

10. It’s not due to Kripke, but this argument is criticized for relying on a “semantic premise” that turns a conceptual fact into a metaphysical problem in Brian Loar’s “Phenomenal States.” A paper responding to this argument illustrates “ways of missing the point” using various explanations of “tasting Vegemite” and “driving a steam locomotive fast on a cold, stormy night.” The main lines of response to this argument include the “ability hypothesis” introduced in that David Lewis paper and the “acquaintance hypothesis.” The first part of this argument imagines a man named Fred who can differentiate two types of ripe tomatoes. This argument, which holds that physicalism is false because someone who knew everything physical about a property would learn something new by being exposed to it, appears in its originator’s essay “Epiphenomenal Qualia.” For 10 points, identify this argument by Frank Jackson that imagines a “color scientist” confined to a black-and-white room.

ANSWER: knowledge argument [or Mary’s room; or Mary the super-scientist]

11. This campaign was first proposed at a 1958 conference in Minneapolis by a man who cited the success, over 50 years earlier, of C. K. Millard’s “Leicester system.” One of the last notable incidents before this campaign’s success was certified was an accident at the University of Birmingham that caused the death of the photographer Janet Parker and led to the suicide of Henry Bedson. The ultimate success of this campaign, which was certified in 1980, gives rise to the most notable fact about the Bangladeshi woman Rahima Banu and the Somali man Ali Maow Maalin (MAH-oh mah-LEEN). After Viktor Zhdanov proposed this campaign, Donald Henderson presided over its implementation, which was aided by a “ring” strategy and the invention of the bifurcated needle. Following the success of this campaign, only the Vector Institute and the CDC are known to have samples of a certain infectious agent. For 10 points, name this public health campaign accomplished in part with a vaccine developed by Edward Jenner.

ANSWER: eradicating smallpox [accept smallpox virus or Variola virus or Variola major or Variola minor in place of “smallpox”; accept any synonym for eradicate in place of “eradicating”; accept any other answer indicating the campaign to eliminate smallpox from the world]

12. The only physical relic of this battle is a cauldron thought to have been used for the burial of Laudaricus (lao-DAR-ih-kuss). A historical account stated that soldiers in this battle “were forced to drink what was the blood they had poured out from their own wounds” from a creek whose “water mingled with gore.” Prior to this clash, a king named Sangiban was placed at the center of the battle formation so he could not treacherously throw open a city’s gates. J. B. Bury argued that it should be called the “Battle of Troyes,” and downplayed its importance, arguing that the later Battle of Nedao was more pivotal. The attacking army’s failure to take Aurelianum turned the tide in this battle documented by the historian Jordanes. A year later, the losers of this battle invaded Italy to press a marriage claim but were halted at the River Po. For 10 points, name this AD 451 battle in which a coalition of Romans and Goths under Flavius Aetius and Theodoric I defeated Attila’s Huns.

ANSWER: Battle of the Catalaunian Plains or the Battle of Chalons [or Battle of the Campus Mauriacus, or Battle of Maurica or Battle of the Catalun or Catalaunian Fields]

13. The narrator of a novel by this author interjects in all-caps to tell the protagonist “GO STEADY” in a chapter in which she fusses over whether to use pigeon-blood paper for a note. In a letter discovered in 2007, this author asked Dr. Kinnicutt for help writing a scene in which the protagonist imagines Nettie Struther’s child lying on her arm. In a novel by this author, a visitor who wants to buy tapestries from the estate of the Chelle family turns out to be the protagonist’s first husband, whom she then remarries after divorcing Raymond. This author of a novel about a woman who precipitates Ralph Moffat’s suicide by telling him about her marriage to Elmer Moffatt in the town of Apex also wrote a novel in which Lawrence Selden arrives too late to propose to a woman who has been “sleeping badly for a long time” and had just overdosed on chloral. For 10 points, name this author whose New York-set novels include one about Undine Spragg, *Custom of the Country*, and one about Lily Bart, *House of Mirth*.

ANSWER: Edith Wharton [accept Edith Newbold Jones]

14. Following this event, the mass-independent fractionation of sulfur isotopes was almost entirely replaced by mass-dependent fractionation. This event is attributed to cooling of the mantle and subsequent decrease in the availability of nickel-rich rock in the “nickel famine” theory. A spike in chromium rock deposits dating to this event suggests that a large increase in global levels of sulfuric acid occurred alongside it. This event likely caused the Huronian glaciation, which led to the first of many snowball Earths, as a result of the decrease in atmospheric methane. The first mass extinction is believed to have occurred during this event, as methanogenic archaea would have likely found the changing environment toxic. For 10 points, name this geological event that occurred approximately 2.45 billion years ago, which saw a dramatic increase in the Earth’s atmosphere of a gas consumed in aerobic respiration.

ANSWER: Great Oxygenation Event [or Great Oxidation Event; or GOE; or Oxygen Catastrophe; or Oxygen Holocaust; or Oxygen Revolution; prompt on answers describing “dramatic increase in atmospheric oxygen” or similar]

15. A series of interviews asking people in this role about how they rationalized their decisions were conducted by Robert Jackall, who used his findings the 1988 book *Moral Mazes*, a book subtitled for these people’s “world.” Geert Hofstede worked in this role before becoming an expert in “international” practice and devising the “theory of cultural dimensions.” Alfred Chandler argued that people in this role constituted “the most powerful institution in the American economy,” and documented a “revolution” led by them, in his book *The Visible Hand*. According to W. Edwards Deming, people in this role should adhere to the “Shewhart cycle” of “plan-do-study-act,” avoid the “seven deadly diseases,” and follow “14 points.” The theory that people in this role should work “by objectives” is central to a 1954 book on the “practice” of filling this role by Peter Drucker. For 10 points, name this corporate role that students at a school named for Alfred P. Sloan are training to fill.

ANSWER: corporate managers [accept answers containing forms of the word manager such as managers of companies or managerial class or company management or middle managers; accept corporate executives or corporate administrators or other answers indicating the people who manage or administer a business]

16. In a play, an old couple sweeping under one of these objects explains how it is coupled with another one of these objects located across the bay, before revealing that they are the spirits of those two objects. One of these objects serves as a memorial to two salt-gathering sisters who loved Yukihiro in a play punningly titled for wind and these objects, which was written by Kanami and revised by Zeami Motokiyo. In a play titled for one of these objects, a man nicknamed “Hard Luck” stabs a rapy tobacco merchant in the head to protect a courtesan whose contract he had vowed to buy out in order to unite her with her love Yojibei. Donald Keene made that play titled for one of these objects one of the four “major plays” of its author by collecting it with *The Battles of Coxinga* (koh-sheen-gah) and the love suicide plays. Chikamatsu wrote about an “uprooted” one of, for 10 points, what type of tree ubiquitous in Japanese literature?

ANSWER: pines [or pine trees; or matsu; accept *Wind in the Pines* or *Matsuzake* or *The Uprooted Pine* or *Nebiki no Kadomatsu*; prompt on “coniferous trees” or “evergreens” or “trees” or “plants” or other less specific answers]

17. In one work, this author criticizes Sylvia Plath’s poem “Daddy” for appropriating “the unspeakable annals of ‘Dachau, Auschwitz, Belsen.’” This author describes how “Romanticism turns almost immediately into Decadence” in a work that argues that “the mother” inspires lifelong sexual anxiety in men. The Marquis de Sade is described as a satirist of Rousseau in that book by this writer that seeks to “demonstrate the unity and continuity of western culture.” One of this author’s works both reviews and is titled for John Donne’s Holy Sonnet XIV. Another work by this author describes Gracie Allen and the Oracle at Delphi as examples of the “pythoness.” This author collected 43 of her favorite poems in the collection *Break, Blow, Burn*. This author’s best-known book replaces the Dionysian with the Chthonic in the Apollonian/Dionysian distinction and argues that “pornography in great art . . . [has] been ignored by most academic critics.” For 10 points, name this heterodox feminist thinker who wrote *Sexual Personae*.

ANSWER: Camille Paglia [or Camille Anna Paglia]

18. This leader's tenure saw the passage of a Pension Reform Law that guaranteed all retirees a pension paying at least 50% of their pre-retirement gross earnings. This politician abolished fees for higher education and created a rent control program called "comparable rents" as part of his Rent Subsidies Act. This leader issued a speech containing his slogan "let's dare more democracy" upon taking office. Political extremists were banned from government office under this man's Anti-Radical Decree. This man's namesake report established 30 degrees north as the line dividing the wealthy "global north" from the impoverished "global south." This politician ended a policy known as the Hallstein Doctrine with his signing of the Basic Treaty of 1972, which established the Oder-Neisse (OH-der-NYE-suh) line as his country's eastern border. For 10 points, name this West German chancellor who launched the policy of Ostpolitik (OHST-poh-lee-teek).

ANSWER: Willy **Brandt** [or Herbert Ernst Karl **Frahm**]

19. An operatic title character with this occupation sings the aria "Je t'implore et je tremble" (zhay tam-plore ay zhay trahm-bluh) while preparing to execute a captive. The opera in which that character of this profession appears was written at the height of the composer's rivalry with Niccolò Piccinni, who wrote an opera on the same subject. A character with this occupation recounts the story of a lowborn daughter who saved a stranger from wild animals by distracting them with the sound of her wand. Another character with this occupation is remembered by the singers of the duet "Au fond du temple saint" (aw fahn duh tahm-pluh sahnt). The glockenspiel echoes one of these characters in the coloratura aria "Où va la jeune Hindoue" (ooh vah zhoon ahn-doo), better known as the "Bell Song." That character of this profession sings the "Flower Duet" with her servant Mallika and falls in love with the British officer Gérald before committing suicide. For 10 points, what occupation is held by Leila in Bizet's *The Pearl Fishers*, and by the title characters of Gluck's *Iphigénie en Tauride* and Leo Delibes's *Lakmé*?

ANSWER: **priestess**(es) [accept more specific answers such as **priestess** of Brahma or **priestess** of Artemis]

20. 5-iodo-willardi-ine selectively binds to a receptor for this compound. The failed drug LY-404,039 ("L-Y-4-oh-4-oh-3-9"), created by Lilly, targeted this compound's receptors in an attempt to treat schizophrenia because the hypofunction of this compound's receptors is a hypothesis behind the cause of schizophrenia. Olney's lesions were historically believed to be caused by inhibitors of receptors of this compound, whose activity is increased in response to BDNF. In some cases of Rasmussen's encephalitis, autoantibodies target this compound's receptors. Memantine and ketamine block a receptor for this compound; that receptor may also be blocked by magnesium ions. Ionotropic receptors for this compound may react to kainate (KAY-ih-nate), AMPA, and NMDA, and are involved in long-term potentiation and synaptic plasticity. GABA (GAB-uh) is synthesized by decarboxylating this compound. For 10 points, name this excitatory neurotransmitter that, like aspartate, is an amino acid with an acidic side chain.

ANSWER: **glutamate** [or **Glu**; prompt on "**E**"]

ACF Nationals 2018

Editors: Jordan Brownstein, Andrew Hart, Stephen Liu, Aaron Rosenberg, Andrew Wang, Ryan Westbrook
 Packet by WUSTL A (Charles Hang, Patrick Butenhoff, Cyrus Zhou)

Bonuses

1. The Piccirilli brothers carved this sculptor's two most recognizable works, which were originally named for the Lenox and Astor collections but were renamed by Fiorello La Guardia. For 10 points each:

[10] Name this sculptor of *Patience* and *Fortitude*, the two marble lions that sit outside the main branch of the New York Public Library.

ANSWER: Edward Clark **Potter**

[10] Potter was trained in the studio of this American sculptor, whose public sculptures include *Minute Man* in Concord, Massachusetts, *Alma Mater* at Columbia University, and a large seated statue on the National Mall.

ANSWER: Daniel Chester **French**

[10] French and Potter collaborated on a gold-plated quadriga titled *Progress of the State* that adorns this Cass Gilbert-designed building, which has the second-largest unsupported marble dome in the world behind St. Peter's in Rome.

ANSWER: **Minnesota** State **Capitol** building [accept answers containing **Minnesota** and **Capitol**]

2. A parody of this poet notes that "bacon's not the only thing that's cured by hanging from a string." For 10 points each:

[10] Name this British poet. Hugh Kingsmill lampooned him in a poem that begins "what, still alive at twenty-two, a clean upstanding chap like you?" in reference to this author's poem "When I Was One-and-Twenty."

ANSWER: A. E. **Housman** [or Alfred Edward **Housman**]

[10] This member of the Algonquin Round Table imagined "how gay 'twould be / to hang me from a flowering tree" in her parody of "Loveliest of trees, the cherry now." She observed that "Razors pain you, Rivers are damp" and concluded "you might as well live" in her poem "Resumé."

ANSWER: Dorothy **Parker**

[10] This author scrawled a Houseman parody beginning "and now, lad, all is over, / 'twixt you, your love, and the clover" in his copy of *A Shropshire Lad*. He parodied 17 other authors in *A Christmas Garland* and lampooned the Pre-Raphaelites in *Rossetti and His Circle*.

ANSWER: Max **Beerbohm** [or Henry Maximilian **Beerbohm**]

3. This bicyclic molecule is found on the side chain of tryptophan and is the basis for auxins. For 10 points each:

[10] Name this compound consisting of a benzene fused to an indole. It is produced in the Bartoli reaction.

ANSWER: **indole**

[10] The Gassman indole synthesis is this sort of synthesis in which all reactions occur in the same vessel. Cascade reactions are these sorts of reactions, which are advantageous due to not needing work-up or multiple purification steps.

ANSWER: **one-pot** reaction or synthesis [accept **telescoping** synthesis]

[10] The Baeyer-Emmerling indole synthesis starts with an ortho-nitro substituted derivative of this unsaturated carboxylic acid. This molecule can be produced from the Perkin reaction or a Knoevenagel (k'NUH-ven-AH-gul) condensation between benzaldehyde and malonic acid.

ANSWER: **cinnamic acid** [or **cinnamate**]

4. This set of motions begins with a *takbir* and contains components including bowing, or *ruku*, and prostration, or *sujud*. For 10 points each:

[10] Name this set of prescribed motions that Muslims undergo while praying.

ANSWER: **rakat** [or **rak'ah**]

[10] The practice of *rakat* is central to this one of the Five Pillars of Islam, which consists of five obligatory prayers each day.

ANSWER: **salat** [or **salawat**, or **namaz**]

[10] The portion of *salat* done while sitting, which includes facing the *qibla* and saying the *shahada*, is known by this Arabic term meaning "testimony of faith."

ANSWER: **Tashahhud** [accept **Attahiyat**]

5. In mid-2014, the largest stone block from antiquity was discovered in a quarry near this town, which also contains the Stone of the Pregnant Woman. For 10 points each:

[10] Name this Lebanese town, once called Heliopolis, where the Temple to Jupiter was the largest temple of the ancient Roman world.

ANSWER: Ras **Baalbek** [accept Ras **Baalbek I**]

[10] The Temple to Jupiter at Baalbek was home to an oracle who predicted this emperor's death in Parthia. This Spanish general, one of the Five Good Emperors, was followed by his adopted son Hadrian.

ANSWER: **Trajan** [or Marcus Ulpius Nerva **Trajanus** Augustus]

[10] This nearby ancient city was home to a dynasty of priest-kings called the Sampsiceramid (somp-sih-ser-AM-idz) who were Roman clients in the 1st century BC. It was also the site of an AD 272 battle at which Emperor Aurelian defeated the Palmyran forces of Queen Zenobia.

ANSWER: **Emesa** [accept Battle of **Emesa**; prompt on "Homs"]

6. The alarmone that triggers this phenomenon is hydrolyzed by SpoT ("spot"). For 10 points each:

[10] Name this bacterial response to stress or amino-acid starvation. RelA ("rel-A") mediates this response that causes inhibition of translation.

ANSWER: **stringent** response [or **stringent** control]

[10] The alarmone that causes the stringent response is derived from this nucleotide and contains five phosphates. G proteins are named for their binding to a triphosphate derivative of this nucleoside.

ANSWER: **guanosine** [accept **guanosine** triphosphate; prompt on "GTP"]

[10] The primary signal for the stringent response is the binding of amino acid-free tRNA to the A site of the ribosome; this is the name for the ATP-coupled addition of an amino acid to tRNA.

ANSWER: **aminoacylation** [or **charging**; accept word forms of charging]

7. A nobleman from this modern-day country, which is not Romania, grouped the novels *They Were Counted*, *They Were Found Wanting*, and *They Were Divided* in his *The Transylvanian Trilogy*. For 10 points each:

[10] Name this modern-day country. A scion of one of its famous noble families chronicled its history in his postmodern novel *Celestial Harmonies*.

ANSWER: **Hungary** [or **Magyarország**]

[10] Many of the sentences that make up the first section of Péter Esterházy's *Celestial Harmonies* concern "my father's" patronage of a man of this profession. A man of this profession is poisoned by his rival Salieri in a Pushkin play.

ANSWER: **composers** [Those composers are, respectively, Joseph Haydn and Wolfgang Amadeus Mozart.]

[10] As a family chronicle set during the collapse of the Austro-Hungarian Empire, Miklós Bánffy's *The Transylvanian Trilogy* is often compared to *Radetzky March*, a novel by this Jewish Austrian writer.

ANSWER: Joseph **Roth** [or Moses Joseph **Roth**]

8. While gathering materials for his book *The Present State of Music in France and Italy*, this author went on a wild goose chase looking for places where castration was performed. For 10 points each:

[10] Name this British music historian whose four-volume *General History of Music* is still highly regarded for its insights into 18th-century taste.

ANSWER: Charles **Burney**

[10] Burney asserted that perhaps there was no instrumental music "more ingenious" than the string quintets by this cellist and composer of *Night Music of the Streets of Madrid*. His E-major string quintet, Opus 11, No. 5, contains the so-called "Celebrated Minuet."

ANSWER: Luigi **Boccherini** (BAHK-eh-REE-nee, but accept phonetic pronunciations) [or Ridolfo Luigi **Boccherini**]

[10] While travelling in the German-speaking lands, Burney consulted with this composer who served as court harpsichordist to Frederick the Great. He wrote *Essay on the True Art of Playing Keyboard Instruments*, and his father had previously written the *Musical Offering* for Frederick.

ANSWER: **C. P. E. Bach** [or **Carl Philipp Emanuel Bach** [prompt on "Bach" or other incomplete answers]

9. A type of auction named for this man, Edward Clarke, and Theodore Groves is used by Facebook to sell ads. For 10 points each:

[10] Name this Nobel laureate, who is the single namesake of a more specific version of the aforementioned auction mechanism in which the high bidder wins but pays the second-place bidder's price.

ANSWER: William **Vickrey** [or William Spencer **Vickrey**; accept **Vickrey** auction or **Vickrey-Clarke-Groves** auction]

[10] Vickrey derived an early and limited version of this result stating that, as long as an auction results in the same outcome, i.e. the same winner, that winner will have paid the same price, regardless of the auction's mechanism.

ANSWER: **revenue equivalence** theorem

[10] In VCG and simple Vickrey auctions, bidding one's true valuation is this type of game theoretical strategy, meaning it is the best strategy regardless of the actions of the other bidders.

ANSWER: **dominant** strategy [accept answers mentioning forms of the word **dominate** or **dominance**]

10. Answer the following about the 1780s, for 10 points each.

[10] In a namesake book, the historian John Fiske used this two-word phrase to refer to the time in American history from 1783 to 1789, borrowing a quote by John Quincy Adams and a thesis by the earlier historian William Henry Trescott.

ANSWER: **Critical Period** [do not accept or prompt on "Confederation Period"]

[10] In 1785, a thirteen-point "compact" determining navigation rights in the Chesapeake Bay area was produced at a conference named for this estate of George Washington, an agreement that Fiske identifies as fostering interstate unity.

ANSWER: **Mount Vernon** [accept **Mount Vernon** Compact or **Mount Vernon** Conference]

[10] At the end of the Critical Period, the Judiciary Act of 1789 was largely written by this judge, who formulated the New Jersey Plan for small state representation at the 1787 Constitutional Convention. He later succeeded William Livingston as governor of New Jersey.

ANSWER: William **Paterson**

11. Members of some of these organizations wear a "1%" patch, an allusion to an apocryphal comment that only 1% of the type of people who join these organizations are criminals. For 10 points each:

[10] Name these organizations whose "Big Four" includes the Pagans, Outlaws, and Bandidos. A war from 1994 to 2002 in Quebec featured one of these groups called the Rock Machine.

ANSWER: **motorcycle gangs** [accept outlaw **motorcycle clubs** and obvious equivalents; prompt on "gangs"]

[10] That comment about how only 1% of motorcyclists are criminals was made by the American Motorcyclist Association after this 1947 riot in which thousands of bikers converged on the namesake California town during the Gypsy Tour, leading to scores of injuries and arrests.

ANSWER: **Hollister** Riot

[10] In the Quebec Biker War, the Rock Machine fought this notorious "Big Four" biker gang, whose members were hired to provide stage security at the 1969 Altamont concert.

ANSWER: **Hells Angels** [or **Hells Angels** Motorcycle Club; or **HAMC**]

12. In a context-free grammar, the left-hand side of every production rule consists of one of these symbols. For 10 points each:

[10] Name these symbols, such as the start variable, that do not appear in the alphabet of a context-free language.

ANSWER: **nonterminal** symbols

[10] The output of a context-free production rule can be one variable, multiple variables, or this entity symbolized epsilon, the identity element of concatenation. It is the only symbol in any given language with length zero.

ANSWER: **empty string**

[10] This theorem can be applied to show that deciding whether a context-free grammar generates a regular language is impossible. Its formulator created a normal form for CFGs that is less strict than Chomsky normal form.

ANSWER: **Greibach's** theorem

13. This Scottish historian, who wrote a two-volume *History of India*, was sent to Kabul in 1808 to try to make a treaty with Shah Shuja, but the Shah had already been deposed. For 10 points each:

[10] Name this man called the founder of the education system in India for his reforms enacted while serving as governor of Bombay, which led him to become the namesake of a college established there in 1856.

ANSWER: Mountstuart **Elphinstone** [accept **Elphinstone** College]

[10] Later, in the wake of the Pandjeh Incident, this British diplomat was sent to Kabul to negotiate with Abdur Rahman Khan, and drew up an 1896 report that spelled out his namesake “line” between British and Afghan spheres of influence.

ANSWER: Henry Mortimer **Durand** [accept **Durand** Line]

[10] Elphinstone wrote to Durand describing this uprising against the rule of the British East India Company, caused partly by rumors that the Enfield rifle cartridges were made from cow and pig fat.

ANSWER: **Sepoy** Rebellion [or **Sepoy** Mutiny; accept answers mentioning the idea of an uprising (in India) in **1857**]

14. Crispus, Philomela, and the Queen of Sheba’s bird deliver monologues in the meter of this passage in John Barth’s short story “Glossolalia.” For 10 points each:

[10] Name this Biblical prayer whose line “our Father in heaven, hallowed be your name” is corrupted by an old waiter in Hemingway’s story “A Clean, Well-Lighted Place.”

ANSWER: **Lord’s** Prayer

[10] In “A Clean, Well-Lighted Place,” the waiter replaces many of the prayer’s words with this Spanish word. In Hemingway studies, this word is used to refer to the condition of tragic meaninglessness faced by Hemingway’s code heroes.

ANSWER: **nada**

[10] Reverend Taylor refuses to recite the prayer’s line “give us this day our daily bread” while being whipped by a mob in this author’s story “Fire and Cloud.” This author’s collection *Eight Men* contains a story about the bigoted Olaf Jensen, “Big Black Good Man.”

ANSWER: Richard **Wright** [or Richard Nathaniel **Wright**]

15. A philosopher of this religion applied a doctrine typically translated as “dependent origination” to analyzing a chain of twelve causes. For 10 points each:

[10] Name this religion. A proposition can be both true and false or neither true nor false in the “tetralemma,” or Catuskoṭi form of argumentation used by Nagarjuna, a sage of this religion’s Mahayana branch.

ANSWER: **Buddhism** [accept Mahayana **Buddhism**]

[10] The namesake of this Greek school of thought expounded a doctrine almost identical to Nagarjuna’s method of fourfold negation, which he likely encountered in India. Adrian Kuzminski’s book titled for this school examines “How the Ancient Greeks Reinvented Buddhism,” and it titles the major work of Sextus Empiricus.

ANSWER: **Pyrrhonism** [accept **Pyrrhonian** skepticism or answers mentioning **Pyrrho** of Elis; prompt on “skepticism”]

[10] This school of Hindu philosophy, a frequent target of Nagarjuna’s writing, instead used a two-valued logic system in its writings. This school prefigured contemporary reliabilism by accepting four knowledge-sources, or *pramanas*, as legitimate ways of gaining knowledge.

ANSWER: **Nyaya**

16. A book describing human rights violations in this country is titled *Draining the Sea* after the army’s strategy of attacking civilians in order to eliminate sources of support for guerillas. For 10 points each:

[10] Name this country where the FMLN fought for twelve years until the signing of the 1992 Chapultepec Peace Accords. It also fought the Soccer War with its neighbor, Honduras.

ANSWER: **El Salvador** [or Republic of **El Salvador** or República de **El Salvador**]

[10] The strategy of “draining the sea” may have been influenced by advisors at this combat training institute. Many Cold War Latin American war criminals attended this institute run by the U.S. Army in Fort Benning, Georgia.

ANSWER: U.S. Army **School of the Americas** [or **SOA**; or The **Western Hemisphere Institute for Security Cooperation**; or **WHINSEC**]

[10] The metaphor of the guerilla as “a fish who swims within the sea of the people” comes from a 1937 book by this man.

ANSWER: **Mao** Zedong [or **Mao** Tse-tung; or Chairman **Mao**] [The book is Mao’s *On Guerrilla Warfare*.]

17. This poet wrote that “here she concludes Lamira thinks it just / such pious tears shou’d wait such Royal Dust” in her poem about the death of Mary of Modena, to whom she had served as a maid of honor. For 10 points each:

[10] Name this poet whose work was influenced by her deep loyalty to James II and the Stuarts. She wrote “this to the crown and blessing of my life, / the much loved husband of a happy wife” in her poem “A Letter to Daphnis.”

ANSWER: Anne **Finch**, Countess of **Winchelsea** [accept either underlined portion; accept Anne **Kingsmill**]

[10] This poet tried to flatter Finch with his poem “Impromptu,” which states that “ev’ry Female Wit” was doomed “when first Ardelia writ.” He wrote “Impromptu” in response to Finch’s criticism of his poem *The Rape of the Lock*.

ANSWER: Alexander **Pope**

[10] Finch’s poem about this man “posed” wonders at his ability to guess “from what new element she came” upon seeing “a vain fantastic nymph.” A medieval poem says that this man “lay ybounden, / bounden in a bond.”

ANSWER: **Adam** [accept “**Adam Posed**” or “**Adam lay ybounden**”]

18. This painter used white patches in a square of blue paint to depict the title birds in *Swan Lake #2*. For 10 points each:

[10] Name this artist whose abstract paintings inspired by real-world locations include *Basque Landscape*, the Rhine-inspired *Lorelei*, and *Mountains and Sea*.

ANSWER: Helen **Frankenthaler**

[10] A critic described Frankenthaler’s art as a “bridge between” this painter “and what was possible.” Frankenthaler began painting with her canvas on the floor after being inspired by this abstract expressionist’s painter’s drip technique.

ANSWER: Jackson **Pollock** [or Paul Jackson **Pollock**]

[10] Frankenthaler painted *Mountains and Sea* using this technique in which paint diluted with turpentine was allowed to infuse itself into a canvas. Frankenthaler’s pioneering use of this technique inspired the second generation of color field artists, many of whom used it as well.

ANSWER: **soak stain** [accept answers mentioning **soak** and **stain** such as **soak staining**; prompt on “**staining**”]

19. The magnetic moment and the line integral of velocity parallel to the magnetic field are the first and second of these quantities for a plasma particle bouncing around in a gyropotential. For 10 points each:

[10] Name these quantities that remain constant or change very slowly compared with typical periodicities of the system.

ANSWER: **adiabatic invariants** [prompt on “**Poincaré invariants**” or “**invariants**”]

[10] This quantity from plasma physics measures the length-scale at which electric fields are screened out. It is named for a Dutchman.

ANSWER: **Debye length** [or **Debye shielding length**; prompt on “**Debye**”]

[10] The frontiers of plasma physics and nuclear fusion are being probed at this experiment located at Lawrence Livermore National Laboratory, which uses over 40,000 optical elements to generate fusion with lasers.

ANSWER: **National Ignition Facility** or **NIF**

20. The King James Bible translates this term as “giants,” while the NIV leaves it untranslated. For 10 points each:

[10] Give this term used in Genesis 6:4 for a race of “heroes of old, men of renown.” They are often interpreted as either fallen angels or descendants of Cain or Seth.

ANSWER: **Nephilim**

[10] In Numbers, ten of these individuals reported seeing Nephilim when scouting the Land of Canaan and thus gave a very gloomy outlook to Moses. Joshua and Caleb were the only two of these twelve individuals who brought back good news.

ANSWER: Twelve **Spies**

[10] The exploits of the giants Ohya and Hahya are detailed in the fragmentary *Book of the Giants*, which is part of this collection of Jewish manuscripts excavated from the caves of Qumran.

ANSWER: **Dead Sea Scrolls**