Chicago Open 2014: A Redoubtable Coupling of Editors
Packet by Bedtime Stories of Ham-Fisted Intimidation (Sam Bailey, Selene Koo, Marshall Steinbaum, and Seth Teitler)
Edited by Austin Brownlow, Andrew Hart, Ike Jose, Gautam & Gaurav Kandlikar, and Jacob Reed

Tossups

1. This man authored a pamphlet ironically titled "Health is in you!," which his followers used to plan a series of crimes accompanied by a pink flyer titled "Plain Words." One follower of this man, known as "Jean Crones," laced soup served at a banquet for Archbishop George Mundelein with arsenic. This associate of Mike Boda formed a group that committed the crime that led to the arrest of Andrea Salsedo, who died from falling out of a window on 15 Park Row in New York. This man's advocacy of "propaganda of the deed" in the *Cronaca Sovversiva* inspired an attack that killed 38 people on Wall Street and a wave of bombings culminating in an explosion on the attorney general's porch that provoked the Palmer raids and led to this man's deportation. Sacco and Vanzetti were thought to be disciples of, for 10 points, what man whose namesake followers were synonymous with Italian anarchism during the 1910s and 1920s?
    ANSWER: Luigi **Galleani** [accept **Galleanist**s; or word forms]

2. In this novel, the protagonist studies the writings of Tommaso Campanella, who learned the theory of transmigration from Pythagorean Brahmans. One character in this book describes a realm called the Land of the Pomegranate where the orgasm is like a corporeal crystal, which a man in this novel creates while dreaming of writing *Millennium of Sex*. Upon a chance encounter, its protagonist is given the *Sutra of the Golden Peacock* by the elderly maid Tadeshina. This book ends with the protagonist's lavish estate burning down, killing both Imanishi and Tsubakihara. This novel's protagonist visits an open-air crematorium while in Benares and sees the Ajanta Caves after settling an international law case for Itsui Products; this novel's protagonist later chances upon Princess Chantrapa, or Ying Chan, who claims to be a reincarnation of Isao Iinuma, the protagonist of *Runaway Horses*. For 10 points, name this third novel in the *Sea of Fertility* tetralogy, titled for a building in Bangkok.
    ANSWER: The **Temple of Dawn** [or **Akatsuki no Tera**; prompt on **Sea of Fertility**]

3. This film was named the best of its decade by Roger Ebert, who angrily described how voters waved flashlights to signal that they wished to stop screening it after 15 minutes, killing its chances for an Oscar nomination. In this film's final scene, a man sitting in a dorm room says that he should tell people "if I don't make it, don't forget about me" before a pre-credits screen notes that he married his girlfriend Catherine and dropped out of school. This film, which was released a year after a companion film called *Higher Goals*, profiles a man who is shown watching his father purchase drugs near a playground. Another man profiled in this film is recruited by Gene Pingatore, and is shown reflecting on the failures of his older brother Curtis, rehabilitating a knee injury, and eventually attending Marquette University. For 10 points, name this 1994 Steve James documentary that follows Arthur Agee and William Gates, two Chicago high-school basketball players.
    ANSWER: *Hoop Dreams*

4. A movement named for this event was sparked by a 1961 book, in which the argument that it arose from the absence of transcendence in the modern world was put forth by Gabriel Vahanian. Charles Taylor claimed that belief in this event is one of the dominant modern "closed world structures," which arises from both contemporary moral experience and scientific advancement, and that belief in it arises from the belief that the "immanent frame" is all-containing. G.W.F. Hegel claimed that this event signified a "reversal" and "the negation of negation." Despite this event, shadows will continue to be exhibited in caves "for millenniums yet"; in another text, which wonders what "festivals of atonement" or "sacred games" must be invented in the wake of this event, a madman alleges that all of humanity was responsible for it. For 10 points, name this event postulated by Friedrich Nietzsche in *The Gay Science* and *Also Sprach Zarathustra*.
ANSWER: **death** of **God** [accept obvious equivalents, such as **God dying** or **God is dead**]

5. This woman's older sister studied under Sir Arthur Stockdale Cope and joined her in accusations of sexual molestation by George and Gerald Duckworth. This woman's father wrote a "historical study" that attacked the London *Times*'s coverage of the Civil War. Her great aunt, photographer Julia Margaret Cameron, depicted this woman's mother staring straight into the camera with wild hair. Her niece, Angelica, spent her childhood unaware that Duncan Grant was her biological father, and later married Grant's former lover, David Garnett. In 1910, this woman's friend Horace de Vere Cole and her brother Adrian convinced her to join a prank in which they dressed up as Abyssinian ambassadors and toured the HMS *Dreadnought*. For 10 points, name this co-founder of the Hogarth Press, sister of Vanessa Bell, and lover of Vita Sackville-West who committed suicide by lining her pockets with stones and jumping into the River Ouse.
ANSWER: [Adeline] Virginia **Woolf** [or Adeline Virginia **Stephen**]

6. A four-eyed one of these creatures is killed with a *sidhraka* wood club wielded by a whore's son in order to drive evil spirits from the horse at the center of the *Ashvamedha* ritual. In Chinese myth, the god Zhang Xian is credited with keeping a "Heavenly" example of these creatures from eating the Moon and stealing children during eclipses. One of these creatures named Drudwyn, which appears in the tale of *Culhwch and Olwen*, can only be handled by the huntsman Mabon ap Modron. One of these creatures travels into the Himalayas on a journey during which Nakula, Sahadeva, Bhima, Draupadi, and Arjuna drop dead; upon reaching Mount Meru, Indra tells Yudhishthira to send it away, but he refuses and it transforms into the god Dharma. A crone forces a hero to break a *geis* by offering him the meat of this animal; that hero is Sétanta, who earned a name referring to this animal while visiting a blacksmith. For 10 points, name this type of animal whose place was taken for a time by Cúchulainn.
ANSWER: **dog** [or **hound**; accept obvious equivalents]

7. Hydroxymethyl derivatives of this compound are produced upon rearrangement in the presence of trifluoroacetic anhydride in the Boekelheide reaction. Oxides of this compound yield alpha-acyloxy substituted product when this compound is boiled with acetic anyhdride and sodium acetate in the Katada reaction. Substituted salts of this compound are formed via an iminium chloride intermediate in the Zincke reaction. Three equivalents of aldehyde in ammonia undergo an imine formation, an aldol condensation, and a Michael addition to produce this compound in the Chichibabin synthesis. Derivatives of this compound are found in the Collins reagent, and in one developed by Corey and Suggs from the reaction of this compound with hydrochloric acid and chromium trioxide, known as PCC. Friedel-Crafts reactions fail for this compound since electrophiles react at this compound's basic nitrogen. For 10 points, name this heterocycle consisting of a nitrogen-substituted benzene ring.
ANSWER: **pyridine** [accept **C5H5N**; accept **azene**; accept **azabenzene**]

8. In the final scene of one of this author's plays, the title character offers a gold ring to a soldier in exchange for transcribing a dictated final message so that the soldier can later smuggle it out. This author was inspired to write that play after Paul Collette attempted to assassinate a politician. In another of this author's plays, an accordion player forces the title character, who is a woman killed in a traffic accident, to admit that she was the lover of Dulac the theatre impresario. In a third play by this author, which Lillian Hellman adapted into English, Warwick's desire to execute a woman is stalled by Cauchon's examination of her life. This author of *Eurydice* wrote about Joan of Arc in *The Lark*, and he wrote a play in which Creon's orders for the title character to stop burying her brother are a thinly veiled critique of the contemporaneous Vichy government. For 10 points, name this French dramatist who adapted Sophocles's *Antigone*.
    ANSWER: Jean **Anouilh**

9. This artist's watercolors, including illustrations for *The Beast in the Jungle* and *The Turn of the Screw*, led Paul Rosenfeld to suspect "an almost feminine refinement in his wash," a coded reference to this man's homosexuality. One of this man's paintings consists of a bunch of grapes, a pinecone, and a sickle with a red ribbon on its handle, all below the word "Dove." In an oil painting, this artist used diagonal, fragmented planes to suggest an inspirational, spiritual dimension of a structure owned by the John W. E. Shelman Feed Company in his hometown of Lancaster, Pennsylvania, thereby linking it with the pyramids. This artist painted nine "poster portraits" of his friends, one of which shows shafts of light streaming from two streetlights in the midground and a sign reading "Carlo." In that painting, he used gold leaf for the medium-sized copy of the title symbol, which appears at one end of a fire truck. For 10 points, name this Precisionist artist of *I Saw the Figure 5 in Gold*.
    ANSWER: Charles **Demuth**

10. Malignancies of this organ are staged according to the Masaoka system. One class of cells that develop in this organ recognizes the protein R3G1. Mutations in a transcription factor ubiquitously expressed in epithelial cells of this organ's medulla result in a disease that manifests as a poly-endo-crinopathy along with muco-cutaneous candi-diasis and Addison's disease. A functional second cervical version of this organ has been identified in mice. Hassall's corpuscles are found in this organ. It is absent in a disease caused by a deletion along the long arm of chromosome 22, called DiGeorge syndrome. Upregulation of the FOXN1 gene allows regeneration of this organ, and deletion of the same gene causes absence of this organ in nude mice. Tumors in this organ are commonly found in patients with myasthenia gravis. Double positive cells in this organ mature to express either CD4 or CD8. This site of positive and negative selection involutes during puberty. For 10 points, name this site of T-cell maturation.
    ANSWER: **thymus**

11. This statement provoked a mob to burn down a hotel, killing 35 people, after attendees at a conference failed to turn over Aziz Nesin in the so-called Sivas Massacre. The country led by the man who made this statement severed ties with the UK on March 7, after which Collets and Dillons on Charing Cross Road were bombed on April 9, and British World War II hero Jackie Mann was kidnapped in Lebanon on May 13. The historical impact of this statement, including an attack on William Nygaard and the 1991 death of Hitoshi Igarashi, was profiled in Richard Webster's *A Brief History of Blasphemy*. The subject of this statement, who responded that "we must be conscious of the sensibilities of others" because the world has "many faiths," was forced into hiding with his wife Marianne Wiggins. For 10 points, name this condemnation broadcast on radio on February 14, 1989, when Ruhollah Khomeini called for the deaths of the author, the editors, and the publishers of a certain novel.
    ANSWER: **fatwa** against *The **Satanic Verses*** or [Ahmed] Salman **Rushdie** [the player must say **fatwa** AND either **Satanic Verses** OR **Rushdie**; prompt on more general answers such as "(Khomeini's) fatwa"]

12. In the penultimate section of this piece, the alto flute plays "B-D-B-G-sharp-C" [please pronounce slowly] after many repetitions of an English horn motive that chromatically rapidly ascends from E to a sustained G sharp. The third-to-last section of this piece, played over a low E flat, is a repetitive C-major fanfare that is later played by the bassoons. Near the end of the fast third section of this piece, repeated measures of eighth-note string tremolos alternating between 6/8 and 3/4 are interrupted by first one loud quarter-note chord for the whole orchestra; then two; then a bass drum THWACK followed by a chord. The second section of this piece's second part ends with a measure containing 11 loud repeated chords. This piece's second section begins with the strings percussively repeating an E-flat dominant-seventh chord on top of an F-flat major chord, with the horns adding accents on seemingly random beats. For 10 points, name this piece that begins with a very high bassoon solo, a ballet by Igor Stravinsky.
ANSWER: The **_Rite of Spring_** [or Le **_Sacre du printemps_**; or **_Vesna svyashchennaya_**]

13. The inequality in these constructs for mothers who enroll kids in childcare is one example of them discussed in *Unanticipated Gains* by Mario Small. They explain persistent income variation by geography in the former West Germany following reunification in a paper by K.B. Burchardi and T.A. Hassan. Thomas Chaney added a second "geography" dimension to a family of models of these constructs in which they grow in a two-stage process that begins with a uniform draw over previous generations. The derivation of conditions under which the degree distribution of these constructs is scale-free is the subject of research by Matt Jackson. These constructs, which have been used to analyze physics citations and racial dating patterns in high school, were studied in an experiment in which people in Omaha or Wichita received envelopes bound for Boston. Stanley Milgram's small world experiments studied the path lengths of, for 10 points, what constructs that can explain success in gaining employment?
ANSWER: social **network**s [accept **social tie**s; prompt on "tie(s)"]

14. This character drapes herself in a black lace scarf, puts on a pair of large earrings made of colored glass and gilding, and admires herself in a small, red-framed looking-glass in the chapter "The Two Bed Chambers." In an act of desperation, she finds a pool with which she will kill herself, but her lack of resolve leads her to sleep in a sheep pen where she is found by a shepherd. She dreams of being grand like Miss Lydia and Lady Dacey and of wearing finery that will outshine the new print dress of her rival, Mary Burge. This character makes an arduous journey to Windsor only to learn that the father of her unborn child is part of a regiment that has been called away. This woman then murders her child, buries it in some bushes, and is convicted for infanticide. This dairy maid is the love interest of a gifted carpenter in Hayslope who has a fistfight with the man she dreams of marrying, the squire Arthur Donnithorne. For 10 points, name this beautiful but shallow woman who appears in *Adam Bede*.
ANSWER: **Hetty** **Sorrel** [accept either name]

15. This quantity varies approximately with the square root of time according to the Skumanich law, allowing measurements of it to be combined with mass or color data to give age estimates for low-mass objects. For the sun, Richard Carrington derived an empirical expression for this quantity that contains a term in which the sine function is raised to the seven-fourths power. This quantity must have a uniform value to guarantee a simple proportionality between the radiative flux and effective gravity, per von Zeipel's theorem. This quantity reaches a significant fraction of its critical value in decretion-disk forming Be ["B-E"] stars; more generally, large values of this quantity give rise to gravity darkening, as the surface gravity varies from pole to equator. This quantity decreases as a result of magnetic braking, as a magnetized stellar wind carries off angular momentum. For 10 points, name this quantity that varies with latitude on the Sun, reaching a value of about once per 24.5 days at the equator.
ANSWER: stellar **rotation** rate [or stellar **spin** rate; or "frequency" for "rate"; or stellar **rotation period** before "gravity darkening"]

16. These actions always took the form of a *decreto*, which generally appeared during the winter, typically followed by one or more *medios generals*, and possibly the issuance of *juros* [HOO-rohs]. In the wake of the third of these actions, the Besançon fairs were moved to Piacenza, where bills of exchange became the dominant currency, signaling the total replacement of a German-based family with the Genoese. These actions occurred in spite of the *servicio* and the papacy-granted "three graces" known as the *cruzada*, *subsidio*, and *excusado*. After the third of these events, which followed English seizures that led to the Convention of Nymegen, Sancho d'Avila suggested that several angry *tercio* regiments sack Antwerp. These actions typically followed military campaigns, such as when the Battle of Gravelines resulted in the loss of much of a 10-million-ducat Armada. For 10 points, name these actions that Philip II took in 1557, 1560, 1575, and 1596 when he didn't have enough money to pay his debts.
ANSWER: [Spain or Philip II or Habsburgs] declaring **bankruptcy** [or **default**ing on its debt; accept obvious equivalents]

17. This structure lies just north of a hill that resembles a man's profile, which, according to tradition, is the architect keeping watch over his creation. This structure features a recurring four-to-six-to-nine geometric ratio and lies on a straight line with Pawon and Mendut. The mysterious Mohammad Jawad was the alleged mastermind of a 1985 terrorist attack on this structure that took place one hundred years after Jan Ijzerman [EYE-zer-mahn] discovered its hidden foot, which contains 160 relief panels illustrating the law of cause and effect. This structure consists of a square base, five square terraces, and three circular platforms, which respectively symbolize the Desire World, Form World, and Formless World. The *mudras* of seated statues change as pilgrims ascend this structure in a clockwise fashion toward the single stupa at its top. For 10 points, what step pyramid built in the 9th century CE on Java is the world's largest Buddhist temple?
ANSWER: **Borobudur** [or **Barabudur**]

18. One character in this book, Joe Montgomery, took the protagonist's wife to Jones's Beach one evening. A waiter named Loving Cup works at the Apollo Restaurant, which serves as a front for a criminal syndicate in this novel. Its central character is a member of the Lantenengo Street crowd who first appears when Irma Fliegler wonders if he and his wife are having another "battle royale." The protagonist of this novel dances with Helene Holman, who is revealed to be the girlfriend of the gangster Ed Charney. This novel's central character despairs about the departure of his wife Caroline and the imminent bankruptcy of his motor company. Those circumstances, and throwing a drink in Harry Reilly's face, lead this novel's protagonist to start his car in a closed garage. This book takes its title from a legend about a Baghdad merchant meeting Death in the title city. For 10 points, name this book about the final days of Julian English, the first novel of John O'Hara.
ANSWER: *Appointment in Samarra*

19. A practitioner of this art form, Pierre-Adrien Dalpayrat, collaborated with the symbolist sculptor Voisin-Delacroix to create works in this form: one that depicts a dreaming face, and another that shows two stalking panthers. Johann Friedrich Böttger and Ehrenfried Walther von Tschirnhaus are credited with the European invention of this art form in Meissen at the behest of Augustus the Strong. The rediscovery of techniques to produce effects known as sang de boeuf, or "oxblood," and celadon in this art form occurred at a factory in Sevres run by Jean-Claude Duplessis, who moved the factory from Vincennes and focused on the "soft-paste" type of this art form. In the late 18th century, an Englishman used barium sulfate to produce a variant of this art form with a matte finish that is named for the mineral jasper and often comes in a distinctive pale blue. For 10 points, name this art form practiced by Josiah Wedgwood that is often used to make pottery.
ANSWER: **ceramic**s [accept **porcelain** or **stoneware**; prompt on "pottery" before mentioned; prompt on "jasper(ware)" before "jasper"]

20. A certain extension of this structure is a big cell of the Grassmannian G(2,4) ["G-2-comma-4"]. Adding the "U equals W" generator of the null cone of the origin in R^6 ["R-6"] makes this structure conformally symmetric. A technique for solving problems in this structure transforms the Schroedinger equation into the heat equation. An incidence relation for the Klein correspondence carries alpha planes in the complexified, compactified form of this structure to projective twistors. Dynamic equations in this structure can be rewritten as static equations in a related structure using the Wick rotation. This structure's classical form is pseudo-Riemannian and has metric signature (-,+,+,+) ["minus plus plus plus"]. The Poincaré group contains this structure's isometries, which include translations, rotations, and boosts. In this structure, light rays travel along null vectors, and intervals separate events. For 10 points, name this four-dimensional manifold that is the natural setting for special relativity.

ANSWER: **Minkowski space**time [prompt on "(flat) spacetime"]

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Bonuses

1. This statement is proved by building a DFA, then invoking the pigeonhole principle to show that there must be some portion of the DFA that can be repeatedly traversed over and over. For 10 points each:
[10] Name this statement that is used to prove the non-regularity of certain languages.
ANSWER: **pumping lemma**
[10] Regular languages are closed under union, intersection, and this other operation, which returns the set of all strings that can be formed by taking the union with the original language.
ANSWER: **Kleene** star [or **Kleene operator**; or **Kleene closure**; prompt on "star"; prompt on the "free monoid (operator)"]
[10] Regular languages are also closed under this other operation, in which each symbol of the alphabet is mapped to a letter of a different alphabet. Although the property of being closed under this operation isn't useful in proofs by itself, the property of being closed under the inverse of this operation can be used to prove the regularity of non-trivial languages.
ANSWER: **homomorphism** [do not accept or prompt on "homeomorphism"]

2. This suite was later adapted into an opera about the lovers Rosario and Fernando. For 10 points each:
[10] Name this piano suite that includes "Compliments" and a "Ballad of Love and Death." It was written by Enrique Granados.
ANSWER: *Goyescas*, *Los Majos Enamorados,* Opus 11
[10] Granados's operatic version of *Goyescas* premiered on a double bill with this opera, which ends with Canio singing "Vesti la giubba" after stabbing his wife and her lover.
ANSWER: *I **Pagliacci***
[10] *Goyescas* premiered at an opera in this city with tenor Giovanni Martinelli as Fernando and baritone Giuseppi De Luca as Paquiro. Three years later, De Luca premiered Puccini's *Gianni Schicchi* at an opera in this city.
ANSWER: **New York** City [accept **NYC**] [Both operas premiered at the Met.]

3. In the late-17th and early-18th centuries, this dynasty expanded into western Mongolia at the expense of the Dzungar Khanate. For 10 points each:
[10] Name this dynasty that concluded its first treaty with a European power when it signed the Treaty of Nerchinsk with Russia.
ANSWER: **Qing** dynasty [or **Ch'ing** dynasty; or **Manchu** dynasty; or Empire of the Great **Qing**; or **Qing Chao**; accept **Ch'ing** instead of "Qing" for any of the answers]
[10] The Treaty of Nerchinsk was reaffirmed and updated in this 1727 treaty, which was signed in a newly founded town that served as the eastern terminus of the Siberian Route from Moscow.
ANSWER: Treaty of **Kyakhta** [or **Kiakhta**]
[10] The Qing conquered the Dzungars and captured Mongolia during the Ten Great Campaigns of this emperor, who abdicated in 1796 to avoid reigning longer than the Kangxi Emperor but remained in de facto power until 1799.
ANSWER: **Qianlong** Emperor or Di [or **Chien-lung** Emperor or Ti; accept Aixin-Jueluo **Hongli** or **Hung-li**]

4. In one of this book's moral fables, a starving jeweler catches sight of a bag of grains, only to learn that it is filled with pearls; another story concerns an athlete whose father warns him that there are only five benefits of travel. For 10 points each:
[10] Name this collection whose eight sections concern topics such as the advantages of silence and the effects of education.
ANSWER: *Gulistan* [or *The Rose Garden*]
[10] The *Gulistan* belongs to this genre of works, intended as a moral guide to life for a royal audience. Keikavus wrote one of these texts called the *Book of Qabus*.
ANSWER: **mirror for prince**s [or *specula principum*; or **Nasîhat**nâme; prompt on "wisdom"]
[10] This book in the mirror for princes genre is framed as a dialogue between various nobles in Urbino and promotes the virtue of *sprezzatura*. It was written by Baldassare Castiglione.
ANSWER: *The Book of the Courtier* [or *Il Libro del Cortegiano*]

5. This prayer is constructed around three visions, two of which are of angels glorifying God enthroned and are drawn from Isaiah and Ezekiel. For 10 points each:
[10] Name this Jewish prayer that comprises the third blessing of the *Amidah*.
ANSWER: *Kedushah*
[10] All versions of the *Kedushah* contain a quote from Isaiah that thrice repeats the Hebrew word "kadosh," which translates to this English word. In Catholic mass, the *Sanctus* also quotes that passage, thrice repeating this word.
ANSWER: **holy** [or **holy, holy, holy**]
[10] The *Kedushah* is expanded during two *Amidah* prayer services on Shabbat, the Mussaf service and this morning service that many synagogues combine with the Mussaf.
ANSWER: **Shacharit**

6. This historian argued that Islamic science and scholarship was the major intellectual influence on the development of scholasticism in the High Middle Ages. For 10 points each:
[10] Name this Oxford Historian, the author of *The Making of the Middle Ages*.
ANSWER: [Richard William] R.W. **Southern**
[10] Southern argued that the state Fulk III set up as count of this region, including the building of a large network of castles in territory he didn't yet fully control, was a watershed in medieval state-building and bureaucratization.
ANSWER: **Anjou** [accept **Andegavia**]
[10] Southern wrote a monograph on this saint and his biographer, Eadmer, as well as a full-scale biography of this saint subtitled "a portrait in a landscape." Chapter 6 of Southern's biography discusses the argument found in this Canterbury resident's *Proslogion*.
ANSWER: St. **Anselm** of Canterbury [accept St. **Anselm of Bec** or St. **Anselm of Aosta**]

7. This command is the first line of a poem that invites the reader to "ride ten thousand days and nights, till age snow white hairs on thee." For 10 points each:
[10] Name this instruction, which precedes other impossible tasks, such as "tell me where all the past years are" and "get with child a mandrake root."
ANSWER: "**Goe, and catche a falling starre**" [or "**Go, and catch a falling star**"]
[10] "Go and catch a falling star" is one of the songs in the *Songs and Sonnets* of this poet of "The Flea."
ANSWER: John **Donne**
[10] In this poem from *Songs and Sonnets,* the speaker asserts that Love knows "no season...nor clime, nor hours, days, months, which are the rags of time." It calls the title entity a "busy old fool" and a "saucy pedantic wretch."
ANSWER: "The **Sunne Rising**" [or "The **Sun Rising**"]

8. These substances are classified as thermal or non-thermal based on the electron temperature. For 10 points each:
    [10] Name these substances that can be modeled kinetically by solving the collisionless Boltzmann equation to produce a particle distribution function. The Saha equation gives their degree of ionization.
    ANSWER: **plasma**s
    [10] Another way to model plasmas is magnetohydrodynamics, which predicts the existence of these low-frequency ion oscillations with velocity equal to B-field strength over square root of vacuum permeability times density.
    ANSWER: **Alfvén wave**s
    [10] This quantity, which appears in the denominator of the Lundquist number, is considered negligible in ideal MHD. Magnetic reconnection occurs when its effective value increases enough to allow magnetic flux diffusion.
    ANSWER: **resistivity** [do not accept or prompt on "resistance"]

9. Unlike later pieces in the same genre, this one includes the Gradual *Si ambulem* and the Tract *Sicut cervus*. For 10 points each:
    [10] Name this piece that may be incomplete, as it concludes with the Offertory *Domine Jesu Christe*. It is the oldest piece of its kind to survive, and it was written by the composer of the *Missa cuiusvis toni* and another mass that consists entirely of mensuration canons.
    ANSWER: **Ockeghem**'s ***Requiem*** [prompt on "requiem"; accept ***Missa pro defunctis*** instead of "*Requiem*"]
    [10] This earlier Franco-Flemish composer is said to have written the first polyphonic Requiem. He also may have invented the use of *fauxbourdon*, and his motets include *O gemma, lux et speculum* and *Nuper rosarum flores*.
    ANSWER: Guillaume **Du Fay** [prompt on "Guillaume"; be aware that a lot of people pronounce this name "doo fah-ee"]
    [10] Several composers from this country wrote requiems, including Manuel Cardoso, Cristóbal de Morales, and Tomás Luis de Victoria. Other composers from this country include Antonio de Cabezón, Francisco Guerrero and Manuel de Falla.
    ANSWER: [Kingdom of] **Spain** [or Reino de **España**]

10. Kenneth Chay and Michael Greenstone analyzed this type of data to determine the value of clean air. For 10 points each:
    [10] Name this type of data summarized by the Case-Shiller index. Fernando Ferreira, Joseph Gyourko, and Joseph Tracy used it to estimate that Proposition 13's tax limitations lowered the mobility of Californians by 10% to 16%.
    ANSWER: **house price**s [accept any equivalent conveying **home sale price**; accept **housing market** or equivalents]
    [10] Chay and Greenstone used this type of modeling to estimate the value of clean air. It refers to the agent having a finite number of options and was pioneered by Daniel McFadden.
    ANSWER: **discrete choice** modeling [or **multinomial choice** modeling]
    [10] McFadden's seminal paper accurately predicted usage patterns for this type of infrastructure, specifically the Bay Area's BART system, prior to its construction.
    ANSWER: **public transportation** [accept rapid **transit** systems or **train**s or **subway**s; prompt on partial or more general answers]

11. This locale was a hotbed of Boeotian baby exposure. For 10 points each:
[10] Name this mountain on which some of Thebes's finest anklebiters were left, including Thebes's builders Amphion and Zethus. Perhaps the best known widdle snoogums abandoned on this mountain was a son of Jocasta and Laius.
ANSWER: Mount **Cithaeron**
[10] This poor chap was the aforementioned son of Jocasta and Laius. He took out his own eyes after realizing he had repeatedly sexed up his mom.
ANSWER: **Oedipus**
[10] Amphion and Zethus saved their mother Antiope when she came to Mount Cithaeron by capturing this evil woman, sometimes said to be Antiope's aunt, and executing her by tying her to the horns of a bull.
ANSWER: **Dirce**

12. This author's *The Language Police* argues that both left- and right-wing interest groups attempt to stifle opposition in standardized tests and textbooks. For 10 points each:
[10] Name this historian of education who chronicled the history of the New York City school system in *The Great School Wars* and critiqued the obsession with testing in *The Death and Life of the Great American School System.*
ANSWER: Diane [Silvers] **Ravitch**
[10] Ravitch criticized this 2010 Davis Guggenheim documentary, which features Geoffrey Canada and Michelle Rhee, as misleading propaganda suggesting that charter schools are a solution to the problems in urban public schools.
ANSWER: *Waiting for "Superman"*
[10] This MSNBC host critiqued elite educational institutions in his *Twilight of the Elites: America After Meritocracy.*
ANSWER: [Christopher L.] Chris **Hayes**

13. At the end of this story, one of its characters points out that bodegas are open all night long. For 10 points each:
[10] Name this Ernest Hemingway short story in which a pair of waiters discuss why an old man, who orders a large amount of brandy, might need the title qualities of their café.
ANSWER: "A **Clean, Well-Lighted Place**"
[10] In this other Hemingway short story, a dim-witted kid named Schatz hears that he has a temperature of 102 and thinks he will die because he heard from some French kids that a temperature above 44 is lethal. It ends with Schatz crying "very easily at little things of no importance" once he realizes that Fahrenheit and Celsius scales are different.
ANSWER: "A **Day's Wait**"
[10] Both "A Clean, Well-Lighted Place" and "A Day's Wait" are part of this short story collection, which takes its title from a supposedly antique book on gambling that was actually written by Hemingway himself.
ANSWER: *Winner Take Nothing*

14. Paul Johnson and Sean Wilentz wrote about the "kingdom" of this man, who may have fed his disciple Elijah Pierson poisoned blackberries. For 10 points each:
[10] Name this "prophet" of 1830s New York, whose servant was also accused and acquitted of Pierson's murder.
ANSWER: **Matthias** the Prophet [or Robert **Matthews**; or **Robert Matthias**; or **Jesus Matthias**; prompt on "Joshua (the Jewish Minister)"]
[10] This woman, who was known as Isabella Baumfree while she worked for Matthias the Prophet, later delivered the "Ain't I A Woman?" speech under another name.
ANSWER: Sojourner **Truth**
[10] One of the first biographers of Matthias, William Leete Stone, also investigated the "awful disclosures" of Maria Monk, who claimed that she was exploited as a nun at the Hotel-Dieu in this city.
ANSWER: **Montreal**, Canada

15. This model explains why the carbon-carbon double-bond length of the ethylene ligand in Zeise's salt is slightly longer than that for ethylene alone. For 10 points each:
[10] Name this model for metal-alkene bonding in which electrons from the alkene are donated to a metal orbital and electrons from the metal are donated to an alkene antibonding orbital.
ANSWER: **Dewar-Chatt-Duncanson** model
[10] The central atom in Zeise's salt is this metal found in the first noble-gas-containing compound and many catalytic converters.
ANSWER: **platinum** [or **Pt**]
[10] This rule from coordination chemistry states that reactions involving transition-metal complexes proceed via intermediates with 16 or 18 valence electrons. It is named for a former UC Berkeley chemist.
ANSWER: **Tolman**'s rule

16. Answer the following about literature in which people think they are other people, for 10 points each.
[10] Poprishchin comes to believe that he is the rightful king of Spain in this Russian author's "Diary of a Madman."
ANSWER: Nikolai [Vasilievich] **Gogol**
[10] In Luigi Pirandello's *Enrico IV*, this man possibly pricked the horse that threw Henry off, causing Henry to adopt the delusion that he is Holy Roman Emperor Henry IV. Henry stabs this baron, his romantic rival, at the end of the play.
ANSWER: Baron **Tito** **Belcredi** [accept either underlined name]
[10] In an essay about translating "Jabberwocky," this French writer supposes that he is Lewis Carroll, who is plagiarizing the work of this man himself. He included the essay "No More Masterpieces" in his book *The Theater and Its Double*.
ANSWER: Antonin **Artaud** [or Antoine Marie Joseph **Artauld**]

17. A couple shepherds and umbrella pine trees were added to a painting showing the lone surviving arch of the Ponte d'Augusto in this city. For 10 points each:
[10] A "view at" what Umbrian city was painted by the teacher of Berthe Morisot and Camille Pissarro?
ANSWER: **Narni**
[10] This French artist painted the *plein air* preparatory sketch *The Bridge at Narni* and the later landscape *View at Narni*.
ANSWER: [Jean-Baptiste-]Camille **Corot**
[10] This fellow member of the Barbizon School with Corot showed a peasant man striding through a freshly tilled field in *The Sower*, and three peasant women doubled over as they pick up leftover bits of wheat in *The Gleaners*.
ANSWER: Jean-François **Millet**

18. This naval battle was followed by the trial and execution of the *strategoi* responsible for failing to collect survivors who were clinging to naval wreckage. For 10 points each:
[10] Name this 406 BCE naval battle in which Athens defeated Callicratidas's Spartans but disastrously didn't finish them off.
ANSWER: Battle of **Arginusae**
[10] Arginusae followed the self-imposed exile of this Athenian commander, who was previously deposed after the Sicilian Expedition, recalled, and then overthrown again by factional fighting in the city.
ANSWER: **Alcibiades** [son of Cleinias] [or **Alkibiades** Kleiniou Skambonides]
[10] Following Arginusae, Callicratidas's faction was discredited and this admiral regained control over the Spartan fleet. He earlier caused Alcibiades's downfall when he defeated the Athenians at Notium.
ANSWER: **Lysander** [or **Lysandros**]

19. Four of these elements are arranged anti-parallely in Greek key domains, and glycine and proline residues play a key role in these structures because they can assume unusual dihedral angles. For 10 points each:
[10] Name these secondary-structure elements, found in protein domains called sandwiches and propellers. The two end strands of these structures can hydrogen bond to form cylinders called "barrels."
ANSWER: **beta sheet**s [or **beta pleated sheet**s]
[10] This fold consists of three beta strands alternating with two alpha helices. It is commonly found in proteins, such as NAD and FAD, that bind to nucleotides.
ANSWER: **Rossmann** fold
[10] An alpha-beta barrel consisting of eight alpha helices alternating with eight parallel beta strands is named for triose phosphate isomerase, which catalyzes the interconversion of glyceraldehyde 3-phosphate and this molecule in glycolysis.
ANSWER: **DHAP** [or **dihydroxyacetone phosphate**; or **3-hydroxy-2-oxopropyl phosphate**]

20. This man died during the Olympics, either from drinking tainted wine or in a fit of laughter brought on by his own suggestion that a donkey be given wine to wash down some figs. For 10 points each:
[10] Name this philosopher who introduced a paradox of identity with a thought experiment involving Dion and a person who is identical to Dion, except for one of his feet, in his book *On the Growing Argument*.
ANSWER: **Chrysippus**
[10] Chrysippus is often considered the "second founder" of this school of philosophy, whose members, such as Epictetus, believed that virtue was sufficient for human happiness.
ANSWER: **Stoic**ism
[10] Chrysippus explained causation using the example of an object of this shape that requires a push to begin moving but will continue down a hill on its own. Anaximander believed that the earth was this shape.
ANSWER: **cylinder**