

SUBMIT 2014: “sometimes referred to as Groper[citation needed]”

Editors Packet 4

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Tossups

1. **A man in a grey coat covers his mouth as he peers off the central structure of one painting by this artist, which also features a man in a top hat walking with a prostitute. This artist’s brother reads in a grove with his back toward the viewer in *The Orange Trees*, and his silhouette appears on a panel on the right side of another painting by this artist, *Young Man at His Window*. This painter of *The Europe Bridge* showed three (\*) bare-backed men leaning down and conversing as they clean the title surface in another work. This painter of *The Floor Scrapers* is most famous for a giant canvas that is full of people holding umbrellas. For 10 points, name this Impressionist painter of *Paris Street, Rainy Day*.**

ANSWER: Gustave Caillebotte

2. **In the 1960s, Clementi and Raimondi calculated these quantities used self consistent field wave functions instead of the usual Slater-type orbitals, allowing them to better account for penetration at the core. This quantity is often used as a tunable parameter when doing calculations using variational methods; for instance, the ground state of the helium atom is minimized when this quantity is 27/16. This quantity can be calculated using (\*) Slater’s rules, an example of which is that 1s electrons decrease the value of this quantity by 0.30, and this quantity is taken over the covalent radius squared in the Allred-Rochow scale of electronegativity. This quantity is different from the number of protons times the proton’s charge due to electron shielding. For 10 points, name this measure of how much positive charge an electron feels from the nucleus.**

ANSWER: effective nuclear charge (accept Z-effective; accept shielding constants until “electronegativity”; prompt on “Z” or “core charge”)

3. **A recent novel set in this country includes a series of illustrated zodiac charts introducing several sections of the novel and follows the gold prospector Walter Moody. A short story by an author from this country includes an episode in which Jonathan Trout beats Stanley Burnell to be the first in the water and is composed of thirteen separate vignettes set “At the Bay.” Another novel from this country follows an artist who secludes herself in the “Tower” and builds a relationship with the physically abused Simon (\*) Gillayley. A short story from this country opens with several men placing a marquee in front of a pair of karaka-trees in preparation for the title event, and ends when Laura brings a basket of food to the family of the dead cart driver Scott. For 10 points, name this country home to Eleanor Catton, Keri Hulme, and the author of “The Garden Party,” Katherine Mansfield.**

ANSWER: New Zealand

4. **One of this man’s ethnographic works was partially based on his extensive correspondence with Ely S. Parker. This anthropologist’s arguments about societal advancement being driven by technology were incorporated into Friedrich Engels’ *The Origins of Family, Private Property, and the State*. This thinker cited contemporary examples of each stage of society except (\*) “lower savagery” in a work that argued that humans culturally evolved from savagery to barbarism to civilization. In another work, this man asserted that matriarchal structures had initially been the norm among human families and observed the “bifurcate merging” that erased the distinction between lineal and collateral lines of Iroquois families. For 10 points, name this American anthropologist who compared kinship by blood and marriage in *Systems of Consanguinity and Affinity of the Human Family*.**

ANSWER: Lewis Henry Morgan

5. During one attack on this city, Catherine Cheynel allegedly poured boiling soup on the invaders. This city was the subject of a letter by Cardinal Jacopo Sadoletto, and the capture of this city was the object of the Fraternity of the Spoon. The Escalade festival celebrates Charles Emmanuel of Savoy's failure to take this city. This city, the home of libertine groups like the Spirituels and Patriots, was the site of a revolt led by (\*) Ami Perrin. William Farel was a minister in this city where the anti-trinitarian Michael Servetus was burnt at the stake. One leader of this city established a Consistory of twelve elders here with his *Ecclesiastical Ordinances*. For 10 points, name this city once ruled by the author of *Institutes of the Christian Religion*, John Calvin.

ANSWER: Geneva (or Genève)

6. In Boris Vian's *Froth on the Daydream*, Chloe becomes obsessed with an author named for this real-life writer. In one play by this author, Senator Clarke tells the protagonist to think of Uncle Sam and Thomas's mother, Mary. In that play, Lizzie MacKay ultimately signs an affidavit claiming that a black man assaulted her on a train. In another work, this author wrote of a man who takes the code-name Raskolnikov and shoots Hoederer for kissing his wife; that man is Hugo (\*) Barine. One play by this author of the *Respectful Prostitute* features a "bronze ornament" on the mantelpiece and a Valet with no eyelids. That play by this author ends with Estelle stabbing a lesbian post-office clerk with a paper-knife and a deserter named Garcin saying "let's get on with it." For 10 points, name this author of *Dirty Hands* who included the line "hell is other people" in his play *No Exit*.

ANSWER: Jean-Paul Sartre (accept Jean-Sol Partre on the first clue, *obviously*)

7. Quine critiqued one concept of a member of this school for not providing an eliminative definition of the term "is at." One member of this school asserted that Einstein's approach to special relativity was superior to the Lorentz-Fitzgerald hypothesis due to its simplicity. One member of this school defined the criterion of significance for theoretical terms as a relation with other such terms. That philosopher asserted that pseudo-statements can be derived from the misapplication of either vocabulary or syntax, which renders metaphysical propositions (\*) meaningless. This school asserted that two levels of scientific thought could allow the emergence of "unity of science," and its 1929 manifesto "A Scientific Worldview" was published by Hans Hahn, Otto Neurath, and Rudolf Carnap. For 10 points, name this group of logical positivists who coalesced around Moritz Schlick in a European city.

ANSWER: Vienna Circle

8. Screening for this disease may include molecular tests to look for mutations in FLT3-R and NPM-1, as well as BM bx with flow cytometry. Staining of myeloperoxidase can be used to test for the acute form of this disease and it is the presence of myeloperoxidase that is responsible for the green color of chloromas, which are most often found in patients with this disease. (\*) One abnormality linked to this disease makes a BCR-ABL gene by reciprocal translocation between chromosomes 9 and 22. That is the Philadelphia Chromosome and often results in the chronic myelogenous form of this disease. In addition to that form, this disease has a lymphocytic variety which most often affects B-cells. For 10 points, name this cancer of the blood or marrow where non-functional white blood cells replicate out of control.

ANSWER: leukemia (accept lymphoma until myeloperoxidase)

9. This man led "Operation 10,000," an initiative to get 10,000 people to enroll in one program. This man brought Adam Yarmolinsky with him to head up one initiative, he man was assisted by Warren Wiggins in his most famous capacity. This man founded the National Clearinghouse for Legal Services, which now bears his name, and he replaced a candidate who was dropped from a nomination despite being supported "1000 percent" due to his depression. This man, who replaced Thomas Eagleton as George (\*) McGovern's running mate, more famously was the head of Johnson's "War on Poverty," overseeing programs like VISTA and Head Start. He is most famous for founding and being the first head of a program to promote "global friendship." For 10 points, name this friend of JFK who founded the Peace Corps and whose daughter married Arnold Schwarzenegger.

ANSWER: Robert Sargent Shriver

10. **Andrew Hamblin is known for his association with these animals, and on *Parks and Recreation*, a liquor named for this animal is “basically rat poison.” A prize named for Teddy Roosevelt offers \$50,000 to anyone who brings a certain kind of this animal in good health to the Bronx Zoo, and a recurring Michael Kupperman comic duo features this animal paired with (\*) bacon.** One character with this name owns the car Li'l Bandit and wishes they had pee-wee hockey when he was a lad. Another man named after this animal has explosives implanted into his arteries which will go off if he does not rescue the President in 24 hours. For 10 points, name this animal that names the hero of *Escape from New York* and the protagonist of the *Metal Gear* game series, a limbless slithery reptile.

ANSWER: snakes (accept more specific kinds of snakes)

11. **One character in this novel is frustrated when his joke comparing gypsies to crows is not understood. This novel ends with a crowd cheering as the pier lights turn off, and the protagonist of this novel makes several clumsy efforts to educate the eighteen-year-old Reginald Cardinal about the “birds and the bees.” At a gathering in this novel where Harry Smith preaches on the dignity of the common man, (\*) Dr. Carlisle realizes one character is lying about his profession. The protagonist once worked for a man who fired his Jewish maids and often entertained Joachim von Ribbentrop, and he tries to improve his “bantering” skills while interacting with his new American boss, Faraday.** For 10 points, name this novel centered on a journey to visit Ms. Kenton, a work about the butler Stevens by Kazuo Ishiguro.

ANSWER: The *Remains of the Day*

12. **The horns play octaves to break from a piano and timpani duet at the beginning of this composer’s first concerto. G-sharp and C-sharp are added to a pantomime chord that is modified throughout “The Chase,” the final piece in a suite by this composer. A xylophone solo in one of his compositions exemplifies his style of “night music.” This composer of *Music for Strings, Percussion, and* (\*) *Celesta* used the “intermezzo interrotto” fourth movement of one piece to parody the “invasion theme” from the *Leningrad Symphony*; that work is better known for featuring sets of two instruments playing together in its second movement “Game of Pairs.” This composer of *Concerto for Orchestra* arranged 153 piano pieces in order of difficulty for another collection.** For 10 points, name this Hungarian composer of *Duke Bluebeard’s Castle* and *Mikrokosmos*.

ANSWER: Béla Bartók

13. **In the case of ultrarelativistic interacting particles, the Weizsacker–Williams method gives a simplifying approximation of one of the interacting particles as an equivalent one of these particles. The theory of these particles extends Yukawa theory by using these particles as internal propagators instead of a scalar field. Particles coupled to an external field may drop to a (\*) lower energy level and give off one or more of these particles in stimulated emission. The force mediated by these particles falls off as one over  $r$  squared, allowing much longer interactions than other gauge bosons.** For 10 points, name these gauge bosons which mediate the electromagnetic force and are the quanta of light.

ANSWER: photon

14. **In the Kalevala, Kullervo transforms some cattle into wolves and these creatures, resulting in the death of Ilmarinen’s wife. One of these creatures married Hwanung and gave birth to Dangun, the founder of the Gojoseon kingdom. Polyphonte fell in love with one of these creatures, resulting in the birth of Agrius and Oreius. The Arkteia festival at Brauron involved girls imitating these creatures to appease (\*) Artemis.** Although it is not a monkey, one of these animals named Jambavan served as an advisor to Sugriva, an ally of Rama. Ilmarinen builds a spear for Väinämöinen so he may slay one of these creatures named Otso; that one is often referred to as “honey-paws.” A daughter of Lycaon who was transformed into one of these animals was the mother

of Arcas by Zeus. For 10 points, name these animals exemplified by Callisto, who was placed among the stars as Ursa Major.

ANSWER: bears

15. In a move attributed to Timothy Richard, one side in this conflict offered the administration of their entire country for an alliance with the United Kingdom. The Detring Mission was sent by the losing side to help end this war after which Charles Denby played a key role in treaty negotiations following it. The Li–Itō Agreement led to this war, the immediate cause of which was the Donghak (\*) Uprising. The Běiyáng Fleet was destroyed during the Battle of Weihaiwei during this conflict in which the Battle of the Yalu River was lost by forces loyal to Empress Cíxǐ. For 10 points, name this conflict ended by the Treaty of Shimonoseki, in which Qīng Dynasty forces faced off against a country led by Emperor Meiji.

ANSWER: First Sino–Japanese War

16. Specific answer required. The founding of this group undermined the authority of the *masands*, and Mata Sahib is known as this group’s “mother.” Members of this group are expected to abide by a code of conduct known as *rahit*. On Baisakhi Day 1699, the first members of this group offered their heads upon the request of their leader and immediately became known as the Panj Pyare; that leader was (\*) Gobind Singh. In order to join this group, an initiate must undergo a ceremony in which sugar water is stirred with a *khanda*, adopt the surname Singh or Kaur, and start wearing the Five K’s. For 10 points, give this term meaning “pure ones,” which denotes the community of Sikhs who have undergone the *amrit* ceremony and fully committed themselves to abstinence from hair cutting, alcohol, halal meat, and adultery.

ANSWER: *Panth* Khalsa (or khalsa order; or khalsa nation; prompt on “Sikhs”)

17. The link between Lie algebras and Lie groups is a map with this name; that map involves applying this function to the infinitesimal elements of the Lie algebra, which are the generators of the Lie group. The Baker–Campbell–Hausdorff formula gives a way to find the product of this function applied to two non-commuting operators. Applying this to two irrational algebraic numbers always results in a transcendental number according to the (\*) Gelfond–Schneider theorem. Like the geometric distribution, the distribution with this name is memoryless, and its mean equals one over its rate parameter. This function solves the differential equation  $y$  equals  $y$  prime. For 10 points, name this function which is its own derivative and is the inverse function of the natural logarithm.

ANSWER: exponential function or distribution or map (accept  $e$  to the  $x$  or  $e$  to the negative  $x$  or other equivalents of exponential; accept exponentiating)

18. One of these events in 1949 occurred due to the publishing of a Burton LeDoux medical article and to support the adoption of the Rand Formula. Nick Gargan, Julian Gryshko and Peter Markunas were murdered at a parade during one of these events organized by the WUL in Estevan, Saskatchewan. One of these events was the cause of the U.K. General Strike, and the newly implemented MINOS (\*) system was partially to blame for one of these in Great Britain led by Arthur Scargill. The NACODS and TUC refused to join that action, which was opposed by Ian McGregor’s NCB. Members of the NUM during that event were called “the enemy within” by Margaret Thatcher. For 10 points, name these events that frequently happen after pit closures, in which mine workers refuse to go to work.

ANSWER: miners’ strikes (accept coal miners’ strikes or asbestos miners’ strikes; prompt on “strikes”)

19. The Case Study House Program began in this city that also housed Irving Gill’s Dodge House prior to its demolition. The Morphosis firm was founded by a Pritzker winner based in this city, Thom Mayne. The Mayan Revival Style Ennis House, designed by Frank Lloyd Wright, is located in this city where his son, Frank Lloyd Wright Jr. was based. An architect associated with this city was passed over for the design of the

**Museum of Contemporary Art for Arata Isozaki, but later worked with Yasuhisa Toyota on a building in this city that houses a philharmonic led by Gustavo (\*) Dudamel. That building in this city had to have its stainless steel exterior sanded down to reduce glare. For 10 points, name this American city, the home of the Walt Disney Concert Hall and the J. Paul Getty Art Museum.**

ANSWER: Los Angeles, California

**20. One character in this story is so happy that he commends his servant instead of beating him when that servant, Negrillon, fakes a leg injury and blows off his work. A character in this story is believed to have been abandoned at her parents' doorstep by a band of Texans, but her mother attributes the occurrence to Providence. At the end of this story, one character discovers a letter indicating that his mother was "cursed with the brand of slavery" after he had ordered that a (\*) willow crib and a collection of gowns be hurled into a fire. In this story, the title character's mother runs away with her into the bayou after being ordered to leave by her disgusted husband Armand Aubigny. For 10 points, name this short story about a product of miscegenation in Louisiana, written by Kate Chopin.**

ANSWER: "Desiree's Baby"

**21. In one of this author's works, Imogene Graham realizes she doesn't love Theodore Colville after a car crash, while another ends with the husband of Ben Halleck's love interest being shot in frontier Arizona. This author wrote about Conrad's death in a streetcar strike in one novel. One of his protagonists employs Zerilla Dewey as a typist and is interviewed by Marcia Gaylord's husband, Bartley (\*) Hubbard. This non-Caldwell author of *Indian Summer* wrote about the anarchist Lindau, the racist Colonel Woodburn and the businessman Dryfoos struggling to control the magazine *Every Other Week* in one work. In another novel by him, Penelope marries Tom Corey and the title character thwarts a sale planned by Milton Rogers. For 10 points, name this author of *A Modern Instance* and *A Hazard of New Fortunes*, who wrote about a paint merchant in *The Rise of Silas Lapham*.**

ANSWER: William Dean Howells

## Bonuses

1. Mesophyll cells contain this enzyme instead of RuBisCO and thus don't waste energy on photorespiration. For 10 points each:

[10] Name this enzyme which turns its namesake compound and bicarbonate into oxaloacetate.

ANSWER: **PEP carboxylase** (or **phosphoenolpyruvate carboxylase**; do not accept "PEP")

[10] PEP carboxylase is used in plants that undergo C4 carbon fixation, unlike plants that use this means to fix carbon. In this light-independent cycle, plants use RuBisCO to turn carbon dioxide into G3P.

ANSWER: **Calvin**-Benson cycle (accept **light-independent** or **dark** reactions)

[10] Oxaloacetate formed by PEP carboxylase is turned into malate and sent to these cells. Malate is turned into back into CO<sub>2</sub> and enters the Calvin cycle, but with less loss because these cells have less oxygen.

ANSWER: **bundle sheath**

2. This three-headed dog guards the gates of Hades, and he was once pacified with a honey cake by Aeneas. For 10 points each:

[10] Name this offspring of Echidna and Typhon who was captured by Heracles without the use of weapons.

ANSWER: **Cerberus** (or **Kerberos**)

[10] This other offspring of Echidna and Typhon is a two-headed dog owned by Geryon. He guards Geryon's cattle with Eurytion and they are both slain by Heracles.

ANSWER: **Orthrus** (or **Orthus**)

[10] This offspring of Echidna was turned into stone by Zeus after being involved in a paradoxical situation with the hunting dog Laelaps. This creature was destined never to be caught.

ANSWER: **Teumessian fox** (or **Cadmean vixen**)

3. This book relates the story of a boy named "Sam" who finds a dead mole, which leads him to fear that his mother might also die. For 10 points each:

[10] Name this text from psychology that posits the "eight stages of psychosocial development."

ANSWER: **Childhood and Society**

[10] *Childhood and Society* is by this German-American psychologist, who also wrote psychological studies of famous men like Gandhi and formulated the concept of an "identity crisis."

ANSWER: Erik Homburger **Erikson**

[10] Erikson wrote this other psycho-biography of a religious figure to exemplify the "identity crisis." This work argues that the title man spent much of his life in a "passive state" before discovering himself.

ANSWER: **Young Man Luther: A Study in Psychoanalysis and History**

4. This man was enraged by Quintus Fabius's murder of one of his generals and later said "Woe to the vanquished!" when told that he was taking too much gold. For 10 points each:

[10] Name this Gallic leader who sacked Rome after the 390 BCE Battle of Allia.

ANSWER: **Brennus** (or **Brennos**, accept **Brennius**)

[10] According to some highly reliable Roman historians, this man arrived just as Brennus was collecting his ransom and told him "not gold, but steel redeems the native land." This "Second Founder of Rome" and five time dictator proceeded to drive the Gauls out of the city.

ANSWER: Marcus Furius **Camillus**

[10] Camillus also defeated these people at the Battle of Veii. This Italian culture was ultimately supplanted by Rome.

ANSWER: **Etruscans** (accept **Rasenna** or **Tyrrhenians**)

5. This character is implied to be having an affair with the narrator, who sometimes brings her a bottle of *Nuit d'Amour*, and becomes angry that she is being treated as a “cosmic last resort.” For 10 points each:

[10] Name this woman who catches a “bitter allusion to the sea” and spaces out while a man is addressing her, thinking instead about enormous beds and perfumes in France.

ANSWER: the **Dover Bitch** (prompt on the addressee of “Dover Beach,” prompt on Matthew Arnold’s wife, lover, girlfriend, etc.)

[10] This American poet whose “The Transparent Man” is narrated by a woman dying of leukemia also wrote “The Dover Bitch.”

ANSWER: Anthony **Hecht**

[10] Hecht’s poem “More Light! More Light!”, in which a Pole is forced to dig a grave for himself and two Jews, focuses on the atrocities of this event. Yevgeny Yevtushenko’s “Babi Yar” also memorializes victims of this event.

ANSWER: the **Holocaust** (or the **Shoah**; prompt on “World War II”)

6. This act was upheld in *Roth v. United States* but later challenged in the more awesomely-named *United States v. One Package of Japanese Pessaries*. For 10 points each:

[10] Identify this 1873 act named for the founder of the “New York Society for the Suppression of Vice.” which banned the sending of “obscene” materials in the mail.

ANSWER: **Comstock** Act (or Laws)

[10] This founder of the American Birth Control League was frequently arrested for violating the Comstock laws and challenged them with her newspaper *The Woman Rebel*.

ANSWER: Margaret **Sanger**

[10] In his majority decision for *Roth v. United States*, this justice opined that obscenity was that which appealed to the “prurient interest” of the “average person.” He later changed his views and authored a dissent in *Miller v. California*.

ANSWER: William Joseph **Brennan**, Jr.

7. This artist wears a bonnet and an oversized frilly white collar in a self-portrait in which she turns away from a painting of a fiddler. For 10 points each:

[10] Name this Dutch Golden Age artist of many genre scenes featuring musicians, such as *Merry Company*. A young woman keeps to her sewing, rebuffing an offer of money from an older man, in her painting *The Proposition*.

ANSWER: Judith **Leyster**

[10] Leyster was accepted to the painters’ guild in this city. Jacob van Ruisdael painted a “View of” this city, whose name was taken up by a New York neighborhood that had its own artistic “Renaissance” in the 1920s.

ANSWER: **Haarlem**

[10] Haarlem houses an art museum named for this longtime resident, who painted an enviably-mustachioed man in *The Laughing Cavalier* and an old woman with an owl in *Malle Babbe*.

ANSWER: Frans **Hals**

8. The Chicxulub crater is thought to be from the impact that caused this event, and this event was less severe than a similar event that happened between the Permian and Triassic periods. For 10 points each:

[10] Name this event 65 million years ago in which most animal and plant species on earth, including the dinosaurs, abruptly died.

ANSWER: **Cretaceous–Paleogene** or **Cretaceous–Tertiary** or **K–Pg** or **K–T** extinction (prompt on “extinction of the dinosaurs” or “meteor that caused the extinction” or descriptive answers that don’t mention the periods)

[10] This other event was a contender for the cause of the K–T extinction, but it’s been less popular since the Alvarez hypothesis came into vogue. Lava from this event left behind massive basalt beds more than a mile thick in the region it’s named for.

ANSWER: **Deccan** eruptions (accept descriptive answers like the eruptions that caused the **Deccan** Traps; prompt

on “volcanic eruptions”)

[10] The Cretaceous period is named for its abundance of this white rock composed mostly of calcite, with smaller amounts of silt and clay. Its softness and propensity to smear make it useful for writing.

ANSWER: **chalk**

9. The beginning of this poem addresses Postumus and proposes that he hang himself from the Aemilian bridge or find a boy lover instead of getting married. For 10 points each:

[10] Name this poem written as a diatribe against marriage and women. It includes the famous line “*Sed quis custodiet ipsos custodes?*”, or “But who will guard the guards themselves?”

ANSWER: **Satire VI**

[10] This Roman poet included detailed discussion of the mores and traditions of Roman society in his *Satires*.

ANSWER: **Juvenal**

[10] Juvenal’s fragmentary last *Satire* describes the certain advantages that people with this occupation had over normal citizens. Plautus created one of *these* people who abducts Philocomasium for himself and inspired a famous archetype in Commedia dell’arte.

ANSWER: Roman **soldiers** (or **miles** or **milites**)

10. Joseph Joachim debuted this composer’s most recognizable violin piece, which has a first movement that is classified as a prelude to the second movement *adagio*. For 10 points each:

[10] Name this German Romantic composer of three violin concerti, the first of which is in G minor. This composer drew from Lord Byron’s *Hebrew Melodies* and used a cello to represent the singing of the title prayer in *Kol Nidrei*.

ANSWER: Max **Bruch**

[10] This English composer of *The Lark Ascending* studied under Bruch. He employed a string quartet and two string orchestras in his *Fantasia on a Theme of Thomas Tallis*.

ANSWER: Ralph **Vaughan Williams**

[10] One of Bruch’s own fantasies, the four-movement *Scottish Fantasy*, was dedicated to this Spanish violin virtuoso. This man’s *Zigeunerweisen*, or *Gypsy Airs*, finishes *Allegro molto vivace* and extensively employs spiccato.

ANSWER: Pablo de **Sarasate**

11. Answer some questions about one of the world cradles of culture, Athens. For 10 points each:

[10] Athens, Georgia’s music scene birthed many bands, including this group that featured Michael Stipe on vocals. Their many hits include “Everybody Hurts,” “Man on the Moon,” “Losing My Religion,” and “Shiny Happy People.”

ANSWER: **R.E.M.**

[10] This alt-country band is also from Athens, with members including Mike Cooley and Patterson Hood. They’re known for sprawling concept albums like *The Dirty South* and *Southern Rock Opera*.

ANSWER: **Drive-By Truckers**

[10] The B-52s, who are also from Athens, recorded this hit song about the title sea creature. It’s spotted at a party where “everybody had matching towels,” and is mistaken for an inanimate object.

ANSWER: **“Rock Lobster”**

12. This quantity may be related to susceptibility or the relative permittivity by the Clausius-Mossotti relation. For 10 points each:

[10] Name this quantity which measures how much an atom or molecule will develop a dipole moment in response to an external electric field.

ANSWER: electric **polarizability** (do not accept “polarization” or anything else)

[10] This theory classifies molecules based on whether they are larger and more polarizable or smaller and less



polarizable.

ANSWER: Pearson's **hard-soft** acid-base theory (accept **HSAB**)

[10] Another theory of acids and bases due to Arrhenius describes bases as species that create hydroxide ions and acids as those that make this ion, H<sub>3</sub>O plus.

ANSWER: **hydronium**

13. Here's a bonus on French authors who mixed creative writing with healthy careers in crime. For 10 points each:

[10] In addition to being the subject of the awesome Robert Louis Stevenson short story "A Lodging for the Night," this lovable brawler and church-looter famously asked "where are the snows of yesteryear?" in his "Ballad of Dead Ladies."

ANSWER: Francois **Villon**

[10] Notable male prostitute and petty larcenist Jean Genet drew on his experiences in prison for several works, including this play in which Lefranc tries to impress Green-Eyes by strangling Maurice.

ANSWER: **Deathwatch** (or **Haute Surveillance**)

[10] This man spent a lot of jail time for sexually abusing his servants and writing about orgies, rape, and murder in classics like *Juliette*, *Justine*, and *120 Days of Sodom*.

ANSWER: Donatien Alphonse François, Marquis de **Sade**

14. Answer the following about skull cups in European history. For 10 points each:

[10] Krum the Horrible, a ruler of these people, drank from Nikephoros I's cranium after the latter died at the Battle of Pliska. A more fortunate Byzantine emperor, Basil II, became known as a "slayer" of these people after blinding legions of them after the Battle of Kleidion.

ANSWER: **Bulgars** (accept **Bulgarians**)

[10] The Pecheneg Khan Kurya made a chalice out of the skull of this man's father, Sviatoslav I. This king of Kiev christianized his kingdom after being informed that Bulgarian Muslims weren't allowed to drink alcohol.

ANSWER: **Vladimir I** Sviatoslavich the **Great** (prompt on "Vladimir" but take any of the other two identifiers)

[10] Ulf the Quarrelsome, a prolific skull cup creator and user, allegedly killed Brodir of Man by wrapping his entrails around a tree at this battle. At this battle, the Irish under Brian Boru soundly defeated a Viking force.

ANSWER: Battle of **Clontarf**

15. Name some things that are related to Yom Kippur. For 10 points each:

[10] This ram's horn is blown to symbolize the end of evening prayer services and liturgy with the "big blast," or the *tekiah gedolah*.

ANSWER: **shofar**

[10] Because of the Talmud's restrictions on footwear made of this material, one might see Orthodox Jews wear canvas sneakers on Yom Kippur.

ANSWER: **leather**

[10] This specialized prayer book adapted from the Siddur would be used to recite the prayers that occupy the day. It is also used on Rosh Hashanah.

ANSWER: **machzor** (or **mahzor**)

16. This poet wrote "Out... In the old man-killing parishes / I will feel lost, / Unhappy and at home" in his poem "The Tollund Man." For 10 points each:

[10] Name this poet of collections like *The Haw Lantern*. Another poem by this author describes a "four foot box, a foot for each year" and begins "I sat all morning in the college sick bay."

ANSWER: Seamus **Heaney**

[10] In addition to writing "Mid-Term Break," Heaney used the interjection "So!" to open his translation of this Old English epic poem that features the title character's battles with Grendel, Grendel's mother, and a dragon.

ANSWER: Beowulf

[10] Heaney also adapted *Philoctetes* into this verse drama. It contains an oft quoted passage about “the longed-for tidal wave of justice” that can rise up “once in a lifetime.”

ANSWER: The Cure at Troy: A Version of Sophocles’ ‘Philoctetes’

17. Answer some questions about Kantian epistemology as expressed in *The Critique of Pure Reason*. For 10 points each:

[10] Kant believed that human reason enabled our minds to structure this concept, and he called metaphysics “the cognitions after which reason might strive independently of all” *this*. Empiricists believe that knowledge comes from *this*.

ANSWER: experience

[10] Two answers required. According to Kant’s scheme of classifying propositions in *The Critique of Pure Reason*, these two terms describe the lone type of proposition that is self-contradictory and therefore cannot exist.

ANSWER: analyticity and a posteriori

[10] This argument from the *Critique* asserts that without the *a priori* concepts of space and time, which Kant called “categories,” we cannot lay the foundation for understanding our unified field of experience.

ANSWER: transcendental deduction

18. The first ruler of this dynasty, Pusyamitra, was a general in Brihadratha Maurya’s Empire before assassinating him. For 10 points each:

[10] Name this Indian dynasty that succeeded the Mauryan Dynasty and ruled Northeast India from 185 to 75 BCE.

ANSWER: Sunga Dynasty or Empire (or Shunga)

[10] The Sunga Dynasty took over India because of the decline of the Mauryans following this Emperor’s death. The son of Bindusara and author of some Rock Edicts, he famously converted to Buddhism after conquering Kalinga.

ANSWER: Ashoka the Great (or Aśoka)

[10] Chandragupta Maurya defeated an invasion by one of these people who fought at the Battles of Corupedium and Ipsus. They included Demetrius I and Lysimachus.

ANSWER: Diadochi (accept successors or followers of Alexander the Great)

19. Name some things about Renaissance Italian sculpture. For 10 points each:

[10] This man is perhaps most remembered for defeating Filippo Brunelleschi with his design for the doors to the Baptistery of Florence, which were dubbed *The Gates of Paradise*. He also made bronze statues for many guilds throughout Florence.

ANSWER: Lorenzo Ghiberti

[10] This unfinished Michelangelo sculpture stands 7 feet tall and depicts a man wearing nothing but a loincloth who appears to be struggling against something. It was intended for the tomb of Julius II.

ANSWER: The Rebellious Slave (or Captive)

[10] This man’s *Assumption of the Virgin* is featured in Florence Cathedral and his *The Four Saints* is featured in the Orsanmichele. He worked alongside Donatello.

ANSWER: Nanni d’Antonio di Banco (accept either underlined name)

20. This technique gave direct evidence for the existence of quarks, and Bjorken scaling allows the replacement of structure functions with form factors in calculations about this technique. For 10 points each:

[10] Name this technique used to explore the insides of hadrons by hitting them with extremely high energy leptons.

ANSWER: deep inelastic scattering

[10] Feynman and Bjorken introduced this model of hadrons to account for the results of the SLAC-MIT deep inelastic scattering experiments. It suppose that at high energies, hadrons are composed of many point-like particles.

ANSWER: **Parton** model (prompt on “quark model”)

[10] Deep inelastic scattering can be accomplished with leptons like electrons, taus, neutrinos, or these particles which are around 200 times heavier than electrons.

ANSWER: **muon**

21. This man wrote about Walter Hartright finding a woman who has escaped from an asylum in one novel. For 10 points each:

[10] Name this British author of *The Woman in White*. He also cowrote “A House to Let” with Charles Dickens and some female authors.

ANSWER: Wilkie **Collins**

[10] This Collins work, considered to be the first detective novel, features several narrators such as the prim evangelist Drusilla Clack and ends with the title gem being returned to its temple in India.

ANSWER: *The* **Moonstone**

[10] This character is the first to realize that no one stole the moonstone. This geriatric policeman wins the friendship of the butler Betteredge and employs a boy with notably bulging eyes, Gooseberry.

ANSWER: Sergeant **Cuff**