TOSSUPS

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1. According to a legend about this man, he nearly stepped off a cliff while near some brigands, but before he could fall, the opposite cliff approached him, closing the gap. Another story holds that he earned the esteem of his peers by recognizing a mistake in a mezuzah. He claimed to have spiritually ascended to heaven, where he was told the Messiah would come when this man's teachings had been widely spread. This rabbi, whose teachings were collected by Jacob Joseph of Polonne (yah-kohb yoh-sef "of" poh-lohn-eh), led a populist movement that adopted the spiritual and joyful elements of kabbalistic teaching while ignoring some of its complex rules. He was criticized by rabbinical authorities for encouraging his followers to drink and dance and for going among the people dressed like them. This man is regarded as the founder of a sect that includes the offshoot Chabad and whose groups are led by a Rebbe. For 10 points, name this "Master of the Good Name" who founded Hasidic Judaism.
ANSWER: **Baal Shem Tov** [or Rabbi **Israel ben Eliezer**; or **Besht**]

2. One monarch of this name ordered a four-month-long buffalo hunt that ended up killing 10,000 subjects and zero buffalo. That same ruler of this name ordered the slave Jean Laborde to construct gigantic scissors to chop invaders in half. Rulers of this name were witnessed celebrating the domestication of _zebu_ cattle with the "Royal Bath" at the _fandroana_ (fahn-droh-ah-nah) festival. Joseph Gallieni put down the Menalamba rebellion after exiling a leader of this name. Many traditional talismens called _sampy_ were burned after the conversion of the court of a monarch with this name. Christian converts living under a ruler of this name were made to drink poison as part of a trial by ordeal called the tangena; that ruler placed decapitated heads on pikes on the beach as part of her virulently anti-Christian stance and came to power after possibly killing her husband Radama I. The establishment of a French colonial government in Antananarivo (an-tah-nah-nah-REE-voh) ended, for 10 points, the rule of the last of three queens of Madagascar with what name?
ANSWER: **Ranavalona** [or **Ranavalona** I; or **Ranavalona** II; or **Ranavalona** III; do not accept "Ravanalona"]

3. Lighter lanthanides form ses·qui·oxides and chal·co·gen·ides with this coordination number, and adopt a type-A structure, as opposed to a cubic type-C structure. A total orbital quantum number of this value is notated with the letter _K_ in its term symbol. Compounds with this coordination number can rearrange themselves via the pseudo-rotational Bartell mechanism. A tetrahedral complex with this many _d_ electrons will display similar, but lower, energy splitting patterns to a d·3 octahedral complex. Molecules with this coordination number can exist in a mono-capped trigonal prismatic or face-capped octahedral geometry. A state with spin three will have this number as its spin multiplicity. A complex with this coordination number is likely to exist in a D·5·h symmetric geometry called pentagonal bi·pyramidal. For 10 points, identify this coordination number which is also the number of f orbitals for a given energy level.
ANSWER: **seven**

4. _Note to players: artist and type of work required_. One of these paintings unusually shows St. John the Baptist with a cross made out of transparent crystal, instead of the conventional reed. That painting once formed the center panel of an altarpiece whose predella contained a lost panel showing St. Nicholas saving a ship during a storm, as well as a panel showing John the Baptist preaching. In addition to that painting for the Ansidei family chapel, these paintings include a work in which two children exchange a carnation. The background of that example is split by a pillar, so that the landscape is visible through two halves of separate arch windows. In another of these works, a throng of blue angelic faces appear behind the central figures, and two cherubs lean on their arms against the bottom. Saints Sixtus and Barbara appear with the title character of that work, which is partly titled "Sistine." For 10 points, name these works by the artist of _The School of Athens_ which, like the "Aldobrandini" one, depict the Virgin and her son.
ANSWER: **Madonna**s by **Raphael** [accept any answers mentioning **Madonna**s by **Raphael**, or **Raffaello** Sanzio da Urbino]

5. Sarah Brigham's 2016 revival of this play prefaces it with an hour-long monologue titled "Jinny." A character in this play acquiesces to being called "an old plant left over from the Edwardian wilderness" after arriving to pick up his daughter. A prop in this play supposedly prompted Pamela Lane to exclaim, "Oh no! Not the ironing board." The protagonist of this play visits the mother of his friend Hugh in the hospital. This play contains a recurring motif involving two stuffed animals symbolizing the central couple: a squirrel and a bear. This play's protagonist repeatedly blares on the trumpet from his room and berates the much kinder Welshman Cliff. In this play, Helena Charles has a brief affair with the husband of her friend Alison, who suffers a miscarriage before reconciling with that husband, Jimmy Porter. For 10 points, name this founding example of "kitchen sink realism," a play by "angry young man" John Osborne.
ANSWER: ***Look Back in Anger***

6. During rehearsals for a performance of *The Mute Girl of Portici* in this city, a ballerina caught on fire when her skirt accidentally brushed against a gas light. An opera house in this city pioneered the use of "English traps," devices that allowed singers to quickly appear and disappear in order to resemble ghosts. Angered by the omission of an Act Two ballet scene, this city's "Jockey Club" disrupted the premiere of Richard Wagner's *Tannhäuser* (TAHN-hoy-zah); after the opera ended, Wagner vowed to never stage works in this city again. In 1896, one of the counterweights of a chandelier in this city's opera house became dislodged and fell on a member of the audience. Most of Giacomo Meyerbeer's grand operas premiered in this city, which is the setting for a Francis Poulenc (poo-LAWNK) opera which ends with the executions of Mother Marie, Sister Constance, and a host of other Carmelite nuns. For 10 points, name this city where the poet Rodolfo lives in Puccini's *La Bohème*.
ANSWER: **Paris**

7. This function is represented using the asterisk symbol in the Bird-Meertens (bird-MAIR-tenz) formalism. In Murray Cole's paper introducing algorithmic skeletons, he discusses this function as a way of implementing a "minimal design" principle. In Haskell, the fact that the order of multiple calls to this function does not matter forms the basis for a compiler optimization in which those calls to this function are "jammed," similar to "loop jamming." This function is used to generate a series of "intermediate data groups" in frameworks like CouchDB and Hadoop. In many functional languages, this function is similar to fold and filter, but it returns a list generated by applying an input function to an input list. For 10 points, name this higher-order function that is paired with "reduce" in the name of a model often used in Big Data.
ANSWER: **map** [or **morphism**; prompt on arrow; do not accept "MapReduce" or "reduce"]

8. Loren Graham took the perspective of a member of this profession, Peter Palchinsky, in a history of the early Soviet Union titled for his "ghost." Nikolai Bukharin earned popular scorn for a quote calling for the unification of management with this profession. A famous member of this profession was the Jamaican-born Robert Robinson, whom the Soviet Union used in propaganda touting its anti-racism. In 1928, Efim Georgievich Evdokimov accused men of this profession in a North Caucasus town of communicating with emigre coal mine owners in the first of Stalin's show trials. Joseph Stalin frequently quoted Yuri Olesha's formulation comparing writers to this profession with respect to human souls. The Shakhty Trial targeted men of this profession, whose representatives in the USSR included Artem Mikoyan and Igor Sikorsky. For 10 points, name these specialized workers in the Soviet Union who designed efforts like the White Sea Canal.
ANSWER: mechanical **engineer**s [or aerospace **engineer**s; prompt on scientists; prompt on answers like airplane designers]

9. A nineteen-year-old composer with this surname won the Prix de Rome in 1913 by writing the cantata *Faust et Hélène* (eh-LEHN), only to die five years later. A Romanian-born violinist who adopted the first name George and this surname composed the showpiece "Avant de mourir" (ah-VAHN day moo-REER) A conductor with this last name revived interest in Monteverdi by recording many of his madrigals for the first time in 1937, and later conducted the premiere of Stravinsky's *Dumbarton Oaks* concerto. After the death of a composer with this surname, Lili, a related composer with this surname stopped writing music and started working at the American Conservatory in Fontainebleau (fohn-tahn-"blow"). That composer with this surname taught over 600 Americans, including Roy Harris, Virgil Thompson, and Aaron Copland. For 10 points, identify this surname of the French pedagogue Nadia.
ANSWER: **Boulanger** (boo-lawn-ZHAY)

10. In a poem, this author wrote of a flower "from some obliterated garden" whose "past existence magically lasts and glows forever in this poetry." In that poem by this man, the speaker celebrates how Destiny allows him to spare "that silent flower, the very final rose that Milton held before his face, but could not see." This poet closed another poem by placing the title soldier in "the Hell marked out for him by God," where "the souls in purgatory of his soldiers and his horses" march. This poet's "A Rose and Milton" and "General Quiroga Rides to His Death in a Carriage" were translated by Alastair Reid, who, like Norman Thomas di Giovanni, is one of his foremost translators. In thematic unity with many of his prose works, this poet wrote a poem noting that he "had always thought of Paradise in form and image as a library." This author claimed that his "Poem of the Gifts" could have been written by Groussac in an essay about his blindness. For 10 points, name this Argentine poet better known for the stories collected in *Ficciones*.
ANSWER: Jorge Luis **Borges** (HORE-hay loo-EES "BOAR"-hayce)

11. This group staged an early protest at a state capitol against the Mulford Act, and was often defended by attorney Charles Garry. Lesser-known members of this group included Geronimo Pratt, a veteran who adopted the last name "Ji Jaga." A poster used by this group showed a man seated in a wicker chair carrying a rifle in one hand and a spear in the other. A member of this organization attacked a series of riots as "Custer·istic" and formed alliances with Jose Cha Cha Jimenez's Young Lords and the Confederate flag-wearing Young Patriots. One member of this group wrote the autobiography *Soledad Brother*, and another was shot while drugged on his mattress in an FBI raid along with Mark Clark. This organization laid out the Ten-Point Program and managed the Free Breakfast for Children project. For 10 points, name this black radical organization founded by Huey Newton and Bobby Seale.
ANSWER: **Black Panther** Party [or the **BPP**]

12. In 2007, researchers at UMich demonstrated that retinal regeneration in this organism occurs through dedifferentiation of Müller glia. Pancuronium bromide is used to study *in vivo* neuronal signaling in this organism. The use of this organism as a model was pioneered at the University of Oregon by George Streisinger. Irradiating sperm and applying hydrostatic pressure to the egg to disrupt the spindle during meiosis II ("two") can be used to generate par·theno·genetic, diploid examples of this organism. Ethyl·nitroso·urea was used in large forward-genetic screens to identify genes important in this organism's development by groups in Tübingen and Boston. Transgenic examples of this organism can be generated with the Tol2 transposon system. This organism's Casper variant is transparent, and it is named for the stripes on its flanks. For 10 points, name this aquatic model organism, a freshwater fish.
ANSWER: **zebrafish** [or *D. rerio*; or *Danio rerio*; or **zebra danio**]

13. Citizens banished from this place asked Sparta for aid by pointing to a bag and saying "The bag wants flour," to which the Spartans replied that the word "bag" was unnecessary. This place is not Arezzo, but Romans referred to bright-red clay pottery called *terra sigillata* as its "ware." In 411 B.C., Alcibiades was recalled to this place as a radical democrat by Thrasybulus, who helped turn this place an Athenian government-in-exile opposed to the Four Hundred. Herodotus claims that the pharaoh Ahmose broke off Egypt's alliance with this city-state after its tyrant discovered his lost ring in the belly of a fish. The engineer Eupalinos carved out a kilometer-long aqueduct in this place, which, along with its Heraion temple, was built under the tyrant Polykrates. Athens intervened against this island during its dispute with Miletus in a 440 B.C. war supposedly launched by Pericles to please the Milesian Aspasia. For 10 points, name this Greek island off the coast of Anatolia, the home of Pythagoras.
ANSWER: **Samos**

14. Rotoscoped archival footage of an event that took place in this city is interspersed with eyewitness interviews in a 2016 Kevin Maitland documentary. In the 1880s, this city was the home of a Jack the Ripper-style serial killer nicknamed the "Servant Girl Annihilator." Visitors to this city often take selfies in front of a green wall with the words "I love you so much" painted on it. This city was the home of a thong-wearing, cross-dressing homeless man named Leslie Cochran who died in 2012. The "Cathedral of Junk" is in this city, which is the only remaining city to use moontowers for street lighting. Like Portland and Louisville, this city promotes itself with a slogan vowing to "Keep [this city] Weird." The longest running American music television show is a PBS series named for this city's "limits." For 10 points, name this city where South by Southwest takes place, the capital of Texas.
ANSWER: **Austin**

15. In a story in this collection, a woman brushes an ash from the back of a man's hand while telling him multiple times how "wonderful" and "marvelous" he was and repeating, "God, I feel like an absolute *dog*!" At the end of that story in this collection, a man accidentally drops a burning cigarette in his lap but angrily stops the woman in bed with him from snatching it up. In that story in this collection, the distressed Arthur recalls the title line from a poem that used to remind him of his wife while rambling over the phone to the gray-haired friend with whom she is cheating. The narrator addresses the title character and spells out the word "faculties" in the last line of another story in this collection. A man causes his companion to vomit by recalling how he shot a cat on the hood of a jeep in that story in this collection, in which a traumatized soldier relates how, after completing his training in England prior to D-Day, he met the title precocious girl. For 10 points, name this collection including "Pretty Mouth and Green My Eyes" and "For Esmé—with Love and Squalor," a work of J. D. Salinger.
ANSWER: ***Nine Stories***

16. A definition of this quantity that takes the form of the Euler-Lagrange equations includes the expression "the negative gradient" of quantity "scalar potential minus the dot product of velocity and vector potential," close quantity, minus "the total derivative of vector potential." The divergence of the Maxwell stress tensor, minus the product of "one over the speed of light squared" and "the time derivative of the Poynting vector," gives the value of this quantity in the continuum limit. The relativistic form of this quantity is proportional to the contraction of the contravariant electromagnetic field strength tensor with the covariant four-velocity. In ideal magnetohydrodynamics, this quantity is decomposed into magnetic tension and magnetic pressure terms that produce circular motion around a guiding center. For 10 points, name this quantity that equals the sum of charge times the E-field and charge times the cross product of velocity with the B-field.
ANSWER: **Lorentz force** [prompt on magnetic <u>force</u> or <u>F</u>; do not accept "Abraham-Lorentz force"]

17. Peggy Sanday's ethnography about one of these places analyzes a masculine ritual she called "the XYZ express." Mary Koss developed a widely-used survey to measure a major crime after conducting a 1987 study of the inhabitants of these places. A 2002 study by David Lisak found that over 90 percent of a certain crime in these places was committed by "serial" offenders. After Jeanne Clery was murdered in one of these places, the Clery Act was passed to require these places to disseminate annual security reports if they receive federal funding. The documentary *The Hunting Ground* examines the way they create victims like Lizzy Seeberg, who committed suicide after reporting a crime that took place at one of them. In 2015, *Rolling Stone* retracted a Sabrina Rubin Erdely article about a crime committed in one of these places. For 10 points, name these places whose administrators frequently fail to investigate sexual assault complaints against athletes.
ANSWER: **college**s [or **universities**; or **fraternities**; prompt on <u>school</u>s]

18. This philosopher challenged the idea the equality is valuable in itself with what he called the "Leveling Down Objection" in his Lindley lecture, "Equality and Priority." In another book, this philosopher identified five cognitive errors that lead people to believe acts affecting large numbers of people cannot be evaluated through consequentialism. This philosopher defined moral laws as those that were "optimific, uniquely universally willable, and not reasonably rejectable," which is his "Triple Theory" of morality. This philosopher argued that person X at t1 and person Y at t2 were identical if they were related through "relation R," which he illustrated with his teletransporter thought experiment. In his major work, this author of *On What Matters* probes utilitarianism for vulnerability to the "mere addition" paradox, a preference for a large population of less happy people. For 10 points, name this British philosopher whose *Reasons and Persons* describes the "repugnant conclusion."
ANSWER: Derek **Parfit**

19. This text narrates a war that begins when a peasant stones a sparrow that has been stealing his grain and ends when a slave kills the commander of the invading army with a pitchfork. In this text, a princess captured in battle avenges her father's death by convincing her drunken captor to wear a golden ornament around his neck, then using it to hang him on a tree while he is sleeping. This text claims that Odin ruled a country east of the Tanakvisl (tah-nah-KVIS-ul) river in Asia, but foresaw that his people would come to live in the northern part of the world. The brothers Eric and Alric kill each other with horse bridles in this text, which also tells the story of how Fjölnir (FYOHL-neer) drowned in a vat of mead. This text is the first section of a larger work that includes biographies of kings like Halfdan the Black and Olaf Tryggvason. For 10 points, identify this saga from the *Heimskringla* that chronicles a namesake Swedish dynasty said to have been founded by Freyr.
ANSWER: **Ynglinga** (ING-ling[-uh]) *saga* [accept **Heimskringla** before "section"]

20. In a section of this poem written in quatrains, the speaker drinks the "fiery wine" of madness and sinks "into the valley of the blind." This poem's speaker tells death, "You will come in any case, so why not now?…I have turned off the lights and thrown the door wide open for you." The speaker recalls a time when "only the dead smiled" and a city swung like "a needless appendage" in this poem's "Prologue." In a prose section at the beginning of this poem, "something like a smile slip[s] across what had once been [the] face" of a woman who whispers to the author, "But can you describe this?" as they stand in line outside a prison. This acmeist poem mourns the imprisonment of the author's son Lev Gumilev and the death of her husband Nikolai Punin under Stalinism. For 10 points, name this poem by Anna Akhmatova.
ANSWER: **Requiem** [or **Rekviem**]

TB. The upper right corner of a painting depicting this scene contains a sculpture of two hands, symbolizing the city of Antwerp, near an orange column containing guild symbols such as a bell and an X flanked by two vertical lines on each side. On the right of that painting, a man with a bucket bends over in a yard filled with oyster shells. An incident of almsgiving during this more general scene can be seen in the background of a still life containing a decapitated cow's head; that scene of a meat stall and this event was painted by Pieter Aertsen (AIRT-sen). A Bruegel painting of this scene contains two tiny salamanders symbolizing sin and the common motif of a pagan idol falling over during it. A semicircular canvas of this scene depicts the central group walking on the banks of a river and was painted by Annibale Carracci. An angel with its back to the viewer plays the violin in Caravaggio's depiction of a rest taken during this event. For 10 points, name this scene that depicts Mary, Joseph, and the baby Jesus fleeing from Herod.
ANSWER: the **flight into Egypt** [accept The **Holy Family Giving Alms** until "almsgiving"; accept **Rest on the Flight into Egypt**]

1. For 10 points each, answer the following about Guido of Arezzo.
[10] Medieval musicians used a mnemonic device called the Guidonian hand to learn this useful skill. In the 19th-century United States, the shape note method was often used to teach this skill to children.
ANSWER: **sight-reading** [or **sight-singing**; or **reading music**]
[10] Guido used the first seven letters of the alphabet to distinguish this property of a note, which is measured in hertz, since it corresponds to the frequency of the sound wave, and refers to how high or low a note sounds.
ANSWER: **pitch**
[10] Guido set this hymn to John the Baptist to music in order to help his students learn Gregorian chants. Because the first syllable of each of its lines corresponds to the pitches of the hexachord, it provided the names for most of the notes in the modern solfège system.
ANSWER: **_Ut queant laxis_** (oot KWAY-ahnt LAX-is)

2. For 10 points each, answer the following about historical attempts to make hospitals safer:
[10] This English nurse documented the causes of death of soldiers fighting the Crimean War in her "rose" diagrams. She was known as the "Lady with the Lamp."
ANSWER: Florence **Nightingale**
[10] Ignaz Semmelweis (IG-nahts ZEM-uhl-"vice") was ridiculed for the outlandish suggestion that hand washing could prevent instances of this disease in the obstetrics ward of the Vienna General Hospital.
ANSWER: **puerperal fever** [or **childbed fever**; or **postpartum infection**; or **postpartum metritis**]
[10] The Bell Commission limited resident doctors in New York to 80-hour workweeks after the death of this 18 year-old girl in 1984. This girl's father Sidney asserted that her death was due to mistakes made by fatigued doctors.
ANSWER: Libby **Zion**

3. A theorem named for these quantities is often proved using the von Mangoldt function, which returns the value k for an input n, if n can be written as "k to the p," where p is a positive integer. For 10 points each:
[10] Name these quantities, whose distribution was approximated using a logarithmic function integral by Dirichlet (deer-ik-let). The growth rate of a function quantifying these values was given as "x over the natural log of x" by Gauss.
ANSWER: **prime** numbers
[10] The second of this mathematician's two number-theoretic functions is defined by summing the von Mangoldt function; those functions are often used in proofs of the prime number theorem to avoid hassles with the prime-counting function.
ANSWER: Pafnuty **Chebyshev**
[10] Chebyshev's first function can also be defined as the log of the primorial function, which is essentially a version of this function in which composite numbers are removed. For an input of 5, this function returns 120.
ANSWER: **factorial** function

4. This woman was the subject of several sculpture busts by Picasso in which sections of her head are perpendicularly arranged, and she may have inspired the monumental sculpture in Chicago's Daley Plaza. For 10 points each:
[10] Name this woman who is the subject of many works by Picasso from the 1950s, which show her wearing a high blonde ponytail. Brigitte Bardot adopted a similar hairstyle shortly after seeing some of those works.
ANSWER: Lydia **Sylvette** **David** [accept either underlined name; accept Lydia **Corbett**]
[10] In 1914, Picasso included a real spoon used for mixing sugar into this alcoholic drink in a sculpture depicting a "glass" of it. This pale-green alcohol was also depicted in a painting by Edgar Degas.
ANSWER: **absinthe** [accept Glass of **Absinthe** or L'**Absinthe**]
[10] Picasso also used found objects for *Bull's Head*, a sculpture consisting of two parts from one of these utilitarian objects. Marcel Duchamp placed a different part of these objects on top of a kitchen stool.
ANSWER: **bicycle**s [accept **bicycle** handlebars, **bicycle** seats, or **bicycle** wheels]

5. Answer the following related to phonons, for 10 points each.
[10] In this microscopic theory of superconductivity, electron-phonon interactions are responsible for the formation of Cooper pairs because they create an attractive force that overcomes electron-electron repulsion.
ANSWER: **BCS** theory [or **Bardeen-Cooper-Schrieffer** theory]
[10] This process occurs when anharmonic scattering translates the phonon wavevector to a different Brillouin (bree-oo-ahn) zone.
ANSWER: **umklapp** scattering [or **umklapp** process; or **U-process**]
[10] In the Debye (deh-"BYE") model, calculating the phonon contribution to internal energy involves integrating this expression times dx, from zero to T-sub-D over T. This expression is the integrand in the definition of the third Debye function. Give your answer as a function of x.
ANSWER: **x cubed over** quantity **e to the x minus one** close quantity [accept word variants, e.g. "the cube of x" in place of "x cubed" or "divided by" in place of "over" or "the exponential of x" in place of "e to the x"; do not accept "x cubed over e to the quantity x minus one close quantity" – x is the argument of the exponential, not x minus one]

6. This character is accused of only being a "rebel from the waist down." For 10 points each:
[10] Name this member of the Junior Anti-Sex League who becomes a thoughtcriminal in partnership with Winston Smith, after which they are both tortured into betraying each other by O'Brien.
ANSWER: **Julia**
[10] Winston first mentions Julia after remembering seeing her and O'Brien at this event in *1984*. During this event, crowds jeer at a video of Party enemy Emmanuel Goldstein.
ANSWER: **Two Minutes Hate**
[10] This literary theorist imagined her essay "A Defense of Poesy" as a last testament from Julia inscribed on a lipstick canister. This current Harvard professor wrote *The Body in Pain* and *On Beauty and Being Just*.
ANSWER: Elaine **Scarry** ("scary")

7. In the Gugler War, this son of Katharina von Habsburg attempted to reconquer his mother's inherited Swiss lands by assembling an army from unemployed soldiers wandering and pillaging France. For 10 points each:
[10] Name this noble, considered one of the most skilled and experienced French military officers of the fourteenth century. His life forms the primary focal point of Barbara Tuchman's *A Distant Mirror*.
ANSWER: **Enguerrand** VII, Lord of **Coucy** [accept either name; accept **Ingelram** de Coucy]
[10] Coucy died in captivity after being defeated by Bayezid I at this 1396 battle for a Danubian fortress in Bulgaria. Although John the Fearless had nominal control of French forces at this battle, Coucy called many of the shots.
ANSWER: Battle of **Nicopolis**
[10] The overall leader of the Nicopolis Crusade was Sigismund of Hungary, who later promised this Czech reformer safe conduct at the Council of Constance. This man was burnt at the stake at the Council of Constance.
ANSWER: Jan **Hus** [or John **Hus**]

8. The second namesake of this technique worked with its first namesake at Verulamium before embarking on her most famous endeavor, the excavation of Jericho. For 10 points each:
[10] Name this method of archaeological excavation. In it, archaeologists dig a grid of square holes, leaving those holes separated by walls called balks.
ANSWER: **Wheeler-Kenyon** method
[10] The Wheeler-Kenyon method is advantageous because it allows relative dating of found artifacts according to this concept, which, like its geological equivalent, states that older things are found beneath younger things.
ANSWER: principle of **superposition** [prompt on **stratigraphy**]
[10] One example of older objects being found beneath younger objects is the site of this ancient city in Hissarlik, Turkey. The remains of this city were uncovered by Heinrich Schliemann.
ANSWER: **Troy** [or **Ilium**; or **Ilion**]

9. Masuji Ibuse (MAH-su-jee EE-bu-say) titled a story about his friendship with Aoki Nampachi (ah-OH-kee nahm-PAH-chee) after this animal. For 10 points each:
[10] Name this animal that, in another story, is beautifully painted by Kogi until Kogi has a dream of being transformed into this animal and being cut open by a cook.
ANSWER: **carp** [prompt on **fish**]
[10] The story "The Carp That Came to My Dream" appears in this 18th-century Japanese horror collection written by Ueda (oo-AY-dah) Akinari. A few of the stories in this collection were later adapted by Kenji Mizoguchi into a film of the same name.
ANSWER: *__Ugetsu__ Monogatari* [or *__Tales of Moonlight and Rain__*]
[10] This other Japanese writer also wrote a horror story about a magnificent painter, in this case one who has people tortured as inspiration for the title "Hell Screen." This author's other stories include "Rashomon" and "In a Grove."
ANSWER: Ryunosuke **Akutagawa** (AHK-ta-ga-wa or ah-KOO-ta-ga-wa) [accept names in either order]

10. The speaker of a text enters this kind of relationship with a housecat when the cat's glance asks him "Do I concern you? Am I there for you? Am I there?" For 10 points each:
[10] Name this "basic word" which, unlike its counterpart, "can only be spoken with one's whole being." Unlike its counterpart derived from experience, this type of relation grows out of an authentic encounter with the other.
ANSWER: **I-You** [or **I-Thou**; or **Ich-Du**; **I and Thou**]
[10] This Austrian-born, Hasidic-influenced philosopher conceptualized the "I-Thou" and "I-It" relationships in his work *I and Thou*.
ANSWER: Martin **Buber**
[10] The first of three "spheres of relation" posited in *I and Thou* concerns "life with" this concept. A namesake essay examines its usefulness to humans in chapters titled "Commodity," "Beauty," and "Language."
ANSWER: **nature** [or **Natur**]

11. Answer the following about white dudes stealing stuff from other cultures and refusing to return it, for 10 points each.
[10] This British noble worked with Ottoman authorities to loot a collection of marble statues from the Parthenon. His namesake "Marbles" are currently held by the British Museum, despite multiple Greek attempts to get them returned.
ANSWER: Thomas **Bruce**, 7th Earl of **Elgin** [accept either underlined portion; or the 11th Earl of **Kincardine**]
[10] A 2009 lawsuit alleged that a secret society stole this object from Fort Sill in 1918 and has been keeping it in a glass case in a building called "the Tomb" ever since.
ANSWER: **Geronimo's skull** [prompt on skull]
[10] In the wake of a 1901 massacre in this town in the Philippines, American servicemen looted three bells from its church. Despite multiple attempts to return the bells to the Philippines, all three remain on American military bases.
ANSWER: **Balangiga** [or the **Balangiga** bells; or the **Balangiga** massacre]

12. In the aftermath of this event, a mob destroyed the office of the German-language *Wecker*, and Thomas Holliday Hicks authorized state militia to burn railway bridges into the affected city. For 10 points each:
[10] Name this event in 1861 in which the Sixth Massachusetts Militia was assaulted by a mob while transitioning between rail stations on its journey south.
ANSWER: **Pratt Street** Riot [or the **Baltimore Riot** of 1861]
[10] In the aftermath of the Pratt Street Riot, this chief justice ruled that Lincoln's suspension of *habeas corpus* was unconstitutional in *Ex Parte Merryman*. This chief justice conspired with James Buchanan on the *Dred Scott* decision.
ANSWER: Roger Brooke **Taney**
[10] In 1856, Know-Nothing candidate Thomas Swann was elected mayor of Baltimore in a disputed ballot partly due to election day rioting involving two American Party-affiliated gangs. Name either.
ANSWER: **Rip Raps** or **Plug Uglies** [accept either]

13. The most common marker for this state detects the activity of a form of beta galactosidase at a pH of 6. For 10 points each:
[10] Name this state in which diploid cells stop dividing. Daniel Martinez controversially claimed that *Hydra* do not undergo this process.
ANSWER: **senescence** [or **aging**]
[10] One cause of senescence is the Hayflick limit, in which these structures at the ends of chromosomes progressively get shorter until they reach a critical length.
ANSWER: **telomere**s
[10] This immunosuppressant has been shown to decelerate senescence in human cell lines. A protein named for this drug forms a signaling pathway with PI3K and Akt.
ANSWER: **rapamycin** [or **sirolimus**]

14. This man eschewed the need for modern architecture to conform to historical architectural styles in his *Messaggio*, which also called for the elimination of all staircases. For 10 points each:
[10] Name this Italian architect. He made a series of super-futuristic sketches that depicted his idea of the *Città Nuova*, or "New City."
ANSWER: Antonio **Sant'Elia**
[10] Sant'Elia was an influence on Helmut Jahn, notable for his design of One Liberty Place in this city, which is the site of Cesar Pelli's Cira Center and of Independence Hall.
ANSWER: **Philadelphia**, Pennsylvania
[10] Giacomo Matté-Trucco kickstarted Futurist architecture with his design for one of these buildings in the district of Lingotto in Turin. Peter Behrens is most famous for a Berlin building of this type with expansive glass walls and rounded corners commissioned by AEG.
ANSWER: **factory** [accept more specific answers, such as **car factory**, **Fiat factory**, or the AEG **turbine factory**]

15. Mohammed was alleged to have delivered the Satanic Verses during recitation of this sura. For 10 points each:
[10] Name this fifty-third sura. It begins with the Divine One swearing by the title objects that Muhammad is God's awaited messenger, and is also notable for being the first sura requiring Muslims to prostrate themselves during its recitation.
ANSWER: Surat **an-Najm** [or The **Star**]
[10] The Satanic Verses contain a reference to "the exalted gharaniq," a term that is difficult to translate because it is one of these things. This Greek phrase refers to words that only appear once in a certain context, such as in a specific work or in the entire works of an author.
ANSWER: **hapax legomenon** [or **hapax legomena**; prompt on hapaxes]
[10] Another hapax legomenon in the Quran is this word for the ninth month of the Islamic calendar, a month of ritual fasting.
ANSWER: **Ramadan**

16. This poem offers "organizations of grass, white sandy paths of remembrance in the overall wandering of mirroring mind" as examples of "eddies of meaning" in the "geography of [the speaker's] work." For 10 points each:
[10] Name this poem whose speaker notes how "in nature there are few sharp lines" and meditates on a beach before saying, "tomorrow a new walk is a new walk." It opens, "I went for a walk over the dunes again this morning to the sea."
ANSWER: "**Corsons Inlet**"
[10] The poet of "Corsons Inlet," A. R. Ammons, almost always used these punctuation marks instead of periods. In his essay about these marks, David Lehman characterizes them as equals signs, in contrast to Emily Dickinson's dashes.
ANSWER: **colon**s
[10] Before moving to UC Berkeley for his master's degree, Ammons spent his life in this American state, the home of the Black Mountain poets. Thomas Wolfe was another native of this state.
ANSWER: **North Carolina** [or **NC**; prompt on Carolina]

17. This author wrote an ambitious history of world soccer titled *Football in Sun and Shadow*. For 10 points each:
[10] Name this Uruguayan author who described the economic exploitation of the New World in his book *Open Veins of Latin America*. He died in 2015.
ANSWER: Eduardo Hughes **Galeano**
[10] *Open Veins of Latin America* jumped to number two on the Amazon.com bestseller list after this world leader gave Barack Obama a copy of the book at the Summit of the Americas in 2009. Nicolas Maduro replaced this man as president of Venezuela after his 2013 death.
ANSWER: Hugo **Chavez** [or Hugo Rafael **Chavez** Frias]
[10] Galeano fled Uruguay after this dictator dissolved the legislature in 1973. In 2010, he was convicted of ordering the 1976 assassination of two Uruguayan dissidents in Buenos Aires.
ANSWER: Juan Maria **Bordaberry** Arocena

18. This novel opens with a psychiatrist interviewing a murderer who wishes to tell her life story before being executed that evening. For 10 points each:
[10] Name this novel about a woman named Firdaus who is imprisoned for stabbing a pimp to death after a series of unfortunate events culminating in her prostitution.
ANSWER: ***Woman at Point Zero*** [or ***Emra'a enda noktat el sifr***]
[10] *Woman at Point Zero* is a novel by Nawal El Saadawi set primarily in this country, which is also the setting of *Palace Walk*.
ANSWER: **Egypt** [or Arab Republic of **Egypt**; or **Misr**; or **Masr**]
[10] This European novelist's sexual encounters with male and female prostitutes in Egypt are the subject of much commentary by critics such as Edward Said ("sigh"-EED). He used the Egyptian desert as the setting for a novel he worked on for decades, finally publishing it in 1874.
ANSWER: Gustave **Flaubert**

19. Answer the following about analyzing poverty, for 10 points each.
[10] Mahbub ul Haq developed an index that measures this two-word concept by assessing how well a country provides its citizens with a long and healthy life, access to knowledge, and a decent standard of living.
ANSWER: **human development** [or **Human Development** Index]
[10] Mahbub ul Haq worked with this Indian economist to create the Human Development Index. He pioneered the capability approach to human welfare and wrote *Poverty and Famines*.
ANSWER: Amartya (Kumar) **Sen**
[10] In *Development as Freedom*, Sen used this concept to explain why African-Americans are less likely to reach old age than Indians in the impoverished state of Kerala. According to Walter Runciman's book about this concept "and social justice," it causes frustration when people are denied things that they believe they should have.
ANSWER: **relative deprivation** [prompt on partial answers]

20. This process can be described by the Langmuir isotherm, which relates the fractional occupancy of a monolayer to the equilibrium constant of this process, times the partial pressure of a molecule. For 10 points each:
[10] Name this process in which an atom, ion, or molecule adheres to a surface.
ANSWER: **adsorption** [be careful not to accept "absorption"]
[10] The Sabatier principle, which states that the affinity of a catalyst for its substrate should be "just right", is apparent when constructing these curves. These curves, named for their distinctive shape, result from plotting the the reaction rate versus a property of the reaction, like the heat of adsorption of the reactant.
ANSWER: **volcano** curves [or **volcano** surfaces]
[10] The Langmuir adsorption isotherm is mathematically analogous to this biochemical equation which describes ligand binding to a macromolecule. When this equation's namesake coefficient is greater than one, ligand binding to an molecule decreases that molecule's affinity for other ligands, and binding is termed "cooperative."
ANSWER: **Hill** equation