2015 George Oppen: Questions courtesy of Anne Hathaway's cow-milking fingers
Written by Auroni Gupta, Stephen Eltinge, and Mike Cheyne
ROUND 13

TOSSUPS

1. A king with this name died when nobles cut the ropes of a tent he was under, so the tent fell on top of him. An earlier king with this name was literally crowned while in the womb of his Jewish mother. A king with this name spent much of his reign trying to curry favor with Pap, or Papas. A king with this name executed the bishop Shimun Bar Sabbae and other Christians when they refused to pay a double tax to finance a war. The second king with this name extracted a humiliating peace treaty from Jovian after Julian the Apostate died in a battle where he beat this king. A king with this name built a namesake city on the road between Estakhr and (*) Ctesiphon. Mani of Manichaeism fame was a scholar in the court of a king with this name. The best-known king with this name collected a huge indemnity from Philip the Arab and won the Battle of Edessa, netting him a key prisoner whom he famously used as a footstool to mount his horse. For 10 points, give this name of the second king of the Sassanid Empire, who capture Valerian.
ANSWER: **Shapur** [or **Sapor**; or **Shahpuhr**; or **Shahapoor**; or **Shapura**; or **Shahapura**]

2. An analogue of this god is represented wearing a long robe and shorts, because he was too busy to put on pants on his way down to Earth. This god grants a boon to the priest Li Shao Jun, ensuring that he would never grow old and would never have to eat again, and he supposedly taught Huang Di, the Yellow Emperor, alchemy. In one story, this god foolishly sells cakes with money baked into them. This blind god ambles his way to the house of his wife, whom he had cheated upon, and is treated so hospitably that he is moved to commit suicide, leaving behind only his (*) leg. Not long before Chinese New Year, this god prepares a yearly report for the Jade Emperor, so to ensure his good graces, worshipers smear effigies of this god with honey and burn them to hasten his journey to heaven. Fire pokers are often referred to as the "leg" of this god, whose namesake festival, also known as the "Little New Year," is celebrated with yard and house work. For 10 points, name this popular Chinese god, the protector of the hearth.
ANSWER: **Kitchen** God [or **Stove** God; or **Zao** Jun; or **Zao** Shen; or **Zhang** Lang; or **Ong Tao**; or **Mandarin God**]

3. In many of his early paintings, this artist placed such emphasis on the shadow cast by jawbones of his subjects their heads looked discontinuous with their necks, seen most extremely in his tiny canvas *Memento Mori.* Marcel Proust identified a namesake shade of pink that this painter frequently used. This man painted the best-known depiction of an incident in which a woman drops a pearl in a glass of vinegar to win a wager against her lover about who could stage the most lavish feast. With Girolamo Colonna, this painter decorated a ballroom in the Palazzo Labia with paintings of the encounters between (*) Marc Antony and Cleopatra. This artist painted Neptune guiding a treasure-laden galleon away from a group of dark-skinned men wearing feathered headdresses in a ceiling fresco for the throne room of the Royal Palace of Madrid. This man painted Apollo touring the universe in his *Allegory of the Planets and Continents,* which decorates the main staircase at the Wurzburg Residence. For 10 points, name this 18th century Venetian painter who worked in Spain and Germany.
ANSWER: Giovanni Battista **Tiepolo** [or Gianbattista **Tiepolo**]

4. In a running gag from this novel, amateurish poems written by the protagonist keep falling out of his journals and books. Its protagonist attends a church service unusually held in the catacombs, when a stranger comes up behind him and whispers "You are in danger in this city." In this novel, a hostage who is executed by drowning in a lake turns out to be the same man who had accused the protagonist of pilfering money from his portmanteau. The antagonist of this novel is first met at a fox-hunt, and is nearly killed in a duel by the protagonist after being discovered embezzling funds from Mr. Tresham. The comic relief in this novel is provided by the magistrate (*) Baillie Jarvie and the gardener Andrew Fairservice. The title character of this novel is saved by his ruthless wife Helen, and kills Rashleigh after strategically altering Sir Hildebrand's will so that the protagonist inherits his father's estate. The protagonist of this novel marries his cousin "Die," or Diana, Vernon. For 10 points, name this novel in which Frank Osbaldistone crosses paths with the title outlaw, written by Sir Walter Scott.
ANSWER: *Rob Roy*

5. A class of objects name for this property is generated in a spin-S system by a unitary rotation of a fully polarized ground state. Those objects with this property are identified by an eigenvalue usually labeled alpha or z, and the probability of finding n particles in one of them is Poisson with parameter alpha-squared. A quantum phenomenon in which this property is lost explains wave function collapse as a leakage of quantum nature into a classical environment. Roy Glauber won a Nobel Prize for studying minimal-uncertainty quantum (*) states with this property. Those states are unitary displacements of the harmonic oscillator ground state. The spatial type of this property ensures strong directionality, while its temporal type ensures that light is monochromatic; both of those properties are possessed by lasers. For 10 points, name this property of waves with a uniform frequency and fixed relative phase.
ANSWER: **coherence** [or **coherent**]

6. This man controversially refused to allow several women and children to pass through his army after they had been ejected from a nearby city, so they died of starvation *en masse* in a nearby ditch. After his youngest brother was wounded in the groin, this man made sure he was taken away safely, losing a piece of his helm to an axe-blow in the process. This man managed to flip the allegiance of the Holy Roman Emperor Sigismund in the Treaty of Canterbury. This man was granted a "double-subsidy" to finance his best-known campaign, during which he besieged (*) Harfleur and ordered the slaughter of several thousand prisoners at a later battle where the only setback he faced was a raid on his lightly-protected baggage train. This man's brother, the Duke of Clarence, took over when he left France, soon after marrying Catherine of Valois and being recognized as heir-apparent to the French throne in the Treaty of Troyes. On Saint Crispin's Day, this man's longbows wreaked havoc on French knights. For 10 points, name this English king who won the Battle of Agincourt.
ANSWER: **Henry V** [prompt on **Henry**]

7. David Kaplan produced and starred in a documentary about this project. Joseph Incandela and Fabiola Gianotti directed portions of this project, which occurred under the general direction of Rolf-Dieter Heuer. The D-Zero and CDF collaborations established bounds on the parameter space explored by this project. The scientists who inspired this project received the 2010 Sakurai Prize. Robert Brout died before the completion of this project, so he did not receive a (*) Nobel Prize for his work related to it. This project vindicated a trio of papers on symmetry breaking that were published in *Physical Review Letters* in 1964. This project, which was delayed for 14 months due to a magnet quench, resulted in observations at 125 giga-electronvolts at both the ATLAS and CMS experiments. For 10 points, name this effort undertaken at the Large Hadron Collider that discovered the last particle in the Standard Model.
ANSWER: the **discovery** of the **Higgs** boson [or any equivalent answer mentioning **searching for** or **finding** the **Higgs** boson; accept **Large Hadron Collider** or **LHC** before "Sakurai Prize" and prompt on them afterwards; prompt on **ATLAS** before mention; prompt on **CMS** before mention]

8. The textbook *Principles of Behavior* presents a formula in which the strength of this phenomenon is multiplied by V, K, and SHR to yield the excitatory potential. The strength of this phenomenon increases exponentially over time according to the "goal-gradient hypothesis." Cottrell disputed that the mere presence of others caused the increase of this phenomenon in an experiment in which cockroaches traveled to the light at the end of a maze faster when there were other cockroaches nearby, conducted by Robert Zajonc. Leopold Szondi diagrammed these phenomena as pairs of opposing factors, such as tender love and sadism accounting for the (*) sexual one. Clark Hull argued that learning is mediated by the "reduction" of these phenomena. According to Freud, *eros* is opposed by the "death" type of this phenomenon, also known as *thanatos*. For 10 points, name these psychological phenomena in which an individual enters an excitatory state when a given need is not satisfied, which can be thought of as an extreme form of a motive.
ANSWER: **drive** [accept **need**; prompt on **arousal**; prompt on **excited state**; prompt on **dominant response**; prompt on **desire**; prompt on **motive** before mentioned; prompt on any other synonyms that are given as answers]

9. In this film, a woman tells a man that "I have a chicken in the icebox and you're eating it." Early in this film, the camera turns clockwise on a diagonally-oriented man standing at a doorway until he appears upside-down at the bedside of a hungover woman. A scene in this film skirted a Production Code guideline by having the lead actors take breaks from making out every three seconds. A well-known shot from this film starts from the high vantage point of a second-floor balcony and tracks in on the female lead, ending on a

close-up of a concealed key. The female lead of this film monitors how much (*) champagne is left at a party to estimate how much time her lover has to investigate a wine cellar; once there, the man foolishly breaks a bottle full of uranium ore. This film opens at a trial in Miami for a convicted German spy, but is mainly set at the Rio de Janeiro mansion of the Nazi Sebastian, which is infiltrated by T.R. Devlin and the spy's daughter Alicia Huberman. For 10 points, name this 1946 espionage film starring Cary Grant and Ingrid Bergman, directed by Alfred Hitchcock.
ANSWER: *Notorious*

10. This author included a soliloquy about the "Fearful key, which locks behind me the prisonhouse of life" in a play in which a character picks up a guitar and sings a dialogue between Brutus and Caesar. Taking advantage of a superstition, one of this author's title characters freely paces the corridors of a castle in the mask and habit of a monk. The protagonist of another play by this author refuses to harbor the murderer Duke John Parricida and personally ferries a fugitive across a stormy lake. The antagonist of that play by him commands everyone to bow before a (*) cap he places on a pole. This author wrote a play in which the title character seals his own fate by rejecting the Princess de Eboli, because he is in love with his father's wife Elizabeth of Valois, as well as one in which Amalia's murder further drives a wedge between the brothers Franz and Karl von Moor. In his best-known play, a man foils Gessler by shooting an apple off his son's head. For 10 points, name this author of historical plays such as *Don Carlos, The Robbers,* and *William Tell.*
ANSWER: Friedrich **Schiller** [or Johann Christoph Friedrich von **Schiller**]

11. For diffusers, the coefficient of pressure recovery conveys the same information as this quantity. The polytropic form of this quantity is defined as the isentropic form when the difference in pressure across a system approaches zero. This value is often measured assuming an LHV, or "lower heating value." When the second law of thermodynamics is taken into account, the "exergy" type of this quantity can be calculated. This quantity depends on both the compression ratio and the specific heat ratio in the (*) Otto Cycle. The coefficient of performance, or COP, is similar to this measure except that it can exceed 1. Both the Kelvin-Planck statement and Carnot's theorem place a fundamental upper limit on this quantity, which in its simplest formulation is equal to the heat of the hot reservoir minus the heat of the cold reservoir, over the heat of the hot reservoir. For 10 points, name this thermodynamic quantity, a measure of how little heat or energy is lost in an engine.
ANSWER: thermal **efficiency** [prompt on **E**c; prompt on **nu**]

12. The speaker of this set of poems calls a woman's final resting place the "quiet city." The third poem in this series includes the image of "wicked hands" creeping into a crib left in a "snow of lilies in joyful bloom." The second poem in this cycle predicts that "One day, this long weariness will be greater, and the soul will tell the body that it doesn't wish to continue / dragging its mass along the frosted road." The speaker of these poems leaves "singing my beautiful vengeance" after "sprinkling earth and rose dust." In the last poem in this set, the speaker confronts God directly and demands: "Return (*) him to my arms or remove him from the flower." These poems won their twenty-five year-old author first prize at the prestigious national Juegos Florales contest. The first poem in this set begins: "Out of the frozen niche where men have put you, I will lower you down to the humble, sunny earth." For 10 points, name these three poems inspired by the suicide of the railway worker Romelio Ureta, written by his lover Gabriela Mistral.
ANSWER: "**Sonnets of Death**" [or "Los **sonetos de la muerte**"]

13. The day after this event, lawyer Charles Morgan Jr. addressed the Young Men's Business Club with a speech repeating the phrase "We all did it." To a death threat he received for reopening the investigation into this event, Governor Bill Baxley replied: "kiss my ass." John Petts raised money from the citizens of Wales to help reverse the property damage incurred during this event, whose site now bears a stained glass window depicting a lack Christ. Four months prior to, and starting in the same location as this event, James Bevel coordinated a "Children's Crusade" whose participants were met by attack (*) dogs and fire hoses ordered by Bull Connor. This event was perpetrated by Herman Cash, Thomas Blanton Jr., Bobby Cherry, and their ringleader, Robert "Dynamite Bob" Chambliss, and it claimed the lives of four black girls preparing for a Youth Day sermon. For 10 points, name this violent 1963 event which destroyed a 16th Street Baptist place of worship in Birmingham.
ANSWER: 16th Street Baptist **church bomb**ing in Birmingham [prompt on **Birmingham bomb**ing, need both the "church" and the "bombing" part to get points]

14. Marion Faber corrected Helen Zimmern's inexplicable choice of "fool" as the word for sheep in her translation of one of these statements describing Ajax's madness. One of these statements declares that a man's disposition towards women in general depends on "an image of woman that he gets from his mother," and another opines that "man does not strive after happiness, only the Englishman does." A culturally influential statement of this kind reads "From life's school of war: what does not kill me makes me stronger." The stater of these statements himself provides an exegesis of one that asks "What do (*) ascetic ideals mean?" The best-known of these statements, which some scholars differentiate from their speaker's "maxims," declares that "He who fights with monsters should look to it that he himself does not become a monster. And when you gaze long into an abyss the abyss also gazes into you." For 10 points, *Daybreak, Human, All Too Human, The Gay Science,* and *Beyond Good and Evil* are replete with unique method of argumentation by Nietzsche that takes the form of witty sayings?
ANSWER: Nietzsche's **aphorism**s [or **aphorismen**; or **sentenz** or **maxim**s before read; or **apophthegm**s; or **dart**s; prompt on answers indicating **witty saying**s before the end of the question]

15. This singer notes "you've been here seven years longer than me" and asks the subject "are you gay?" in her first single, while in another song she riffs on Longfellow with the line "you'll never get my mind right, like two ships passing in the night." Those songs are "Stronger Than Me" and "In My Bed." In one of her music videos, a band invites a series of women up on stage to lip sync to lyrics including "well sometimes I go out by myself, and I look across the water." This singer, who covered (*) "Valerie" with Mark Ronson, addressed another song to a man in "rolled up sleeves" and a "skull t-shirt" who "tears men down like Roger Moore." In her highest-charting single, she responds "no, no, no" to the title request, justifying herself by saying "my daddy thinks I'm fine." For 10 points, name this English singer whose album *Back to Black* included "You Know I'm No Good" and "Rehab," who died of alcohol poisoning in 2011.
ANSWER: Amy **Winehouse**

16. One of these addresses likens a charitable man banishing envy and anger to a powerful warrior destroying his enemies. Another of them ends with a Sith Code-like passage describing a man who "conceives an aversion," and "in conceiving this aversion, he becomes divested of passion, and by the absence of passion he becomes free, and when he is free he becomes aware that he is free." The third of these addresses claims that the ear, the nose, the tongue, the body, the mind, and the mind-consciousness are all on (*) fire. A torchlit procession known as the *perehara* occurs on Esala day, which commemorates the first of these addresses. The second one, which was about the nonexistence of the soul, transformed all who listened to it into *arhats.* Mahakashyapa was the only one to smile during a wordless address of this kind, whose deliverer merely held up a white lotus flower. The first of these addresses was delivered in Sarnath, and laid out precepts such as the Middle Way and the Four Noble Truths. For 10 points, name these liturgical orations delivered by Siddhartha Gautama.
ANSWER: **sermons of Buddha** [or **Buddhist sermon**s; accept **speeches of Buddha** and **teachings of Buddha** and **sayings of Buddha** and similar answers]

17. Marrack's lattice hypothesis explains how imbalances in proportion prevent this interaction from happening. In the Ouchterlony procedure, the substances undergoing this interaction diffuse out of circular wells cut into agar gel. This interaction does not occur in the prezone and postzone phenomena. When the complex formed by this interaction accumulates, it can lead to type III hypersensitivity. The capacity for the proteins involved in this interaction to undergo it is termed (*) "avidity." If this interaction occurs with red blood cells, a direct Coombs test will be positive. "Blocking" proteins prevent clumping in a specific form of this interaction known as agglutination. This interaction can potentially occur twice as much in a sandwich ELISA as in a regular one. One constant and one variable domain, each consisting of a heavy and light chain, make up the Fab region that participates in this interaction alongside the epitope. For 10 points, name this crucial immunological interaction in which a protein designed to recognize a foreign object binds to that object.
ANSWER: **antibody-antigen** binding [accept anything along the lines of **antibodies interacting with antigens**; prompt on partial answer; accept **agglutination** before mention]

18. As it is about to be destroyed, this object interrupts the conical facade of a doorway with its "square squat shape... like a cubistic bug." In its last appearance, sparks rain on this object in such a way that they cause a chain reaction, making it appear as if the last person to touch it is "enclosed in a thin nimbus of fire." In a section possibly narrated from inside this object, a character remembers thinking "Now you are aware of

me" as she whipped misbehaving children with relish. A numbered list specifies that this object adjusts for the stress caused by animal magnetism, so its designer "made it on the (*) bevel." This object nearly gets lost during a catastrophic river fording during which several mules drown and a man re-breaks his previously injured leg. The Gillespie barn gets torched as part of Darl's plan to incinerate this object, which Cash had used his carpentry skills to construct. This object is unloaded in Jefferson and its contents buried. For 10 points, name this object in *As I Lay Dying,* which transports the remains of the deceased matriarch Addie Bundren.
ANSWER: **Addie's coffin** in *As I Lay Dying* [or Addie **Bundren's coffin**; accept just **coffin** after "As I Lay Dying" is read]

19. Early in his reign, this king put down a revolt known as the Fools' War. A notable pre-revolutionary Estates General sided with this king's sister Anne de Beaujeu against the scheming Duke of Orleans. The succession crisis following the death of Matthias Corvinus enabled this man to poach his wife Anne of Brittany from her husband-by-proxy Maximilian I. A punitive expedition in this monarch's lands in response to his decision to back the pretender Perkin Warbeck was ended by the Treaty of Etaples. This man launched a campaign in which his soldiers suffered through the first recorded outbreak of syphilis in Western history. (*) Girolamo Savonarola heralded the arrival of this king in Florence as the fulfillment of a messianic prophecy, refusing to join the Holy League which Alexander VI formed to oppose this man. This man died soon after his army lost the Battle of Fornovo. For 10 points, name this late-15th century French king who began an invasion of Italy continued by his successors Louis XII and Francis I.
ANSWER: **Charles VIII** [prompt on **Charles**]

20. A piece for this solo instrument is typically played by a person wearing a clown uniform, who turns to the audience and asks "Why?" An extra one of these instruments plays a solo in the second movement of Berlioz's *Grand Funeral and Triumphal Symphony.* Apart from being a composer, Gustav Holst was also an accomplished player of this instrument, for which Luciano Berio scored his *Sequenza V.* Though it does not appear in the first three movements, this instrument plays a chorale in the finale of Brahms's first symphony. Christian Lindberg perfomed in a good recording of the definitive concerto for this instrument, the one in B-flat major by Rimsky-Korsakov. The "Tuba Mirum" of Mozart's *Requiem* begins with a solo for this instrument. This instrument and the (*) piccolo make some of their earliest appearances in orchestral music in the finale of Beethoven's Fifth Symphony. This instrument is derived from the medieval sackbut. For 10 points, name this brass instrument with a side whose B-flat tenor variety is scored an octave above the tuba, and an octave below the trumpet.
ANSWER: **trombone** [accept **bass trombone**; accept **tenor trombone**; accept other varieties of trombones]

TB. Baer and Rinzel formulated a model for a particular aspect of these structures. These structures are small in class I and II cells which express low levels of the gene *cut,* but are more extensive in class III and IV cells with high expression. Slit2 and its receptor Robo2 are needed for self-avoidance in these structures. They're not in oocytes, but recent research has suggested that CPEB facilitates transport of mRNAs to these structures prior to translation. MAP2 links microtubules to intermediate filaments in these structures. AMPA receptors are trafficked away from these structures in long-term potentiation. These structures, broadly split into basal and apical types, are especially extensive in (*) cerebellar Purkinje cells, and have projections with mushroom-shaped heads and thin necks, known as spines. These structures propagate electrical input to the adjacent cell body. For 10 points, name these small postsynaptic projections in neurons named because networks of them resembles trees.
ANSWER: **dendrite**s [accept dendritic **spine**s until mentioned; prompt on **neuron**s]

BONUSES

1. The Brown tumor arises in areas with excess activity of these cells, which is triggered by RANKL binding to RANK. For 10 points each:
[10] Name these cells which resorb bone, working in concert with osteoblasts to ensure calcium homeostasis.
ANSWER: **osteoclast**

[10] Osteoclast formation is stimulated by this cytokine, which stimulate the formation of T helper 17 cells with TGF-beta, binds to a receptor who gp130 component triggers Janus kinase signalling, and regulates the fever and acute phase responses.
ANSWER: **inteleukin-6** [or **IL-6**]
[10] Malignant osteoclast-like cells can form an uncommon condition known as giant cell tumor of bone, which can be addressed by these drugs. These drugs are better known for reducing the risk of fracture in post-menopausal women suffering from osteoporosis.
ANSWER: **bisphosphonate**s

2. The protagonist of this novel tells her story entirely through letters in the section "Work: 1955-1964," visits her father-in-law Magnus Flett, who has memorized *Jane Eyre,* and dispenses horticultural advice as writer of the column "Mrs. Green Thumb." For 10 points each:
[10] Name this autobiographical novel about Daisy Goodwill Flett, whose mother gives birth to her without ever knowing that she was pregnant, and whose father takes a job that moves their family from Winnipeg, Manitoba, to Bloomington, Indiana.
ANSWER: The ***Stone Diaries***
[10] In 1993, Carol Shields' *The Stone Diaries* unusually won both the Pulitzer Prize and this award, established by John Buchan, annually given by the namesake official to two Canadian authors in each of seven categories of literature.
ANSWER: **Governor General**'s Award
[10] This author won the Governor General's Award in 1966 for her poetry collection *The Circle Game* and in 1985 for her dystopian novel about Offred.
ANSWER: Margaret **Atwood** [or Margaret Eleanor **Atwood**]

3. This operatic excerpt made use of the recently-installed gas lighting at the Paris Opera, and secured the fame of Marie Taglioni. For 10 points each:
[10] Name this episode from the third act of a 1831 opera, in which Bertram goes to a cloister and summons the title vow-breaking ghosts from their tombs, before the Abbess orders them to dance.
ANSWER: "**Ballet of the Nuns**" [or "**Nuns Ballet**"]
[10] The "Ballet of the Nuns" appears in this French composer's grand opera *Robert le Diable.* He is better known for *Le Prophete* and *Les Huguenots.*
ANSWER: Giacomo **Meyerbeer** [or Jacob Liebmann **Beer**]
[10] The "Ballet of the Nuns" is widely held to be the first work in the romantic ballet genre, which introduced this innovation to the art form. Â The pancake and the bell styles are common variants of this aspect of ballet.
ANSWER: ballet **tutu** [prompt on ballerina **costume** and similar answers]

4. This man controversially alleged that people go to soup kitchens not because they are hungry, but because the food there is free. For 10 points each:
[10] Identify this Attorney General under Ronald Reagan, who chaired a commission on the effects of pornography in society.
ANSWER: Ed **Meese** [or Edwin **Meese** III]
[10] Meese was tangentially involved in this major scandal during the Reagan administration, in which arms sales in a Middle Eastern country funded anti-Communist rebels in Nicaragua.
ANSWER: **Iran-Contra** scandal
[10] Meese resigned as Attorney General when it was brought to light that he had helped his friend award no-bid contracts to this New York-based defense contractor, which was founded by Puerto Rican John Mariotta and originally manufactured baby carriages.
ANSWER: **Wedtech** Corporation [or **Wedtech** scandal or synonyms]

5. Numerologists have struggled to determine the significance of the exact number "153" in the second of these episodes, during which the discipline whom Jesus loved exclaims "It is the lord!" For 10 points each:
[10] Name these two miracles of Jesus, the first of which endangers the structural integrity of a boat and results in Peter begging "Go away from me, Lord; I am a sinful man!" In response, Jesus promises to make Peter a good evangelist.
ANSWER: miraculous **catch of fish** [accept equivalents suggesting that these are **big fish payload**s]

[10] The second miraculous draught of fishes, as well as the disciple whom Jesus loved, appear only in this last, non-synoptic gospel.
ANSWER: Gospel According to **John**
[10] There are also a fair number of passages that only appear in the Synoptic Gospels, such as this parable, which argues that Jesus's teachings are meant to be heard, not concealed, like the light emanating from the title object.
ANSWER: Parable of the **Lamp Under a Bushel** [or **Lamp Under a Bowl**; prompt on **lamp**]

6. This Modernist manifesto protests the practice of using footlights to make the faces of actors appear fatter, and starts by laying out the author's vision of theater as a Bible in pictures for those who cannot read or write. For 10 points each:
[10] Identify this introductory piece, in which the author calls his character Jean an Aryan "race builder" for aspiring to escape his lowborn valet status, and offers thirteen reasons, including a "degenerate brain" and poor parenting by her father, why a count's daughter falls for him.
ANSWER: **preface to *Miss Julie*** [or equivalents, like **prologue to *Miss Julie***]
[10] This author's major works of dramatic criticism include his "Author's Note" to *A Dream Play* and his preface to *Miss Julie.*
ANSWER: August **Strindberg** [or Johan August **Strindberg**]
[10] In *A Dream Play,* Indra's daughter Agnes visits two allegorical locations: one, a peaceful, yet economically unequal paradise filled with newlyweds, and the other, a hellish prison whose inmates are watched by a quarantine master in blackface. Name either place.
ANSWER: **Fairhaven** or **Foulstrand**

7. This film expanded on thematic material introduced in its director's short film *Alive in Joburg*. For 10 points each:
[10] Name this 2009 film directed by Neil Blomkamp. It envisions a South Africa populated by both humans and large insectoid aliens in a not-so-subtle metaphor for real-life racial tensions.
ANSWER: *District 9*
[10] The aliens in *District 9* are known by this derogatory nickname. It refers not to an edible aquatic crustacean, but rather to a species of cricket common in southern Africa.
ANSWER: **prawn**s
[10] After protagonist Wikus van de Merwe is infected by alien DNA, he gains this ability. The military contracting company MNU attempts to vivisect him to study and replicate this ability, but he escapes.
ANSWER: **operating alien weapons** [or **operating alien equipment**; accept "prawn" or other clear equivalents in place of "alien"]

8. This book devotes as much time to Beaumarchais as it does to Goethe, and it decries the "Great Switch" of liberalism signified by the social welfare programs enacted by Bismarck in the 1880s. For 10 points each:
[10] Name this book that surveys 500 years of Western cultural and intellectual history, with interludes examining specific cities in specific years, such as Madrid in 1540 and Weimar in 1790. It was published when its author was 93.
ANSWER: *From Dawn to Decadence*
[10] *From Dawn to Decadence* is heavily informed by its author Jacques Barzun's study of the Great Books, which led Barzun to co-found a course dedicated to them with this Columbia literary critic, who denounced conservatism as the "irritable mental gestures which seek to resemble ideas" in his tome *The Liberal Imagination.*
ANSWER: Lionel **Trilling**
[10] The nucleus of *From Dawn to Decadence* can be found in Barzun's 1941 bestseller asserting that the nineteenth century was defined by the thought of Darwin, Marx, and this man, who attempted to synthesize his operas into a universal work of art known as *Gesamtkunstwerk,* but is better-known for being a big fat anti-Semite.
ANSWER: Richard **Wagner** [or Wilhelm Richard **Wagner**]

9. For 10 points each, identify the following techniques that are used in geological relative dating---or not used, as the case may be.
[10] James Hutton's theory of uniformitarianism opposed the now-discredited theory of catastrophism, which proposed that the Earth was shaped by brief, violent events like this Biblical disaster.
ANSWER: Noah's **flood**

[10] This principle asserts that new rock layers are deposited on top of older layers. When layers fold or tilt, one looks for surface sedimentary features to identify the layer that was originally on top, and then applies this principle.
ANSWER: principle of **superposition** [or law of **superposition**]
[10] This principle states that intrusions or fractures are younger than the features that they disrupt. Intrusive igneous plutons and faults can be dated using this principle.
ANSWER: principle of **cross-cutting relationships**

10. The winning side in this conflict fanned its soldiers out, forming a "human-net," to squash resistance at the islands of Chios, Lesbos, and Tenedos. For 10 points each:
[10] Name this 499 - 493 BC conflict engineered by the Milesian tyrant Aristagoras to make up for his disastrous attack on Naxos. After the capture and burning of Sardis, this conflict went poorly for the Greeks.
ANSWER: **Ionian Revolt**
[10] The Ionian Revolt was the major catalyst for the first phase of these wars, whose four great battles took place at Plataea, Salamis, Thermopylae, and Marathon.
ANSWER: Greco-**Persian** Wars [or, the wars between **Persia and Greece**]
[10] The Ionian fleet was decisively defeated by a much smaller Persian navy at this 494 BC battle near an island off the coast of Miletus.
ANSWER: Battle of **Lade**

11. These compounds can be prepared by adding Grignard reagents to oximes in the Hoch-Campbell synthesis, or by an intermolecular reaction on beta-amino alcohols in the Wenker synthesis. For 10 points each:
[10] Name these high ring-strain compounds that can also be made by subjecting azides to photolysis to produce nitrenes, and then adding the nitrenes to an alkene.
ANSWER: **aziridine**s
[10] The ring strain of aziridines makes it harder for them to experience this phenomenon, where nitrogen-containing molecules with trigonal pyramidal geometry, such as ammonia, turn inside out.
ANSWER: nitrogen **inversion**
[10] Aziridine is the nitrogen-containing analogue to this cyclic, three carbon compound, with formula C_3H_6, produced in the Simmons-Smith reaction.
ANSWER: **cyclopropane**

12. After the Irish-born officer Maximilian Karl Lamoral O'Donnell thwarted an assassination attempt against this emperor, his brother raised funds to build the Votive Church to thank God for saving his life. For 10 points each:
[10] Name this emperor whose foreign minister Count Leopold Berchtold issued an ultimatum to Serbia on the eve of World War 1. He was part of the Three Emperors' League with Kaiser Wilhelm I and Tsar Alexander II.
ANSWER: **Franz Joseph I** [or **Francis Joseph I**; prompt on **Franz Joseph**; prompt on **Francis Joseph**]
[10] Franz Joseph I ruled this dual monarchy that formed in 1867, the final stage of the House of Hapsburg.
ANSWER: **Austria-Hungary** [or **Austro-Hungarian** Empire; or **Osterreich-Ungarn**; or **Ausztria-Magyarorszag**]
[10] In 1903, Franz Joseph I undertook this action against Mariano Rampolla, by invoking *jus exclusivae* for the last in European history.
ANSWER: **papal veto** [or equivalents specifying **vetoed his election to the papacy**; prompt on **veto**]

13. One entry of this series is named for the lion bas-relief at the bottom, and another consists of a series of drawbridges that seemingly lead nowhere. For 10 points each:
[10] Name this series of "capricious inventions," consisting of 16 prints displaying elaborate torture instruments in the title places.
ANSWER: *Carceri* [or The *Prisons*; or *Carceri* d'Invenzione]
[10] Piranesi's grotesque *Carceri* prints of Roman prisons stand in sharp contrast with the *vedute,* or serene cityscapes, painted by this contemporary Venetian artist who depicted the man-made waterways crossing the city.
ANSWER: **Canaletto** [or Giovanni Antonio **Canal**]
[10] Piranesi's depiction of Roman ruins in his own series of *Vedute* was inspired by the incorporation of monuments from antiquity in the landscapes of this Baroque French artist, named for a region in Northeast France, who painted *The Embarkation of the Queen of Sheba.*

ANSWER: Claude **Lorrain** [or **Claude**; or Claude **Gellee**]

14. This author parenthetically asked "Is Eliot a great poet? no one knows" in his caricature of academic poetry, titled "Fresh Air." For 10 points each:
[10] Name this author of the Bollingen Prize-winning collections *One Train* and *On The Great Atlantic Railway,* who endeared himself to Will Nediger by including "translations" from a bunch of fake South American poets in his collection *The Pleasures of Peace,* alongside a poem that repeats the phrase "sleeping with women" eighty-six times.
ANSWER: Kenneth **Koch**
[10] Kenneth Koch, Barbara Guest, James Schuyler, Frank O'Hara, and John Ashbery were the principal members of this art-influenced ironic poetry group, which arose in a big city in the 1950s.
ANSWER: **New York** School
[10] Koch's poem beginning "I chopped down the house that you had been saving to live in next summer" is a set of variations on William Carlos Williams's "This Is Just to Say," whose speaker eats these food items in the icebox, which you were probably saving for breakfast, because "they were delicious / so sweet / and so cold."
ANSWER: the **plum**s

15. Liszt's "Grand Concert Piece" inspired by this collection remained unperformed in full until 1984, when the identical twin brothers Richard and John Contiguglia played it at a Liszt festival in Utrecht. For 10 points each:
[10] Name this collection of eight books of six piano pieces each, including the "Spinning Song" and the "Spring Song."
ANSWER: *Songs Without Words* [or *Lieder ohne Worte*]
[10] This composer of the *Songs Without Words* took a fateful trip to Scotland in 1829, influencing both his third symphony and his *Hebrides Overture.*
ANSWER: Felix **Mendelssohn** [or Jakob Ludwig Felix **Mendelssohn** Bartholdy]
[10] In this A-minor piece that concludes third book of Mendelssohn's *Songs Without Words,* the left and right hands represent separate voices which come together at the end to play two final chords.
ANSWER: "**Duetto**" [or "**Duet**"]

16. A motorcade transported Nathan Cirillo's body down the "Highway of Heroes" in the aftermath of this event, which happened two days after Martin Couture-Rouleau rammed two soldiers with his car. For 10 points each:
[10] Identify the location in Ottawa where, on October 22, 2014, Michael Zehaf-Bibeau exchanged gunfire with security personnel adjacent to a caucus room.
ANSWER: **Parliament Hill** [or **Centre Block**; prompt on **Canadian Parliament** building or similar answers]
[10] One of the bullets in the Parliament Hill shooting entered the caucus room where MPs from the New Democratic Party were gathered along with this current leader of the opposition, who caused a rift in the NDP with his support for Israel.
ANSWER: Tom **Mulcair** [or Thomas Joseph "Tom" **Mulcair**]
[10] Zehaf had fought for anti-government forces during this conflict, which came to an end soon after the leader of the government was killed trying to escape from Sirte.
ANSWER: **Libyan Civil War** [or **Libyan Revolution**; prompt generously on **Arab Spring**]

17. On his way to Athens, Theseus himself undertook a set of labors. Answer the following about them, for 10 points each.
[10] First, Theseus tricked Periphetes into giving up his club and then bashed his skull with it near Epidaurus, which was sacred to this son of Apollo, the god of healing and medicine.
ANSWER: **Asclepius**
[10] This man promised the kingdom of Eleusis to any passers-by who could defeat him in a wrestling match, but he always won and killed all challengers. Theseus defeated him handily, spared his life, started the sport of wrestling.
ANSWER: **Cercyon**
[10] The funniest of Theseus's opponents, Sciron, asked travelers for a favor and then indirectly killed them in this manner.
ANSWER: **kick**ing them off a cliff, at the bottom of which there was a giant turtle or sea monster

18. These people gave the nickname *culo de hierro,* meaning "iron buttocks," to the man who led them at battles such as Boyaca and Carabobo. For 10 points each:
[10] Name these herdsman who grazed the namesake grasslands in Venezuela and Colombia, and supplied most of the cavalry for the independence efforts of those countries.
ANSWER: **llanero**s (yaneros)
[10] This man rallied the *llaneros* and partook in the independence movements of five countries, including one named after him, earning the nickname "El Libertador."
ANSWER: Simon **Bolivar** [or Simon Jose Antonio de la SantÃ-sima Trinidad **Bolivar** y Palacios Ponte y Blanco]
[10] This "Centaur of the Plains" was Bolivar's chief subordinate at the Battle of Carabobo, and drove the Spanish out of their last Venezuelan stronghold, at Puerto Cabello. He later led the independence movement of Venezuela from Gran Colombia, became its first president, and then turned dictatorial.
ANSWER: Jose Antonio **Paez**

19. The stable equilibrium of this system can be found using an effective potential with a new term that is quadratic in the driving frequency. For 10 points each:
[10] Identify this parametric oscillator, in which a driving vertical oscillation allows a bob on a rigid rod to balance in an upward-pointing position.
ANSWER: **Kapitza**'s **pendulum** [prompt on partial answer]
[10] The motion of the Kapitza pendulum can be derived using these doubly-eponymous equations. They give the equations of motion that satisfy the law of least action.
ANSWER: **Euler-Lagrange equation**s
[10] The motion of the Kapitza pendulum can be treated as a perturbation in terms of the ratio of the pendulum's natural frequency to the driving frequency. Give the expression for the natural angular frequency in terms of the acceleration due to gravity, *g*, and the length of the pendulum, *L*.
ANSWER: the **square root** of the quantity **g over L**

20. In a novel of this kind, Syrena Tricksy amasses a sizable fortune despite her start as an apprentice to a mantua-maker, but dies penniless in her mother's house. For 10 points each:
[10] Name this kind of novel, whose best-known example stars a comically manipulative and promiscuous woman who tricks the hapless Squire Booby into marriage. In these novels, virtue is most certainly not rewarded.
ANSWER: **satires of *Pamela*** [or **responses to *Pamela***; accept anything indicating that these are books **making fun of *Pamela***]
[10] This eighteenth-century author wrote the excessively-sentimental and easily-made-fun-of novel Pamela, and gave us Clarissa, one of the longest books written in English.
ANSWER: Samuel **Richardson**
[10] This female writer, who formed the "fair triumvirate of wit" with Delarivier Manley and Aphra Behn, wrote *The Anti-Pamela,* and showed everyone how amatory fiction is really done in her book about the reformed rake Count D'Elmont, titled *Love in Excess.*
ANSWER: Eliza **Haywood** [or Elizabeth **Fowler**]

TB. Chiefs Blount and Hancock led opposing factions of this nation, whose name in their native language means "hemp gatherers" or "shirt-wearing people." For 10 points each:
[10] Name this tribe which fought a 1711-15 civil war in North Carolina, complete with outside intervention from the British, German, Dutch, Yamasee, and Cherokee.
ANSWER: **Tuscarora**
[10] Several members of the Tuscarora were admitted to this powerful Confederacy of American Indian tribes consisting of the Seneca, Oneida, Onondaga, Mohawk, and Cayuga.
ANSWER: **Iroquois** Confederacy
[10] This alcoholic Iroquois leader and half-brother to Cornplanter one day had a series of alcohol-fueled visions inspiring him to promulgate a code banning practices such as promiscuity, drunkenness, and wife-beating.
ANSWER: **Handsome Lake** [or **Sganyadaiyo**; or **Hadawako**; or **Shaking Snow**; or **Okanyatarariyau**]