

## Tossups

1. A particularly bulky example of this functional group is found in Hunig's base. They're not hydroxyl groups, but the buffers Tris and HEPES contain this functional group. Aromatic examples of this functional group can be synthesized using the Buchwald-Hartwig cross-coupling reaction. One method of synthesizing these compounds reacts an alkyl halide with potassium phthalimide, then cleaves the product with hydrazine. This functional group undergoes exhaustive methylation in a reaction which produces the (\*) less-substituted alkene; that elimination is named for Hofmann and violates Zaitsev's rule. The Gabriel synthesis produces this functional group, which has a pKa of around 36, though their protonated forms have pKa around 10. For 10 points, name this functional group which contains a nitrogen single bonded to one or more carbon chains.

ANSWER: amine <EM>

2. This is the numerical ranking among the Beauties of Jinling held by the Imperial Concubine Yuanchun. In that work, key characters such as one who reincarnated from a divine flower first appear in a chapter of this number. This is the number among the 36 Heavenly Spirits for the chief strategist of the Liangshan bandits, "Resourceful Star" Wu Yong. This was the number of stages in the Longzhong Plan proposed by (\*) Zhuge Liang. At the Battle of Hulao Pass, this is the number of heroes who were able to chase off Lu Bu. Earlier in the same work, that same group of this many people takes the Peach Garden Oath. In *Journey to the West*, Xuanzang has this many supernatural disciples. For 10 points, name this number that, in a Luo Guanzhong historical romance, describes the number of post-Han dynasty kingdoms.

ANSWER: three [or san; or word forms, such as third] <PL>

3. While driving away from an incident in this state in a yellow Mercury Marquis, a man was arrested due to lack of a valid concealed-carry permit. During one incident in this state, sheriff Willard McCullough was offered the service of twenty-five armed black men to help defend a courthouse. Lori and Michael Fortier were arrested in connection with an event in this state, where an encounter between Sarah Page and Dick Rowland, an (\*) elevator operator, sparked an event during which the so-called "Black Wall Street" of the Greenwood district was burned down. In an incident in this state involving Terry Nichols, a militia movement sympathizer detonated a Ryder van with fertilizer-based explosives, causing 168 deaths. For 10 points, name this state, the location of the Alfred P. Murrah building and the Tulsa Race Riots.

ANSWER: Oklahoma <WA>

4. This architect designed a memorial including a "Hall of Acts" and a "Creativity Pavilion": the main portion of that memorial depicts a hand dripping blood in the shape of a map. A park designed by this man includes an Air Force Museum called "The Hut" and a white trapezoidal building with a red flame-like marquee over the entrance. This architect designed a church which the local bishop called "the devil's bomb shelter", which contains a tapestry copy of Picasso's *Guernica*. One of this man's most famous buildings is made of four concrete (\*) parabolas and an inverted obelisk; this Church of St. Francis of Assisi was part of his Pampulha Project. His most famous large-scale project includes a hyperboloid cathedral made of 16 concrete columns. For 10 points, name this modern architect who designed most of Brasilia.

ANSWER: Oscar Niemeyer <JC, ed.>

5. The central event of a *sama* ceremony is the performance of this activity. Irish priest Neil Horan was defrocked for engaging in this activity in unexpected public venues. During Navratri, some people perform this activity using sticks called *dandiya*. The dwarf Apasmara is typically depicted in iconography of the *tandava*, an instance of this activity. Maidens called *miko* lead activities of this type called (\*) *kagura* in Shinto. A form of this activity is done as a form of *dhikr*, or remembrance, by the Mevlevi sect. In his Nataraja aspect, Shiva is considered the "Lord" of this activity, a variety of which called a *horah* is often performed to the tune of "Hava Nagila." For 10 points, name this action, which members of the Zuni tribe perform to summon rain.

ANSWER: dancing [or dance; or whirling] <TK, ed.>

6. In this country, the meadow on which which a princess was married gave rise to a local name for a festival. A fossil quarry in this country that was probably a lake during the Eocene is where a fossil known as “Ida” of the primate *Darwinius masillae* was found. The Hercynian Forest identified by classical geographers is traditionally placed in the south of this country. This home of “Theresa’s meadow” and the Messel pit is the largest country where the (\*) *dirndl* is traditionally worn. A picturesque castle in this country that was opened to the public after its builder’s death in 1883 inspired the Sleeping Beauty Castle. Cuckoo clocks were first manufactured in a large forest in this country, which is divided into federal districts called *Lander*. For 10 points, name this country, the home of the Black Forest and Oktoberfest.

ANSWER: Federal Republic of Germany [or Bundesrepublik Deutschland] <WA>

7. One process occurring in this organelle is blocked by tunicamycin. Stress within this organelle causes the activation of IRE1p, which in turn leads to the cleavage of Hac1 mRNA. Glucose-6-phosphatase is attached to this organelle. One enzyme found within this organelle targets the N-X-S/T motif, and transfers a branched polymer from dolichol to the target. This organelle, where protein (\*) disulfide isomerase is responsible for linking cysteines together, is also the site where N-linked glycosylation takes place. The sequence KDEL is responsible for keeping proteins in this organelle, through whose membrane they are threaded after the action of the signal recognition particle. Vesicles from this organelle travel to the Golgi apparatus. For 10 points, name this organelle that comes in rough and smooth varieties, the former of which is responsible for transporting proteins throughout the cell.

ANSWER: endoplasmic reticulum [or ER] <EM>

8. This character watches the “turf event of the season” at the Jockey Club on an invitation from Mrs. Highcamp and angers her father by refusing to attend her sister Janet’s wedding. She becomes nostalgic by singing the song “Ah! si tu savais” while painting and, for a time, moves off of Esplanade Street and into a small bungalow. After revealing that she’d skipped out on her Tuesday reception day, this character tears up a handkerchief, smashes a vase, and stamps on her (\*) wedding ring. She befriends a Chopin-playing pianist named Mademoiselle Reisz, who is more free-spirited than Adele Ratignolle. This character chafes in her marriage with Léonce, prompting her to have an affair with Alcee Arobin and pine for Robert Lebrun, whose departure causes her to despair and drown herself. For 10 points, name this protagonist of Kate Chopin’s *The Awakening*.

ANSWER: Edna Pontellier [or Edna Pontellier] <RC>

9. One politician briefly expelled from this party for running as an independent in a mayoral election that he won gave a victory speech that began, “As I was saying before I was so rudely interrupted fourteen years ago...” This party abandoned its largely symbolic Clause Four and defeated an attempted infiltration by the Militant Tendency. It lost the 1992 election because of misleading adverts during the War of Jennifer’s Ear and negative media headlines like one that read: “If (\*) Kinnock wins today, will the last person to leave Britain please turn out the lights?” This party’s 1983 election manifesto is often called “the longest suicide note in history.” The first Prime Minister from this party was smeared by the Zinoviev Letter and its first majority was under Clement Attlee. For 10 points, name this political party that replaced the Liberals as the main centre-left party in Britain.

ANSWER: British Labour party <AL/PL>

10. In one painting of this place, the central member of a trio of figures places her legs in a multicolored pool that reflects a sunset on its right. The background of a self-portrait of an artist in this place shows one of that artist’s paintings in which an old woman in black looks at a young girl who is imagining ghosts. An artist said he would commit suicide after completing a painting of this place which he claimed should be read from right to left. That painting showing people from this place shows a child eating an apple in the foreground while a woman listens to a large (\*) blue idol. *Day of the God* and *Spirit of the Dead Watching* depict this place, whose natives are shown in three groups representing three existential questions in *Where Do We Come From? What Are We? Where Are We Going?* For 10 points, name this Pacific Island whose women are the subject of numerous Gauguin paintings.

ANSWER: Tahiti [accept anything mentioning Tahiti] <WA>

11. Charles Darwin's 1832 diaries describe him quarreling with Captain FitzRoy over this institution, after which he proclaimed he would "never visit again" a certain type of country. The Law of Sexagenarians targeted this institution, which Muslims rebelled against during the Malê Revolt. The *casa-grande* and *senzala* occupied by two kinds of participants in this institution are discussed in the most famous work by Gilberto (\*) Freyre. Palmares was the largest example of hinterland communities called *quilombos* that were populated by former members of this institution, which was the target of a law promulgated by Princess Isabel in 1888. People born into this institution were affected by the Law of the Free Womb, which was succeeded by the Golden Law. For 10 points, name this repressive institution abolished in Brazil under Emperor Pedro II.

ANSWER: slavery in Brazil [or obvious equivalents; or escravidao; or escravismo; or escravatura] <WA>

12. In Aeschylus's *Seven Against Thebes*, Hippomedon's shield bears an emblem of this being as he fights Hyperbios. Hesiod's *Theogony* claims that all wet winds *except* for the trio of Notus, Boreas, and Zephyrus come from this being, and tells this being's story before a list of Zeus's wives and seductions. This being, which was first spawned in Cilicia, used the Corycian cave for storage, from which Aegipan and Hermes managed to recover the (\*) sinews that this being tore out of his greatest opponent. Several gods assumed the shape of animals after fleeing to Egypt to escape this being. According to Pindar, it is this creature, and not Enceladus, which has spewed fire since its burial under Mount Etna. For 10 points, name this being with a hundred snake heads, a child of Gaea and Tartarus which nearly defeated the Olympian gods and fathered several monstrous offspring with Echidna.

ANSWER: Typhon [or Typhaon; or Typhoeus] <MJ>

13. Robert Agnew updated this theory to include a threshold effect and focused on individuals' attempts at pain-avoidance. This theory argues that a lack of differential class symbols of achievement leads to internalization of general culture and labels the "triumph of amoral intelligence" in Al Capone as an example of an innovation. Retreating in the form of substance abuse or rebelling against culturally defined goals are two of the five (\*) means of adaptation in this theory that stem from negative relationships with others due to goal blockage. Rapid changes break down cultural norms and anomie sets in as this theory's namesake action leads towards dissolution in social orders. For 10 points, identify this theory of criminology explaining deviance as a result of the lack of means to achieve cultural goals, first articulated by Robert K. Merton.

ANSWER: strain theory [prompt on "anomie" until it is read] <CC>

14. This author wrote a play in which a character steps on his tortoise and accidentally shoots his hare shortly after using them to disprove Zeno's paradox. That play by this man also features the inspector Bones investigating the murder of McFee and includes appearances from a group of logical-positivist gymnasts. In a play by this author, a botanist who died of a monkey bite is revealed to be the terrible poet Ezra Chater, who challenges a main character to a duel after the latter's authorship of a negative review is revealed by (\*) Lord Byron. In that play by this man, Hannah Jarvis discovers that the "hermit of Sidley Park" was actually Septimus Hodge, the tutor of Thomasina Coverly. For 10 points, name this author of *Jumpers* and *Arcadia*, a Czech-British playwright who used minor *Hamlet* characters in his *Rosencrantz and Guildenstern Are Dead*.

ANSWER: Tom Stoppard [or Tomas Straussler] <RC>

15. A device used to characterize these particles was the first superconducting solenoid in the world; that device showed that these particles are emitted from the decay of the Y(9.46) state as partly predicted by the Lund string model. The number of these particles can be calculated by finding the dimension of the adjoint of the special unitary group of order (\*) 3, which shows that they come in eight types. These particles, which were first discovered by the JADE and PLUTO detectors' observation of three-jet events, are responsible for carrying color charge. The force mediated by these particles is described by QCD. For 10 points, name these particles that mediate the strong force, named for the fact that they adhere quarks together.

ANSWER: gluons <EM>

16. In the leadup to an insurrection in this country, the landlord-supported “White” faction opposed armed rebellion. Positivists from this country argued that its national effort should be refocused away from fighting major powers as part of the “organic work” movement. Emilia Plater served as a captain during a rebellion in this country, which is the historic homeland of the *uhlan* cavalry of the Napoleonic Wars. While it was a (\*) French client state named for its largest city, it was ruled by the Saxon king Frederick Augustus I. Constantine Pavlovich was later ousted as its Grand Duke. During emancipation, larger plots of land were granted to serfs to undermine the *szlachta* nobility of this country, where the January and November Uprisings took place. For 10 points, name this frequently partitioned country where Tadeusz Kosciuszko led a major uprising.

ANSWER: Kingdom of Poland [or Polska; or Polonia; or Congress Poland; or Polish-Lithuanian Commonwealth; or Tsardom of Poland; or Russian Poland; or Duchy of Warsaw; prompt on “Commonwealth”] <WA>

17. In this scientist’s classified report *A Mathematical Theory of Cryptography*, he mathematically showed that all unbreakable ciphers are equivalent to one-time pads. This scientist showed that the probability of error can be made arbitrarily small if the rate of transmission is less than the capacity of a “noisy” channel. He’s the alphabetically latter namesake of a result showing that an analog signal can be reconstructed – without aliasing – from a digital signal as long as the (\*) sampling rate for the original analog signal is greater than or equal to twice the signal’s bandwidth. This scientist’s source coding theorem sets the limit for lossless compression, requiring that the average number of bits per symbol not be less than his namesake entropy. He names the previously mentioned sampling rate result with Harry Nyquist. For 10 points, name this father of information theory.

ANSWER: Claude Shannon <IJ>

18. Type of piece and composer required. The E, D, E motif that opens one of these pieces by this composer was quoted in the Menuetto movement of his 13th string quartet, in A minor. A good chunk of these works were premiered by their composer in concert with Johann Michael Vogl. The most famous of these works by this composer opens with rapidly repeating triplet semiquavers that represent the galloping of a horse, before transitioning to four characters distinguished solely by vocal range and a major or minor interval. Dietrich (\*) Fischer-Dieskau, a renowned interpreter of them, made no less than eight recordings of their most famous cycle, which was based on works of Wilhelm Müller. The two most famous cycles of these works are *Die schöne Müllerin* and *Winterreise*. For 10 points, name these works for voice and piano, including *Erkönig*, based on poems and written by a German composer.

ANSWER: Franz Schubert’s lieder [or Franz Peter Schubert’s art song cycles] <CV>

19. This philosopher criticized the “pragmatic” method of one subject for attempting to provide moral lessons that it argues leaders never listen to, a method he considered as part of that subject’s “reflective” approach. This philosopher presented the state, civil society, and family as respectively representing moments of individuality, particularity, and universality. This philosopher also presented the state as the union of the “subjective particular” with an “objective universal” in a (\*) compilation of lectures that claims Africa has not exhibited development. This philosopher, who formulated the concept of “ethical life”, described a “struggle to the death” in which self-conscious beings recognize each other in a passage called the “master-slave dialectic.” For 10 points, name this author of *The Philosophy of Right* and *The Phenomenology of Spirit*.

ANSWER: Georg Friedrich Wilhelm Hegel <WA>

20. An essay about this author poses the question “Can we, without renouncing our individuality, satisfy our aspirations to universality?” In one of his novels, the bandit Brisatesta and his wife Clairwil mentor the title character, who mocks the papacy during an audience with Pius VI. Another of his novels is narrated to Madame de Lorsagne by a character who suffers the many “misfortunes of (\*) virtue”. A Simone de Beauvoir essay asks “Must We Burn” this author, who wrote two novels about the daughters of Monsieur de Bertole and a novel in which four libertines lock themselves in a castle for four months. This man’s time in the Charenton asylum was the subject of a Peter Weiss play in which he directs a production about Jean-Paul Marat. For 10 points, name this author of *Juliette*, *Justine*, and *120 Days of Sodom*, a French aristocrat who lends his name to a term for erotic cruelty.

ANSWER: the Marquis de Sade [or Donatien Alphonse François de Sade] <RC>

## Bonuses

1. Morris Fiorina theorized a retrospective version of this political action while Anthony Downs thought people acquired information about doing this as the by-product of everyday life. For 10 points each:

[10] Identify this action that V.O. Key argued could successfully be used to hold politicians accountable in a “reward-punish” model of it.

ANSWER: **voting** [or obvious equivalents, such as casting a **vote**; do not prompt on “elections”]

[10] This trait, the psychological identification of a person with a political faction, is one of the strongest determinants of vote choice for individuals. The Michigan Model puts this trait at the forefront of its “funnel of causality.”

ANSWER: **partisanship** [or word forms, such as **partisan**]

[10] Experiments have found that the threat of revealing that a person did not vote to neighbors is more effective than appeals to civic-mindedness at increasing this measure, which is often depressed in campaigns with many attack ads.

ANSWER: voter **turnout** <CC>

2. The title character of this novel takes on Bertuccio as a valet after recovering the treasure described by Abbé Faria during their imprisonment in the Château d'If. For 10 points each:

[10] Identify this Alexandre Dumas novel in which Edmond Dantes adopts the title aristocratic alias to take revenge against those who wronged him.

ANSWER: *The **Count of Monte Cristo*** [or *Le **Comte de Monte-Cristo***]

[10] Dantes's three biggest enemies are the prosecutor Villefort, the Comte de Morcerf, and this man, his former shipmate. This banker's wife Hermine has an illegitimate son with Villefort, while his daughter Eugénie has a lesbian affair with Louise d'Armilly.

ANSWER: Baron **Danglars**

[10] At one point, Danglars is kidnapped by this Italian shepherd-turned bandit king, an ally of Dantes who also briefly captures Albert de Morcerf.

ANSWER: **Luigi** Vampa [Luigi **Vampa**] <RC>

3. This city controlled Sardinia and Corsica for a time. For 10 points each:

[10] Name this Ligurian city, the birthplace of Christopher Columbus. This city had a longstanding rivalry with Venice over naval supremacy.

ANSWER: Most Serene Republic of **Genoa** [or Serenissima Repubblica di **Genova**]

[10] This Genoese *condottiere* and admiral helped restore Genoese republicanism by reforming its constitution to create 28 *alberghi*, or clans. He accompanied Charles V on the disastrous Algiers Expedition in 1541.

ANSWER: Andrea **Doria**

[10] The Black Death is believed to have first entered Europe from this Genoese colony on the Black Sea. This home of one of Europe's largest slave markets was purchased from the Golden Horde in 1316.

ANSWER: **Caffa** [or **Feodosia**] <WA>

4. In this book, Peter has a vision of a sheet of unclean animals and then converts Cornelius the Centurion. For 10 points each:

[10] Name this New Testament book, in which Paul travels to many different cities in Asia Minor and Greece before being imprisoned in Rome. It describes the early spread of Christianity by men such as Matthias.

ANSWER: **Acts** of the Apostles

[10] Paul was forced to speak in defense of his missionary activity in Athens at this location. Dionysius and a later Pseudo-Dionysius took an epithet after the name of this place, where Apollo rebuffed the Furies to defend Orestes.

ANSWER: **Areopagus** rock [or **Areopagus** sermon]

[10] A 1913 Eduard Norden paper argued that Athenians worshiped this being. Paul's Areopagus speech referred to an inscription mentioning this being to show that his evangelization was actually in accordance with existing Athenian beliefs.

ANSWER: the **Unknown God** [or **Agnostos** Theos] <PL>

5. Multiplying their wavevector  $k$  with  $\hbar$  gives the crystal momentum. For 10 points each:

[10] Name these quasiparticles which represent vibrations in a crystal structure. They always have 3 acoustic modes and  $3N$  minus 3 optical modes.

ANSWER: phonons

[10] Phonons were originally posited by Debye to show that this quantity has a  $T^3$  dependence at low temperatures. This quantity is the amount of heat needed to raise the temperature of an object by one degree.

ANSWER: heat capacity [or specific heat]

[10] Van Hove singularities arise when this function of the phonons is not differentiable. This quantity in general is the number of available energy states in a given energy interval.

ANSWER: density of states [or DOS] <EM>

6. This opera begins with women writing equations in the air and later features a man delivering a soliloquy on love from a bus. For ten points each:

[10] Name this five-hour opera without a plot, which has “knee plays” occurring between its acts, which include “Train” and “Trial”. Its music references the pre-existing songs “Mr. Bojangles” and “I Feel the Earth Move.”

ANSWER: Einstein on the Beach

[10] This other opera by the same composer as *Einstein on the Beach* depicts Walt Disney on his death bed; it discusses the conspiracy theory that his body was cryogenically stored.

ANSWER: The Perfect American

[10] *Einstein on the Beach* and *The Perfect American* were written by this minimalist American composer of the opera *Satyagraha*. This influential minimalist also scored *The Hours*.

ANSWER: Philip Glass <JC, ed.>

7. Answer some questions about that guardian angel of the genome, p53, for 10 points each:

[10] p53 can arrest the cell cycle in this phase, which occurs immediately before the S phase of interphase. During this part of the cell cycle, the cell can choose to enter a quiescent state or go on to divide.

ANSWER: G1 phase

[10] p53 gets its name from the fact that its mass is fifty-three thousand of these units, which is the typical unit used to measure the mass of a protein.

ANSWER: dalton [or Da; prompt on “atomic mass units” or “amu”]

[10] The ATM gene phosphorylates p53 in response to DNA damage. Said gene is mutated in a condition named for *this symptom* and telangiectasia, which also appears in a genetic disease named for its spinocerebellar form.

ANSWER: ataxia <EM>

8. This woman is likened to Helen in the way she “taught to ignorant men most violent ways” in the poem “No Second Troy” and is considered to be the “Ledaean body” dreamed of in “Among School Children. For 10 points each:

[10] Name this Irish nationalist, a woman who was the dedicatee of the play *The Countess Cathleen* and turned down a number of marriage proposals from its author.

ANSWER: Maud Gonne [or Maud Gonne MacBride]

[10] Maud Gonne inspired a lot of poetry by this Irish author of “The Lake Isle of Innisfree”, “Sailing to Byzantium”, and “The Second Coming”.

ANSWER: William Butler Yeats

[10] Gonne married John MacBride, who was referred to as a “drunken, vainglorious lout” in this Yeats poem, which begins “I have met them at close of day, coming with vivid faces” and repeats the line “a terrible beauty is born”.

ANSWER: “Easter, 1916” <RC>

9. This presidential candidate advocated for the creation of a “Medicare lock box” which would prevent Medicare taxes from being used for anything except Medicare or paying down the debt. For 10 points each:

[10] Name this Presidential candidate, whose father was one of only three Southern Democratic senators to not sign the Southern Manifesto, though he did vote against the Civil Rights Act of 1964.

ANSWER: Albert Arnold “Al” Gore, Jr.

[10] Al Gore’s presidential run came to a sketchy end in the case *Bush v. Gore*, which decided that the recounts in this southern state simply had to stop.

ANSWER: Florida [or FL]

[10] This lawyer represented George W. Bush during *Bush v. Gore* and also served as his first Solicitor General.

ANSWER: Theodore Bevery Olson <WA>

10. An essay by Martin Heidegger argues that great examples of these things both “give to things their look” and help historical communities understand what is noble and matters in life. For 10 points each:

[10] Identify these things, whose “aura” is sublimated in modern times because reproductions of them are outside the “sphere of authenticity” according to an essay by Walter Benjamin.

ANSWER: works of art [or artworks; or obvious equivalents]

[10] This American pragmatist developed his aesthetic theory, based on the exchange between the “live creature” of man and his environment, in *Art as Experience*. He also wrote *Democracy and Education*.

ANSWER: John Dewey

[10] This long-time art critic for *The Nation* coined a term for what he called “an atmosphere of art theory” in his influential essay, “The Artworld.”

ANSWER: Arthur Danto <WA>

11. A protest song by Peter Gabriel in honor of this man contains the Xhosa lyrics “Yihla Moja!”, roughly meaning “Come to me, spirit!” For 10 points each:

[10] Name this founder of the Black Consciousness movement, a South African activist who was beaten by police and then left to die in prison in 1977.

ANSWER: Steven Biko

[10] This system of anti-black laws and restrictions was the primary cause opposed by Steven Biko, who helped organize the Soweto riots to draw attention to its anti-indigenous language laws.

ANSWER: apartheid

[10] This man was prime minister of South Africa during Biko’s death. This man, who pushed Ian Smith to cede power in Rhodesia, had previously been Minister of Justice during the Rivonia trial of Nelson Mandela.

ANSWER: B.J. Vorster [or Balthazar Johannes Vorster; or John Vorster] <MJ>

12. This church’s Sassetti Chapel contains a fresco by Domenico Ghirlandaio. For 10 points each:

[10] Name this church, whose altar contained a Maesta by Cimabue showing a blue-robed Mary holding an infant Jesus before that painting was moved to the Uffizi gallery.

ANSWER: Santa Trinita [or Holy Trinity]

[10] This saint is the subject of Ghirlandaio’s frescoes in the Sassetti chapel, as well as a Cimabue Madonna with four angels. This patron saint of animals is frequently depicted giving his sermon to the birds.

ANSWER: Saint Francis of Assisi [or San Francesco d’Assisi]

[10] This painter of a *Sermon to the Birds* and pupil of Cimabue painted the *Kiss of Judas* as part of a series of frescoes for the Scrovegni Chapel in Padua.

ANSWER: Giotto di Bondone [or Giotto di Bondone] <WA>

13. One of these compounds forms a bond with a boronic acid in the Liebeskind-Srogl coupling. For 10 points each:

[10] Name this sulfur-containing functional group which is found in acetyl-CoA and other derivatives of coenzyme A. This kind of bond also is formed between ubiquitin and its substrate.

ANSWER: thioester

[10] Speaking of sulfur, thiols are sometimes named for the fact that they can bind to this element. Its dimethyl form is a really poisonous NMR standard that killed Karen Wetterhahn, and it is also present in the preservative thimerosal.

ANSWER: mercury

[10] An amalgam of zinc and mercury is used as a reducing agent in this reaction, which is used as a gentler, acidic alternative to the Wolff-Kishner reduction. It is used to transform ketones to alkanes.

ANSWER: Clemmensen reduction

14. This poet, who parodied *The Waste Land* in his “Poem beginning ‘The’”, was the leading figure in a group that also included Charles Reznikoff and George Oppen. For 10 points each:

[10] Name this founder of the Objectivist poets, whose magnum opus is a 24-part autobiographical epic called “A”.

ANSWER: Louis Zukofsky

[10] The seventeenth section of Zukofsky’s “A” is an homage to this fellow American poet of *Pictures from Brueghel* and *Paterson*, whose collection *Spring and All* contains “The Red Wheelbarrow”.

ANSWER: William Carlos Williams [or WCW]

[10] Zukofsky was also influenced by this Bostonian author of the novels *Democracy* and *Esther*, who described his visit to the Paris Exposition in “The Dynamo and the Virgin”, a section from his 1907 autobiography.

ANSWER: Henry Brooks Adams

15. When this chord is used to prepare a dominant chord in common-practice voice leading, it is almost always presented in first inversion so as to avoid a tritone leap in the bass. For 10 points each:

[10] Name this type of chord, a major triad built on the flattened second scale degree of a given key.

ANSWER: **Neapolitan** chord [or **Neapolitan** sixth]

[10] This composer of the opera *Griselda* ring-led the Neapolitan school of composers, for whom the Neapolitan chord is named. His son Domenico produced a whopping 555 harpsichord sonatas.

ANSWER: Alessandro **Scarlatti**

[10] This German composer of “Für Elise” used Neapolitan chords extensively in the third movements of his “Appassionata” and “Moonlight” piano sonatas.

ANSWER: Ludwig von **Beethoven** <MJ>

16. In this novel, the journalist Oscar Fate takes Rosa Amalfitano to the United States in order to escape an ongoing rash of murders of women in Santa Teresa, a fictionalized version of Ciudad Juarez. For 10 points each:

[10] Identify this 2004 novel, published a year after its author’s death, whose first part focuses on a quartet of literary critics in search of the reclusive German author “Benno von Archimboldi”.

ANSWER: **2666**

[10] 2666 is a novel by this Chilean author who also used Santa Teresa as the setting for part of a novel about the Visceral Realists’ search for Cesarea Tinajero, called *The Savage Detectives*.

ANSWER: Roberto **Bolaño** Ávalos

[10] Bolaño titled a collection of stories and essays for “The Insufferable” one of these figures, pampas-dwelling cattle herders who gave their name to a type of literature exemplified by the epic poem *Martin Fierro*.

ANSWER: **gauchos** <RC>

17. According to Plutarch, this leader surrendered by riding his horse up to the enemy commander, dismounting, and then stripping himself of his arms and armour. For 10 points each:

[10] Name this leader of the Arverni, who won at Gergovia but was finally captured and defeated at the siege of Alesia.

ANSWER: **Vercingetorix**

[10] This Roman general captured Vercingetorix during his nine-year campaign of plunder and conquest in Gaul, which he said was divided into three parts in his *Commentarii de Bello Gallico*.

ANSWER: Gaius Julius **Caesar** [or Gaius Iulius **Caesar**]

[10] Caesar presented this tribal group’s territory as the first of the three divisions of Gaul, along with the parts belonging to the Aquitani and Celtae. Sub-tribes in this group, described by Caesar as the fiercest in Gaul, included the warlike Nervii and the numerous Bellovaci.

ANSWER: **Belgae** <SJ, ed.>

18. Answer the following about wide-open expanses in ancient Egyptian mythology, for 10 points each.

[10] This evil god with tall flat-topped ears and a thin snout ruled the “Red Land,” a.k.a. the vast desert anywhere not along the Nile. He ripped his brother Osiris into pieces.

ANSWER: **Set** [or **Seth**; or **Seteh**; prompt on “Typhon” if there are any ancient Greeks playing this set]

[10] This lush paradise is the destination of people whose hearts weigh less than the feather of Ma’at after death. In English-language sources, it is usually identified by the plant life that grows there.

ANSWER: **Field of Reeds** [or **Aaru**; prompt on “Next World;” prompt on “Du’at”]

[10] In the Ogdoad cosmology, this husband of Naunet represents the endless cosmic waters or cosmic abyss, from which the first landmass emerged.

ANSWER: **Nun** [or **Nu**; do NOT accept “Nut;” if necessary, ask teams to spell their answer]

19. A pulsar-driven cloud of energetic electrons trapped within this structure’s magnetic field emits synchrotron radiation. For 10 points each:

[10] Name this thousand-year old supernova remnant whose radiation is used to study the Sun’s corona and Saturn’s moon Titan with a namesake pulsar in its center, also known as Messier 1.

ANSWER: **Crab** Nebula

[10] The Crab Nebula is located in this constellation which marked the Sun’s location in the spring equinox and which forms a complex with Auriga.

ANSWER: **Taurus**

[10] The Crab Nebula is often used to calibrate instruments that detect photons in this range, which is often emitted by binary stars that have matter moving from a donor to an accretor.

ANSWER: **X-ray**



20. This political issue also called the English Question is named for the constituency of the MP who first brought it up. For 10 points each:

[10] Name this political debate on whether MPs at Westminster representing constituents from regions with devolved parliaments should vote on laws that solely concern England.

ANSWER: the **West Lothian** question [prompt on “English votes for English laws”]

[10] David Cameron pledged to solve the West Lothian question in a speech that promised more devolution to this constituent country of the United Kingdom that had a failed independence referendum in September 2014.

ANSWER: **Scotland** [or **Alba**]

[10] This party’s leader Nigel Farage called on Scottish MPs to recuse from voting on English affairs until a constitutional convention. This far-right party broke into Westminster with Douglas Carswell’s by-election win.

ANSWER: **UKIP** [pronounced YOU-kip out loud, or read normally as an acronym; or **UK Independence** Party; or **United Kingdom Independence** Party] <PL>