# SOUTHEAST-MIDWEST HOUSEWRITE: PACKET 16 

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## NOTE: THESE TOSSUPS AND BONUSES ARE PAIRED. IF THE TOSSUP GOES DEAD, SKIP THE ASSOCIATED BONUS. DO NOT GO BACK AND READ ANY BONUSES THAT ARE SKIPPED.

1. In a novel by this author, the protagonist is forced to be a servant for Brunelda after being fired from his job as a lift-boy for housing the drifter Robinson. That protagonist of an unfinished novel by this author is abandoned by his senator uncle Jacob after trying to help a ship stoker avoid losing his job. A character is described as a "family member who could not be treated like an enemy" in a work by this author, whose novels were posthumously published and edited by (*) Max Brod. A family takes a trolley ride to the country at the end of a novella by this author whose protagonist scares three boarders while listening to his sister play the violin. That protagonist slowly dies after an apple thrown by his father gets lodged in his back. For 10 points, name this author who wrote about Gregor Samsa's transformation into a giant cockroach in The Metamorphosis.
ANSWER: Franz Kafka
<Ashbrook, Long Fiction> [Ed. Leahy]
2. This writer credited the Portuguese historian Gomes de Zurara with writing the first "recorded history of anti-Black racist ideas" in his book Stamped from the Beginning. For 10 points each:
[M] Name this historian whose memoir How to Be an Anti-Racist skyrocketed in popularity during the Black Lives Matter protests of 2020.
ANSWER: Ibram X. Kendi [or Ibram Xolani Kendi; or Ibram Henry Rogers]
[E] Kendi traced slavery-justifying theories to this thinker's "climate theory" of slavery and his belief that some people are slaves by nature. That idea was put forth in this thinker's Politics, a continuation of his Nicomachean Ethics.

## ANSWER: Aristotle of Stagira [accept Aristoteles]

[H] Kendi asserted that Aristotle's "climate theory" was expanded upon by this Muslim thinker and historian, who used it to justify the enslavement of Slavs and sub-Saharan Africans in his book the Muqadimmah ("MOO-kah-DEE-mah").
ANSWER: Ibn Khaldun [or Abu Zayd Abd al-Rahman ibn Muhammad ibn Khaldun al-Hadrami]
<Karthik, Other Social Science> [Ed. Ashbrook]
2. A queen and princess from this empire both wrote poetry using the pen name 'Makhfi,' meaning "hidden one." The life of this empire's second ruler was documented in an account written by his sister, the princess Gulbadan. After this empire's third ruler successfully besieged the fort of Chittor, thousands of women committed suicide in a self-immolation ritual called jauhar. That ruler of this empire apocryphally had his son's lover (*) Anarkali buried alive between two walls. The only queen of this empire to have coins struck in her name was Nur Jahan, consort of Jahangir. After the death of his wife Mumtaz Mahal, one ruler of this empire built the Taj Mahal as a mausoleum for her. For 10 points, name this Muslim empire in India ruled by Akbar and Shah Jahan.
ANSWER: Mughal Empire
<Prabhakar, World History> [Edited]
2. Muirhead's inequality generalizes an inequality named for the "arithmetic" and "geometric" types of this operation. For 10 points each:
[E] Name this operation, whose arithmetic type can be computed as the sum of the numbers divided by $n$. This measure of central tendency is contrasted with the median and mode.
ANSWER: mean [accept arithmetic mean; accept geometric mean; prompt on average]
[M] This mathematician used forward-backward induction in a proof of the AM-GM inequality. This mathematician first proved a vector inequality about the inner product and the norm that he co-names with Schwarz.
ANSWER: Augustin-Louis Cauchy
[H] In Cauchy's forward-backward induction, the AM-GM inequality is first proved for these numbers. Cauchy's condensation test determines convergence by examining the terms of a sequence that substitutes these numbers in.
ANSWER: powers of two [or $\underline{\underline{2}}^{\mathbf{n}}$ ]
<Karthik, Math> [Edited]
3. A long-haired, green-skinned creature in this myth system snatches naughty children from the seashore. In this myth system, the demon Mahaha uses its long bony fingers to tickle people to death. In one myth from this system, a bear hunter was blinded by his mother, who rubbed fat in his eyes while he slept. After regaining his sight, that boy caused his mother to be drowned by a (*) whale. In this myth system, the creator god Anguta takes dead souls to Adlivun. The master of bears Nanook appears in this myth system, and in one story from this myth system, the amputated fingers of a goddess thrown into the ocean become whales, walruses, and other sea creatures. That goddess is Sedna. For 10 points, name this myth system shared by indigenous peoples in the Arctic.
ANSWER: Inuit myth [accept Yupik or Inupiat; do NOT accept or prompt on "Eskimo"] (The monster in the first line is Qallipilluit.)
<Delot-Vilain, Mythology> [Ed. Groger]
3. Some academics believe the Ur-Hamlet play, featuring a ghost encouraging Hamlet's revenge, was written by this playwright. For 10 points each:
[H] Name this playwright, who wrote another play that mirrors elements of Shakespeare's Hamlet such as a vengeful ghost and a treacherous play-within-a-play held by Hieronimo.
ANSWER: Thomas Kyd
[M] Thomas Kyd's The Spanish Tragedy and Shakespeare's Hamlet both draw heavily from the bloody revenge tragedies written by this Roman Stoic playwright, who also included a vengeful ghost in his play Thyestes.
ANSWER: Seneca the Younger [or Lucius Annaeus Seneca; accept Senecan tragedy]
[E] Both Hamlet and Kyd's Hieronimo are "stage" characters named after this writer because they use the political tactics espoused in this writer's The Prince.
ANSWER: Niccolo Machiavelli [or stage Machiavel]
<Bowman, Drama> [Edited]
4. This composer included movements titled "Premonitions" and "Peripetie" in a work whose orchestration may have served as an early inspiration for Holst's Planets. This composer directed a soprano to enter with a line translating "I feel air from another planet" in the final movement of his Second String Quartet. This composer's Book of the Hanging Gardens originated a technique that he later used in (*) Gurre-Lieder and an adaptation of commedia dell'arte for soprano and a namesake five-piece ensemble. This composer used his textbook Harmonielehre to explain his concept of serialism, and he led a school that included his students Alban Berg and Anton Webern. For 10 points, name this composer of the Second Viennese school whose work Pierrot Lunaire used his twelve-tone technique.
ANSWER: Arnold Schoenberg
<Strombeck, Classical Music> [Edited]
4. A composer from a school named for this region composed a suite of ten Woodland Sketches for piano that includes the popular tune "To a Wild Rose." For 10 points each:
[M] Give this region that names a late 19th century school of composers including Edward MacDowell and Horatio Parker. Movements titled for Putnam's Camp and Housatonic at Stockbridge appear in a suite named for "Three Places" in this region.
ANSWER: New England [accept Second New England School; accept Three Places in New England; prompt on Boston Six by asking "What larger region was the school also named for?"; do NOT accept or prompt on "England"] [E] This composer of Three Places in New England departed from European tradition with quotations of American songs in works like Central Park in the Dark. He also composed The Unanswered Question. ANSWER: Charles Ives
[H] This youngest member of the Second New England School wrote dozens of songs, including 3 settings of Browning poems, though she is best known today for her Gaelic Symphony.
ANSWER: Amy Beach
$<$ Strombeck, Classical Music> [Edited]
5. Absorption lines in the spectra of some of these objects indicate neutral hydrogen, providing evidence for reionization. The Sloan Digital Sky Survey categorizes most objects with a redshift greater than 2 as these objects. These objects are older and more luminous than similar objects called Seyfert galaxies. The Huchra lens galaxy gravitationally lenses one of these objects to form the image of the (*) Einstein cross. These most powerful AGNs emit a relativistic jet from the supermassive black hole at the center of their accretion disk. These objects are classified as radio-quiet or radio-loud. For 10 points, name these highly energetic astronomical objects whose name is short for quasi-stellar radio sources.
ANSWER: quasars [accept quasi-stellar radio sources before mention; accept OSOs; accept blazars; prompt on active galactic nuclei; prompt on AGN before mention]
<Ashbrook, Astronomy> [Ed. Bowman]
5. A client queen in this region named Cartimandua was negatively described by Tacitus for divorcing her husband Venutius. For 10 points each:
[M] Name this region where Cartimandua betrayed the rebel Caratacus, handing him over to the Romans and receiving great wealth in return. Another revolt in this region was defeated at the Battle of Watling Street.
ANSWER: Britannia [or Britain; accept Roman Britain or Great Britain or England; do not accept nor prompt on "Scotland" or "Wales" or "Ireland" or "United Kingdom" or "U.K."]
[E] The latter half of Cartimandua's long reign overlapped with the reign of this Roman emperor, who also suppressed Boudicca's revolt. This successor of Claudius purportedly fiddled during the Great Fire of Rome. ANSWER: Nero Claudius Caesar Augustus Germanicus
[H] Boudicca was queen of this tribe, leading them in her unsuccessful rebellion. Under this tribe's king Prasutagus, this tribe's coins had their name inscribed upon them, an unusual practice for the tribes of Britannia.
ANSWER: Iceni
<Delot-Vilain/Prabhakar, Other History> [Ed. Prabhakar]
6. An old woman in this novel lives in the decaying Butler family mansion along with numerous Weimaraners. The mother of this novel's protagonist was supposedly caught sucking the fingers of her dead father's corpse by her husband. This novel's protagonist hears the sound of a woman crying at Ryna's Gulch during a hunting trip where he is choked with a wire. Henry Porter is a member of a racially motivated assassination group called the (*) Seven Days in this novel, another of whose members named Robert Smith jumps off a hospital roof in an attempt to fly. The bootlegger Pilate is killed at the end of this novel by Guitar Bains, who previously helped the protagonist in an attempt to steal some gold and bones his father Macon claimed. The life of Milkman Dead is recounted in, for 10 points, what novel by Toni Morrison?
ANSWER: Song of Solomon
$<$ Prabhakar, Long Fiction> [Ed. Leahy]
6. This book claims that houses of confinement represent the police's attempt to establish themselves as the "civil equivalent of religion." For 10 points each:
$[\mathrm{H}]$ Name this book that discusses how its "dazzled" subjects were exiled in the Ship of Fools in the medieval era, but became subject to "The Great Confinement" in the classical period.
ANSWER: Madness and Civilization: A History of Insanity in the Age of Reason [accept Folie et Déraison:
Histoire de la folie à l'âge classique]
[E] Madness and Civilization was written by this French philosopher. This philosopher detailed the empowerment of penal institutions in Discipline and Punish.
ANSWER: Michel Foucault [or Paul-Michel Foucault]
[M] In Madness and Civilization, Foucault designates the mad as a part of this group. Simone de Beauvoir categorized women as part of this group due to being defined in relation to men.
ANSWER: the Other [accept l'autre]
<Bowman, Philosophy> [Edited]
7. In a painting by this artist, a vignette shows a man with his head trapped in a table swordfighting below an image of Jesus with the Latin inscription "Cave cave dominus videt." A man points a stick at a dog wearing a spike-covered collar near some bones on the exterior of another work by this artist. The main panel of that work by this artist features an owl and God observing a group of fools below the title (*) vehicle. In another work, this artist painted various naked figures supporting enlarged bagpipes and being strung between harp strings. That work includes a depiction of Hell as the rightmost of three panels that also depict Adam, Eve, and many strange animals in a paradise. For 10 points, name this Dutch artist of The Haywain and The Garden of Earthly Delights.
ANSWER: Hieronymus Bosch
$<$ Lin, Painting \& Sculpture> [Ed. Strombeck] (The first line refers to The Seven Deadly Sins and the Four Last Things.)
7. Anna Maria van Schurman was known as the "Learned Maid" of this city. For 10 points each:
[H] Name this city in which van Schurman attended the university lectures of Gisbertus Voetius behind a screen. Protestant leaders signed a 1579 treaty establishing a union named for this city in response to the Union of Arras.
ANSWER: Utrecht
[E] Van Schurman corresponded with many leading women in her day, including a Bohemian queen with this name. Van Schurman also expressed admiration for a Tudor queen of England with this name hailed as the "Virgin Queen." ANSWER: Elizabeth [or Elisabeth; accept Elizabeth of Bohemia or Elizabeth Stuart or Elizabeth I]
[M] Van Schurman was a proponent of women's education, and cited this monarch as a paragon of educated women. This "Nine Days' Queen" took power after Edward VI died before she was deposed and imprisoned by Mary I.
ANSWER: Lady Jane Grey [accept Lady Jane Dudley; prompt on Jane]
<Delot-Vilain/Prabhakar, British/European History> [Ed. Prabhakar]
8. In this country, people can take the world's steepest cogwheel train at Mt. Pilatus overlooking a town in this country that sits on the Reuss River. The world's second-largest jazz festival takes place every year in this country's city of Montreux. This country's region of Valais is known for its resort towns like Verbier. The Castles of Bellinzona are located in this country's Ticino region, which shares Lake (*) Maggiore with this country's southern neighbor. The annual World Economic Forum takes place in this country's city of Davos. Romansh is one of the four official languages of this country, which is divided into 26 cantons including Zurich. Bern is the capital of, for 10 points, what famously neutral Alpine country?
ANSWER: Switzerland [accept the Swiss Confederation]
<Sareddy/Prabhakar, Geography> [Ed. Prabhakar]
8. Type IV secretion systems in these organisms are divided into A and B classes. For 10 points each:
[M] Name these organisms, which have a much larger periplasmic space than their counterparts and whose surfaces contain LPS. In one procedure, these organisms turn red when the counterstain safranin is added.
ANSWER: Gram-negative bacteria [prompt on bacteria]
$[\mathrm{H}]$ This organism uses a class A type IV secretion system to transfer a Ti plasmid and several effector proteins into a eukaryotic cell, causing the formation of a crown gall tumor.
ANSWER: $\underline{\text { Agrobacterium tumefaciens }}$ [accept $\underline{R} h i z o b i u m \underline{\text { radiobacter, }}$, Agrobacterium fabrum, prompt on Agrobacterium or Rhizobium
[E] On the other hand, Legionella uses a class B type IV secretion system to infect alveolar macrophages in this organ, causing Legionnaire's disease. The alveoli in this organ facilitate gas exchange.
ANSWER: lungs
$<$ Karthik, Biology> [Ed. Lei]
9. Description acceptable. One part of this system goes through an area whose name translates to "the woman who died." A variety of grass called ichu was used to build one type of structure within this system. The pututu was a wind instrument employed by those using this system. Stations called tambos could be found along this system, which was known in one language as Qhapaq Nan. People called (*) chasquis used this system to transmit messages through quipus. Rope bridges were built to traverse sections of this system that connected the four provinces of Tawantinsuyu. For 10 points, name this transportation network that was used by an empire centered at Cusco.
ANSWER: Inca road system [accept Qhapaq Nan until mention; accept anything relating to the transportation network of the Inca Empire; accept Tawantinsuyu in place of "Inca" until mentioned; prompt on roads with "In what polity?"]
<Sareddy, Other History> [Ed. Prabhakar]
9. Followers of this tradition make heavy use of a code system of assigning letters to number values known as gematria ("geh-MAY-tree-ah"). For 10 points each:
[M] Name this esoteric tradition of Jewish mysticism. The Zohar lays out this tradition's beliefs in the pure manifestation of God known as Ein Sof and their ten emanations, called sefirot.
ANSWER: Kabbalah
[H] Kabbalists depict the sefirot as nodes forming this Biblical object, with Keter on top. According to the last chapter of Revelation, the river of the Holy City is flanked by this object, which names the handles of the Torah's scroll.
ANSWER: tree of life [or etz havim; accept eitz chaim; prompt on tree]
[E] Kabbalists controversially believe in this doctrine, which they refer to as gilgulim ("geel-goo-LEEM"). According to this general doctrine, humans are reborn after death in new, different bodies.
ANSWER: reincarnation [accept transmigration]
<Ashbrook, Religion> [Edited]
10. A calcium gradient in part of this organ controls the flow of lamellar bodies, which help form the extracellular matrix. In one region of this organ, a six-electron conrotatory reaction opens a ring in 7-dehydrocholesterol. Desmosomes are prevalent in a part of this organ named the prickle cell layer or spinosum. Antigens from pathogens detected on this organ's surface are presented on Langerhans cells. Pacinian and (*) Meissner corpuscles in this organ detect vibrations and mechanical pressure. UV light photolysis controls the synthesis of Vitamin D in this organ. Sebaceous glands and melanocytes are found in this organ. For 10 points, name this large external organ that covers the human body.
ANSWER: skin [accept epidermis or dermis]
$<$ Lau, Biology> [Ed. Lei]
10. The protagonist of this novel watches a man emerge out of a church on Ash Wednesday in its final chapter while discussing his upcoming hopes of marriage and attending medical school. For 10 points each:
[H] Name this novel in which a stockbroker having an affair with Sharon Kincaid assists his suicidal step-cousin Kate.
ANSWER: The Moviegoer
[E] The protagonist of The Moviegoer, Binx Bolling, is a resident of this city. The Moviegoer largely takes place during this city's Mardi Gras parades.
ANSWER: New Orleans
[M] This author also wrote a novel set in New Orleans in which the hot dog vendor Ignatius J. Reilly starts a revolt at the Levy Pants factory.
ANSWER: John Kennedy Toole (The novel is A Confederacy of Dunces.)
$<$ Kala, Long Fiction $>$ [Edited]
11. A leaflet criticizing this company led it to sue Helen Steel and David Morris for libel in what became the longest court case in British history. Jerome Jacobson made an anonymous one million dollar donation to St. Jude in 1995 using this company's money while defrauding it with the Colombo crime family. Sociologist George Ritzer used the name of this company for a term representing the "mind-numbing sameness" overtaking society. A 2020 (*) HBO documentary mini-series details the uncovering of a fraud scheme in this non-Hasbro company's 1990s Monopoly token game. Morgan Spurlock explored the effects of this company's products on the body in the documentary Super Size Me. For 10 points, name this restaurant chain whose many signature food products include the Big Mac.
ANSWER: McDonald's Corporation [accept McD's; accept Mickey D's; accept the Golden Arches; accept McDolan's; accept McDonaldization]
<Ashbrook, Other Academic> [Edited]
11. A temporary branch of this institution in Málaga, Spain centers around a steel and stained-glass structure known as El Cubo. For 10 points each:
[H] Name this institution whose other branches include one with a curving fiberglass roof designed by Shigeru Ban and another with a red, glass-covered staircase along its exterior.
ANSWER: Centre Pompidou [or Pompidou Centre; accept answers mentioning branches of the Centre
Pompidou or Pompidou Centre in Paris, Metz, or Málaga; prompt on Pompidou museum]
[M] This architect conceived an "inside-out" design for the Centre Pompidou, which he designed along with Richard Rogers. This architect created a pyramid-like glass design for his London Shard.
ANSWER: Renzo Piano
[E] Shigeru Ban is best known for his design of one of these structures in Christchurch, New Zealand using cardboard. Christopher Wren rebuilt one of these structures named for St. Paul after the Great Fire of London.
ANSWER: cathedral [accept church]
$<$ Strombeck, Architecture> [Edited]
12. In one poem, a girl named Mabel asks her father who makes this substance, to which her father replies "the good All-father." This substance makes a "tumultuous privacy" in a Ralph Waldo Emerson poem that serves as an epigraph to a poem in which the narrator makes "Aladdin's wondrous cave" out of this substance after being told "Boys, a path!" In a sonnet titled for this substance, the narrator claims no book contains "the legend of a life more benedight" than his dead wife. That sonnet is titled for a (*) "Cross of" this substance worn by Henry Wadsworth Longfellow. A family tells stories around a fire on a December night because of a "universe of sky and" this substance outside in a poem by John Greenleaf Whittier. For 10 points, name this "cold and keen" substance described in the poem " A Winter Idyl."
ANSWER: snow [accept "The First Snowfall," "The Snow Storm," "Snowbound: A Winter Idyl," or "The Cross of Snow"] (The first line refers to James Russell Lowell's poem "The First Snowfall")
<Ashbrook, Poetry> [Edited]
12. This country's first president ordered the Bodo League Massacre in the summer of 1950. For 10 points each:
[E] Name this country where the massacre took place not long after this country's northern neighbor, under Kim il-Sung invaded. The ensuing war saw this country and that northern neighbor divided by the DMZ.
ANSWER: South Korea [accept Republic of Korea or ROK]
[M] This hardline anti-communist served as South Korea's first president and led the country during the Korean War. This leader's corruption ultimately led to him being ousted in the April Revolution of 1960.
ANSWER: Syngman Rhee [accept Rhee Syngman]
[H] Rhee's successor Yun Posun would himself be ousted in a coup by this Korean War officer in 1963. This third president of South Korea implemented economic reforms contributing to the "Miracle on the Han River."
ANSWER: Park Chung-hee [accept Chung-hee Park; prompt on Park]
<Alaro, World History> [Ed. Prabhakar]
13. A form of this thing known as Jataveda is said to serve as a messenger to the Gods and watch over family lineages. The death of Holika is commemorated using this thing on the night before Holi. The first twenty chapters of the Yajurveda mostly describe practices involving this thing. In some traditions, tying the mangalsutra precedes a ritual with this thing called saptapadi. The (*) deity of this thing is the subject of the first hymn of the Rigveda. The practice of sati involved a wife dying by this thing after the death of her husband. Offerings such as ghee, milk, and grains are made to this thing in a yajna. Hindu weddings involve taking seven steps around this thing. For 10 points, name this thing symbolized by the god Agni.
ANSWER: fire [or flames; prompt on light; accept Agni before mention]
$<$ Kapadia, Religion $>$ [Ed. Ashbrook]
13. For an electron with both spin and orbital angular momentum, a type of this quantity is close, but not quite equal, to two. For 10 points each:
[H] Name this dimensionless quantity that relates the magnetic moment of a particle to its spin.
ANSWER: the $\boldsymbol{g}$-factor [accept Landé $\boldsymbol{g}$-factor; accept electron spin $\boldsymbol{g}$-factor]
[M] The g-2 ("g minus two") experiment at Fermilab recently detected a small but significant anomaly in the $g$-factor of these particles, implying that the Standard Model is incomplete. These second-generation leptons are found in cosmic rays.
ANSWER: muons [do NOT accept or prompt on "muon neutrinos"]
[E] Virtual photons emitted by the muon in the g-2 experiment can split into one of these particles and its antiparticle. The Higgs Boson was discovered by a large collider of these particles operated by CERN.
ANSWER: hadrons [accept Large Hadron Collider or LHC]
<Bowman, Physics> [Edited]
14. A method for processing these elements uses biolixiviant from Gluconobacter bacteria. Hundreds of mixing-settling units are used in a method of producing some of these elements that uses countercurrent solvent exchange. Xenotime and bastnasite are sources of these elements. Impact breccia on the moon that have potassium, phosphorus, and these elements as components are called (*) KREEP. One of these elements is alloyed with cobalt in a strong permanent magnet, while another type of magnet is created using boron, iron, and another of these elements. Yttrium and scandium are generally classified within this group of elements, which also includes lanthanides like samarium and neodymium. For 10 points, name these elements that are relatively common despite their name.
ANSWER: rare-earth elements [or rare-earth metals, accept lanthanides or lanthanoids, prompt on $\underline{\text { block }}$ elements]
<Lei, Chemistry> [Edited]
14. In one poem, the author wonders whether a "ploughman may / Have heard the splash, the forsaken cry" of this painting's title action. For 10 points each:
[M] Name this painting. W. H. Auden described "how everything turns away / quite leisurely from the disaster" of this painting in his poem "Musée des Beaux Arts."
ANSWER: Landscape with the Fall of Icarus
[E] This poet described a "splash quite unnoticed" in his own poem on Landscape with the Fall of Icarus. This poet apologizes for eating plums in an icebox in "This is Just to Say."
ANSWER: William Carlos Williams
[H] Icarus is seen "plunging down / while his sensible daddy goes straight into town" in this author's
"To a Friend Whose Work Has Come to Triumph." This poet wrote that "suicides have a special language" in
"Wanting to Die."
ANSWER: Anne Sexton
<Mehra/Leahy, Poetry> [Ed. Leahy]
15. The northern terminus of the Old Salt Road was a city on this body of water that was referred to as the "Queen of" one confederation. Amber from along this body of water was transported south as part of the Amber Route. One confederation built trading posts called kontors along this body of water. Albert of Mecklenburg hired a band of pirates to oppose a monopoly held by that confederation in this body of water. The yearly (*) Skåne Market was a major trading event for herring in this body of water. The Victual Brothers were headquartered in this body of water's port of Visby. Other major trading centers along this body of water included Lübeck and Danzig. The Hanseatic League operated in, for 10 points, what sea in Northern Europe?
ANSWER: Baltic Sea
<Sareddy/Prabhakar, British/European History> [Ed. Prabhakar]
15. In a review of the Armory Show, this amateur critic claimed that a rug in his bathroom was "more satisfactory and decorative" than any Cubist painting he had seen. For 10 points each:
$[\mathrm{H}]$ Name this person who holds onto the post of a staircase as the subject of a 1903 portrait he commissioned to replace an unfavorable one dubbed "The Mewing Cat."
ANSWER: Theodore Roosevelt [or Teddy Roosevelt; prompt on Roosevelt]
[E] Roosevelt's presidential portrait was created by this American artist, who scandalously depicted the socialite
Virginie Gautreau in his Portrait of Madame $X$.
ANSWER: John Singer Sargent
[M] This other Sargent painting, which hangs in Boston's Isabella Stewart Gardner Museum, depicts two guitars hanging on a wall above a row of musicians and spectators watching a Spanish woman dance.
ANSWER: El Jaleo
<Dantzler, Painting \& Sculpture> [Ed. Strombeck]
16. The Skyscraper Index correlates the construction of really tall buildings with these things, which are partially measured using the qualitative "three Ds" and "three Ps." The HP filter is applied to remove these things from time series data. Finn Kydland and Edward Prescott developed a theory named after these things that proposes that they're caused mainly by technological shocks to the economy. (*) Nikolai Kondratiev ("kahn-DRAH-tyev") names the longest class of these things, which were typified by Joseph Schumpeter. The "Great Moderation" around the turn of the century was characterized by a reduction in the volatility of these things. For 10 points, periods of expansion, crisis, recession, and recovery make up what fluctuations of economic growth and decline?
ANSWER: business cycles [or economic cycles; or trade cycles; accept Real Business-Cycle theory; prompt on cycles; accept recessions until "three Ds" is read; prompt on recessions afterward by asking "What more general things are recessions part of?"]
<Ashbrook, Economics> [Edited]
16. One side in this conflict was crushed at the Battle of Alamance by William Tryon's militia. For 10 points each: [H] Name this rebellion against corrupt English tax collectors and other officials in North Carolina. Participants in this rebellion were inspired by future Whiskey Rebellion leader Herman Husband.

## ANSWER: War of the Regulation [or Regulator Movement]

[M] In homage to the War of the Regulation, members of this later rebellion called themselves "regulators." Benjamin Lincoln helped put down this rebellion whose leaders included Luke Day and Job Shattuck.
ANSWER: Shays' Rebellion
[E] Shays' rebellion took place in this state, which was governed at the time by James Bowdoin. During the rebellion, the regulators targeted this state's Springfield Armory.
ANSWER: Massachusetts
$<$ Karthik, American History> [Ed. Nageswaran]
17. This function is applied to the likelihood in Bayesian calculations to avoid arithmetic underflow. The iterated form of this function is marked by appending a star. Public-key encryption algorithms like Pohlig-Hellman and Diffie-Hellman make the assumption that the discrete form of this function is inefficient to compute for expressions involving large primes. Fast hardware-based algorithms by Wong and Goto use the (*) Mercator series for this function, which is the alternating sum of " $x$ to the $n$ over $n$." The height of a full binary tree is equal to this function applied to its number of nodes. The best-case runtime of quicksort is big-O of " $n$ times this function of $n$." For 10 points, name this function, the inverse of exponentiation.
ANSWER: $\underline{\mathbf{l o g a r i t h m}}$ [accept $\underline{\boldsymbol{\operatorname { l n }}}(x)$; accept $\underline{\log }_{\mathbf{2}}(x)$; accept $\underline{\mathbf{l o g}(\mathrm{x})]}$
<Bowman, Computer Science> [Edited]
17. For 10 points each, answer the following about the Kalevipoeg ("kah-leh-VIH-pohg"), the title giant of the Estonian national epic:
$[\mathrm{H}]$ Kalevipoeg builds the boat Lennuk out of this material after learning that wood is too flammable for his purposes. Nuada, the first king of the Tuatha dé Dannan, had a title referring to a hand of this material.
ANSWER: silver [prompt on metal]
[E] Kalevipoeg is warned to build his ship out of metal rather than wood, lest the spirits of this phenomenon light it on fire. The Chipewyan people of Western Canada believe that this colorful Arctic phenomenon are dead spirits dancing in the sky.
ANSWER: aurora borealis [accept northern lights, prompt on aurora]
[M] Kalevipoeg's father Kalev is taken to Estonian shores on the back of one of these animals. The Trojan youth Ganymede was abducted to Olympus by one of these animals.
ANSWER: eagles [prompt on birds]
<Delot-Vilain, Mythology> [Ed. Groger]
18. A character describes "seeing rare beauty, hearing lovely sounds" in a play in this language which begins as a stage director asks an actress what play is going to be performed. A treatise written in this language calls for plays to be performed in oblong, square, or triangular playhouses to ensure a successful production. In one play written in this language, a mistress gives her jewelry to a poor boy so he can buy a golden version of his (*) only toy. A treatise in this language defined the rasa theory prevalent in this language's plays, one of which sees a sage prevent a king from shooting a sacred deer. In that play, a king presents a signet ring from his dead wife found in the belly of a fish. Kalidasa wrote The Recognition of Shakuntala in, for 10 points, what ancient Indian language used to write the Mahabharata?
ANSWER: Sanskrit
$<$ Prabhakar, Drama> [Ed. Leahy]
18. An attempt by this leader to establish diplomatic relations with North Korea ended with him being called a "villain" for commenting on a weapons test. For 10 points each:
[M] Name this member of the Liberal Democratic Party who stepped down in September 2020 due to ulcerative colitis after marking the longest time in office of any prime minister in his country.
ANSWER: Shinzo Abe
[E] Shinzo Abe served as Prime Minister of this country for eight years before being succeeded by Yoshihide Suga. The resignation of this country's emperor Akihito in 2019 ended the Heisei Era and began the Reiwa Era.
ANSWER: Japan
[H] The South Korean Supreme Court heavily fined this Japanese company for using Korean forced labor during WWII. This company received a 2020 government contract to replace the outdated F-2 model of one machine.
ANSWER: Mitsubishi Heavy Industries
<Strombeck, Current Events> [Ed. Nageswaran]
19. Adam Clayton Powell Sr. led one of these locations in New York City. Under the leadership of James Bevel, children gathered in Kelly Ingram Park outside one of these locations to protest during the 1963 Children's Crusade. Fred Shuttlesworth co-founded an organization which held most of its meetings in these locations. That organization conducted the (*) Poor People's Campaign under the leadership of Ralph Abernathy, who worked in one of these locations. Denise McNair was one of four girls killed during a bombing of one of these locations on 16th Street in Birmingham. For 10 points, name these locations where Black liberation theology was spread by preachers during the Civil Rights movement.
ANSWER: Black churches [accept Abyssinian Baptist Church; accept 16th Street Baptist Church; accept First Baptist Church; accept West Hunter Street Baptist Church; accept Baptist churches; prompt on park or Kelly Ingram Park before mentioned with "The park was outside what kind of location?"]
$<$ Nageswaran, American History> [Edited]
19. Recently, the first enzyme that catalyzes a reaction of this type was found in the mulberry tree, and that enzyme is used in the last step of the synthesis of chalcomoracin. For 10 points each:
[M] Name this type of reaction, exemplified by one that reacts a diene and dienophile to form a cyclohexene derivative, the Diels-Alder reaction. These reactions involve molecules joining together and forming a ring.
ANSWER: cycloadditions [prompt on addition or pericyclic reaction or cyclization; prompt on Diels-Alder reaction before mention]
$[\mathrm{H}]$ The total type of this quantity, up to 1873 for the new Diels-Alderase, is a measure of the number of substrates acted upon by the enzyme throughout its life per active site. This quantity is equal to V-max over catalyst site concentration.
ANSWER: total turnover number [or catalytic rate constant; or $\underline{\mathbf{k}}_{\text {cat }}$; prompt on $\underline{\mathrm{CRC}}$; prompt on rate constant] [E] One of the enzymes with the highest turnover number is carbonic anhydrase, which converts bicarbonate ions in the blood into this molecule in the lungs, which we then breathe out.
ANSWER: carbon dioxide [accept $\mathbf{C O}_{2}$ ]
$<$ Karthik, Chemistry> [Ed. Lei]
20. Along with the drums, this is the most common instrument used in modern performances of an elaborate English folk dance in which participants wear bells and toss sticks back and forth, the Morris dance. With a rhythm section made of a triangle and a zabumba, the Brazilian forró dance is performed to music played by this instrument. Bands playing the "Slovenian style" or "Cleveland style" of a (*) Central European dance always feature one of these instruments. Astor Piazzolla's nuevo tango style heavily featured the bandonéon, a relative of this instrument. Weird Al Yankovic plays this instrument, which is heavily used in polka music. For 10 points, name this instrument that is played by pressing buttons or keys and expanding or contracting the bellows. ANSWER: accordion [accept melodeon, concertina, or bandonéon before mention]
<Delot-Vilain, Miscellaneous Fine Arts> [Edited]
20. This character subsists "exclusively on rice and eagles' blood" in a tiny cottage on the coast of Tibet, despite Tibet not having a coastline. For 10 points each:
[H] Name that character who is pursued by the "witty consumptive" Marcel Dufarge. In a story, the Chief relates the escapades of this character to the Comanche Club.
ANSWER: The Laughing Man
[E] "The Laughing Man" is a short story by this American author, who collected it along with "A Perfect Day for Bananafish" in his Nine Stories. He's more famous for a novel about Holden Caulfield.

## ANSWER: Jerome David Salinger

[M] In "A Perfect Day for Bananafish," this character shoots himself after a conversation with the three-year-old Sybil Carpenter. Salinger's "Hapworth 16, 1924" is framed as a letter by this character from summer camp.
ANSWER: Sevmour Glass [prompt on Glass]
$<$ Karthik, Short Fiction/Other> [Ed. Leahy]

