

## Cal's Mid-Spring Tournament 2018

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Tossups

1. In the Qur'an, this man is the only person who is called a *hanif* by name; that term was also used to describe some of Muhammad's contemporaries like Zayd ibn Amr, who once chastised him for offering sacrifices to idols. In the Qur'an, this prophet dumbfounded a ruler who said that he, like God, could give life and death by asking him to bring the sun from the west. This prophet saw a star, the moon, and the sun, and said "This is my Lord" after seeing each one. This prophet's footprint is said to be in a namesake "station" near the (\*) Kaaba, which Islamic tradition credits him with constructing. During the *hajj*, pilgrims commemorate one of this prophet's actions by throwing stones at three walls as part of the Stoning of the Devil. For 10 points, the Islamic festival of Eid al-Adha ("eed al-ODD-hah") commemorates the willingness of what prophet to sacrifice his son Ishmael?

ANSWER: Abraham [or Ibrahim]

<WC, Religion>

2. The original experiment employing this technique used carbon-14 labeling and a freeze-thaw procedure to resolve so-called "ghosted particles" within the head of the T4 phage. An alternative to this technique uses a zwitterionic arginine stacking agent and a tricine buffer system to avoid the negative side effects of a reagent in this technique crystallizing at low temperatures. A preparatory step for the standard variant of this technique makes use of the cross-linking agent MBAA in the presence of a TEMED ("TEM-ed") catalyst and the radical initiator (\*) ammonium persulfate. Following that step, samples in this technique are frequently boiled in a reducing agent prior to the addition of a dye like bromophenol blue. A solution of tris base and glycine forms the standard running buffer used at each electrode in this technique; that buffer is named for Ulrich Laemmli. The results of this technique are typically visualized by a Western blot or addition of a stain like Coomassie blue. For 10 points, name this variant of gel electrophoresis that makes use of a namesake anionic surfactant to separate proteins. ANSWER: SDS PAGE ("S-D-S page") [or SDS polyacrylamide gel electrophoresis; prompt on PAGE or polyacrylamide gel electrophoresis or gel electrophoresis or electrophoresis or protein gel electrophoresis] (The first clue is Laemmli's original SDS PAGE paper, and the second clue is CTAB PAGE.)

<RH, Biology>

3. A book by Hans Blumenberg culminates in a reinterpretation of a fable in which this concept "crosses the river." Engrossment is one of the three prerequisites for this concept proposed in a 1984 book by Nel Noddings which pioneered a theory based on this concept which has also been developed by philosophers like Virginia Held. In Chapter 6 of *Being and Time*, Heidegger says that this concept "is the Being of *Dasein* ("DAH-zyne")." The third volume of Foucault's *History of Sexuality* is titled for this concept with respect to the (\*) self. A "perspective" named after this concept is illustrated by contrasting Jake and Amy's responses to the Heinz dilemma in the book *In a Different Voice* by Carol Gilligan, who pioneered a feminist ethical theory named after this concept. For 10 points, name this concept which might be defined as concern for the well-being of oneself or others.

ANSWER: care [or Sorge ("ZOR-guh"); or epimeleia *heautou*; or souci *de soi*; accept concern until read]

<WN, Philosophy>

4. An author from this country created Angel Day, whose family lives on the west side of town and feuds with a mob of east-siders led by Joseph Midnight. A character who lives in this country feels as if she is

communing with the “single mind” of a swarm of bees that covers her entire body. An author from this country wrote the 1987 autobiography *My Place*. Norm Phantom, Mozzie Fishman and the other inhabitants of the town of Desperance are the subject of a novel by an author from this country. In a novel from this country, an artist makes a painting depicting an event in which a group of (\*) factory workers stage a mock crucifixion of a Jewish man. The English boy Gemmy Fairley is marooned in this country for sixteen years in the novel *Remembering Babylon*. Despite converting to Methodism and marrying the white Gilda, a character from this country remains mocked by his masters, leading him to become an outlaw and go on a murderous rampage in *The Chant of Jimmie Blacksmith*. For 10 points, name this home country of Thomas Keneally and many Aboriginal authors.

ANSWER: Commonwealth of Australia

<RK, Long Fiction>

5. This compound and triethylborane couple an iodolactam and an aldehyde in one variant of the Reformatsky reaction. Heating Wilkinson’s catalyst and silver triflate in a solution of this compound mediates the cycloaddition of carbon monoxide, an alkyne, and an alkene in the PK-type reaction. A species of *Azoarcus* specialized for the breakdown of this compound makes use of the enzyme BSS to add a molecule of fumarate to this compound. In the body, members of the cytochrome P450 (“P-four-fifty”) enzyme family hydroxylate this compound in the first step of its conversion to (\*) hippuric acid, which is the most common biomarker for toxic levels of this compound. A molecule of this compound with a nitro group in the ortho position is used as the starting material in the Bartoli indole synthesis. When this compound is bonded to a sulfonate group, a tosylate is formed. A molecule of this compound with three nitro groups is a common explosive. For 10 points, name this aromatic compound consisting of a benzene ring with a single methyl group.

ANSWER: toluene

<RH, Chemistry>

6. Ralph Catterall praised the leadership of this organization in his book about its history. During a debate over this organization’s status, a politician was described as “reckless and as full of fury as a drunken man in a brothel” by his censured rival. The brother of one of this organization’s leaders was killed in a duel with Spencer Pettis on Bloody Island after his leadership was criticized. The Supreme Court ruled that an Ohio tax on this organization was “repugnant to the Constitution” in the Osborn case. William Duane and Louis (\*) McLane were removed from cabinet positions for their perceived support of this organization. An opponent of this organization was the first cabinet appointee to be rejected by the Senate, after his recess appointment expired. This institution was depicted as the “many-headed monster” in a political cartoon that featured a president fighting it. That president ordered Roger Taney (“TAH-nee”) to move its funds to smaller, regional “pet” institutions. Nicholas Biddle served as president of, for 10 points, what institution, whose charter Andrew Jackson failed to renew in the 1830s?

ANSWER: Second Bank of the United States [prompt on Bank of the United States]

<RD, American History>

7. When a suitor requests a taste of the “nectar of [this character’s] lips,” she responds that there are no French wines around. This character asks her maid if her dress makes her look like Cherry from *The Beaux’* (“boze”) *Stratagem*. This woman is concerned by a man’s timidity in an “interview” during which she is forced to complete his sentences for him, but is later impressed when he describes being nicknamed “Rattle” at the Ladies’ Club. As her father and Sir (\*) Charles watch from behind a screen, this character’s suitor remarks on her “refined simplicity” and confirms their love. This character is referred to in the title of a play that includes a subplot about a love triangle between Hastings, Constance Neville, and this character’s step-brother, who calls her a “talkative maypole” while at the Three Pigeons Inn. After Marlow sees this character in plain clothes, she pretends to be a barmaid to judge his personality. For 10 points, name this character who “stoops to conquer” in an Oliver Goldsmith play.

ANSWER: Kate Hardcastle [accept either underlined portion]  
<RK, Drama>

8. The 2018 case of *Rubin* centers on the interpretation of an attachment exception to a form of this principle, a dispute involving the University of Chicago. The 2015 law JASTA expanded one exception to this principle; that bill was passed in the only veto override of the Obama administration. The Tucker Act and FTCA grant exceptions to that form of this principle, which is divided into “absolute” and “qualified” types. Devyani Khobragade (“KOH-brah-GAH-day”) had charges against her dismissed due to a form of this principle; individuals are sometimes given “official cover” in order to take advantage of that form of this principle, which is governed by the (\*) Vienna Convention. A 1996 case to which Paula Jones was party held that “unofficial conduct” prior to an individual’s becoming President is not subject to a form of this principle, allowing her suit to proceed. Article III, Section II was used to argue that a form of this principle did not to apply to certain controversies in *Chisholm* (“CHIZZ-um”) v. *Georgia*; the Eleventh Amendment was passed to overturn that decision. For 10 points, identify this legal principle, under which certain types of parties may not be subject to criminal or civil liability and cannot be sued.

ANSWER: immunity [accept sovereign immunity or diplomatic immunity or consular immunity or presidential immunity]  
<MC, Current Events>

9. This book’s appendix recommends keeping a file combining personal observations with professional plans, arguing that maintaining such a file is a form of intellectual production. This book’s first chapter opens with the observation that people feel that their lives are a series of traps. This book builds on Marx’s theory of “alienation” to posit a Fourth Epoch in which man is becoming a “cheerful robot.” The cover of this book depicts a man standing on a puzzle piece to illustrate its title approach, and it provides succinct “translations” of (\*) Talcott Parsons’ *The Social System* to highlight the author’s issues with “Grand Theory.” This work critiques an emphasis on the scientific method as “abstracted empiricism,” exemplified by the work of Paul Lazarsfeld. This work posits that examination of our “private troubles” can further understanding of “public issues.” For 10 points, name this work that offers a new way of understanding both individual and society, written by C. Wright Mills.

ANSWER: The Sociological Imagination  
<RK, Social Science>

10. This book was supposedly written after its author was expelled from the city of Innsbruck after he was caught having an affair with Helena Scheuberin (“SHOY-buh-rin”). This text and a “compendium” by Francesco Guazzo (“GWAHT-so”) that it inspired were first translated into English by Montague Summers. A directory written by the friar Nicholas Eymeric and Thomas Aquinas’s *Summa Theologica* inspired the three parts of this text, which includes a papal bull by Innocent VIII justifying its reasoning. Because its author failed to get this text approved from the rectors, the letter of approbation from the faculty of the University of Cologne in this text’s preface is believed to be forged. This text, attributed to (\*) Jacob Sprenger and Heinrich Kramer, advises using the strappado, rack, and other torture devices to extract “confessions” from accused women, who would then often be burned at the stake. For 10 points, name this fifteenth-century text whose Latin name suggests it is a guide to hunting witches.

ANSWER: Malleus Maleficarum [accept Hammer of Witches; accept The Witch Hammer]  
<IJ, European History>

11. An essay about this photographer claims Edward Steichen’s (“STY-kunz”) *Family of Man* is the “last sigh” of “Whitmanesque” eroticism, comparing it to a retrospective of this artist accompanied by an *Aperture* monograph. This artist’s first major exhibition, the “New Documents” exhibit, included similar work by Lee Friedlander and Garry Winogrand. This artist’s switch from a grainy Nikon to a twin-lens Rolleiflex (“ROH-lif-lex”) led to a shift to sharp, square portraiture. After seeing this photographer’s portrait of him sprawled

**on an armchair for the *New York Times Book Review*, (\*) Norman Mailer referenced her best known photo in a comment. She photographed a boy in a straw hat with a button reading “Bomb Hanoi” in a pro-Vietnam War parade. This photographer captured two identical twin girls, showed Eddie Carmel towering over his parents, and photographed a lanky boy with a loose suspender strap holding a fake weapon. For 10 points, name this American photographer known for her dark images of marginalized people, such as *Child with Toy Hand Grenade in Central Park*.**

ANSWER: Diane Arbus [or Diane Nemerov] (The essay quoted in the first clue is Susan Sontag’s “Freak Show.”)  
<AK, Other Art (Photography)>

**12. A story by this author is about the two daughters of a woman who is contemptuously called “She-who-was-Cynthia” by her imperious mother, who is known only as the Mater. At a crucial moment in one of this author’s stories, the protagonist feels an “ice of fear” in her womb. A story by this author ends with the bodies of two men, one of whom has bruises all over his legs, lying together in a mortuary. This author, who adapted one of his short stories into the play (\*) *The Widowing of Mrs. Holroyd*, wrote a story in which an orderly kills the captain who has been abusing him. In a story by this author, a woman who “had no luck” lives in a house haunted by the phrase “There must be more money!” In a story by this author, Elizabeth thinks that her husband is out drinking at a pub, but realizes “the horror of the distance between them” when his body is brought into the parlor after his death in a mining accident. For 10 points, name this author of “The Virgin and the Gipsy,” “The Prussian Officer,” “The Rocking-Horse Winner,” and “Odour of Chrysanthemums.”**

ANSWER: D. H. Lawrence [or David Herbert Lawrence]  
<JN, Short Fiction>

**13. In just intonation, this is the *smaller* number in the ratio of frequencies for a major second interval. An open pipe that is this many feet long roughly produces a C2, so an organ stop in unison with a piano is said to be at [this number]-foot pitch. A musical score arranged in the shape of a birdcage appears in a monodrama that consists of this number of sections. This number of *Lines* titles a long 5/4-time Steve Reich (“RYE’sh”) piece. Counting the octave once, this is the number of notes in the bebop dominant scale, as well as in Messiaen’s (“mess-YAWN’s”) second mode of limited transposition. A vocal piece by Peter (\*) Maxwell Davies is titled for this many songs *for a Mad King*. This is the number of unique notes in a scale made up of alternating whole- and half-steps. If two notes are separated by this interval, their frequencies are in a two to one ratio. The largest interval that is perfect, but *not extended*, is named for this number. Musical notation represents very high or very low notes by this number followed by the superscripts “va” (“V-A”) or “vb” (“V-B”), respectively. This is the number of quavers in a bar of common time. For 10 points, give the number whose Greek prefix appears in the word “octave.”**

ANSWER: eight [or eighth; or VIII]  
<EC, Classical Music>

**14. While imprisoned, this leader refuted accusations that he had formulated a plan to rig his country’s elections called the “Model Election Plan,” also known as the Larkana Plan. This man nationalized many industries, establishing the steel mill company PSM near Port Qasim. After claiming that arms intended for rebels were discovered in his country’s Iraqi embassy, this leader launched a military operation against his country’s southwestern province. He proclaimed that (\*) “we will eat grass or leaves, even go hungry, but we will get one of our own,” referring to his country’s development of nuclear weapons. This prime minister was overthrown in Operation Fair Play by Zia-ul-Haq, who approved his execution two years later. This leader signed the Simla Agreement with Indira Gandhi, establishing the Line of Control in Kashmir. For 10 points, name this founder of the Pakistan People’s Party, which was later led by his daughter Benazir.**

ANSWER: Zulfikar Ali Bhutto [prompt on Bhutto]  
<JS, World History>

15. A textbook by Howard Keisler explicitly foregoes using this statement in any of its proofs. This statement was formalized after a mathematician examined elliptic functions proposed by his teacher Christoph Gudermann, leading to the development of uniform convergence. Internal set theory grounds Abraham Robinson's alternative to this statement, and states that a value  $x$  tends to  $a$  if and only if for every  $\epsilon$ , a function  $f$  of " $x$  plus  $\epsilon$ " has a certain property. This statement was first formally used by Karl (\*) Weierstrass, who then used it to prove a special case of the intermediate value theorem. Nonstandard analysis foregoes the usage of this statement, which was first used in a non-rigorous fashion in the textbook *Cours d'Analyse* by Cauchy. This statement allows a function to output values as arbitrarily close to a value  $L$  by letting the input to the function approach another value  $c$ . For 10 points, name this method of defining a limit that is named for two Greek letters. ANSWER: epsilon-delta definition of a limit

<IJ, Math>

16. After an owner of this object slept with a snake woman to find his horses, he gave a belt and this object to her to determine which of their sons would become king of the Scythians ("SITH-ee-unz"). As a reward for helping Euneus expel the Carians from a group of islands, an owner of this object was granted the territory of Acesa ("uh-KEE-suh"). In differing accounts, an owner of this object received a wound for either Achilles's murder of King Tenes ("TEN-eez") or trespassing on Chryse's ("CRY-seez") shrine. This object was exchanged on Mt. Oeta ("ET-uh") after a former suitor of Helen finally lit the (\*) funeral pyre that a dying hero had constructed for himself. It's not bones or the Palladium, but Helenus prophesied that Troy could not be taken unless the Greeks had this object. As a result, Odysseus convinced an owner of this weapon to come to Troy, where he was treated by Machaon ("muh-KAY-un"). That owner of this weapon later slew Paris after being stuck on Lemnos with a snakebite. The centaur Nessus was slain using this weapon, part of which was dipped in the poison of the Hydra. For 10 points, name this weapon given to Philoctetes ("fill-uck-TEE-teez") by a hero who carried out twelve labors.

ANSWER: the bow and arrows of Heracles [accept arrows of Hercules; or the bow and arrows of Philoctetes; or arrows of Philoctetes; prompt on bow and arrows with "belonging to which figure?"]

<JX, Legends>

17. The speaker of "Dream Song 172" says "Your face broods from my table" when addressing one of these events, which leads Henry to "wonder why he alone breasts the wronging tide." A poem about one of these events ends with the exclamation "O tiny mother, you too! O funny duchess! O blonde thing!" These events are compared to carpenters who "want to know *which tools*" but "never ask *why build*" in a poem describing how these events "have a (\*) special language." According to an urban legend, Sara Teasdale's poem "I Shall Not Care" refers to one of these events. The speaker of a poem describes how she "rocked shut as a seashell" after trying to perform this action. The observations that "rivers are damp" and "drugs cause cramp" appear in a poem listing the inconveniences of various approaches to this action, Dorothy Parker's "Resumé." A number of feminist critics have argued that Ted Hughes was largely responsible for one of these events. For 10 points, confessional poets often discussed what action performed by Sylvia Plath in 1963?

ANSWER: suicide [accept equivalents; prompt on death or dying]

<RK, Poetry>

18. This model's energy-scaling law was experimentally confirmed through observations of the quantum-confined proto-plasmonic transitions in fluorescent gold clusters. This model improves upon an earlier model's approximation of the Lorentz number from the Wiedemann-Franz law by calculating the heat capacity of an ideal gas using a pre-factor significantly less than three-halves. This model erroneously assumes that the Hall coefficient is independent of both temperature and magnetic field strength and possesses a constant value. Predictions under this model are dependent on its formulator's namesake (\*) expansion of the Fermi-Dirac occupancy for energies near the Fermi level. Applying the empty lattice approximation to this model produces a model of band structure named for "nearly" resembling this model. For 10

points, name this model of charge carrier behavior in metallic solids developed by Arnold Sommerfeld through the application of quantum mechanical Fermi–Dirac statistics to the classical Drude model.

ANSWER: **free electron** model [accept **nearly free electron** model; accept **Drude–Sommerfeld** model until “Sommerfeld” is read, but prompt afterward; do not accept or prompt on “Drude model”]

<RH, Physics>

19. **To protest the expansion of this initiative, thousands of women dressed as teddy bears and witches, and then chained themselves to a fence at a so-called “Common.” Margaret Gowing is best known for studying this initiative, whose early successes included Operations Hurricane and Grapple. Four identically-worded handwritten directives known as “letters of last resort” are used as a powerful deterrent by this initiative. This initiative was responsible for the devastating Windscale Fire. A memorandum by Otto (\*) Frisch and Rudolf Peierls (“PIE-urly”) prompted the creation of the MAUD Committee to research for this initiative, which was once headed by William Penney. This initiative’s Polaris programme was later replaced by the current Trident programme. Members of this initiative’s Tube Alloys Project later contributed to the Manhattan Project. For 10 points, name this initiative that arms Royal Navy submarines with ICBMs.**

ANSWER: **nuclear** program of the **United Kingdom** [or **British nuclear** weapons program; accept equivalents; accept **Tube Alloys** until read; anti-prompt on **Polaris** or **Trident**]

<RK, European History>

20. **This artist painted a woman in a black dress paddling a catamaran in *Woman in a Podoscaphé*, a possible challenge to the more successful Alexandre Cabanel. He’s not Monet, but this artist’s time in Étretat (“ay-truh-TAH”) inspired more than sixty seascapes of waves breaking. His patron was the wealthy son of a banker from Montpellier (“mohn-pull-YAY”), home to the Musée Fabre (“moo-ZAY FOB-ruh”) housing many of his works. This artist escaped to Switzerland after being billed for the creation of a new Vendôme (“von-DOME”) Column due to his position in the Paris Commune. At the 1855 (\*) Exposition Universelle (“oo-nee-vair-SEL”), this client of Alfred Bruyas (“broo-YAH”) created a pavilion for his work after the rejection of his monumental canvas showing his friends Champfleury (“shom-flur-EE”), Pierre-Joseph Proudhon (“proo-DOHN”), and Charles Baudelaire surrounding a nude model. This artist also used the scale of history painting for the funeral of his great-uncle in his hometown and painted two peasants creating some rubble. For 10 points, name this French realist painter of *The Stone Breakers* and *Burial at Ornans* (“or-NON”).**

ANSWER: Gustave **Courbet** [or Jean Désiré Gustave **Courbet**]

<AK, Painting/Sculpture>

## Bonuses

1. Despite being outclassed by the Chassepot (“shoss-POH”) rifle, soldiers armed with this firearm managed to rout French forces during the Franco-Prussian War. For 10 points each:

[10] Name this invention of Johann von Dreyse (“DRY-zuh”), which allowed the Prussian army to decisively win the Battle of Königgrätz (“KUR-nig-rets”). Its success spurred the rise of the breech-loading rifle.

ANSWER: Dreyse **needle gun**

[10] The needle gun allowed Prussia to defeat a confederation of German armies led by this other empire in the Seven Weeks’ War. It was united with Hungary in the *Ausgleich* (“OWSS-glysh”).

ANSWER: **Austrian** Empire [accept **Austria**-Hungary]

[10] Other than superior firepower, Prussian troops held a decisive advantage over their Austrian counterparts at Königgrätz because they followed this military doctrine of “flexible command.” Soldiers were expected to improvise and act on their own initiative as part of this doctrine. Either the original German name or the English translation is acceptable.

ANSWER: **Auftragstaktik** (“OWF-trocks-TOCK-tick”) [or **mission-style** tactics]

<IJ, European History>

2. Answer the following about the history of chess theory, for 10 points each:

[10] During the French Revolution, Philidor famously wrote that these pieces “are the soul of chess.” Philidor pioneered the study of the structure of these pieces, which are generally strong in chains but weak when isolated or backward.

ANSWER: **pawns** [or **pions**]

[10] The Romantic era of chess paralleled Romanticism in the arts by emphasizing intuitive tactical play rather than rational strategic play. Thus, these sacrificial openings like the King’s and the Evans were popular, although many are now considered unsound.

ANSWER: **gambits**

[10] This school of chess arose in the interwar era in opposition to the classical school. It was inaugurated by Aron Nimzowitsch’s *My System* and advocated controlling the center from a distance rather than occupying it with pawns.

ANSWER: **hypermodernism**

<EC, Other Academic>

3. A director with this surname made a short in which Ellion Ness performs a striptease which culminates in her removing her limbs and finally her head, before her torso blasts off into outer space. For 10 points each:

[10] Identify this surname of Gunvor, the director of *Take Off*. A director with this surname lampooned racial stereotypes in *Oh Dem Watermelons*, which culminates in a watermelon chasing some white people up a hill.

ANSWER: **Nelson**

[10] A short by Gunvor Nelson consists of shots of her daughter of this name set to a hypnotic soundtrack based on the phrase “my name is [this].” This is also the name of Charlie Chaplin’s last wife, a daughter of Eugene O’Neill.

ANSWER: **Oona**

[10] Gunvor Nelson’s *My Name Is Oona* and Robert Nelson’s *Oh Dem Watermelons* were scored in this musical style by Steve Reich. Movies like *Koyaanisqatsi* (“koh-yah-niss-COT-see”) were scored in this style by Philip Glass.

ANSWER: **minimalism** [or **minimalist**]

<WN, Other Art (Film)>

4. Rear Admiral Yates Stirling encouraged the lynching of this woman’s assailants, but later cooled down and accepted the need for a trial. For 10 points each:

[10] Name this woman, whose mother Grace Fortescue was charged with the murder of prizefighter Joseph Kahahawai. Her mother had killed the prizefighter after this woman was gang-raped by five men, who were all released after a highly-charged trial ended in a hung jury.

ANSWER: Thalia **Massie** [or Thalia Fortescue **Massie**]

[10] Grace Fortescue was only sentenced to one hour of imprisonment for killing Kahahawai after this high-profile defense attorney came out of retirement to defend her. This man faced off against William Jennings Bryan by defending the teaching of Darwinian evolution in the Scopes trial.

ANSWER: Clarence **Darrow** [or Clarence Seward **Darrow**]

[10] Grace Fortescue's father was first cousin to this man, whose fear of the formation of a "deaf race" led him to advocate eliminating sign language and prohibiting deaf people from marrying other deaf people. This man's father developed the system of Visible Speech to help deaf people talk.

ANSWER: Alexander Graham **Bell**

<IJ, American History>

5. This philosopher introduced the "turnstile" symbol, which denotes logical consequence. For 10 points each:

[10] Name this author of the highly influential *Foundations of Arithmetic*, who also wrote "On Sense and Reference."

ANSWER: Gottlob **Frege** ("FRAY-guh") [or Friedrich Ludwig Gottlob **Frege**]

[10] This British expert on Frege, who developed the Quota Borda voting system, coined the term "logical harmony" to refer to the idea that there are constraints on the rules of inference that can be used in a logical system.

ANSWER: Michael **Dummett** [or Michael Anthony Eardley **Dummett**]

[10] To argue against logical harmony, Arthur Prior introduced this connective, which allows any statement to be deduced from any starting point. That argument was critiqued in a Nuel Belnap paper supplementing this connective with "plonk" and "plink."

ANSWER: **tonk**

<WN, Philosophy>

6. An Oliver Wendell Holmes parody of this poem commands "Be not like those lazy cattle! Be a rooster in the strife!" For 10 points each:

[10] Name this poem that calls its title subject "real" and "earnest," challenging the assertion that it is "but an empty dream!" It says that the "lives of great men" remind us that we can leave behind "footprints on the sands of time."

ANSWER: "A **Psalm Of Life**"

[10] The author of "A Psalm of Life," Henry Wadsworth Longfellow, wrote a sonnet whose title "Mezzo Cammin" ("METS-oh cahm-MEEN") comes from the opening of this fourteenth-century Italian epic poem that Longfellow translated.

ANSWER: *The **Divine Comedy*** [or ***Divina Commedia***; anti-prompt on the **Inferno**]

[10] Longfellow's brief poem "The Rainy Day" follows the line "Thy fate is the common fate of all" with this oft-quoted phrase, whose seven words each happen to be exactly four letters long.

ANSWER: "**into each life some rain must fall**"

<RK, Poetry>

7. One member of this genus responsible for the soft rot of root tissues in infected plants has its virulence controlled by the cutinase genes *cut1* ("cut-one") and *cut2* ("cut-two"). For 10 points each:

[10] Name this genus of pathogenic ascomycetes whose *graminearum* species causes a namesake head blight in staple grasses like barley and wheat, leading to shriveled grain kernels and vomiting when ingested.

ANSWER: **Fusarium** [prompt on **Gibberella**]

[10] Another species of *Fusarium* posing a major risk to commercial agriculture is *F. oxysporum*, which famously caused this disease that wiped out the Gros Michel ("grow mee-SHELL") banana crop in the 1950s. Alarmingly, this disease is also threatening the modern Cavendish banana crop.

ANSWER: **Panama** disease [prompt on *Fusarium wilt*; or green leaf syndrome; or yellow leaf syndrome]

[10] Another pathogenic fungus that threatens modern agriculture is *Ustilago maydis*, which causes the smut named for this other staple crop. This crop was also used by Barbara McClintock in her experiments that led to the discovery of transposons.

ANSWER: **corn** [or maize; or Zea mays; or Z. mays; or corn smut]

<RH, Biology>

8. This anthropologist's fieldwork inspired her novel *Return to Laughter*, which she wrote under the pseudonym Elenore Smith Bowen. For 10 points each:

[10] Name this anthropologist whose oft-anthologized article "Shakespeare in the Bush" describes her attempts to tell the plot of *Hamlet* to members of Nigeria's Tiv people.

ANSWER: Laura **Bohannan** [or Laura Marie Altman **Bohannan**; prompt on Laura Marie Altman **Smith**]

[10] The Tiv people are a prominent example of a society with segmentary lineage, like this Nilotic ethnic group which is the subject of a trilogy by an anthropologist who co-edited *African Political Systems* with Meyer Fortes.

ANSWER: **Nuer** ("NOO-ur")

[10] Laura Bohannan's husband Paul divided this activity among the Tiv into three spheres. The kula ring is a ceremonial form of this activity.

ANSWER: **exchange** [accept gift-giving]

<WN, Social Science>

9. This critic's 2001 essay collection *The Blurring of Art and Life* opens with an essay arguing that, in light of the passing of the title painter, artists should pursue a more spontaneous "new concrete art" instead of creating "near-paintings" mimicking his scale and form. For 10 points each:

[10] Name this critic who wrote "The Legacy of Jackson Pollock" while teaching at Rutgers, where he also developed his concept of nonlinear events known as "happenings."

ANSWER: Allan **Kaprow**

[10] Kaprow's "happenings" are part of this genre of art that usually involves the artist's live presence and possible interaction with an audience. Artists prolific in this genre include Chris Burden and Marina Abramović ("ah-BRAH-moh-vitch").

ANSWER: **performance** art

[10] Also during the 1950s, this Japanese performance art movement produced *Challenge to the Mud*, in which a man rolled around in clay, and *Laceration of Paper*, in which an artist hurled himself through several paper screens.

ANSWER: **Gutai** group [or Gutai Bijutsu Kyōkai]

<AK, Painting/Sculpture>

10. This figure founded the Swedish Yngling ("ING-ling") dynasty through his son Fjölnir ("FYOHL-neer"). For 10 points each:

[10] Name this god of fertility who rules over Alfheim. He is killed by Surt at Ragnarök because he had earlier given away his sword, which could fight on its own.

ANSWER: **Frey** [or **Freyr**]

[10] Frey gives his sword to his servant Skirnir and tells him to help him woo this giantess, who Frey had seen while sitting on Odin's throne. This giantess is unimpressed by offers of gold, but gives in after Skirnir threatens her with curses.

ANSWER: **Gerd** ("gaird") [or **Gerdr**]

[10] In Sweden, Frey's cult often featured processions of wagons carrying idols of him to bless the fields, a tradition that might be linked to the cult of this older Germanic fertility goddess described in Tacitus's *Germania*. Her name may indicate a connection to the Norse sea god Njörd ("nyord").

ANSWER: **Nerthus**

<JK, Legends>

11. All four voices of this piece begin *sotto voce* (“VOH-chay”), and this piece uses chromatic pitches outside its key of D major, such as G-sharp and E-sharp, to highlight the words “*passum*” and “*immolatum*.” For 10 points each:

[10] Name this piece only lasting forty-six measures addressed to the Virgin Mary that was written for the Corpus Christi feast. This 1791 choral piece for strings and organ was written as a gift for Anton Stoll, a conductor at the St. Stephan church in Baden.

ANSWER: **Mozart’s *Ave verum corpus*** [prompt on either part alone]

[10] Mozart’s *Ave verum corpus* is one of these polyphonic choral pieces that set a sacred Latin text instead of the secular vernacular texts set by madrigals.

ANSWER: **motets**

[10] Franz Liszt quoted both Mozart’s *Ave verum corpus* and this piece by Gregorio Allegri in his *Evocation à la Chapelle Sixtine*. This piece was only used during the Sistine Chapel Tenebrae (“TEN-uh-bree”) service and prevented from being transcribed until Mozart did so from memory.

ANSWER: Allegri’s ***Miserere***

<AK, Classical Music>

12. The Parashat Nitzavim, a Torah portion from the Book of Deuteronomy, begins with Moses’s declaration that “You are standing today, all of you, before the Lord your God” to enter into one of these things. For 10 points each:

[10] Name these things that are denoted by the Hebrew word *brit*. Abraham entered into one of these things on Mount Betarim, giving him the land of Canaan but requiring the circumcision of him and his descendents.

ANSWER: **covenants** [prompt on contracts or equivalents]

[10] Another covenant found in the Book of Genesis, requiring people not to eat blood and asserting that “Whoever sheds the blood of man, by man shall his blood be shed,” was symbolized by the appearance of this thing in the sky.

ANSWER: **rainbow** [or **bow** in the cloud] (The covenant was made with Noah.)

[10] The Christian doctrine of supersessionism, which holds that the New Covenant replaced the Mosaic Covenant, is often defended using chapter six, verse sixteen from this Pauline epistle, which states, “And as for all who walk by this rule, peace and mercy be upon them, and upon the Israel of God.”

ANSWER: Epistle to the **Galatians**

<AK, Religion>

13. Pseudomorphs are formed when a mineral adopts this macroscopic property of another mineral. For 10 points each:

[10] Give this term for the general shape that a mineral takes when it crystallizes. Examples of this property include botryoidal, describing the grape-like appearance of hematite, and acicular, describing the needle-like appearance of rutile in quartz.

ANSWER: crystal **habit**

[10] This group of silicate minerals names a habit characterized by strong and flexible hairlike fibers. These minerals were widely used in insulation until it was discovered that their inhalation can cause lung cancer and mesothelioma.

ANSWER: **asbestos**

[10] This is the term for a pseudomorph that grows on the original mineral, with the original mineral sometimes dissolving to create a hollow space known as a “cast.”

ANSWER: **epimorph** [or **epimorphy**; or **incrustation** pseudomorph; or **perimorph**]

<EC, Other Science (Earth)>

14. An author from this country, who wrote a trilogy beginning with *The Big House*, wrote a story in which an old man plays dice with his failed assassin, collected in *The Savage Night*. For 10 points each:

[10] Name this country home to a feminist writer often considered for the Nobel Prize before her 2015 death, who recalled this country's atrocities in the collection *The Tongue's Blood Does Not Run Dry*.

ANSWER: People's Democratic Republic of **Algeria** [or *al-Jazair* or *Algérie*] (Those authors are Mohammed Dib and Assia Djebar.)

[10] Modern Algerian authors often acknowledge the influence of this French-Algerian author. Kamel Daoud responded to this man's most famous novel in *The Meursault* ("mur-SOH") *Investigation*.

ANSWER: Albert **Camus** ("kah-MOO")

[10] Algeria is the setting of this Camus story, in which the schoolmaster Daru disobeys Balducci's orders by letting an Arab man free, only to see the words "You handed over our brother. You will pay for this" on his blackboard.

ANSWER: "The **Guest**" [or "*L'Hôte*"]

<RK, Short Fiction>

15. For modeling chemical bonds, the Morse potential deviates from the quantum harmonic oscillator by allowing this process to occur. For 10 points each:

[10] Name this process that has an energy equal to the potential well depth in the Morse potential. Doing this to a bond generally requires a high energy from sources like heat or UV light and results in two radicals with unpaired electrons.

ANSWER: bond **dissociation** [or **homolysis**; or **photolysis**; or bond **cleavage**; or **breaking**; or anything ending with "lysis"]

[10] Description acceptable. The equation for the energies of the Morse potential includes a negative quadratic term multiplied by a constant named for this general behavior. The constant creates a non-parabolic plot of bond energy versus displacement and causes energy levels to converge.

ANSWER: **anharmonicity** [or **deviation** from **harmonicity**; prompt on anything mentioning **nonideality**]

[10] Graphically, bond dissociation energy can be found using a Birge-Sponer plot, which sums delta energy terms with subscripts with this expression in terms of a vibrational energy level  $v$ . This expression in terms of  $v$  also appears in the power series for anharmonic solutions for oscillating systems that are more accurate than the Morse potential.

ANSWER:  $v$  **plus one-half** [or **half integers**; or **odd** number **divided by 2**]

<AK, Chemistry>

16. This phrase's originator is contrasted with Parmenides in a passage where a surgeon repeats this phrase while crossing a border to reunite with a "woman born of six laughable fortuities." For 10 points each:

[10] Name this phrase whose "weighty resolution" fascinates a surgeon, who becomes a window-washer after publishing an article comparing Communists to Oedipus.

ANSWER: "***Es muss sein!***" ("is moose ZYNE") [or "**It must be!**"]

[10] Tomáš's love for Tereza, who introduced him to Beethoven, is conveyed through his repetition of "*Es muss sein!*" in this Milan Kundera novel.

ANSWER: *The **Unbearable Lightness of Being*** [or ***Nesnesitelná lehkost bytí***]

[10] The baron married to the title character of this Theodor Fontane ("TAY-oh-dor fon-TAH-nuh") novel exclaims "*Es muss sein!*" when vowing to kill a soldier with whom the title character had an affair many years earlier.

ANSWER: ***Effi Briest*** ("breest")

<RK, Long Fiction>

17. The Landau-Zener formula gives the probability of a transition of this kind between two energy states. For 10 points each:

[10] Give this term that also describes a representation that describes multiple potential energy surfaces wherein the nuclear kinetic energy operator is diagonal. In this kind of representation, coupling is due to electronic energy and is scalar, which greatly simplifies numerical estimation.

ANSWER: **diabatic** [accept **diabatic** representation or **diabatic** transition; accept **pseudo-diabatic** or **non-adiabatic**; DO NOT ACCEPT “adiabatic” or word forms]

[10] The calculation of diabatic potentials is often necessary when this approximation for calculating the wavefunction of a complex particle does not hold. This approximation assumes that nuclear movement and electron movement are separable.

ANSWER: **Born–Oppenheimer** approximation

[10] That application of diabatic potentials also involves re-casting the “molecular” version of this equation into a set of coupled eigenvalue equations. The time-independent version of this equation states that  $H\psi = E\psi$ .

ANSWER: **Schrödinger** equation

<RH, Physics>

18. Most historians believe that this empire was founded by the Zaghawa people, who gained political control because they possessed horses and ironworking technology. For 10 points each:

[10] Name this empire centered around Lake Chad, the first in sub-Saharan Africa to acquire firearms. Ibn Furtu chronicled the military exploits of one of this empire’s greatest *mais*, Idris Alooma.

ANSWER: **Kanem-Bornu** Empire [accept either underlined part]

[10] Dunama Dabbalemi, a thirteenth-century ruler of Kanem, desecrated a sacred object called the *mune* as part of his campaign to convert the populace to this religion. Mansa Musa was a follower of this religion.

ANSWER: **Islam**

[10] German explorer Heinrich Barth discovered this Kanem-Bornu king list. It dubiously traces the Sayfawa dynasty’s lineage to the sixth-century Himyarite king Sayf ibn Dhi-Yazan.

ANSWER: **Girgam** [or **Diwan al-Salatin Bornu**]

<EC, World History>

19. The protagonist of this novel steals a ROM construct containing the consciousness of his mentor, who is nicknamed “Dixie Flatline” for his near-death experiences during hacks. For 10 points each:

[10] Name this novel in which Armitage enlists the drug addict and former “console cowboy” Case and Molly Millions to merge Wintermute and the title artificial intelligence.

ANSWER: **Neuromancer**

[10] The author of *Neuromancer*, William Gibson, coined a term that combines this word with “space” in his story “Burning Chrome.” When combined with “punk,” it describes a science fiction subgenre exemplified by *Neuromancer*.

ANSWER: **cyber** [accept **cyberspace** or **cyberpunk**]

[10] Gibson’s steampunk novel *The Difference Engine*, co-written with Bruce Sterling, borrows the title character of this 1845 novel in which Morley gives a climactic speech describing the “two nations” of the subtitle as “THE RICH AND THE POOR,” written in all caps.

ANSWER: **Sybil**, or *The Two Nations* (by Benjamin Disraeli)

<JN, Long Fiction>

20. A book describing ancient Chinese grain storage by Chen Huang-chan, a Confucian doctoral student at Columbia, inspired this politician to propose a system of “ever-normal granaries.” For 10 points each:

[10] Name this politician who served as Secretary of Agriculture under FDR from 1933 to 1940. Later, he heralded a “century of the common man” in his speech “The Price of Free World Victory.”

ANSWER: Henry A. **Wallace** [or Henry Agard **Wallace**]

[10] As Secretary of Agriculture, Wallace sent this man on a botanical expedition to Central Asia, though he spent much of the time searching for Shambhala. Wallace wrote the politically-damaging “Guru letters” to this man.

ANSWER: Nicholas **Roerich** (“RUR-ick”) [or Nikolai Konstantinovich **Rerikh**]

[10] Westbrook Pegler published the “Guru letters” during this presidential election, in which Wallace ran for his newly-formed Progressive Party. The *Chicago Tribune* erroneously claimed that Thomas Dewey won this election.

ANSWER: 1948 presidential election  
<WC, American History>