Cal's Mid-Spring Tournament 2018
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Tossups

1. The central quantity of this equation can be measured as $\mathbf{0 . 1 3 8 8}$ times the thickness squared over the time to fifty-percent increase due to a laser pulse. An implicit finite difference method developed to solve this equation is represented by two rows of three circles with the middle circles connected; that is the CrankNicolson method. The central quantity of this equation can be calculated through laser flash analysis. Because the transformation from time to imaginary time turns this equation into the (*) Schrödinger equation, the Schrödinger equation is the Wick rotation of this equation. The fundamental solution to this equation is proportional to the exponential of "negative $x$-squared over four- $k-t$," or a Gaussian with a width increasing with time. The Fourier series was developed to solve this equation. This equation relates a function's Laplacian to its time derivative by the thermal diffusivity, which is symbolized alpha. For 10 points, name this parabolic partial differential equation, which models how temperature changes in a space over time.
ANSWER: heat equation
<AK, Physics>
2. A painting titled in reference to this man overlays an image of two hands holding a piece of cake on top of a portrait of him; that painting is by James Rosenquist. Two identical images of this man in garish red and blue appear in a print from a series accompanied by Teletype reports titled Flash. A green halo surrounds this man as he clutches an armrest and somberly looks at the viewer in one of several portraits of this man done by Elaine de Kooning. A parachuting man and a close-up of this man pointing are next to an image of him in both Retroactive I and Retroactive II by Robert Rauschenberg. A series reappropriating (*) newspaper photographs uses various shades of blue for nine depictions of this man's wife that juxtapose her smiling and despondent faces. That series of silkscreens of this man's wife after his death is part of Andy Warhol's Death and Disaster series. This man's death is memorialized by an "Eternal Flame" at Arlington National Cemetery. For 10 points, name this president often depicted by Pop artists, whose wife was depicted in Warhol's Nine Jackies.
ANSWER: John F. Kennedy [or John Fitzgerald Kennedy; or JFK]
<AK, Painting/Sculpture>
3. Hoffman and Rosenkrantz's definition of this concept invokes the notion of unrestricted repeatability. In a paper analogizing this concept to sovereignty, J. L. Mackie distinguished between first-order and secondorder versions of it. A 1973 Peter Geach paper named after this concept considers and rejects four different definitions of it. A being named McEar who does only one thing, scratching his ear, was introduced in a discussion of this concept by (*) Alvin Plantinga ("PLAN-ting-guh"). The proposition "A man is a donkey" is contrasted with the proposition "Socrates sits" in the discussion of this concept in the Summa Theologica. The socalled "paradox of the stone" concerns the definition of this concept. Practically all theologians since Aquinas have held that this concept does not apply to logically impossible actions. For 10 points, the problem of evil concerns the coexistence of evil with a God who is omnibenevolent, omniscient, and has what other quality of being allpowerful?
ANSWER: omnipotence [or being omnipotent; prompt on all-powerfulness until read]
<WN, Philosophy>
4. A poem in this language was inspired by the suicide of the author's friend Mohammed Sceab ("shayAHB"). A poet who wrote in this language supposedly gave envelopes containing some of his poems to one of
his fans on the condition that they be published only after his death, resulting in the publication of the Posthumous Diary, though some scholars allege that the poems are forged. A poet used this language to write of the title location "I know you mild between broad hills" in a poem from the collection (*) Waters and Earths. The speaker of a poem written in this language "prefers small streets that falter into grassy ditches" to "boxwood, acanthus, where nothing is alive to touch" and insists "even the poor know that richness, the fragrance of the lemon trees." The collection Cuttlefish Bones exemplifies the Hermeticist movement in this language's poetry. For 10 points, name this language used by the poets Giuseppe Ungaretti, Salvatore Quasimodo, and Eugenio Montale.
ANSWER: Italian [or Italiano]
<JN, Poetry>
5. A self-aggrandizing book claiming to offer an "Inside Story" rebuts a different book which claimed that this event was in part the result of an attempt to realize a prophecy from the "soothsayer Madam $X$," and that it was planned by the wife of its central figure. The latter book is attributed to former private detective Gaston Means. A loss of financial security resulting from this event supposedly led one person to publish a book claiming that a girl named Elizabeth Ann was the daughter of this event's central figure; that book was written by Nan Britton and contained a story about having sex in a coat closet. This event took place at San Francisco's Palace Hotel in the midst of a train tour that had taken its central figure to Canada and Alaska. This event made possible the dismissal of Harry (*) Daugherty ("DOH-ur-tee") from the cabinet, dissolving the Ohio Gang. For 10 points, identify this event which led to the ascent of Calvin Coolidge to the presidency.
ANSWER: death of Warren G. Harding [or death of Warren Gamaliel Harding]
(Note from the editor: The original question concluded with the line "the premature timing of which made possible the slandering of a great American leader." I, as history editor, disagree with this statement, but have chosen to make a note of it to preserve the author's opinion. The reader of this question may choose to add in the editorializing comment when the question is read.)
<MC, American History>
6. A thinker with this surname analyzed the thought of Michael Oakeshott and Eric Hobsbawm in chapters like "The Intransigent Right" and "The Vanquished Left" in his book Spectrum. Another thinker with this surname analyzed the "totalizing classification" and "jigsaw effect" of European-style maps commissioned by Rama V in a book that repeatedly cites Tom Nairn and Hugh Seton-Watson. That thinker with this surname wrote a book whose original edition ends with the declaration that Walter Benjamin's ("VALL-tuh BEN-yahmeen's") Angel of History is (*) immortal. A thinker with this surname edited New Left Review through the 1960s and 1970s. A thinker with this surname worked with Ruth McVey on the "Cornell Paper" and described the circulation of documents in the vernacular as "print capitalism," linking it to the social construction of nations. For 10 points, give this surname of the New Left historian Perry and his brother, the author of Imagined Communities. ANSWER: Anderson [accept Benedict Anderson or Perry Anderson] <AK, Social Science>
7. According to Matthew Paris, a king of this modern-day country rejected a letter by King John in 1213 seeking an alliance and promptly expelled English envoys. The Mensagem ("men-SAH-zhem") helped popularize the belief that a monarch killed in this modern-day country would return to lead a Fifth Empire, an event that Canudos ("kuh-NOO-doosh") leader Antônio Conselheiro ("cone-sell-YAY-roo") claimed to predict. The Treaty of Zamora secured the independence of one kingdom after it won the Battle of Ourique ("oh-REEK") against a state based in this country. Ferdinand the Holy Prince was captured and killed following a battle in this country against its (*) Marinid dynasty. The Iberian Union was formed after Sebastian I of Portugal was killed in this country during a battle between "three kings" at Ksar El Kebir. A sultanate from this country was defeated by a Christian alliance at the Battle of Las Navas de Tolosa. For 10 points, the Battle of Tangiers was fought in what African country, whose Almohad Caliphate opposed the Reconquista?

ANSWER: Kingdom of Morocco [or al-Mamlakah al-Maghribiyah; or Tageldit n Lmarrib]
8. Gabe Gabriel, whose skin is deemed too light to play African-American roles, goes to one of these locations owned by his friend Johnny Williams in Charles Gordone's "Black-Black Comedy" No Place to Be Somebody. One of these locations in the DRC is owned by Mama Nadi in Lynn Nottage's Ruined. In a Steve Martin play, Picasso and Einstein meet at one of these locations. One of these locations is owned by a "bag of (*) bones" who wears extremely misaligned eyeglasses. As a play set in one of these locations ends, a character begins singing La Carmagnole ("car-mahn-YOHL") before reciting a poem beginning, "The days grow hot, O Babylon!" In that play, Don Parritt confesses to turning in his wife before being urged to suicide by the "old foolosopher" Larry Slade, the only character without "pipe dreams." For 10 points, Harry Hope owns what kind of establishment visited by "Hickey" in Eugene O'Neill's The Iceman Cometh?
ANSWER: bar [accept equivalents such as saloon, pub, or tavern; accept cabaret; accept pool hall or poolroom, or brothel since the bar in Ruined is also a poolroom and brothel]
<RK, Drama>
9. A scene from this film includes a rear-projected image of an atom bomb exploding accompanied by Glenn Miller's "In the Mood" while the protagonist is hoisted on a crucifix. This film's main character frequents a red light district where a pimp speechifies about the "whore of Babylon." Two ostentatiously-dressed angels accompany this film's protagonist at the beginning of its hallucinatory epilogue, which includes a sequence in which two of the main characters lie among a pile of naked bodies in a ${ }^{*}$ ) slaughterhouse. This film's first section, which begins at the moment that its protagonist is released from Tegel prison, is ironically titled "The Punishment Begins." In this film, Barbara Sukowa ("ZOO-koh-vuh") plays Mieze ("MEE-tsuh"), who is murdered by the protagonist's brutish frenemy Reinhold. That protagonist, who loses his arm after Reinhold pushes him out of a getaway car, is named Franz Biberkopf. For 10 points, name this fifteen-and-a-half hour television film by Rainer Werner Fassbinder based on a novel by Alfred Döblin.
ANSWER: Berlin Alexanderplatz
<WN, Other Art (Film)>
10. British intelligence analyst Martin Packard described discovering how twenty-seven people were killed by hospital staff in this country in a 2008 book titled Getting it Wrong. A ship containing arms was caught supplying a terrorist group in this country in the Deniz incident. Widespread violence broke out in this country after two men refused to display identification cards after a night out in an incident termed "Bloody Christmas." Massacres in this country's capital city led its Ledra Street to be nicknamed "Murder Mile." Kofi Annan proposed a namesake plan to reunify this country, which failed to pass in a 2004 referendum. In this country, a coup planned by (*) EOKA-B headed by Nikos Sampson against President Makarios III led to Operation Atilla, a 1974 invasion of it. To oppose taksim ("tuck-SEEM"), a faction in this country formulated the Akritas plan in an attempt to achieve enosis. For 10 points, name this Mediterranean island nation disputed between Greek and Turkish nationalists.
ANSWER: Republic of Cyprus [or Kypriakí Dimokratía; or Kıbrıs Cumhuriyeti; accept Northern Cyprus from Turkish nationalists]
<RK, European History>
11. After Hephaestus captured Ares and Aphrodite in his bed, this deity did not laugh and instead convinced Hephaestus to release Ares. Idas used a winged chariot provided by this god to run away with Marpessa. This deity saved the Danaid ("duh-NAY-id") Amymone ("ah-mee-MOH-nee") from a satyr before seducing her himself and fathering Nauplius. After Hera induced insanity in Athamas, who attempted to kill his wife Ino and his son Melicertes, Aphrodite successfully convinced this deity to immortalize them. This deity helped the (*) insatiably hungry Erysichthon by giving his daughter Mestra the ability to shapeshift, a gift he also bestowed on
his other children Periclymenus ("pair-ick-LIM-in-us") and Neleus. At his wedding, this god presented Peleus with the immortal horses Balius and Xanthus. This deity lost a contest when Cecrops ("SEE-crops") voted in favor of an olive tree rather than the salt spring he created. For 10 points, name this god whose less helpful actions included starting earthquakes, the Greek god of the ocean.
ANSWER: Poseidon
<JX, Legends>
12. One of this author's characters is born after his mother is supposedly raped by a bear, and ends up killing his bride by biting her throat. The narrator of a novella by this author mocks an apprentice who throws a stone at a statue only for it to bounce back and hit him. In that novella, the bridegroom Alphonse is killed by a statue of Venus with the inscription "CAVE AMANTEM" ("KAH-vay ah-MAHN-tem"). In a story by this author of (*) Lokis and "The Venus of Ille," a boy who is offered a silver watch points to a nearby haystack hiding Gianetto Sanpiero ("jah-NET-toh sahn-PYAY-roh"). This author rediscovered the Lady and the Unicorn tapestries, which were brought to public attention by his friend and sometime lover George Sand. The title character shoots his "traitor" son Fortunato for revealing the location of a bandit in this author's story "Mateo Falcone" ("mah-TAY-oh fall-KOH-nay"). A novella by this author ends with Don José stabbing the title gypsy woman. For 10 points, name this author of Carmen.
ANSWER: Prosper Mérimée ("mare-ee-MAY")
<JX, Short Fiction>
13. This number is the base for the argument of a function that John Conway used to show that a nowhere continuous function can take every real value within every open interval. Conway also introduced the Mathieu groupoid with this many objects, where each object corresponds to a point in the projective plane of order 3. This is the third unique ordered Bell number, meaning that there are this many weak orderings on a set of three elements. The elongated square gyrobicupola ("gyro-by-KYOO-puh-luh") is traditionally excluded from a set of $\left(^{*}\right)$ this many polyhedra because it is not isogonal, despite that fact that each of its vertices is surrounded by the same pattern of regular polygons. This is the number of Archimedean solids. After 5, this is the smallest hypotenuse length of a primitive Pythagorean triple. For 10 points, what is the first prime number for which reversing the digits yields a different prime?
ANSWER: thirteen [or 13]
<EC, Math>
14. Characters in this novel discuss whether Shakespeare knew about champagne and compare a flaming dessert to natural gas at a tense dinner party attended by a pro-slavery colonel. At this novel's conclusion, the protagonist and his wife question the morals of a charity-giving banjo-playing woman who has become a nun. The novel Their Wedding Journey first introduced this novel's protagonist, who settles on an apartment full of (*) "gimcrackery" at the end of an exhaustive search he undertakes with his wife Isabel. The son of an entrepreneur is killed by a stray bullet while trying to save the German translator Lindau during a violent streetcar riot near this novel's end. The entrepreneur Jacob Dryfoos eventually sells the magazine Every Other Week to this novel's protagonist, an ex-Boston insurance agent. For 10 points, name this novel about Basil March's rise in the newspaper industry of Gilded Age New York, written by William Dean Howells.
ANSWER: A Hazard of New Fortunes
<RK, Long Fiction>
15. An author from this religious movement wrote a book subtitled Berger, the Angel, and the Scandal of Reckless Indiscrimination in response to criticisms by David Berger. The founder of this movement wrote a book describing people in an intermediate state called beinoni who have neither sinned nor purged themselves of evil; that book is the Tanya. Members of this movement celebrate the nineteenth day of Kislev ("kee-SLEV") as the New Year, since its founder (*) Schneur ("SHNAY-oor") Zalman of Liadi was released
from prison on that day. This movement sponsored mitzvah campaigns to reach out to secular Jews. This movement has been embroiled in debate over whether its deceased leader Menachem Mendel Schneerson should be recognized as the Messiah. For 10 points, name this Hasidic Jewish movement headquartered in Crown Heights, Brooklyn that was led by the Lubavitcher Rebbe.
ANSWER: Chabad ("hah-BOD") [or Habad or Chabad-Lubavitch; accept Lubavitchers until "Lubavitcher" is read; prompt on Hasidic Jews or Hasidim or Hasidism]
<WC, Religion>
16. A 2006 book about the founder of a publication of this type argues that he constructed networks between New Communalists and technical experts. A publication of this type lent its name to an early virtual community and Bay Area ISP called The WELL. Steve Jobs was heavily influenced by that publication of this type, which was popular in hippie communes, and quoted its valediction to (*) "Stay Hungry. Stay Foolish" in his Stanford commencement address. The founder of that publication of this type led a campaign to convince NASA to release a complete image of the Earth taken from space in the belief that it would unite humanity. The "Wish Book" was version of a publication of this type. Aaron Montgomery Ward is known for founding a publication of this type, which took advantage of the advent of Rural Free Delivery and parcel post to provide its service to farmers. For 10 points, identify this type of publication, a notable example of which was published by Sears, Roebuck and Company, which displayed their products for sale.
ANSWER: catalogues
<MC, American History>
17. Dipesh Chakrabarty has offered "Four Theses" on the way that historians should relate themselves to this political issue. In the article "Why Has Critique Run Out of Steam?", the author cites an article from The New York Times dealing with this political issue as a motivation for examining his own role in helping to create the debate over this issue. In a study that relates debates over this issue to earlier political debates, Erik M. Conway and Naomi Oreskes argue that small networks of individuals like Frederick Seitz and Fred Singer have played a disproportionate role in shaping those debates. In 2017, Washington, (*) New York, and California formed an "Alliance" on policy relating to this issue in response to a decision made in accordance with the "America First" policy. In or after 2020, the United States is scheduled to pull out of an agreement on this issue. For 10 points, identify this issue that the 2015 Paris Agreement seeks to mitigate.
ANSWER: global warming [or climate change or the anthropocene; prompt on science]
<MC, Current Events>
18. Description acceptable. The definition of structures resulting from this process is mediated by interactions dependent on the proteins Tbx4 and Tbx5. The presence of the TGF-beta inhibitor Gremlin disrupts apoptosis along a gradient of BMP during the final stages of this process. The patterning of structures resulting from this process is also dependent on the interaction between retinoic acid and Fgf10. Specification of cell fates during this process relies on secretions from the zone of polarizing activity of (*) sonic hedgehog. The presence of the protein Fgf8 has been shown to be a sufficient substitute for the function of another key structure in this process. That structure, the apical ectodermal ridge, forms along the lateral midline during this process after the coalescence of mesenchymal cells beneath the epidermis. The products of this process may be described using the prefixes stylo-, zeugo-, and auto- and are patterned along the body via Hox genes. For 10 points, name this developmental process that occurs in four distinct locations in tetrapods.
ANSWER: limb formation [accept any answer involving growing limbs or arms or legs or digits or clear equivalents; accept synonyms for "formation" such as outgrowth or development; do not accept or prompt on answers mentioning axial patterning]
<RH, Biology>
19. In the finale of this symphony, the winds play a descending $F E D$ line that cuts off the first of two passages in which the strings trade pizzicato ("pit-sick-COT-oh") eighth notes while slowly increasing in tempo and volume. This symphony's third movement opens in A-flat major with the clarinet playing a slurred eighth-note melody in a four-bar phrase that the strings extend to a fifth bar. The trombones only play in this symphony's fourth movement, where they play a chorale that reappears during this symphony's cut-time coda. In the $6 / 8$ opening of this symphony, the strings play ascending half steps while the winds play a descending theme as a timpani pounds on C; that opening is marked (*) "Un poco sostenuto." This piece's finale features a timpani roll interrupted by a passage for solo horn based on a melody its composer heard while in Switzerland; that is this piece's Alphorn theme. Similarities between a theme in this symphony's finale and the finale of Beethoven's Ninth led Hans von Bülow ("BYOO-loh") to label it "Beethoven's Tenth." For 10 points, name this symphony, the first of the composer of A German Requiem.
ANSWER: Johannes Brahms's Symphony No. 1 [or Johannes Brahms's first symphony] <AK, Classical Music>
20. Armentrout names a modification of one method for calculating this quantity that uses a quadrupole ion trap. In atmospheric-pressure chemical ionization, transfer reactions will occur in the mobile phase solvents if those solvents possess a value for this quantity greater than 697. It's not pKa , but phosphine imides are notable for possessing extremely high values of this quantity, which may be calculated using the extended kinetic method. Since hydronium is acting as the primary ion, only molecules with higher values of this quantity than water are detectable in (*) PTR mass spectrometry. For binary acids, bond dissociation energy is equal to electron affinity minus ionization energy plus this quantity. This quantity is implicit to the definition of a Brønsted-Lowry base and is equal to the negative enthalpy change for a certain exothermic reaction conducted in the gas phase. For 10 points, name this quantity equal to the amount of energy released when a hydrogen ion is added to a neutral or anionic molecule.
ANSWER: proton affinity [or PA; or $\underline{E}$-sub-pa]
<RH, Chemistry>

## Bonuses

1. The collapse of a derrick bearing a block of granite nearly kills this character during the inauguration of a school. For 10 points each:
[10] Name this man who frequently clashes with Father Dámaso, who schemes to prevent his marriage with the presumed daughter of Captain Tiago. This man later resurfaces as the jeweler Simoun and leads a failed revolution. ANSWER: Crisóstomo Ibarra [accept either underlined portion; or Juan Crisóstomo Ibarra y Magsalin]
[10] Ibarra is the protagonist of this Filipino writer's novel Noli Me Tangere. This man penned the poem "My Last Farewell" shortly before the Spanish executed him by firing squad.
ANSWER: José Rizal [or José Protasio Rizal Mercado y Alonso Realonda]
[10] In the novel El Filibusterismo, Rizal alludes to this episode from the Old Testament when Simoun laces Captain Tiago's house with explosives and leaves a warning reading "Mene, Thecel, Pares" ("men-AY tek-ELL PAH-ress").
ANSWER: the writing on the wall [or Belshazzar's feast]
<JN, Long Fiction>
2. Name some things about gallery paintings, which are paintings of collections of paintings, for 10 points each: [10] Giorgione's Three Philosophers is featured in David Teniers ("TEN-yurz") the Younger's painting of the gallery of this patron of his. Teniers later created Theatrum Pictorium, a collection of over two hundred engravings based on paintings belonging to this man which eventually became part of the collection of the Kunsthistorisches ("koonst-hiss-TOR-ish-us") Museum.
ANSWER: Archduke Leopold Wilhelm
[10] A group of men admire Titian's Venus of Urbino at the bottom of a Johan Zoffany painting documenting the various paintings and sculptures of the octagonal Tribuna of this Florence art museum designed by Giorgio Vasari. ANSWER: Uffizi ("oo-FEET-see") Gallery [or Galleria degli Uffizi]
[10] Giovanni Paolo Panini contrasted this city's "Ancient" and "Modern" artistic creations in two massive canvases. Panini was a major influence on Piranesi, who painted vedute ("vay-DOO-tay") of this city and created a series of its prisons that featured often impossible arrangements of staircases and walkways.
ANSWER: Rome [or Roma]
<RK, Painting/Sculpture>
3. Antonin Scalia ("skuh-LEE-uh") once served as a faculty advisor to this organization. For 10 points each: [10] Name this conservative legal organization, which since its founding in 1982 at the Chicago, Yale, and Harvard law schools has played a key role in the promotion of originalist legal theories in the United States. It has been credited with heavily influencing judicial appointments under Republican presidents.
ANSWER: Federalist Society for Law and Public Policy Studies
[10] A major setback for the Federalist Society occurred when this conservative Supreme Court nominee, who had helped to found its Yale branch, was rejected by the Senate in 1987. He had influentially applied originalist ideas to the subject of antitrust law in his book on that subject's Paradox.

## ANSWER: Robert Bork

[10] In its early years, the Federalist Society received significant funding from foundations controlled by the heirs to this Pittsburgh-based family's fortune, such as Richard Scaife. Another Republican member of this family served as Treasury Secretary throughout the 1920s and headed a bank that eventually merged with the Bank of New York.
ANSWER: Mellon family
<MC, American History>
4. Answer the following about neutrino experiments, for 10 points each:
[10] This detector, built under the Amundsen-Scott South Pole Station in Antarctica, identifies neutrinos using a network of optical sensors called DOMs connected to photomultiplier tubes. It detected the first cosmic neutrinos in December 2013.
ANSWER: IceCube Neutrino Observatory
[10] In 2011, the OPERA ("opera") neutrino experiment observed muon neutrinos exceeding this value, an apparent violation of special relativity. It was later determined that the measurement resulted from a timing error.
ANSWER: speed of light [or $\underline{\boldsymbol{c}}$ ]
[10] Observations from the LSND detector at Los Alamos and the MiniBooNE ("mini-boon") experiment at Fermilab suggest the existence of this type of neutrino, which has right-handed chirality.
ANSWER: sterile neutrino
<PS, Physics>
5. In this collection's story "Wild Honey," Gabriel Benincasa is paralyzed by the honey he eats and is devoured by ants. For 10 points each:
[10] Name this Horacio Quiroga ("kee-ROH-gah") collection that includes a story in which the newlywed Alicia is preyed on by a parasite living in the title object, "The Feather Pillow."
ANSWER: Stories of Love, Madness and Death [or Cuentos de amor de locura y de muerte; or Tales of Love, Madness and Death]
[10] Many of Quiroga's stories tell of the dangers of this type of place. A Quiroga collection named after this type of place was inspired by a Rudyard Kipling book that details Mowgli's adventures.
ANSWER: jungle [or selva; accept Jungle Tales or Cuentos de la selva; accept The Jungle Book]
[10] In a Quiroga story, the sight of this animal's beheading leads Mazzini and Berta's "four idiot sons" to behead their sister. In No One Writes to the Colonel, the colonel struggles with the decision to sell a prize animal of this kind that had belonged to his son.
ANSWER: chicken [accept rooster; accept hen]
<JN, Short Fiction>
6. This book states that the deferential character of the middle class creates a stagnant ruling class. For 10 points each:
[10] Name this book that argues that the "efficient secret" of the title entity is the fusion of legislative and executive power in the Cabinet. It states that the presence of cabinets prevents people from knowing how contemporary statesmen, such as Abraham Lincoln and William Gladstone, are alike.

## ANSWER: The English Constitution

[10] The English Constitution was written by Walter Bagehot ("BADGE-it"), who served as chief editor of this magazine for seventeen years. This London-based magazine founded in 1843 has traditionally supported classical liberalism.
ANSWER: The Economist
[10] A series of Bagehot articles published in The Economist concerned the depreciating value of this commodity, caused by a trade deficit with China. Bagehot explains how the value of this commodity weakened the Indian economy, since the value of the rupee was based on this commodity.
ANSWER: silver
<RD, European History>
7. In 1913, a Russian warship invaded this mountain to round up monks who advocated imiaslavie, the worship of God's name as God Himself. For 10 points each:
[10] Name this mountain, the site of twenty monasteries, that functions as a semi-autonomous theocracy within Greece. Since 1060, women and female animals have been banned from this mountain.
ANSWER: Mount Athos
[10] According to tradition, Gabriel revealed this hymn honoring Mary to a monk at Mount Athos. This hymn begins, "It is truly meet to bless you, O Theotokos."
ANSWER: Axion Estin
[10] Mount Athos lies under the spiritual jurisdiction of this position within the Eastern Orthodox Church. In 1054, the holder of this position and the Pope excommunicated each other, initiating the East-West Schism.
ANSWER: Ecumenical Patriarch of Constantinople [or Patriarch of Constantinople]
<WC, Religion>
8. Opening the windows in this house's dining room creates a "disappearing corner." For 10 points each: [10] Name this house Gerrit Rietveld ("REET-felt") designed for a woman in Utrecht ("YOO-trekt"). It contains a system of sliding and revolving panels that can divide the upper level into up to six rooms and housed Rietveld's Red and Blue Chair.
ANSWER: Rietveld Schröder House [or Rietveld Schröderhuis]
[10] The Red and Blue Chair was originally made of unstained wood, but Rietveld painted it in primary colors after joining this Dutch movement led by Theo van Doesburg ("DOOZ-burk").
ANSWER: De Stijl ("duh STYLE") [or Neoplasticism]
[10] This architect lived in a houseboat called De Stijl, but broke from the movement after failing to steer it in a communist direction. He designed the Villa Henny, one of the first houses built of reinforced concrete.

## ANSWER: Robert van 't Hoff

<EC, Other Art (Architecture)>
9. According to legend, people who die in this manner remain at their place of death as ghosts and try to take over the bodies of people who pass by. For 10 points each:
[10] Name this cause of death. After Qu Yuan ("choo yoo-EN") killed himself in this manner, locals commemorated him by throwing a glutinous rice called zongzi ("tsong-tsuh") into the Miluo River to prevent fish from eating his body.
ANSWER: drowning [accept word forms]
[10] Races in these boats originated when people used them to scare the fish away from Qu Yuan's body by beating drums. Zongzi are eaten on the Duanwu Festival, which is usually named for these boats in English.
ANSWER: dragon boats [or longchuan; or longzhou]
[10] In Fujian and Taiwan, this goddess is revered as a patroness of sailors and fishermen. In one version, she was swept out to sea while holding out a lantern to guide her father's safe return to shore.
ANSWER: Mazu ("mah-tsoo") [or Lin Moniang]
<JK, Legends>
10. Answer the following about the impact of Alain-Fournier's ("ah-LAN-foorn-YAY's") masterpiece Le Grand Meaulnes ("luh grahn MOLE-nuh") on American literature, for 10 points each:
[10] Its most lasting influence is likely inspiring the title of this Jazz Age novel, whose author had previously considered various titles about Trimalchio, referencing its protagonist's lavish parties in West Egg.
ANSWER: The Great Gatsby
[10] This character steals the novel from a stall in Hollywood, which he explores with a Mexican girl after convincing her he isn't a pimp. Later, he calls himself a "man of the earth" while helping her pick cotton, as part of his search for "IT."
ANSWER: Sal Paradise [accept either underlined portion]
[10] This author praised Le Grand Meaulnes in his lengthy correspondence with Anaïs ("ah-nah-EES") Nin undertaken while living in Paris.
ANSWER: Henry Miller [or Henry Valentine Miller]
<RK, Long Fiction>
11. Answer the following about the question of whether or not existence is a predicate, for 10 points each:
[10] Kant rejected this argument for the existence of God by arguing that existence is not a real predicate, and therefore a "supremely perfect being" need not necessarily exist.
ANSWER: ontological argument
[10] In a book of this two-word title, Terence Parsons argued that things like "existence" and "being possible" are extranuclear predicates. Meinong's jungle is populated by things described by this two-word phrase.
ANSWER: non-existent objects
[10] In his book Towards Non-Being, this philosopher adopted Richard Routley's noneism ("NUN-ism"), the theory that some things do not exist, based on the notion that existence is a predicate. He's better known for defending dialetheism ("die-uh-LETH-ee-ism").
ANSWER: Graham Priest
<WN, Philosophy>
12. During this event, government troops destroyed the main transmitter of Radio Veritas, after which Radyo Bandido took over the role of broadcasting to protestors during this event. For 10 points each:
[10] Name this event in which June Keithley broadcast news and instructions to protestors. This event saw the defection of Fidel Ramos and Juan Ponce Enrile from the ruling government.
ANSWER: People Power Revolution [or EDSA Revolution; or Philippine Revolution of 1986]
[10] Early during the People Power Revolution, Radio Veritas broadcast an appeal from this Archbishop of Manila urging listeners to go to the EDSA to demonstrate support for Ramos and Enrile.
ANSWER: Jaime Sin ("HY-may seen")
[10] The People Power Revolution led to the overthrow of this president of the Philippines, whose wife Imelda possessed an infamously large collection of shoes.
ANSWER: Ferdinand Marcos
<WC, World History>
13. Binding of this plant hormone inactivates a negative regulatory protein named for its active ZIM ("zim") domain, which allows MYC2 ("mic-two") to interact with its co-activator MED25 ("med-twenty-five"). For 10 points each:
[10] Name this plant hormone whose binding in wild-type Arabidopsis triggers a reduced growth phenotype in response to a stimulus, such as herbivory.
ANSWER: jasmonate [or jasmonic acid; or JA]
[10] One way in which herbivory triggers the biosynthesis of jasmonate is when this enzyme from the wound response triggers the release of alpha-linoleic acid into the octadecanoid pathway. In another pathway, this enzyme cleaves PIP2 ("pip-two") to yield IP3 ("eye-P-three") and diacylglycerol.
ANSWER: PLC [or phospholipase C]
[10] JAZ ("jazz") proteins, which inhibit the jasmonate pathway prior to ligand binding, are also inhibited by the DELLA ("della") protein RGA in Arabidopsis, which is a negative regulator of this other hormone's signaling pathway. This hormone is responsible for stem elongation, and was first discovered while investigating foolish seedling disease in rice.
ANSWER: gibberellins
<RH, Biology>
14. In 2008, John Oxford exhumed this statesman's corpse from his lead-lined coffin, intending to obtain samples of the H1N1 virus that caused the Spanish flu. For 10 points each:
[10] Name this statesman, who died of the Spanish flu in 1919 during the Paris Peace Conference. Previously, he had secretly divided the Middle East into spheres of influence with François Georges-Picot.

## ANSWER: Mark Sykes

[10] John Oxford's study of the Spanish flu has traced its outbreak to the British training camp in this French town. In 1917, the arrest of A. J. Healy, a gunner from New Zealand, prompted a mutiny of British soldiers in this town. ANSWER: Étaples ("ay-TOP-luh")
[10] Mark Humphries traced the Spanish flu to this country, suggesting that it was diffused around the globe by a "Labour Corps" from this country. During the Paris Peace Conference, this country sought to regain Shandong. ANSWER: Republic of China [or Zhongguo; or Zhonghua minguo]
<WC, Other History>
15. The passage that introduces this concept describes African-Americans as the "seventh son," labeling this concept the "sense of always looking at one's self through the eyes of others, of measuring one's soul by the tape of a world." For 10 points each:
[10] Name this concept introduced in the chapter "Of Our Spiritual Strivings."
ANSWER: double consciousness
[10] This sociologist coined the term "double consciousness" in his book The Souls of Black Folk. This man also cofounded the NAACP.
ANSWER: W. E. B. Du Bois ("doo-BOYSS") [or William Edward Burghardt Du Bois]
[10] Du Bois's dream of creating this work failed due to lack of funding, but it inspired a similar work edited by Henry Louis Gates and Kwame Anthony Appiah ("APP-ee-ah") that was published in 1999.
ANSWER: Encyclopedia Africana [accept Africana: The Encyclopedia of the African and African-American Experience]
<AK, Social Science>
16. These objects can be detected by the lithium test, which can distinguish them from other low mass stars. For 10 points each:
[10] Name these substellar objects that include Teide 1 and Gliese 229B, the first one of these objects to display a methane absorption band. These substellar objects are unable to sustain hydrogen fusion due to their insufficient mass.

## ANSWER: brown dwarfs

[10] These gas giants, whose masses are below those of brown dwarfs, are the easiest exoplanets to detect using the radial velocity method. The first exoplanet discovered, 51 Pegasi b , is one of these objects.
ANSWER: hot Jupiters
[10] A hypothesis named for this term states that hot Jupiters form in the cold, outer regions of their solar system and travel inward until they orbit a star.
ANSWER: migration hypothesis [accept planetary migration]
<PS, Other Science (Astronomy)>
17. Answer the following about people who studied magmas, for 10 points each:
[10] This figure likely introduced the term magma, defined as a set equipped with a single binary operation, to abstract algebra. This pseudonym refers to a group of French mathematicians led by André Weil ("vay") who sought the highest level of abstraction in their influential text Elements of Mathematics.
ANSWER: Nicolas Bourbaki ("boor-bah-KEE") [accept Bourbaki group]
[10] This thinker used the term magma to refer to a mode of indeterminate being presented by the "social imaginary significations in a given society" in The Imaginary Institution of Society. He also founded Socialisme ou Barbarie ("soh-see-ah-LEEZ-muh oo bar-bah-REE") with Claude Lefort.
ANSWER: Cornelius Castoriadis
[10] Plagioclase feldspars evolve from a calcium-rich to a sodium-rich form as magma cools according to the continuous branch of a reaction series developed by this geologist.
ANSWER: Norman Levi Bowen [accept Bowen's reaction series]
<EC, Other Academic>
18. Answer some questions about the landscape of British contemporary music, for 10 points each:
[10] In 2012, the Britten Sinfonia premeried Max Richter's "recomposed" version of this set of pieces by Vivaldi. His reinterpretation breaks up four violin concertos that make up this set of pieces into three to four sections each.
ANSWER: The Four Seasons [or Le Quattro Stagioni]
[10] This composer wrote a Violin Concerto, subtitled Concentric Paths, with movements titled "Rings" and "Rounds." He also wrote Asyla and a chamber opera centering on the Duchess of Argyll ("ar-GUILE") titled Powder Her Face.
ANSWER: Thomas Adès ("ADD-iss")
[10] Much of this composer's work is inspired by the architect Francesco Borromini and the lighthouses of Orkney, both of which play into his ten symphonies and ten Naxos Quartets. He also directed the Pierrot Lunaire ensemble The Fires of London with Harrison Birtwistle.
ANSWER: Peter Maxwell Davies
<AK, Classical Music>
19. Edmund Wilson slammed an English translation of this work by attributing to it "a lack of common sense" and the translator's desire to "torture both the reader and himself." For 10 points each:
[10] Name this novel written in a form of iambic tetrameter that alternates masculine and feminine rhymes, known as its title character's "stanza." Its title character incites a duel when he attends Tatyana's name day celebration.
ANSWER: Eugene Onegin ("ohn-YAY-ghin") [or Yevgéniy Onégin]
[10] This writer earned Wilson's ire for his extremely literal translation of Eugene Onegin, which he accompanied with an analysis of Russian and English verse called Notes on Prosody ("PRAH-zuh-dee").
ANSWER: Vladimir Nabokov [or Vladimir Vladimirovich Nabokov]
[10] In Notes on Prosody, Nabokov writes that the beauty of this device in English is "the delicate sensation of something being physically preserved by the voice" and finds that it is absent in Russian. Robert Bridges explains syllabic variation between lines in Paradise Lost with this device in Milton's Prosody.
ANSWER: elision
<JN, Poetry>
20. This man developed a total synthesis of tropinone, a precursor to cocaine, by reacting succinaldehyde, methylamine, and acetonedicarboxylic acid through a double Mannich ("MAN-ick") reaction. For 10 points each: [10] Name this chemist who developed the curved arrow notation used to represent the movement of electrons. A reaction named for him synthesizes the Wieland-Miescher ("WE-land ME-shur") and Hajos-Parrish ketones used in steroid synthesis.
ANSWER: Robert Robinson [accept Robinson annulation]
[10] The aforementioned Robinson annulation is essentially a combination of a Michael addition and an intramolecular one of these reactions, in which an enol attacks a carbonyl.
ANSWER: aldol reaction [or aldol addition; or aldol condensation]
[10] The final step of the reaction proceeds through an E1cb ("E-one-C-B") mechanism, during which a strong base causes the elimination of a proton and hydroxyl group, forming one of these structures that contain a pi and sigma bond.
ANSWER: carbon-carbon double bond
<RD, Chemistry>

