

2015 George Oppen: Questions courtesy of Anne Hathaway's cow-milking fingers
Written by Aauroni Gupta, Stephen Eltinge, and Mike Cheyne
ROUND 10

TOSSUPS

1. This man names a phenomenon described either by the low-velocity limit of the Mott formula, or as the limit of a muon-electron interaction as the muon mass goes to infinity. A type of spectrometry named for him is often used in tandem with Elastic Recoil Detection to non-destructively analyze thin films of materials. Integrating the solution to the Binet equation over possible incoming trajectories yields a cross section for this man's namesake phenomenon that is inversely proportional to the fourth power of sine of theta over two, as well as a distance of closest approach of roughly 27 (*) femtometers. His namesake type of elastic scattering is governed by the static Coulomb potential of a point charge. This man proposed an experiment in which roughly 1 in 8,000 alpha particles were deflected through large angles, disproving the Thomson plum-pudding model of the atom. For 10 points, name this physicist, whose students Geiger and Marsden carried out the gold foil experiment.
ANSWER: Ernest Rutherford

2. As he walks by a gutter, the protagonist of this story sees a scrap of newspaper advertising pills for HEARTBURN, rendered in all caps. A voice in this story promises to "tell you a better story than 'The Monkey's Paw,' or 'La Grande Breteche,'" about a flower becoming a seed. The protagonist of this story reads a passage beginning "Now I plunge my pen against the page and scribble toward a purpose unperceived" out loud from a book as a test for eye strain. Its protagonist gradually loses his ability to hear the footsteps of the (*) postman from several houses away. This story begins during a geography lesson, in which the girl sitting in front of the protagonist, named either Astrid or Deirdre depending on the version, describes the equator as the earth wearing a belt. In the middle of a house call paid by a physician, the protagonist of this story runs upstairs to his bedroom, and, in a climactic moment, yells "Mother! Mother! Go away! I hate you!" For 10 points, name this horror story about Paul's inward descent into a world of wintry precipitation, written by Conrad Aiken.
ANSWER: "Silent Snow, Secret Snow"

3. Historian Denis Winter developed the thesis that this commander rewrote his diary to account for hindsight after battles. After this man transferred control of his offensive to Herbert Plumer, his army adopted a "leap-frog" strategy at the Battle of Menin Ridge. This man impelled his troops to fight to the end in his famous "Backs to the wall" order. This man established a namesake "fund" for ex-servicemen, whose members sell remembrance poppies prior to Armistice Day. After the disastrous Battle of Loos, this man took over the command of his rival John (*) French. This man initiated the Battle of Fromelles, which constituted the bloodiest twenty four hours in Australian military history, to support the Fourth Army commanded by his subordinate Henry Rawlinson, during an offensive in which his side deployed the first-ever tanks in military history. For 10 points, name this commander of the British Expeditionary Force who infamously incurred hundreds of thousands of casualties at the Third Battle of Ypres and the Battle of the Somme.
ANSWER: Douglas Haig [or 1st Earl Haig]

4. Ezra Laderman included six instances of this feature in his *Audobon Quartet*, signifying the number of years the ensemble had spent together. Violins and violas playing in extremely high register create this feature at the start of Britten's first string quartet. Giuseppe Verdi employed this feature in the organs to represent a storm at the beginning of his opera *Otello*. Gyorgy Ligeti used graphical notation to score his piece *Volumina*, which consists almost entirely of these musical features, and began his piece (*) *Atmospheres* with an extensive one played by the strings and woodwinds. The popularity of this musical feature was driven in part by *The Tides of Manaunaun*, a short piano piece by Henry Cowell which has many of them. Perhaps the best-known instance of this feature occurs in the "Hawthorne" section of the *Concord Sonata*, and is created by using a nearly 15 inch long piece of wood to depress piano keys. For 10 points, identify these very large chords consisting of three or more adjacent tones.
ANSWER: tone clusters [or cluster chords; prompt on chord]

5. This work deploys an elegant analogy suggesting that, like bats which cannot process blinding sunlight with their blind eyes, so too does the truth elude us. Translators baffled by this work's phrase "the what it was to be" rendered the whole thing as the word *essentia*, from which we get the English word "essence." This work arbitrarily defines a human being as a two-footed animal in order to demonstrate the impossibility of believing the same thing to be and to not be, in an extended illustration of the principle of (*) non-contradiction. In his autobiography, Avicenna claimed to have read this work 40 times without understanding it before encountering al-Farabi's elucidation of its "purposes." Book XII, or lambda, of this work terms a being whose "thinking is a thinking of thinking" the "unmoved mover." For 10 points, name this work by Aristotle which gives its name to the field of philosophy concerned with the nature of being, with a title suggesting that pupils should tackle it after reading his *Physics*.

ANSWER: Metaphysics

6. Michel deGraffe wrote a cautionary essay warning against the exceptionalism of these entities. Henry Wittmann and David Gil dispute John McWhorter's three criteria for these entities' prototypes. Ian Hancock came up with the "domestic origin hypothesis" for how these entities came into existence. William Stewart came up with the terms "acrolect" and "basilect" to denote the upper and lower boundaries of the "continuum" lying beyond these entities. Three major categories of these entities are named for the fort, the (*) plantation, and maroons. Different theories posit that these entities arise when a native speaker simplifies a language for foreigners or babies, or when the process of second language acquisition goes poorly. Many of these languages arose in places where the French established colonies. Gullah is an English-based language of this type. For 10 points, name these stable natural languages that developed from simplified versions of languages known as pidgins.

ANSWER: creoles

7. Reversing all the edges of one of these objects is the first step of Brzozowski's algorithm. Another algorithm uses partition refinement to merge the nondistinguishable states of one of these objects; that algorithm to minimize these constructs is called Hopcroft's algorithm. The Rabin-Scott powerset construction creates an exponentially large one of these objects. The Myhill-Nerode theorem asserts the existence of one of these objects with as many states as there are equivalence classes among strings in a given (*) regular language. They have precisely one exiting transition arrow for every symbol in their alphabet. Every NFA with n states can be converted to one of these objects with 2^n states. They're not Turing machines, but they consist of an alphabet, a transition function, and a set of states, some of which are called accept states. For 10 points, name this type of finite state machine that non-probabilistically accepts or rejects a given input string.

ANSWER: deterministic finite automaton [or DFA; or deterministic finite state machine before giveaway; prompt on partial answer; prompt on finite state machine]

8. This character fantasizes about emerging from his lover's bed wearing a "branched velvet gown," and sending seven servants to greet a visitor as he winds his watch or plays with his jewelry. This man is ridiculed for disavowing Pythagoras's belief that a human soul might as well inhabit the body of a bird. He speaks the innuendo-laced line "these be her C's, her U's, and her T's and thus makes she her great P's," and exits with the ominous line "I'll be revenged on the whole pack of you." Because this character smiles frequently, wears yellow stockings, and appears cross-gartered, he is deemed a lunatic and locked in a dark chamber where the sham (*) priest Sir Topas visits him. This man reads aloud from a letter assuring him that "some are born great, some achieve greatness, and some have greatness thrust upon them." The maid Maria conspires with Sir Andrew Aguecheek, Feste the Jester, and Sir Toby Belch to dupe this fun-hating character into thinking that his employer loves him. For 10 points, name this tormented steward of Olivia in *Twelfth Night*.

ANSWER: Malvolio

9. This war culminated in a massacre during which so many were killed that the winning side's horses were drenched with blood up to their nostrils. The losing side of this war over-struck a large number of coins, replacing the image of the Roman emperor with pictures of trumpets and lyres, and deliberately crafted bad weapons so that the local garrison threw them away, allowing local fighters to pick them out of the trash. The epitaph "may his bones be crushed" is always appended to the name of the victorious emperor during this war, who upon his return omitted the salutation "I and the Army are well" and refused a triumph. This war was sparked in part by the (*) erection of a Temple to Jupiter in the newly-renamed city of Aelia Capitolina.

Sextus Julius Severus traveled all the way from Britain to quell this revolt, culminating in the siege of the fortress of Betar in 135. The namesake messianic leader of this revolt received a nickname meaning "son of a star" in Aramaic from Rabbi Akiva. For 10 points, name this last major Jewish revolt, crushed by Hadrian.

ANSWER: Bar Kokhba revolt [or mered Bar Kokhba; or Third Jewish revolt; accept Third after "Jewish revolt" is read; or Third Jewish-Roman war]

10. Jacob Molin unusually swayed his body while performing this action. Some people take three steps backwards, representing a retreat from the material world, followed by three steps forward before performing this action. On Shemini Atzeret, this practice is modified to take the incoming rainy season into account. The person performing this action has a four-cubit radius bubble which others are not supposed to breach, and must imitate Hannah's behavior in Samuel by being audible only to him or herself. During the Ten Days of Repentance, a reference in this ritual to "the Holy King" is substituted for "the Holy God." The middle (*) thirteen components of this ritual, which is performed facing Jerusalem, are replaced with a single one for the Shabbat, during which an additional fourth "Mussaf" instance of this action is performed. This prayer consists of nineteen blessings which are recited three times a day by observant Jews. For 10 points, name this central "standing" prayer of Judaism.

ANSWER: amidah

11. In this film, a character in peril is nonplussed by a suggestion to "construct a weapon" such as "some sort of rudimentary lathe." The line "Well, fuck that!" was replaced with the overdubbed "Well, screw that!" in a scene in which two characters encounter "the chompers." A character in this film shouts "Is there air? You don't know!" in protest as another character opens a door. A former stage actor famed for his portrayal of Richard III wears a prosthetic (*) headpiece that falls into progressively greater disrepair over the course of this film, in whose climax he utters the catchphrase "by Grabthar's Hammer, you shall be avenged." In this film, the bloodthirsty reptilian Sarris searches for the time-rewinding Omega 13 device, which is saved by the efforts of the last remaining Thermians and the crew members of the NSEA *Protector*. For 10 points, name this film in which the cast of the title fictional TV series encounter real-life aliens, a parody of *Star Trek*.

ANSWER: Galaxy Quest

12. While in Rome, this artist accepted a commission to create a portrait of Eva Rohr as Marguerite from Gounod's *Faust*. This artist's brother depicted Ceres carrying a sickle and a sheaf of wheat, and Thales holding a thunderbolt, in his group *The Progress of Railroading*. He created a standalone artwork of his favored recurring motif consisting of an angel with raised wings wearing a belt and a crown of passion flowers. This artist honored the memory of a woman who committed suicide by ingesting potassium cyanide, by depicting her seated against a granite block, eyes closed and wearing a (*) robe. This man's sculpture of a president rising from a chair, about to give a speech, is located in Lincoln Park. This artist's best known sculpture is a bronze relief in which an angel flies over a man on horseback leading a regiment of black soldiers carrying bayonets. For 10 points, name this American sculptor of the *Adams Memorial* and the *Standing Lincoln*, best known for his monument to Robert Gould Shaw.

ANSWER: Augustus Saint-Gaudens

13. The free energy barrier for this process is equal to 16 times pi sigma cubed over 3 times delta G squared. An equation for the rate of this process incorporates a constant known as the Zeldovich factor. The critical radius for this process is equal to negative 2 sigma over delta G. The Zimm-Bragg process determines whether helixes propagate or perform this other process. The Avrami equation assumes that this process occurs randomly. Spinodal decomposition occurs when there is no barrier to this process. In polymer chemistry, a theory named for John D. (*) Hoffmann characterizes this process. New microtubules undergo this process and are then organized by MTOCs. Boiling chips are added to solutions to add sites for this process, enabling smooth boiling without bumping. Silver iodide is added to clouds to provide a seed for the freezing form of this process. For 10 points, name this process that triggers the formation of a new phase, such as in crystallization.

ANSWER: nucleation [reverse-prompt on crystallization or crystal formation before mention]

14. The protagonist of a novel by this author is irritated at the licentiousness and atheism of the Dutch painter Lys, whom he challenges to a duel, and writes the story of his own life after the widow Judith returns from America with his diary. The Muses compose a song while on vacation in Earth, and give a disastrous

premiere of it in Heaven, in this author's story "A Little Legend of the Dance." A poor tailor plays along when he gets mistaken for a Polish count in a story by this author whose title gave us our expression "Clothes make the man," which is part of a collection about the imaginary town of Seldwyla. This author wrote a *kunstlerroman* about (*) Heinrich Lee, whose nickname is inspired by the colored cloth used to make all his clothing. A dispute over a tract of land owned by the illegitimate Dark Fiddler breaks out between the farmers Marti and Manz, whose children Sali and Vrenchen fall in love, in this author's most famous story, which was made into an opera by Frederick Delius. For 10 points, name this Swiss author of *Green Henry* and "A Village Romeo and Juliet."

ANSWER: Gottfried Keller

15. The controversial Baptist minister Issachar Jacox Roberts taught his most famous pupil in this city. Peasants near this city spontaneously rose up against an invading army in the Sanyuanli Incident. The Muslim's Loyal Trio monument commemorates the massacre of over 70,000 people in this city by one of the Three Feudatories, Shang Kexi. This city was home to a center of commerce known as the Thirteen Factories. During the First Opium War, the *Wellesley* captured a fort on Whampoa Island near this city. Lin Zexu's open letter to Queen Victoria was published in this city, where merchants known as (*) *hongs* managed a namesake "system" of trade. The Portuguese established their base of operations at Macau after being kicked out of this city, whose Romanized name is thought to come from a Portuguese word. For 10 points, name this major coastal city in Southern China, which lends its name to a major non-Mandarin dialect of Chinese.

ANSWER: Guangzhou [or Canton]

16. The magician Uba-aner creates a wax animal of this kind that is seven fingers long, but has the ability to grow to seven cubits. The fragmentary *Tale of the Doomed Prince* abruptly breaks off after one of these animals offers to help save the prince from a dog, in exchange for aid against a demon. As punishment for his gluttony, a god of this animal had his tongue cut out. The Temple of Kom Ombo was home to several mummified examples of these animals, one of which, according to Diodorus Siculus, saved the King Menes. Some confusing myths report that Horus took this non-avian animal form to search for the pieces of Osiris, and others state that one of them (*) transported the dead body of Osiris to safety. A live, sacred example of these animals known as Petsuchos can be found in the sanctuary in the Fayyum province for a son of Neith and Set who had this animal form. That god with the head of this animal had a cult center in a city that the Greeks called "this animal" "opolis." For 10 points, name this animal represented by Sobek, an apex predator that lives in the Nile river.

ANSWER: Nile crocodiles [or Crocodylus niloticus]

17. A week after this event, Frank Milatto became the sole survivor of an explosion in nearby Hastings. During this event, a group of men paraded around in an armored car with a mounted machine gun, known as the "Death Special." George McGovern wrote his doctoral dissertation on this event, for which Governor Elias M. Ammons was roundly criticized. The son of a famous librarian, Karl Linderfelt, broke the butt of his gun over the Greek-born leader Louis Tikas during this event, in which several men received arms and training at the nearby town of Trinidad. This non-West Virginia incident was worsened by the hired Baldwin-Felts agency. In this event's aftermath, the (*) Walsh Committee subpoenaed John D. Rockefeller Jr., who served as absentee director on the board of the company responsible. The nearly 2000 inhabitants of a tent colony were attacked by camp guards loyal to a Fuel & Iron Company alongside the National Guard during this April 1914 event. For 10 points, name this killing of striking coal miners in Colorado.

ANSWER: Ludlow Massacre [prompt on Colorado Coalfield War]

18. A painting that this man placed over the doorway leading to a church's north transept takes its nickname from the sack that Joseph is leaning on. Two servants converse over a balcony railing, and Judas is unusually part of the main group, in the well-preserved *Last Supper* this artist painted on the refectory wall in San Salvi. This artist modeled St. John after a terracotta sculpture by his studio-mate Jacopo Sansovino in one of his paintings. This artist's largest undertaking was a grisaille fresco series in the Chiostro dello Scalzo, depicting the life of John the Baptist. Several angels hover over a canopy in this artist's painting *Birth of the Virgin*, in which one of the women attending to St. Anne is modeled after his wife (*) Lucrezia del Fede. Two angels cling to Mary's legs in this artist's most famous painting, in which she holds Christ while seated atop a polygonal pedestal decorated with reliefs of mythological monsters. For 10 points, name this "faultless painter" of the *Madonna of the Harpies*, named for being the son of a tailor.

ANSWER: Andrea del Sarto [resignedly accept Andrea d'Agnolo di Francesco di Luca di Paolo del Migliore]

19. The most important biological application of the multifactor dimensionality reduction approach to data mining is in detecting this phenomenon. The "K" in Stuart Kaufmann's NK model represents the degree of this phenomenon. Schuldiner and Collins et. al developed a nascent analytical tool which uses a "miniarray profile" to quantify this phenomenon. It's not "genetics," but William Bateson coined this term. Fitness landscapes become more rugged as this phenomenon increases. Alexey Kondrashov's deterministic mutation hypothesis only holds when the (*) "synergistic" form of this phenomenon occurs. This phenomenon is broadly classified into "magnitude" and "sign" types, an example of the "reciprocal" form of the latter being two mutations in yeast that individually increase fitness, but decrease it when both are active. For 10 points, name this phenomenon in genetics where the effect of a gene is dependent on the effect of another gene, such as the baldness phenotype superseding the gene for hair color.

ANSWER: epistasis [accept word forms, such as epistatic]

20. This essay asserts that, opposite of his contemporaries, Oscar Wilde was a profound man who wanted to appear frivolous. The author of this essay imagines that his "Poem of the Gifts" could just as well have been written by his little-known countryman Paul Groussac. Early in this essay, its author contrasts the power of the German word "scarlach" with the impotence of the Spanish word "amarillo." Its author recalls chanting the Anglo-Saxon words for London and Rome with several female students enrolled in his English literature class. Its author famously remarks "I have always (*) imagined Paradise as a kind of library," highlighting the irony in being surrounded by nine hundred thousand books, but being unable to make out their spines and title pages. For 10 points, name this essay in which Borges meditates on the title condition that he suffered from.

ANSWER: "Blindness" [or "La ceguera"]

TB. The title character of this novel rebukes her friend for feeling only a "secondhand" kind of loneliness, and returns from college on a day inauspiciously marked by a mass-dying of robins. Its protagonist slices off the tip of her finger with a paring knife to intimidate four boys trying to harass her. A mother in this novel soothes a crying child by lubricating his ass with grease, then manually extracting stone-shaped stools to relieve his constipation; when that grown-up son later develops a heroin addiction, the mother (*) murders him with kerosene. This novel uses lowercase to render the names of three adopted man-children known as the deweys, who eventually join a shell-shocked veteran in celebration of National Suicide Day. The hilltop village of Bottom paradoxically overlooks Medallion in this novel, in which the drowning of Chicken Little drives a wedge between Nel and her title brash, sexually-liberated friend. For 10 points, name this novel by Toni Morrison.

ANSWER: Sula

BONUSES

1. This man names the iron bar correcting for vertical magnetism in calibrating compass binnacles, but he is better known for a journey on which he was accompanied by the adorable cat Trim. For 10 points each:

[10] Name this English cartographer who became the first man to circumnavigate Australia and identify it as a continent.

ANSWER: Matthew Flinders

[10] This nephew of Matthew Flinders and fourth Lieutenant-Governor of Tasmania proved to be a far inferior navigator, as evinced by the fact that he and his whole crew perished from hypothermia, starvation, lead poisoning, scurvy, tuberculosis, and cannibalism on his doomed trip to find the Northwest Passage in 1845-47.

ANSWER: John Franklin

[10] In 1795, Flinders made a preliminary expedition to Botany Bay, which is where this circumnavigator of New Zealand, murder victim of Hawaiian Islanders, and voyager in the Pacific Ocean had landed the HMS *Endeavor* in 1770.

ANSWER: James Cook

2. This system was built by Amphion and Zethus, one of whom played his lyre to lift and gently guide stones to their proper places. For 10 points each:

[10] Name this set of fortifications which protected a city besieged by seven of Adrastus's chosen champions.

ANSWER: the walls of Thebes [accept anything suggesting the defenses of Thebes]

[10] This member of the Seven Against Thebes was a huge buffoon who boasted that not even Zeus could prevent him from scaling the walls and taking the city. That was before he took a thunderbolt to the face and died.

ANSWER: **Capaneus**

[10] In an attempt to stop a plague that had been ravishing Thebes, Menoeceus, a descendant of these beings, threw himself off the walls to commit suicide. They sprang up from the dragon's teeth sown by Cadmus and Jason at Thebes and Colchis.

ANSWER: **Spartoi** [or **Sparti**]

3. This collection preserves a dialogue in which the philosopher Favorinus rebukes a woman for not breastfeeding her own child. For 10 points each:

[10] Identify this compendium of stories, sketches, fragments, discourses, and other bits of miscellaneous learning, which its author Aulus Gellius began during a winter he spent in Greece.

ANSWER: **Attic Nights** [or **Noctis Atticae**]

[10] *Attic Nights* contains the earliest form of the fable in which this slave is spared by a lion in the Circus Maximus, since years earlier he had removed a thorn from the lion's paw.

ANSWER: **Androcles**

[10] This contemporary of Aulus Gellius included the well-known myth of Psyche and Cupid in his ribald second century novel *Metamorphoses*, better-known as *The Golden Ass*.

ANSWER: **Apuleius** [or Lucius **Apuleius** Madaurensis]

4. This transformation's matrices always have determinant negative one, regardless of representation. For 10 points each:

[10] Identify this physical symmetry, which corresponds to inverting a system's spatial coordinates. The Cronin-Fitch experiment showed that neutral kaon decay violated the combination of this symmetry and charge conjugation.

ANSWER: **parity** symmetry [prompt on **P**]

[10] This 1956 experiment showed that parity symmetry was violated in the decay of cobalt-60 to nickel-60. It resulted in a Nobel Prize for Lee and Yang, who proposed it, but not the woman who carried it out.

ANSWER: **Wu** experiment

[10] The discovery of parity violation resolved the tau-theta puzzle by showing that two separate decay modes both originated from positive kaons, which are made of a strange antiquark and this particle.

ANSWER: **up quark**

5. Rodney Walker's building of this type contains several extended overhanging eaves, and the one designed by Charles and Ray Eames was #8 in the Case Study Program. For 10 points each:

[10] Identify this type of building, which Frank Gehry designed as an extension of a Dutch Colonial structure incorporating chain-link fences and corrugated steel in Santa Monica.

ANSWER: an **architect's personal residence** [or the **house that the architect himself or herself lives in**; prompt on **house** or **residence**]

[10] The best-known personal residence is the Glass House, designed by this American who worked on the Seagram Building with Mies van der Rohe.

ANSWER: Philip **Johnson** [or Philip Cortelyou **Johnson**]

[10] This Barcelona-born architect converted an abandoned cement factory into his personal residence, used columns of prefabricated concrete for his Les Espaces d'Abraxas housing project in Paris, and designed the National Theater of Catalonia.

ANSWER: Ricardo **Bofill**

6. *C. elegans* possesses a variant of this complex with a DPY-27 subunit, known as the IDC type. For 10 points each:

[10] Identify these complexes consisting of a core SMC2-SMC4 dimer, which introduce superhelical tension in double-stranded DNA upon being phosphorylated.

ANSWER: **condensins**

[10] In contrast, SMC1 and 3 form the ATPase domains of cohesin, a complex which regulates the separation of the "sister" type of these identical types of duplicated chromosomes in both mitosis and meiosis.

ANSWER: **chromatids**

[10] 13S cohesin I is targeted by one of these enzymes, which recognize the consensus sequence S slash T P X K slash R. One of them dimerizes to its regulatory protein in maturation promoting factor.
ANSWER: **cyclin-dependent kinases** [or **Cdks**]

7. The leader of this insurrection bombarded the town of Norfolk with his artillery, but the city's own well-placed artillery around Cow Tower inflicted heavy damage on his guns. For 10 points each:

[10] Name this 1549 protest against enclosure led by a yeoman farmer who rallied his troops under an oak tree.

ANSWER: **Kett's Rebellion**

[10] This son of Jane Seymour weathered Kett's Rebellion and named his cousin Lady Jane Grey successor before dying of illness at the ripe old age of 15.

ANSWER: King **Edward VI** [prompt on **Edward**]

[10] Marian prosecution victim Nicholas Ridley encouraged Edward VI to convert this royal residence, the setting of Hans Holbein the Younger's *Ambassadors*, into an orphanage and a residence for homeless women. Alas, just three years later, it was converted into a prison.

ANSWER: **Bridewell** Palace [or **Bridewell** Prison]

8. For 10 points each, name these American composers who worked for at least some time in the American Northeast, none of whom are that cacophonous and nightmare-inducing jerk Conlon Nancarrow.

[10] The trombone plays the first five notes of the B minor scale at the beginning of the *Violin Concerto* with violin-less orchestra by this composer, who composed eight symphonies and wrote the libretto for an opera with a part-Nahuatl libretto, titled *Montezuma*.

ANSWER: Roger **Sessions** [or Roger Huntington **Sessions**]

[10] This composer paid homage to Yale sports with his pieces *Yale-Princeton Football Game* and *Calcium Light Night*, but is best-known for a piece that depicts the "Housatonic at Stockbridge," titled *Three Places in New England*.

ANSWER: Charles **Ives** [or Charles Edward **Ives**]

[10] This composer adapted tunes by William Billings, such as "Chester" and "When Jesus Wept," in his *New England Triptych*, and has an uncannily similar last name to a Romantic composer.

ANSWER: William **Schuman** [or William Howard **Schuman**]

9. The speaker of this poem banishes "my Hooks, my Quills, And Angles, idle Utensils," as soon as he realizes that "the young Maria walks to night." For 10 points each:

[10] Name this country house poem which tours the estate of Thomas Fairfax, and asks "Why should of all things man unrul'd / Such unproportioned dwellings build?"

ANSWER: **"Upon Appleton House"**

[10] This author of "Upon Appleton House" promised that "though we cannot make our sun / Stand still, yet we will make him run" in his poem "To His Coy Mistress."

ANSWER: Andrew **Marvell**

[10] The sixth stanza of Marvell's poem "The Garden" asserts that the mind "withdraws into its happiness" and creates "far other worlds, and other seas," but then "annihilat[es] all that's made" into a state of being described by these six words.

ANSWER: **"a green thought in a green shade"**

10. In the episode "The Diatribe of a Mad Housewife," this character says, in the third-person, that he "loved this book almost as much as he loves cameras." For 10 points each:

[10] Name this *Simpsons* character, a real-life reclusive author who wears a bag over his head and promises to include a recipe for "V-licious" wings in a cookbook right next to "The Frying of Latke 49."

ANSWER: Thomas **Pynchon** [or Thomas Ruggles **Pynchon**]

[10] Pynchon approved the script, and supplied the fictitious title *Pandemonium for the Sun*, for a 1994 episode of this man's namesake NBC sitcom heavily featuring him. This man won four consecutive Emmys for his supporting role as Daniel Fielding on *Night Court*.

ANSWER: John **Larroquette** [or John Bernard **Larroquette** III]

[10] A purported biography of Pynchon written by Jules Siegel was published in this magazine, which hit its literary peak in the 1970s under the fiction editorship of Robie Macaulay, when this magazine published everyone from

Michael Crichton to Yevgeny Yevtushenko. *The Autobiography of Malcolm X* grew out of Alex Haley's interview of Malcolm X for this magazine.

ANSWER: Playboy

11. In a book about the pseudonymous Kallikak family, Henry H. Goddard laid out his support for this movement, which gained further traction with the 1927 *Buck v. Bell* decision. For 10 points each:

[10] Identify this movement, to which Margaret Sanger belonged. It was in favor of improving the genetic traits of mankind by encouraging superiors to breed and, sometimes, calling for inferiors to be sterilized.

ANSWER: eugenics movement

[10] This reformer encouraged an early form of eugenics known as "stirpiculture" in his sex-filled silverware-producing central New York commune Oneida.

ANSWER: John Humphrey Noves

[10] The huge wave of sterilizations following *Buck v. Bell* abated following this 1942 ruling, which held that laws allowing compulsory sterilization of criminals are unconstitutional if they are only applied to certain kinds of crimes.

ANSWER: Skinner v. *Oklahoma* [or Skinner v. State of Oklahoma, ex. rel. *Williamson*]

12. In porous media, the effective value for this quantity can be calculated by taking the standard value, multiplying it by the porosity and constrictivity, and dividing by the tortuosity. For 10 points each:

[10] Name this constant which is multiplied by the negative partial derivative of concentration with respect to position to yield flux in Fick's first law.

ANSWER: mass diffusivity [or diffusion coefficient; prompt on D]

[10] Fick's second law can be derived from Fick's first by considering this principle, proven through the experiments of Antoine Lavoisier, which states that matter and energy must be preserved in any process.

ANSWER: conservation of mass

[10] The diffusion coefficient for this process, defined as when the chemical potential gradient equals zero, can be calculated by taking the diffusion coefficient and multiplying it by the partial derivative of the natural log of concentration with respect to the natural log of activity.

ANSWER: self-diffusion

13. These objects are created by artists known as *shilpin*, and they are installed in temples through the *prana pratishtha* ceremony. For 10 points each:

[10] Identify these gigantic stone, wood, or marble representations of Hindu gods and goddesses, before which dozens of garlands are laid out during ceremonies.

ANSWER: murti [or murthi; or vigraha; or pratima]

[10] Murti construction is laid out in these post-Vedic texts, which share their name with the scriptural compilations of Mahavira's teachings in Jainism.

ANSWER: Agamas

[10] Murtis of this elephant-headed remover of obstacles are placed in temporary shrines in a very popular Hindu festival.

ANSWER: Ganesh [or Ganapati; or Vinayaka]

14. The only issue with this drug arose in 2011 when Ranbaxy Laboratories in India recalled 10, 20, and 40 mg doses of the generic version due to possible contamination. For 10 points each:

[10] Name this Pfizer-produced statin drug, which, along with Merck's Zocor, are the two most famous cholesterol-reducing drugs.

ANSWER: Lipitor [or Atorvastatin]

[10] In 2009, Pfizer was fined \$2.3 billion for promoting this practice with its drugs Bextra, Geodon, Lyrica, and Zyxos. This practice is when drugs are used for unapproved indications, and in unapproved age groups, dosages, and forms of administration, with dangerous consequences.

ANSWER: off-label use [or going off-label]

[10] In 1996, Pfizer investigator Dr. Abdulhamid Isa Dutse sued the company after running a clinical trial for an experimental antibiotic in this country, following outbreaks there of measles, cholera, and bacterial meningitis. More than 50 of the 200 children from this country in the trial died.

ANSWER: Nigeria [or Federal Republic of Nigeria; or Jamhuriyar Taraiyar Nijeriya]

15. "Imps in eager caucus" raffle for this entity in a poem which begins by asking this thing, "wilt thou toss again?" For 10 points each:

[10] Identify this entity which slams the door after it selects her own society, and is the place where hope, the thing with feathers, perches.

ANSWER: the soul

[10] Those poems about the soul were written by this American poet, better-known still for a poem which begins "Because I could not stop for death, he kindly stopped for me."

ANSWER: Emily Dickinson [or Emily Elizabeth Dickinson]

[10] Give the first line of the Dickinson poem which ends "This Traverse may the poorest take / Without oppress of Toll - How frugal is the Chariot / That bears a human soul."

ANSWER: "There is no frigate like a book"

16. The essay "Who Am I And Who Are You?," which is about Paul Celan, is often seen as Hans-Georg Gadamer's practical illustration to the theory of this concept he laid out in *Truth and Method*. For 10 points each:

[10] Identify this theory of textual interpretation common in Biblical and philosophical contexts, which is wider in scope than exegesis.

ANSWER: hermeneutics

[10] Gadamer's *Truth and Method* elaborated upon the "hermeneutics of factual life" developed by this Nazi Party member who coined the term "Dasein" in his confusing book *Being and Time*.

ANSWER: Martin Heidegger

[10] Paul Ricoeur gave this nickname to his hermeneutical method, which focused on unmasking myths about a text, in the style of Marx, Nietzsche, and Freud. Those three, according to Ricoeur, formed a "school" of this kind teaching us to doubt our experiences and understandings.

ANSWER: hermeneutics of suspicion [accept word forms; or suspicion said in the French way]

17. The opportunist civil rights leader Sheldon Tubman forms a terrifying cult in one of this author's novels, a modern adaptation of the Osiris myth starring the classmates Ast, Asar, and Soja. For 10 points each:

[10] Name this author who is best known for his debut in which a nameless Man angers his wife by refusing to take a bribe, and helps the corrupt politician Joseph Koomson escape the country through a shit-bucket.

ANSWER: Ayi Kwei Armah

[10] In the aforementioned novel *The Beautiful Ones are Not Yet Born*, Armah explored the postcolonial struggles of this West African country, home to the recently-slain poet Kofi Awoonor and esteemed writer of *Our Sister Killjoy* and *Changes: A Love Story*, Ama Ata Aidoo.

ANSWER: Ghana [or Republic of Ghana]

[10] This author recounted her years living in Accra as a university administrator in the autobiography *All God's Children Need Traveling Shoes*. She wrote of her abuse-filled childhood in Stamps, Arkansas in her book *I Know Why the Caged Bird Sings*.

ANSWER: Maya Angelou [or Marguerite Annie Johnson]

18. In a paper, Eugene Wigner defined this field as "the science of skillful operations with concepts and rules invented just for this purpose." For 10 points each:

[10] Name this field of study, which Wigner discussed in that paper about its "Unreasonable Effectiveness in the Natural Sciences."

ANSWER: mathematics

[10] Wigner uses this law as his primary example of a mathematical law. Its discoverer invented calculus in order to show that it applies to a hollow shell of matter as if the shell were concentrated at a single point.

ANSWER: Newton's law of universal gravitation [prompt on Newton's law; accept "gravity" in place of "gravitation"; do not accept "Newton's laws of motion"]

[10] Wigner coined this four-word phrase to refer to the meta-observation that mathematical laws "chosen for their manipulability" tend to reproduce actual physical phenomena.

ANSWER: empirical law of epistemology

19. Name these humiliating Roman defeats, for 10 points each.

[10] Hasdrubal Barca inflicted a double defeat on the brothers Publius and Gnaeus Cornelius Scipio near the headwaters of the Guadalquivir in this 211 BC battle in the Second Punic War.

ANSWER: Battle of the **Upper Baetis**

[10] In this other Second Punic War battle, Paullus and Varro kept pushing the seemingly weak Carthaginian center of Hannibal until they were enveloped and lost up to 75,000 newly recruited soldiers. Historians often criticize Hannibal for not marching on Rome immediately after his huge victory here.

ANSWER: Battle of **Cannae**

[10] Gaius Pontius forced a trapped Roman army to pass under the yoke in this 321 BC "battle," a decisive moment in the Second Samnite War.

ANSWER: Battle of **Caudine Forks**

20. A rooster stands in mid-air in a study for an artwork of this kind, in which the floating gypsy girl Zemphira gets her hair pulled by the only visible arm of Aleko. For 10 points each:

[10] Name this kind of artwork, another of which includes a rocking chair modified to be a "woman's seat," designed by Isamu Noguchi.

ANSWER: **ballet sets** [or **ballet costumes**; or **ballet designs**; or ballet **backdrops**; or anything indicating **ballet illustrations**]

[10] This Vitebsk native received nineteen curtain calls for his excellent work painting the sets and costumes for the ballet *Aleko*. A scythe-carrying man walks up to an upside down female violinist, and a green-skinned man stares at a goat, in his most famous painting.

ANSWER: Marc **Chagall** [or Marc Zakharovich **Chagall**]

[10] This one-time Fauve created designs for Diaghilev's ballet *The Prodigal Son*, but is best known for depicting the anguish of clowns, and for religious-themed canvases such as *The Old King* and his cycle *Miserere*.

ANSWER: Georges **Rouault** [or Georges Henri **Rouault**]

TB. One of these places in Chengde contains a villa for "absorbing the heat," and another, named Wutai, contains over fifty-three temples. For 10 points each:

[10] Identify these places in China, two of which named "Heng Shan" rank among the five great ones, alongside Song Shan, Hua Shan, and Tai Shan.

ANSWER: **mountains**

[10] Jiuhua Shan is one of the "Four Sacred Mountains" of this religion, in which capacity it boasts many temples to Ksitigarbha, a bodhisattva.

ANSWER: **Buddhism** [accept word forms]

[10] The Wuyi Mountains are located at the northern tip of this province in Southeastern China, whose largest city is Quanzhou. The Matsu islands are located off the coast of this province, but belong to the Republic of China.

ANSWER: **Fujian** Province