

2015 George Oppen: Questions courtesy of Anne Hathaway's cow-milking fingers
Written by Aauroni Gupta, Stephen Eltinge, and Mike Cheyne
ROUND 6

TOSSUPS

1. A glass-less building of this type is located on the "Singing Hill," or the "Cerro Sonsonate." A home for the aged was added as a dependency of one of these buildings whose construction began during the Ten Years' Crusade. The first of these buildings was demolished and converted to a public park following a 1948 earthquake in Ashgabat. Nine intricately-carved quartz and Portland cement pillars are the key feature of a building of this kind designed by Louis Bourgeois. The official name for these buildings is "Dawning-place of the praise of God," or (*) Mashriqu'l-Adhkar. The "Greatest Name" is engraved above each of the nine doors of the only building of this kind in North America, located in Wilmette, Illinois. The "most visited building in the world" is one of these clergy-less, tranquil structures consisting of twenty-seven marble "petals" arranged in groups of three, resembling a lotus flower, that is located in New Delhi. For 10 points, name these seven extant structures that serve as places for prayer for a tolerant monotheistic religion.

ANSWER: Bahai House of Worship [or Bahai Temple; accept Mashriqu'l-Adhkar before it is read]

2. In his preface to one of his collections, this composer defended the twelfth-bar transition from C sharp to D flat in the second section of one of the pieces. The left hand constantly crosses over the right, creating the illusion of the title deformity, in this composer's piece "The Three Hands." This man composed several tambourins, the best-known of which is the penultimate movement of his suite in E minor. Under the opening notes "G, G, G, G, G, G, B flat, D," this man wrote the words "co co co co co co dai," imitating the (*) clucking of a hen. Princess Phani is courted by the rivals Don Carlos and Huascar, while a volcano erupts, in the *Incas of Peru* section of this composer's ballet-heroique *Les indes galantes*. One of this composer's operas ends with Jupiter decreeing that the protagonists can share their immortality, and another is based on a libretto by the composer's contemporary Jean Racine. For 10 points, name this baroque French composer of *Castor et Pollux* and *Hippolyte et Aricie*.

ANSWER: Jean-Philippe Rameau

3. A character in this novel remarks that discoveries of human remains, such as Java Man, are always men because Eve hadn't been created yet. In this novel, a political meme becomes so pervasive that it is even emblazoned in Latin all over St. Peter's Square and the Vatican Palace. Two lovers in this novel are literally bound together by an endless thin blue thread. A large flock of starlings make the noise "vruuuuu" as they follows a character in this novel wherever he goes. Amusingly, the protagonists of this novel decide to travel on two actual horses after abandoning a two (*) horsepower French car nicknamed Deux Chevaux. At the start of this novel, a woman sweeps the ground with an elm branch, causing the dogs of Cerbere to bark for the first time in centuries. In this novel, Maria Guavaira, Joaquim Sassa, Joana Carda, Pedro Orce, and Jose Anaico band together after a geographic calamity. For 10 points, name this speculative novel in which the Iberian Peninsula breaks off the European mainland, written by Jose Saramago.

ANSWER: *The* Stone Raft [or *A jangada de pedra*]

4. A popular optimization software for this technique is known as DryLab. By subjecting a mixture of 2,2- and 4,4- bipyridine to this technique, one can easily test for corrosion in equipment used to carry it out. The standard test for identifying thalassemia is performing this technique on dried blood samples. Critical peaks are run through a detector at a slower flow rate in a type of this technique known as "peak parking." Molecular biologists can locate polymorphisms in double-stranded DNA easily in the "denaturing" variant of this technique. The (*) isocratic mode for this technique is less common than the gradient mode, especially when it is used to study proteins in its "reverse-phase" form. This technique is sometimes performed with the electrospray ionization form of mass spectrometry as a detector, although the detector is more commonly UV. This technique uses particles of a small size to pack the column. For 10 points, name this form of chromatography in which a liquid is pumped through the sample at up to 400 atmospheres.

ANSWER: high performance liquid chromatography [or high pressure liquid chromatography; or HPLC; prompt on chromatography and liquid chromatography]

5. Many of this man's writings published under the pseudonym Frank Talk are collected in the volume *I Write What I Want*. Frances Ames led a medical ethics inquiry after the death of this man. He co-led a political movement with philosopher and labor leader Rick Turner. This man established the Zimele trust fund to help support prisoners of war and their families. An editor of the *Daily Dispatch* named Donald Woods wrote a book about his friendship with this man, who, after being arrested for violating the Terrorism Act of 1967, was driven nearly (*)1100 km in a Land Rover to the site of his prison. In 1997, five police officers appeared before their country's Truth and Reconciliation Commission and confessed to having murdered this man. This subject of Richard Attenborough's film *Cry Freedom* died of a brain hemorrhage a day after being discovered naked and shackled outside a hospital in Pretoria in 1977. For 10 points, name this martyred founder of the Black Consciousness Movement, an anti-apartheid activist.

ANSWER: Steve Biko

6. According to a nonfiction account, rheumatism is common among inhabitants of these islands who use sea water to wash their clothes. Residents of these islands wear a moccasin-like shoe made from untanned cowhide, known as a pampootie. The director of *Nanook of the North* produced an equally fraudulent 1934 documentary about these islands, which fabricates the islanders' practice of hunting sharks for liver oil. These islands lend their name to a style of waterproof sweater with intricate basket, diamond, honeycomb, or cable stitches. Dun (*) Aengus is the best known of the many prehistoric hill forts on these islands. A cripple and a lieutenant star in a trilogy of plays about these islands by Martin McDonagh. J.M. Synge wrote an account of his life on these islands, the setting of his play *Riders to the Sea*. These islands are found at the mouth of Galway Bay, and their names are Inisheer, Inishmaan, and Inishmore. For 10 points, name these three islands located off the west coast of Ireland.

ANSWER: Aran Islands

7. A veteran of this war moved to Taos, New Mexico, and began work on his firsthand account *On Another Man's Wound*. The first non-Russian soviet was established by a city's Trades and Labour Council during this conflict. The Strickland Report uncovered the perpetrators of a city-wide series of arsons that destroyed a Carnegie Library in this conflict. The HMS *Argenta* was used as a "floating gulag" during this war, following an incident during which soldiers killed civilians spectating a soccer match. During this conflict, a group called the Twelve Apostles or simply The Squad carried out a hit against a bunch of intelligence agents known as the (*) Cairo Gang. The Auxiliaries perpetrated the burning of Cork during this war. The treaty ending this war led to the creation of a namesake Free State, via a treaty disputed in a subsequent civil war by Michael Collins's victorious forces over those led by Eamon de Valera. For 10 points, name this mostly-guerrilla 1919-21 war fought between the IRA and British security forces for control of an island west of England.

ANSWER: Irish War of Independence [or Anglo-Irish War; or Black and Tan War; or Cogadh na Saoirse]

8. To characterize the tendency of smaller movements being subsumed into larger ones, this thinker coined the term "equilibration." He deployed an obsolete analogy stating that just as a well-intentioned doctor is free from prosecution if a patient dies under his care, so too should a legislator be free from moral blame if his measures result in evil, at the end of his chapter "The Sins of Legislators." A spat erupted among the faculty at Yale University when president Noah Porter forced William Graham Sumner to discontinue teaching one of this thinker's books. This thinker spent nearly forty years completing his multidisciplinary treatise titled *System of* (*) *Synthetic Philosophy*, whose section *Principles of Biology* contains his best-known contribution. This thinker attacked the "New Toryism" of William Gladstone in his book *Man Versus the State*, and expounded upon the "right to ignore the state" in his best-known book, which states that laissez-faire capitalism is necessary to achieve human happiness. For 10 points, name this British thinker who wrote *Social Statics* and coined the term "survival of the fittest."

ANSWER: Herbert Spencer

9. This city is the setting of a novel that starts with the line "This is going to be a horror story," narrated by a woman who holed up in a women's bathroom with a book of poems for thirteen days. A crime novel written in the "four hands" method, titled *The Uncomfortable Dead* is set in this city. In a cigarette-and-Scotch-filled room in this city, nicknamed the "Cave of the Mafia," Gabriel Garcia Marquez holed himself up and wrote *One Hundred Years of Solitude*. This city itself can be considered the main character of a novel in which the socialite Norma Laragoiti marries the banker Federico Robles, and the timeless (*) Ixca Cienfuegos acts as an

outside observer. Both Roberto Bolano's *Amulet* and Elena Poniatowska's *The Night of Tlatelolco* document the violence surrounding the student protests ten days before the 1968 Summer Olympics held in this city. For 10 points, name this extremely polluted capital city, the setting of the ironically-titled *Where the Air is Clear*, written by native son Carlos Fuentes.

ANSWER: Mexico City [or Mexico, D.F.; or Ciudad Mexico; or Mexico, Distrito Federal]

10. John Sanford and Edward Wolf refitted an air rifle with tungsten particles to effect this process in onion cells. The chances of this practice occurring are boosted in a laboratory technique in which calcium chloride is added to the sample. pBR322 and species in the pUC series are often used to measure the efficiency of this process, which is reported in cfu per microgram. Cells undergoing this process turn into the namesake colors in the blue-white screen. The Avery-MacLeod-McCarty experiment identified the agent that was responsible for modulating this process in rough and heat-killed smooth species in (*) Griffith's experiment. Only species that possess competence may undergo this process, which is induced by discharging hundreds of volts across a cell membrane in electroporation. A variant of this process performed with DNA in eukaryotic cells is called transfection. For 10 points, name this form of horizontal gene transfer in which a cell incorporates outside genetic material, contrasted with transduction and conjugation.

ANSWER: transformation [accept transfection until mentioned]

11. Part of this poem describes how ants "seem to stagger, as the dawn sun has trapped their shadows." Basil Bunting compared this poem to the Alps, saying "you will have to go a long way around if you want to avoid them." This poem's speaker admits "And I am not a demigod, I cannot make it cohere," a nod to Heracles's dying exclamation in its author's translation of *Women of Trachis*. Later editions of this poem include a portion in praise of a girl who lures soldiers to their deaths in a minefield. An oft-excerpted part of this poem lists "a painted paradise on [a] church wall" and "a house of good stone each block cut smooth and well fitting" among other fine things lost "with (*) usura." The first part of this poem abruptly ends a colon after the words "so that:," and begins, *in medias res*, "And then went down to the ship." This poem contains sections titled "Thrones," "The Fifth Decad," and "Rock-Drill," but its most widely read segment reflects the author's wartime imprisonment in Pisa. For 10 points, name this fascist magnum opus of Ezra Pound.

ANSWER: *The Cantos* [reverse prompt on any section mentioned in the question; accept *The Pisan Cantos*]

12. The Bennett acceptance ratio technique estimates the difference in this quantity between states. This quantity is located opposite one symbolized H in the Born square mnemonic. Subtracting chemical potential times particle number from this quantity gives the grand potential. In the canonical ensemble, computing negative kT times the natural logarithm of the partition function gives this quantity, whose natural variables are temperature and (*) volume. It's not work, but the German "arbeit" provides the origin of the letter A used to denote this quantity. This quantity, which is defined as internal energy minus temperature times entropy, measures the amount of useful work that can be extracted from a system at constant volume and temperature. For 10 points, name this type of energy, which is equal to PV plus a similar quantity named for Gibbs.

ANSWER: Helmholtz free energy [prompt on free energy; prompt on F; prompt on A before mention; do not accept "Gibbs free energy"]

13. A road named after this man at his alma mater is the same road that is also partially "Don Knotts Boulevard." The captain of this man's team dubbed him "Tweety Bird" due to his high pitched voice. In reference to his rural background, he was called "Zeke from Cabin Creek" early in his career. This man won Finals MVP in a series decided with a game in which he was outraged at his owner having thousands of balloons hanging in the rafters anticipating a win. In another NBA Finals, he hit a 60-foot game-tying buzzer beater in Game 3 after racing past Walt (*) "Clyde" Frazier. This man, "Mr. Outside" to Elgin Baylor's "Mr. Inside," remains the only player to win the NBA Finals MVP from the losing team, after dropping the 1969 Finals to the Celtics. This player was the general manager who traded Vlade Divac for Kobe Bryant, and his silhouette is reportedly on the NBA logo. For 10 points, name this Los Angeles Lakers great who was general manager of the team from 1982 to 2002.

ANSWER: Jerry West

14. The artist of this painting refused to sell it to settle his debts, leaving his widow to bequeath it to her mother Maria Thins to keep the creditors away. A mask can barely be seen on the table in this painting,

which is partly covered by a large set of blue and gold drapes. In a canvas by Dali, the subject of this painting balances a bottle of wine on his massively outstretched right leg. The uppermost part of a chandelier hanging from the ceiling in this painting is decorated with a double-headed eagle. A woman in this painting, who carries a trumpet, holds a yellow-colored volume of Thucydides, and wears a blue (*) laurel and a blue robe, symbolizes Clio, the Muse of History. A crease in the large map in this painting's back wall signifies the political division between the independent northern and Habsburg southern Dutch provinces. Sitting on a chair on a checkered floor in this painting, a man works at his easel. For 10 points, name this painting in which Vermeer depicts someone of his profession, maybe even himself, hard at work.

ANSWER: The *Art of Painting* [or The *Art of Painting*; or The *Allegory of Painting*; or *Painter in his Studio*; or The *Artist in his Studio*]

15. A holder of this position refused to extradite James Cunningham, the second-most famous fugitive from a Georgia chain gang. Marcus Morton was elected to this position in a ludicrously close election in which he won exactly 50% of the votes. A holder of this position appointed George Lewis Ruffin, the first African-American judge, and made Clara Barton head of the Reformatory for Women. At the end of his term, the holder of this position takes a ceremonial "lone walk" to rejoin the citizenry, a tradition established by Benjamin Butler. While holding this position, Levi Lincoln Jr. issued a controversial veto of the (*) Warren Bridge Company charter. A weekend furlough program resulted in the release of felon Willie Horton during the tenure of the longest-serving holder of this position, ruining Democrat chances in the 1988 presidential election. Essex County was redistricted to resemble a salamander during Elbridge Gerry's tenure in this position. For 10 points, name this chief executive position of a New England Commonwealth, held by men such as Michael Dukakis and Mitt Romney.

ANSWER: Governor of Massachusetts [or Massachusetts Governor]

16. A bird that this hero imprisoned in a cage was released by his great-grandson, who became a very wise man as a result. This was the most famous brother of a god who could knock down entire hills with a well-aimed sling-shot; this man tried to send that brother away with promises of a golden cup and a miniature pack animal. This hero's brothers either turned into stone, or sprouted wings and gained the ability to terraform the landscape, upon escaping from a cave. In one story, this hero, who isn't Tutay Quiri, gained ascendancy by impressing his subjects with dazzling sunlight-reflecting clothing. According to the chronicler Garcilaso de la Vega, this hero, Tocay, Pinahua, and Colla held dominion over the (*) "four quarters," or the Tawantinsuyu. This male hero planted a golden staff in the ground to create civilization, alongside his sister and wife Mama Ocllo, following a great flood that Viracocha sent to ravage the area around Lake Titicaca. For 10 points, name this legendary first emperor of the Inca.

ANSWER: Manco Capac [or Ayar Manco]

17. A woman who marries into this family demolishes her husband's religious faith by pointing out that the gargoyles of his church look like wives mocking their husbands. A flustered member of this family drops her sketchbook into a lake at the sight of her crush. The feminist teacher Winifred Inger marries into this family after ending her lesbian affair with her student, another member of this family. The lover of a woman from this family dies of hypothermia high in the Alps after attempting to strangle her for spending time with the German sculptor Loerke. While in recovery from miscarrying Anton (*) Skrebensky's child, a woman with this surname sees the title sign of a 1915 novel in the sky. Anna Lensky marries William, a member of this family, in a novel whose sequel focuses on the simmering homosexual tensions between Rupert Birkin and Gerald Crich, both of whom are dating women with this surname. For 10 points, give this surname of sisters Gudrun and Ursula, who star in D.H. Lawrence's *The Rainbow* and *Women in Love*.

ANSWER: Brangwen [accept Anna Brangwen; accept Tom Brangwen; accept Ursula Brangwen; accept Gudrun Brangwen]

18. The initial distribution of this quantity, which can be estimated from current values using the method of Miller and Scalo, varies according to a power law with an exponent of -2.35 according to the Salpeter formula. This quantity and chemical composition uniquely determine all other properties according to the Vogt-Russell theorem. Donald Figer proposed a maximum attainable value for this quantity by studying the Arches Cluster. This quantity is raised to a power of roughly 3.5 to compute (*) luminosity for main-sequence stars. This parameter decreases very rapidly in Wolf-Rayet stars. White dwarfs which exceed the sun in this measure

by a factor of 1.4 will collapse to neutron stars according to the Chandrasekhar limit. For 10 points, name this stellar parameter, which is often measured relative to the Sun's value of roughly 10^{30} kilograms.

ANSWER: stellar mass

19. This man commissioned his secretary Eutropius to write a history of Rome since the city's founding titled *Breviarium ab Urbe condita*. This emperor was unable to deal with a massive revolt throughout the Middle East led by the Arab queen Mavia. This man elevated to the position of emperor when his brother, while yelling at the Quadi, burst a blood vessel in his skull and died. He may have died when the farmhouse he took refuge in was set on fire, after a battle in which his infantry managed to reach a circle of (*) wagons before the enemy cavalry hit. This man's troops had already crossed the Cilician gates into Syria, when he learned that his capital was under the control of the usurper Procopius. Water was supplied to the city of Constantinople by an aqueduct named for this emperor, who had teamed up against his eventual killer against the Thervingian leader Athanaric. This emperor was killed by troops led by Fritigern, who commanded a coalition of Goths at a 378 CE battle in modern-day Turkey. For 10 points, name this brother of Valentinian, the loser at the Battle of Adrianople.

ANSWER: Valens

20. A non-title character from this ballet was one of the most popular roles of the Argentine bombshell Julio Bocca. This ballet contains a dream sequence in which the title character murders a gigantic spider, causing its web to transform into a magical garden. A completely unfaithful adaptation of this ballet, with music by Vladimir Nabokov's cousin Nicolas, starred Suzanne Farrell and George Balanchine in the lead roles. A new character called the Dryad Queen was added in a revival of this ballet by Alexander Gorsky, who spliced in the "Grand pas de (*) toreadors" from the choreographer's later ballet *Zoraiya*. The final scene of this ballet includes a grand pas de deux danced by the innkeeper's daughter Kitri and her barber lover Basilio, or Basil. Act II, Scene II of this ballet consists of the protagonist intimidating gypsies at a marionette theater performance, followed by him tilting at some windmills. For 10 points, name this collaboration between composer Ludwig Minkus and choreographer Marius Petipa, a ballet based on a Cervantes novel.

ANSWER: Don Quixote

TB. In a novel written in this language, an architect hired to renovate a castle secretly helps disgruntled workers plant explosives underneath it. A man travels to his alcoholic grandmother's feces-and-urine-caked apartment in a novel written in this language that was so wildly popular that its author and his family went into hiding from nosy journalists. The unexpected prosperity of a copper mine and the infanticide of a girl born with a harelip threaten a farm in another novel in this language. This language was used to write a series of six recent autobiographical novels with the cheeky title *My (*) Struggle*. The author of *Beyond Our Power* and the anthem "Yes, we love this country" is one of the "Four Greats" of this language's literature. The protagonist donates her golden wreath to a shrine in the middle volume of a trilogy of medieval historical fiction written in this language, used in *The Growth of the Soil* by Knut Hamsun. For 10 points, name this Scandinavian language used by the authors Sigrid Undset and Bjornstjerne Bjornson.

ANSWER: Norwegian [or Bokmal; or Nynorsk]

BONUSES

1. The title character of this story buys a lot of candy for his wife, joking with the clerk Miss Pearl that he likes his women fat. For 10 points each:

[10] Name this otherwise-plaintive story in which the kindhearted Dr. Ed Burleigh happens to be out of town when the title elderly farmer overexerts himself in his barn and dies.

ANSWER: "Neighbour Rosicky"

[10] In this story by the same author, the title character offends his school's faculty by wearing a red carnation in his buttonhole, works as an usher in Carnegie Hall, and throws himself in front of a train to escape punishment for stealing \$1,000 to fund a trip to New York City.

ANSWER: "Paul's Case"

[10] "Neighbour Rosicky" and "Paul's Case" are the best-known stories of this Nebraskan regionalist author of *O, Pioneers!* and *My Antonia*.

ANSWER: Willa Cather [or Willa Sibert Cather]

2. For a one-particle density f , this man proved that the phase space integral of f times $\log f$ changes monotonically in time. For 10 points each:

[10] Name this statistical mechanic, who also discovered an equation for the evolution of a non-equilibrium thermodynamic system in terms of its microscopic kinetic variables, his namesake transport equation.

ANSWER: Ludwig Eduard **Boltzmann**

[10] The Boltzmann transport equation arises as the dilute limit of this set of equations. Each of these equations describes the evolution of an n -particle distribution function in terms of the $(n+1)$ -particle function.

ANSWER: **BBGKY hierarchy** [or **Bogoliubov-Born-Green-Kirkwood-Yvon hierarchy**]

[10] Systems interacting via Boltzmann transport reach equilibrium when this quantity is the same between them. The third law of thermodynamics establishes the existence of a zero-kelvin point for this quantity.

ANSWER: **temperature**

3. Lewis Binford borrowed this term from sociology to construct and analyze ethnographic fieldwork among hunter-gatherer societies. For 10 points each:

[10] Name this sociological approach that integrates theory and empirical research. It was developed by Robert Merton.

ANSWER: **middle-range** theory [or theories of the **middle range**]

[10] Middle-range theories may be generated in this other theoretical framework, which flips standard social science research by specifying that data should be collected and rigorously analyzed first, and then theories should be formulated.

ANSWER: **grounded** theory

[10] Middle-range and grounded theories both break from the positivist framework established by this Frenchman, who is often considered the founder of sociology.

ANSWER: Auguste **Comte** [or Isidore Auguste Marie Francois Xavier **Comte**]

4. In the frame story of this movie, a man continually reads from Izaak Walton's *The Compleat Angler*, and a woman compares two of her lovers to the voices in a *cantus firmus*. For 10 points each:

[10] Name this 2013 film variously released in two volumes, as a single four hour version, and as an extended five-and-a-half-hour director's cut version, in which the Charlotte Gainsbourg-played Joe recounts all her sexual experiences, starting from when a Shia LaBeouf-played character deflowers her then leaves to go fix his moped.

ANSWER: **Nymphomaniac** [or **NYMPH()MANIAC**]

[10] *Nymphomaniac* caps off the so-called "Depression Trilogy" that this Danish filmmaker/provocateur began with *Melancholia* and *Antichrist*.

ANSWER: Lars von **Trier**

[10] In *Nymphomaniac*, Joe points out that a tea stain that she created looks like a Walther PPK, a gun that notably does *not* appear in this film, which includes a fight in the skies above Rio de Janeiro that ends with a cable car careening into, and obliterating, a building.

ANSWER: **Moonraker**

5. Answer the following about black voter suppression during Reconstruction, for 10 points each.

[10] In 1875, Democrats in this state hatched a dual-pronged "plan" to oust the Republican Party, by which paramilitaries known as Red Shirts "persuaded" white scalawags and carpetbaggers to switch parties or leave, and outright murdered black voters.

ANSWER: **Mississippi**

[10] Grandfather clauses, literacy tests, and this monetary measure were instituted in several Southern states to discourage blacks from registering to vote.

ANSWER: **poll taxes** [prompt on partial answer]

[10] In 1870, this Governor of North Carolina dispatched George Washington Kirk to impose martial law in Caswell and Alamance counties in an effort to stop the Klan from intimidating freemen. For his trouble, this guy became the first impeached governor to be removed from office.

ANSWER: William W. **Holden** [or William Woods **Holden**]

6. This film, which was originally over eight hours long, consists mainly of a series of close-ups and cuts except for a scene shot in a single take, in which a man throws a knife that barely misses a man's face, but destroys his pipe. For 10 points each:

[10] Identify this film by Erich von Stroheim that ends with Dr. John McTeague releasing a caged canary in Death Valley.

ANSWER: **Greed**

[10] In *Greed*, von Stroheim personally applied the Handschiegl technique to several scenes to execute the "gold" form of this process, the adding of color to black and white films. Many westerns of the 1930s and 40s featured the "sepia" variety of this process.

ANSWER: **tinting** [or **toning**; or **tone**]

[10] Jonathan Rosenbaum compared the shot set-ups in *Greed* to this King Vidor film, which features a celebrated tracking shot in which the camera battles its way through the title group, ascends a skyscraper to the twentieth floor, frames a window, pans across a hall full of desks, and settles on the James Murray-played protagonist John Sims.

ANSWER: *The **Crowd***

7. The protagonist of this story snatches a sweet from the hands of his fiancée Sybil Merton and hands her another one. For 10 points each:

[10] Name this story whose title character is foiled in his attempt to explode a carriage-clock bomb he bought from a German anarchist, and in his plot to poison his Aunt Clementina, even though a chiromantist had told him that his destiny was to be a murderer.

ANSWER: "**Lord Arthur Savile's Crime**"

[10] "Lord Arthur Savile's Crime" and "The Happy Prince" are stories by this Irish writer of *The Picture of Dorian Grey*, who was imprisoned for his homosexual relationship with Lord Alfred Douglas.

ANSWER: Oscar **Wilde** [or Oscar Fingal O'Flahertie Wills **Wilde**]

[10] The narrator of another of Wilde's stories finds the rotting corpse of Erskine next to a portrait of this mysterious man, a possible lover of Shakespeare's to whom the Bard dedicated his sonnets.

ANSWER: Mr. **W. H.**

8. Doob's convergence theorems concern the long-time behavior of these mathematical objects. For 10 points each:

[10] Name these probabilistic systems, in which the expectation value of the next entry in a sequence of random variables equals the current entry, even given knowledge of all previous entries.

ANSWER: **martingales**

[10] These similar stochastic systems undergo transitions from one state to another in a memoryless fashion, so that the probability of moving to a certain state is only determined by the current state.

ANSWER: **Markov chains** [or **Markov processes**]

[10] This equation, which is useful in the study of martingales, states that the expectation value of a sum of a random number of identically distributed random variables equals the expected number of terms times the expectation value of a single term.

ANSWER: **Wald**'s equation [or **Wald**'s identity; or **Wald**'s lemma]

9. Pope Zachary sanctioned the enthronement of this monarch, who subjugated Basque and Aquitaine lords led by the hilariously-named Waifer. For 10 points each:

[10] Identify this first Carolingian King of the Franks, the father of Charlemagne, whose nickname may reflect the young age he became king, his well-trimmed hair, or his diminutive stature.

ANSWER: **Pepin the Short** [or **Pippin the Younger**; or **Pepin le Bref**; or **Pippin der Kleine**; prompt on **Pepin**; prompt on **Pippin**]

[10] Before deposing Childeric III and becoming king, Pepin the Short served in this advisory role, the manager of the household of the Frankish king. This office arose during the conflict between Austrasia and Neustria, and it was frequently the real power behind the throne.

ANSWER: **mayor of the palace** [or **majordomo**; or **maior palatii**; or **maior domus**]

[10] Pepin and his sons Carloman and Charlemagne were anointed for a second time by the second pope with this name, the successor to Zachary. Pepin helped that second pope with this name put down the Lombard menace under Aistulf and established the Papal States for him under the so-called Donation of Pepin.

ANSWER: **Stephen** II [or **Stephanus** II]

10. The "Marche funebre" from this ballet quotes the waltz from Gounod's *Faust* and precedes a section titled "Quadrille." For 10 points each:

[10] Name this ballet to a libretto by Jean Cocteau that takes place on Bastille Day, whose title festivity is interrupted by a lion that eats one of the guests and a "child from the future" who kills everyone else.

ANSWER: Les *maries de la tour Eiffel* [or The *Wedding Party on the Eiffel Tower*]

[10] *Les maries de la tour Eiffel* is noteworthy because five members of this collective collaborated on it. Those five are Georges Auric, Germaine Tailleferre, Francois Poulenc, Darius Milhaud, and Arthur Honegger.

ANSWER: Les Six [or The Six]

[10] This oratorio by Arthur Honegger, a microcosm of Western music which uses techniques ranging from Gregorian chant to jazz, includes an actress playing the Witch of Endor in its "Incantation" scene, and ends with the death of the title character after the coronation of Solomon.

ANSWER: Le *roi David* [or King David]

11. This politician winked when an elderly cancer-ridden phone sex worker called in with comments about the budget, and thought that in 2010, all housewives still did the ironing. For 10 points each:

[10] Name this doofus, the current prime minister of Australia.

ANSWER: Tony Abbott [or Anthony John Tony Abbott]

[10] Abbott's remark suggesting that this assemblage representing the rights of indigenous Australians was no longer necessary sparked a 2012 protest on the 40th anniversary of its founding. This complex grew out of a single beach umbrella planted in 1972 to protest a bill refusing to recognize indigenous land rights.

ANSWER: Aboriginal Tent Embassy [accept Aboriginal Embassy]

[10] Abbott was doing pretty okay for himself in this post during the Howard government, when he used his authority to coordinate rescue efforts during the Bali bombings. Sussan Ley is the current holder of this post.

ANSWER: Minister of Health and Ageing

12. The legendary healer Abaris studied among these people, who leap into a bitumen lake and transform into swans at the end of their very long lives. For 10 points each:

[10] Name these inhabitants of a perpetually sunny land far north of the domain of the north wind.

ANSWER: Hyperboreans [or Hyperborei]

[10] Hyperborea was ruled by three priests of this god, who gave Abaris the magical arrow that he had used to slay the Cyclopes. The Hyperboreans sent emissaries to the island where Leto gave birth to this male god.

ANSWER: Apollo [or Apollon]

[10] This river god, the father of Zeuxippe, resides in Hyperborea and has a name meaning "early burnt," possibly referring to when Phaethon's solar chariot came careening down into his waters. Phaethon's sisters, the Heliades, transformed into amber-shedding trees on the banks of this river.

ANSWER: Eridanus [or Eridanos]

13. In this play, Pridamant is stricken with grief after witnessing the supposed murder of his son Clindor, but soon finds Clindor, Isabella, and the rest of the play's cast counting out money. For 10 points each:

[10] Name this complex, meta-theatrical play in which the magician Alcindor offers a defense of the noble profession of an actor.

ANSWER: The *Illusion* [or The *Comic Illusion*; or L'*illusion comique*]

[10] In *L'illusion comique*, this French dramatist made a mockery of the classical unities that he had so closely followed in plays such as *Polyeucte* and *Le cid*.

ANSWER: Pierre Corneille

[10] Corneille began a three-year self-imposed creative silence after his play *Le Cid* was politicized in this debate, which rocked the French Academy in the seventeenth century. This conflict was waged between authors like Nicolas Boileau, who urged strict adherence to the classical unities, and genre-establishing writers such as Pierre de Marivaux, and was satirized by Jonathan Swift as a literal battle between actual books.

ANSWER: Quarrel of the Ancients and Moderns [or querelle des Anciens et des Modernes; accept any similar answer that contains both the words Ancient and Modern]

14. The Eigen-Wilkins mechanism determines the rate law for the "associative" form of this reaction paradigm in coordination complexes. For 10 points each:

[10] Name this reaction type in which one group is replaced with another. Like elimination, it can come in uni- or bi-molecular types.

ANSWER: substitution

[10] The Zincke reaction and other reactions of substituted pyridines use this mechanism for nucleophilic substitutions, an acronym suggesting that the introduction of the nucleophile accompanies the decyclization of the reactant.

ANSWER: **ANRORC** [or **addition of the nucleophile, ring opening, ring closure**; accept answers that convey those three things]

[10] Paul Walden names an inversion of this property, oft-analogized to an umbrella turning inside-out during a strong wind, that occurs in bimolecular substitution reactions.

ANSWER: **chirality** at the chiral center [or word forms]

15. The rulers of this people's kingdoms descended from a woman who fled from her father, disguised as a man, and took refuge in the home of an elephant hunter whom she eventually married. For 10 points each:

[10] Identify this African ethnic group whose loose collection of kingdoms included one ruled by the Moro-Naba, who had his capital at Ouagadougou.

ANSWER: **Mossi**

[10] The Mossi kingdoms were on the losing side of a *jihad* waged by Askia Muhammad I of this empire, which supplanted the Mali until 1591, when it was conquered by the Moroccans.

ANSWER: **Songhai** Empire

[10] The Mossi established trade relations with this other West African ethnic group, the largest pastoral nomadic community in the world. Usman dan Fodio led a these people in uprising against the Hausa and proclaimed the Sokoto Caliphate.

ANSWER: **Fulani** people [or **Fulbe**; or **Peul**; or **Pel**; or **Fulaw**]

16. Whirlpools and vaginas abound as the very fabric of reality literally cracks in this artist's painting *The Vertigo of Eros*, one of his "inscapes." For 10 points each:

[10] Name this surrealist, best-known for showing the expanse of outer space underneath a smoky exterior in his *The Disasters of Mysticism*, and for being Chilean.

ANSWER: Roberto **Matta**

[10] Matta came to the United States and mentored many artists involved in this emerging art movement, exemplified by the soak-stained canvases of Helen Frankenthaler and the arbitrary drippage of Jackson Pollock's "masterpieces."

ANSWER: **abstract expressionism** [word forms okay, prompt on partial answer]

[10] Matta had an affair with the wife of this artist, a refugee from the Armenian Genocide who helped bridge the surrealism-abstract expressionism gap with paintings like *One Year the Milkweed* and *The Liver is the Cock's Comb*.

ANSWER: Arshile **Gorky** [or Vosdanig Manoug **Adoian**]

17. This party's uncertain future was the subject of Julius Bachem's 1906 article "We must get out of the tower!" For 10 points each:

[10] Name this political party, which grew out of a meeting at Soest, led by Ludwig Windthorst and opposed to the marginalization of the Catholic Church in Germany during *Kulturkampf*.

ANSWER: Catholic **Centre** Party [or German **Centre** Party; or Deutsche **Zentrum**spartei; or **Zentrum**]

[10] The *Kulturkampf* program was enacted by this German chancellor who declared that the great political questions of his time would be settled with iron and blood.

ANSWER: Otto von **Bismarck** [or Otto Eduard Leopold, Prince of **Bismarck**, Duke of Lauenburg]

[10] This particularly hated 1875 piece of legislation from Kulturkampf revoked constitutional protection for religious orders, stopped state subsidies to the Catholic Church, and abolished religious orders. Gerard Manley Hopkins wrote about the death of five nuns escaping Germany because of this law in his "The Wreck of the Deutschland."

ANSWER: **Congregations** Law of 1875

18. A community of "radical" members of this movement known as the Skevikare toured Northern Europe in exile for eleven years before settling on an island off the coast of Stockholm. For 10 points each:

[10] Name this reform movement heralded by Philipp Jakob Spener and August Hermann Francke, which broke from the Lutheran emphasis on doctrine and theology and instead stressed personal faith.

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

[10] Francke and Spener co-founded the University at this German city in southern Saxony, and made it a center of Pietism. The Marktkirche in this city contains the original death-mask of Martin Luther, who posted his 95 Theses at Wittenberg an hour away.

ANSWER: Halle [or Saale]

[10] The Halle brand of Pietism was a profound influence on John Wesley, who found this other movement that became a full-blown sect in its own right.

ANSWER: Methodism [accept word forms]

19. The protagonist of this story feels separated by a metaphorical pane of glass from a large black cat that he pets at a coffee shop, and nearly dies of septicemia after running headlong into the edge of an open door. For 10 points each:

[10] Name this story in which Juan Dahlmann is constantly foiled in his efforts to read a rare edition of the *Thousand and One Nights*, eventually stumbling his way into a knife-fight with a gaucho.

ANSWER: "The South" [or "El Sur"]

[10] This Argentine short-story writer fictionalized his own head injury in "The South," which appears in the second edition of his collection *Ficciones*.

ANSWER: Jorge Luis Borges [or Jorge Francisco Isidoro Luis Borges]

[10] In a story Borges published in his collection *Dr. Brodie's Report*, the medical student Baltasar Espinosa brainwashes a ranch owner, his son, and his adopted daughter by reading to them from this book. Eventually, they murder him with a method taken from this book.

ANSWER: The Gospel According to Mark [prompt on The Bible or The New Testament or other answers]

20. The gla protein domain is present in many proteins involved in this pathway, whose "final common" component begins after tenase activates factor X. For 10 points each:

[10] Name this cascade of reactions which culminates in Factor XIII crosslinking fibrin so that platelets can help stop blood from being lost.

ANSWER: coagulation [or clotting; or word forms]

[10] This most common coagulation disease occurs due to a deficiency in a namesake factor that binds to Factor VII. In patients with aortic valve stenosis, this disease is known as Heyde's syndrome.

ANSWER: von Willebrand disease

[10] *In vitro*, this clotting factor is activated by physical contact with a negatively charged surface, such as glass, and itself activates prekallikrein. *In vivo*, this clotting factor basically does nothing and its deficiency is completely asymptomatic.

ANSWER: factor XIIa [or Hageman factor]

TB. A ruler of this kingdom abdicated the throne to his brother Ramiro and committed himself to a monastery, only to un-retire the following year and join his nephews in defeating the tyrannical Ramiro. For 10 points each:

[10] Name this medieval Spanish kingdom which broke apart from the larger Kingdom of Asturias in 910 and held dominion over the northwest quarter of the Iberian peninsula.

ANSWER: Kingdom of Leon

[10] This heavily-fortified kingdom was originally a vassal to the Kingdom of Leon, but soon unified with it under Ferdinand III and became a major regional power under its queen Isabella I.

ANSWER: Kingdom of Castile

[10] This late 11th and early 12th century Leonese king conquered the cities of Caceres, Merida, and Badajoz from the Almohads, but refused to join his father-in-law's crusade against the Almohads, which is why Leon was absent from the Battle of Las Navas de Tolosa.

ANSWER: King Alfonso IX [prompt on Alfonso]