

Chicago Open 2014: A Redoubtable Coupling of Editors

Packet by Bach's Magnifisob Accompanied By His Cats (Billy Busse, Matt Jackson, John Lawrence, Matt Weiner)

Edited by Austin Brownlow, Andrew Hart, Ike Jose, Gautam & Gaurav Kandlikar, and Jacob Reed

Tossups

1. This equation follows from the conservation laws of an expanding universe filled with a fluid whose pressure is two-thirds its density, as shown by S.H. Pereira. This equation implies that the pre-exponential factor in the Richardson-Dushman equation is a universal constant of thermionic emission. One of the original derivations of this equation erroneously calculated a certain term as "three-halves times Boltzmann's constant times particle number," which its author corrected to "five-halves $k N$ " using data on the vapor pressure of mercury. This equation is valid when volume over the quantity "particle number times thermal wavelength cubed," close quantity, is much greater than one, and it predicts a value of negative infinity at absolute zero. This equation can be derived by calculating the occupied volume in phase space, then assuming that particles are indistinguishable in order to resolve the Gibbs paradox. For 10 points, name this equation that gives the absolute entropy of a monatomic ideal gas.

ANSWER: Sackur-Tetrode equation

2. This author's son Ted created a self-important literary hack named Franklin Dixon who makes a living playing online poker in the novel *Pocket Kings*. In one of this author's novels, a chaplain is arrested by the government for urinating heavy water. In that novel by this author, a lawyer named Noodles Cook works for the law firm of "Atwater, Fitzwater, Dishwater, Brown, Jordan, Quack & Capone," and a character throws a wedding ceremony at the Port Authority Bus Terminal in New York City. His final novel focuses on the writer Eugene Pota, who seeks to recreate the success of his first novel before he dies. Another satire by this man chronicles the history of *Aristotle Contemplating the Bust of Homer*. In another of his books, a character purchases all of the world's supply of Egyptian cotton and coats it in chocolate so that he can offload it at a mess hall. For 10 points, name this author of *Portrait of the Artist as an Old Man*, *Picture This*, and *Closing Time*, who created the characters Colonel Cathcart and Yossarian.

ANSWER: Joseph Heller

3. The protagonist of this film explains that, to gain respect in prison, he "beat the living shit out of a sniveling little runt called Pinky Bandinski," but that Bandinski has "actually become a dear friend." Many objects in this film are smuggled in pink, ribboned gift boxes from Mendl's, planted by an employee who has a birthmark shaped like Mexico on her cheek. This film reveals that Deputy Vilmos Kovacs, played by Jeff Goldblum, was found "stuffed inside a sarcophagus" with four fingers missing after a scene in which Kovacs is chased by J.G. Jopling, played by Willem Defoe, through an art museum. Its plot is set into motion with the death of Madame D, who bequeaths Johannes von Hoyt's painting *Boy with Apple* to the protagonist. This film, which is set in the fictional Republic of Zubrowka and is based on the stories of Stefan Zweig, tells the story of Zero Moustafa and Monsieur Gustave H. For 10 points, name this 2014 Wes Anderson film starring Ralph Fiennes as the concierge of the title establishment.

ANSWER: *The Grand Budapest Hotel*

4. This leader, who denounced corruption in his government in the “Dawn Broadcast,” was the main inspiration for the protagonist of a Peter Abrahams novel published a year before he took power, *A Wreath for Udomo*. After winning the first elections under the Coussey Constitution, he appointed as an advisor lifelong friend George Padmore, whom he met while a student at Lincoln University in Pennsylvania. Unrest derived from this leader’s attempts to control the rapidly rising price of cocoa led to the creation of the National Liberation Movement opposing him. This leader broke off from the J.B. Danquah-led UGCC to pursue a campaign of civil disobedience he termed “Positive Action.” This founder of the Convention People’s Party was overthrown by a coup during a visit to Beijing in 1966. This fervent supporter of Pan-Africanism oversaw the construction of the Akosombo Dam as part of the Volta River Project. For 10 points, name this first prime minister of independent Ghana.

ANSWER: Kwame **Nkrumah**

5. This man’s daughter Harriet so disliked his informal dress in a portrait of him that she allegedly had her nephew Frederick Ballestier copy the face of that portrait and place it atop a military uniform. Two gold buttons are visible below this man’s right hand in a portrait composed similarly to its artist’s earlier *Portrait of Charles Pelham*; Pelham’s son Henry later accused this man, the subject of that portrait, of plagiarism. In that portrait, this man poses behind a polished mahogany table whose surface reflects two burins and a needle, and he is wearing casual attire that includes a loose white linen shirt and an open vest. In that portrait, he sits in front of tools indicative of further engraving on an unfinished object that he rests on a leather pad and rests his chin on his right hand. For 10 points, name this subject of a John Singleton Copley portrait who holds a teapot in his left hand, indicative of his trade as a silversmith.

ANSWER: Paul **Revere**

6. In one speech in this play, a prostitute tells the story of how her first lover drowned himself after learning of her infidelity, and concludes “pleasure is the best kind of prayer.” This play’s first act ends with its antagonist contrasting himself with Jesus, saying that Christ redeemed men by sacrificing himself and shedding his own blood, whereas he redeems men by sacrificing them and shedding their blood. Much of the dialogue of this play is ripped from the history books its author read, and it begins with its main characters playing cards in a royal palace. The protagonist of this play repeatedly exclaims “they wouldn’t dare!” when warned of his impending fate. This play ends with Lucille Desmoulins crying “Long live the king!” so that she can share the fate of her husband, who was executed under orders from Saint-Just and Robespierre. For 10 points, name this historical drama about the execution of the title revolutionary, the first play by Georg Büchner.

ANSWER: **Danton’s Death** [or **Dantons Tod**]

7. The beta-subunit of this enzyme has aspartate-452 and leucine-453 residues rather than the corresponding asparagine and arginine residues in its alpha subunit. Those changes cause this enzyme’s beta subunit not to show any activity despite having active sites, as the changes make the beta subunit inflexible. Bacterial analogs of this enzyme suggest that it proceeds via the formation of an oxazolinium intermediate, and its R-247-W and R-249-W mutations in humans are its two known pseudo-deficient forms. This enzyme’s substrate is extracted from membranes by the activator protein SAP-3. This enzyme’s main activity is to cleave N-acetyl-galactosamine from certain oligo-saccharides. The zero-variant of this enzyme, in which the beta-subunit is affected, results in Sandhoff’s disease. It is localized to the lysosome, and mutations that make it unable to hydrolyze GM2 ganglioside lead to a buildup of fat in nerve cells. For 10 points, name this enzyme that is faulty in patients suffering from Tay-Sachs disease.

ANSWER: **hexosaminidase** [accept beta-**hexosaminidase** A or beta-N-acetyl-**hexosaminidase** or **N-acetyl-beta-glucosaminidase** or **HEXA** or **TSD**]

8. In Hellenistic Alexandria, an Egyptian god of this concept named Shai was syncretized with a snake god in depictions of the “good spirit” Agathos Daimon. A set of deities governing this concept in Slavic paganism included one with a giant, salivating bottom lip, another with a thumb an inch in diameter, and another with one huge foot. It’s not childbirth, but in Baltic paganism, the linden tree was a symbol of Laima, a goddess of this concept who was sometimes syncretized with Daila. Using power over writing, the Babylonian god Nabu holds information about this concept. A Goliard poem describing this concept as “monstrous and empty” used the name of its Latin personification, Sors, and the *Aeneid* claims it is governed by the Parcae. Verdandi and Skuld can see examples of this concept near the Well of Urd. For 10 points, name this concept presided over by the crone-like Norns and by Clotho, Lachesis, and Atropos, who determine it by measuring and cutting threads.

ANSWER: **fate** [or the **Fates**; or **destiny**; or one’s **lifespan**; accept any answer indicating the **ordained end result of a person’s life**; accept **thread of life** or similar answers; accept answers such as **fortune** or **luck** or one’s **lot** in life]

9. Georg Evers found no evidence of rumors that this man’s dalliance with a married woman in Innsbruck led him to be sentenced to be drowned in a sack before royal intercession. He was assisted by Konrad Wimpina in drafting a rebuttal to accusations against him and withdrew from public life after being accused of embezzlement by Karl von Miltitz. He worked under the guidelines of the *Instructio Summaria* in an effort in which he attempted to cover the debts of Albrecht of Brandenburg, who had run up huge bills in a campaign to have himself appointed Archbishop of Mainz. He used a slogan translated as “as soon as a coin in the coffer rings / the soul from purgatory springs” in a campaign that was commonly thought to be financing the construction of St. Peter’s Basilica. George of Saxony sent this man to work in Wittenberg, inspiring Martin Luther to post the *Ninety-Five Theses*. For 10 points, name this infamous seller of indulgences whose venal claims sparked the Protestant Reformation.

ANSWER: Johann **Tetzel**

10. Members of this group of artworks that have glass fans and floral motifs are known as the “édicules,” and are contrasted with those that use a lily-of-the-valley stem shape. These artworks were commissioned from a compromise candidate who had recently impressed with the Castel Béranger. Many of these artworks were replaced in the late 1900s by Joseph Cassien-Bernard’s neoclassical stone designs. Some of the 86 surviving examples of these artworks use a slab of glazed lava to display a word within a ballustrade. The designs of Eugène Viollet-le-Duc were a large influence on these pieces, whose only surviving “kiosk” example is located at Porte Dauphine. These artworks, which were painted green to resemble bronze patina, consist of a cast-iron arch and a sign marking a staircase going underground. For 10 points, name these artworks designed in an Art Nouveau style by Hector Guimard for a public transportation network.

ANSWER: **entrances** to the **Paris Metro** [accept **Métropolitain**; or **Metro de Paris** in place of “Paris Metro”; accept equivalents for “entrances”; prompt on partial answers]

11. In 1968, Sauer used the Geneva lens measure to calculate the curvature of these objects, but for small types of these structures, the Obrig radius dial gauge is now preferred. The morphotypes of these structures are either tubospherulitic, prolatospherulitic, prismatic, or ratite. Zhao Zhi-Kui's para-taxonomic classification of these objects divides them into geckonoid, testudoid, and crocodiloid, amongst other types. The first one of these items to be named was *Olithes bathonicae* by J. Buckman. Other ways of classifying these objects include schemes based on their distribution of pore canals, which are necessary for air circulation, and their surface ornamentation. Many of the fossilized kinds of these items were found at Auca Mahuevo in Patagonia. Some of these taphonomic items were found in the Gobi Desert and misattributed to *Protoceratops* instead of the theropod *Oviraptor*. For 10 points, name these reproductive structures that were laid by now-extinct reptiles.

ANSWER: fossilized dinosaur eggs

12. Marlaine Smith applied this concept to the study of nursing, placing it two steps below the “particulate-deterministic,” “interactive-integrative,” and “unitary-transformative” paradigms in a metaparadigm chart. This theory was applied to archaeology in *Nunamiut Ethnoarchaeology* by Lewis Binford, who used it to construct methods by which the waste of Paleolithic societies could be used to determine hunter-gatherer behavior. An essay explicating the original form of this concept gives as examples “Gilbert on magnetism, Boyle on atmospheric pressure, or Darwin on the formation of coral atolls.” This concept was developed as a counter to Talcott Parsons, and suggests that small-scale, ideologically interchangeable ideas that generate multiple “testable hypotheses” are needed to bridge a gap between “grand theories” and empirical observation. For 10 points, name this approach to sociology explained in *Social Theory and Social Structure* by Robert Merton.

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

13. One poet from this country created a poem that spends hundreds of lines listing various types of windmills and focuses on a prophet who can travel faster than the speed of light named Altazor; that poet from this country also wrote a poem that concludes “the poet is a little God.” One author from this country described how “all that remains is to drop a dollop of cream into the concoction” in a poem that describes the preparation of the title food dish. That author from this country wrote “tiniest star, you seem to be buried forever in things: your devilish fire occult” in a poem that is addressed to the atom. A poet from this country spearheaded a one-man literary movement called *creacionismo*. An author from this country of origin of Vicente Huidobro wrote “here, among the market vegetables, this torpedo from the ocean depths” to describe a large tuna. The poem “Ode to Conger Chowder” is part of *Elemental Odes*, a collection from this country. For 10 points, name this country of origin of Pablo Neruda.

ANSWER: [Republic of] Chile [or República de Chile]

14. One tribe of these people had a name meaning “hunting hounds” and wore massive bronze armlets. Symbols found on artifacts of these people include the double disc and Z-rod, as well as a bizarre creature, called their namesake “beast,” which resembles a seahorse. These people lost the Battle of Two Rivers, but later defeated Ecgfrith at Nechtansmere to win independence in 685 CE. They conquered Dal Riata during the reign of Oengus I, and had seven kingdoms, including Fife and Fortriu, that were named for the sons of Cruidne, according to their namesake Chronicle. The name of these people suggests that they were tattooed, a fact not apparent on their namesake Stones. Tacitus reports that one group of these people, erroneously considered to be Britons, were led by Calgacus in their defeat to Agricola at the Battle of Mons Graupius. For 10 points, name these people who, beginning with the reign of Kenneth MacAlpin, merged with the Gaels to form the Kingdom of Scotland.

ANSWER: Picts [prompt on “Celt(s)”; anti-prompt on “Venicone(s)” or “Caledonian(s)”; do not accept or prompt on “Scots”]

15. According to Ibn Abi Zayd, a member of this group should give the greeting “on you,” and the proper response is “on you a stone.” Wahhabi scholar Abd al-Aziz ibn Baz weighed in affirmatively on the controversy over whether those in this group can be labeled *mushrikeen*. Relations with this group are often said to be governed by the terms of the apocryphal Pact of Umar. This group is characterized by adherence to a doctrine that was allegedly changed in the practice of *tahrif*. One mysterious constituency within this group, whose members were said to adhere to the *Zabur*, consists of the Sabians. Most members of this group are adherents of the *Injil* or *Taurat*. Members of this group, which is described by a term contrasted with *ahl al-fatrah*, are able to achieve *dhimmi* status by paying the *jizya* tax. For 10 points, name this term from Islamic theology that signifies a monotheistic group that adheres to revealed scriptures, namely Jews and Christians.

ANSWER: **People of the Book** [or ‘**Ahl al-Kitab**’; accept **dhimmi** before “dhimmi”; prompt on “Christians and Jews” (in either order) or “Christians” or “Jews” before “Jews”; prompt on “non-Muslims” or “non-believers” (or equivalents) or “kafir” or “kuffar”]

16. This author wrote a play in which a poet mistakes a journalist who has come to interview him for the male prostitute he has hired for the day; that poet is later visited by a composer with whom he had formerly collaborated on writing operas. In one play by this author, a man being strapped to a chair by a doctor declares “I am the King” only to be told “no, you are the patient.” In another play by him, a teacher is forced to take early retirement when it is revealed that he fondles his students’ genitals while giving them rides home on his motorcycle. One play by this man depicts a rehearsal of *Caliban’s Day*, a play-within-a-play about a fictional encounter between Benjamin Britten and W.H. Auden. This author of *The Habit of Art* and *The Madness of George III* wrote a play in which Posner and his crush Dakin are both students of the idealistic Mr. Hector and the cynical Mr. Irwin in Sheffield in the 1980s. For 10 points, name this contemporary British playwright of *The History Boys*.

ANSWER: Alan **Bennett**

17. The two central figures of this text are compared to “two bald men searching for a comb” in Soren Kierkegaard’s dissertation. The first paragraph of J. S. Mill’s *Utilitarianism* cites this text as foundational. It claims that pleasure is the good and one cannot be overcome by good, so the state of being “overcome by pleasure” can only result from ignorance. One man in this text describes how all species but humans received a special power at creation because Epimetheus forgot. Several men lift the ailing Prodicus out of bed in this text, in which the poetic lines from Simonides, “for a man to become good is truly hard” and “hard it is to *be* good,” are contrasted. This dialogue is set in the house of Callias, and concludes with Socrates undermining his own argument by stating that the central concept is knowledge, and knowledge can be learned. For 10 points, name this Platonic dialogue in which Socrates debates whether virtue can be taught with a Sophist who claimed that “man is the measure of all things.”

ANSWER: **Protagoras**

18. One term in this equation can be divided into trans-particle, trans-channel, short-range inter-channel, and long-range inter-channel terms. An analogue to this equation describing wall-coated, open-tubed devices was developed by Golay. The coupling of two terms in this equation is described in the Giddings equation. Another alternative to this equation that adds a reduced velocity to the one-third power term is the Knox equation. This equation is typically written as “H equals A plus B over U plus C times U,” where A, B and C are the multipath, longitudinal diffusion, and mass transfer coefficients. This equation uses the “rate theory” of a certain process to generate an upward-pointing hyperbola on a plot of plate height vs. linear velocity. This equation suggests that mass transfer effects can be minimized by smaller stationary phase particles, and it implies a tradeoff between flow-rates and separation efficiency. For 10 points, name this equation that describes band broadening in column chromatography.

ANSWER: **Van Deemter** equation [accept **Golay** or **Giddings** or **Knox** equation before mentioned]

19. In English virginal music, notes with two slashes through the stem are supposed to be played with this technique. In Monteverdi's time, an accelerating form of this technique was known as the "ribattuta." When Bach copied out D'Anglebert's instructions on performing this technique for Wilhelm Friedemann, he translated the French "appuyé" ["ah-pwee-YAY"] variety as this technique "with accent." In French baroque music it usually starts with an appoggiatura, whereas in Italian baroque music, it usually starts on the main note. In French baroque music, the "lié" form of this technique is often used for its obligatory "cadential" variety. A short type of this, called the "Schneller" is the inversion of a mordent. If its sign includes a vertical line through it at the end, a termination is added to it. For 10 points, name this ornament, a long one of which must be played at the same time as a melody on another string in a Tartini sonata named for a "Devil's" one.

ANSWER: **trills** [or **shake**; or **tremblement**; or **trillo**; or **triller**; accept any more specific answers including those answers such as **Devil's Trill** or Il **trillo del diavolo**; prompt on word forms of "ornaments" or "ornamentation"]

20. This man was allegedly told by his wife not to "shilly-shally," leading him to move to seat female delegates. In one speech, this man pointed to "pictured lips" on portraits of notable men and imagined them lambasting his state's Attorney General James Austin as a "slanderer of the dead." Richard Hofstadter called this non-President man "The Patrician as Agitator" in *The American Political Tradition*. Andrew Johnson asked a heckler to hang Thaddeus Stevens and this man in a drunken outburst from the Swing Around the Circle. This man became an activist after seeing an attempted lynching outside his Court Street legal office. After a preface, a letter from this man precedes the original *Narrative of the Life of Frederick Douglass*. He rejected a comparison to the Boston Tea Party and harshly critiqued a press-burning mob in Alton, Illinois in an unplanned speech at Faneuil Hall that lifted him to fame. For 10 points, name this American abolitionist orator who delivered a stirring eulogy for Elijah Lovejoy.

ANSWER: Wendell **Phillips**

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Bonuses

1. This man's fourth string quartet uses his characteristic "arch" form and his namesake kind of snap pizzicato. For 10 points each:
[10] Name this Hungarian composer of six string quartets, *Bluebeard's Castle*, and *Music for Strings, Percussion, and Celesta*.
ANSWER: Béla [Viktor Janós] **Bartók**
[10] In Bartók's sixth string quartet, each movement begins with a slow section marked with this indication.
ANSWER: **mesto**
[10] *Mesto* means "sadly." This other composer used the similarly depressed markings "Tenebroso" and "Largo desolato" in the last movement of his *Lyric Suite* for string quartet.
ANSWER: Alban [Maria Johannes] **Berg**
2. Some molecules that promote this condition contain trihydroxytetraene and are exemplified by a myeloid cell product called leukotriene B4. For 10 points each:
[10] Name this condition whose "acute" form is characterized by five cardinal signs called "PRISH." Prostaglandins help promote this primary immune response, which involves swelling at the damaged site.
ANSWER: **inflammation**
[10] These white-blood-cell-produced cytokines promote inflammation by activating T cells and B cells. The sixth member of this group is a biomarker for atherothrombosis and may promote TNF-alpha.
ANSWER: **interleukins** [or **ILK**]
[10] These arachidonic acid derivatives, which are not resolvins or leukotrienes or protectins, can help reduce inflammation. They promote degranulation and superoxide generation, and they have "aspirin-triggered" counterparts that are produced via the COX-2 pathway, unlike these compounds.
ANSWER: **lipoxins** [or **lipoxigenase interaction products**; prompt on "non-classic eicosanoids"]
3. Answer these questions about Vietnamese mythology and folklore, for 10 points each.
[10] A golden creature of this type arose from a lake to take the legendary sword Heaven's Will back from Le Loi. These creatures include the Chinese sacred animal of the north, and Vishnu's second avatar, Kurma.
ANSWER: a **turtle** [or **tortoise**; or **terrapin**]
[10] In a story retold at the mid-autumn festival of Tet Trung Thu, the trickster boy Chu Cuoi is taken to this place after his wife pours garbage on a magic banyan tree and the tree floats off to this place with him hanging onto it.
ANSWER: the **moon**
[10] Spirits of these two archetypal realms tried to wed princess My Nuong, causing a feud that recurs with each year's monsoon. Au Co, a fairy from one of them, married the dragon's son Lac Long Quang from the other. A book named for them contains the stories of Nuwa and other figures and is the principal source of Chinese mythology.
ANSWER: the **mountains** and the **ocean** [accept answers indicating the **sea**, **water**, etc. instead of the ocean; accept **Mountain** Spirit and **Ocean** Spirit; accept **Son** Tinh and **Thuy** Tinh; prompt on answers of "land" or "earth" or equivalents instead of "mountains"]

4. Good news everyone! We'll be delivering a package to Chapek 9, a world where humans are killed on sight. For 10 points each:
 [10] To get there, we'll be making frequent use of this equation that sets the delta-v of a maneuver equal to "effective exhaust velocity times the natural log of initial mass over final mass."
 ANSWER: ideal **rocket** equation [or **Tsiolkovsky** rocket equation]
 [10] We'll also be making use of this most efficient way to transfer from a lower orbit to a higher one, or vice versa. We'll wait for the right launch window so that this elliptical transfer orbit will intersect with Chapek 9's orbit around its sun.
 ANSWER: **Hohmann** transfer orbit
 [10] In order to haul ass out of Chapek 9, we use this kind of rocket nozzle to exhaust fuel at supersonic velocities. This type of nozzle is hourglass shaped and is usually named for its Swedish inventor.
 ANSWER: **de Laval** nozzle [or **convergent-divergent** nozzle; or **CD** nozzle]
5. In the middle of the book in which he appears, this character's skull is put on display on a tree stump so that the other characters can march past it in the morning. For 10 points each:
 [10] Name this character from *Animal Farm* who advocates overthrowing the human oppressors and teaches the song "The Beasts of England" shortly before his passing.
 ANSWER: **Old Major**
 [10] Another pig in English literature is this prize sow owned by Lord Emsworth in the Blandings saga by P.G. Wodehouse.
 ANSWER: **Empress** of Blandings
 [10] Jerome's father is killed by a pig that falls off of a balcony in this author's short story "A Shocking Accident." Trevor leads the gang destroying Mr. Thomas' house in this author's story "The Destructors."
 ANSWER: [Henry] Graham **Greene**
6. Name the following about New Yorkers parodying poems by people from New Jersey, for 10 points each.
 [10] This New York School poet of the collections *The Art of Love* and *Seasons on Earth* parodied William Carlos Williams in a poem beginning: "I chopped down the house that you had been saving to live in next summer. / I am sorry but it was morning, and I had nothing to do / and its wooden beams were so inviting."
 ANSWER: Kenneth **Koch**
 [10] That poem by Kenneth Koch is a parody of Williams' "This Is Just to Say," in which the speaker apologizes for eating these fruits from the icebox.
 ANSWER: **plums**
 [10] This poet wrote: "I think that I shall never see a billboard lovely as a tree / indeed unless the billboards fall, I'll never see a tree at all." in a parody of Joyce Kilmer. He once quipped that he'd bet "a silk pajama / there isn't any / three-L llama."
 ANSWER: [Frederic] Ogden **Nash**
7. This book opens with a conversation between Ahern and Robartes, who argues that the 28 embodiments of nature and mankind correspond to the phases of the moon. For 10 points each:
 [10] Name this book that uses astrology and "The Great Wheel" to interpret history. Its sections include "What the Caliph Partly Learned" and "What the Caliph Refused to Learn."
 ANSWER: A **Vision**
 [10] A *Vision* is one of the densest works of this poet and literary critic, who also wrote *The Madness of King Goll* and the English-language preface to *Gitanjali*.
 ANSWER: William Butler **Yeats**
 [10] In *A Vision*, Yeats begins by saying he was inspired to write *A Vision* after engaging in this practice. Philippe Soupault and another author wrote *Les Champs Magnétiques* using this technique.
 ANSWER: **automatic writing** [or pure **psychic automatism**; accept descriptive equivalents]

8. This novel's protagonist disapproves of Barbro, a woman who joins the Salvation Army, and in an early chapter, its protagonist sells a copper mine to the local sheriff. For 10 points each:
[10] Name this novel by Knut Hamsun that focuses on Isak's and Inger's attempts to cultivate their farm Sellaanrå.

ANSWER: *The Growth of the Soil* [or *Markens Grode*]

[10] Early on, Inger is sent to jail because she murders her own child, who has this condition.

ANSWER: hare-lipped [or cleft palate]

[10] In Hamsun's memoir *On Overgrown Paths*, he defends himself from critics who accused him of being insane after he gave a eulogy for this man. He inadvertently achieves YouTube fame as a satirist after waking up in 2011 in Timur Verme's novel *He's Back Again*.

ANSWER: Adolf Hitler

9. "Prolonged Stay in Weightless Environment," "Sibling Rivalry" and "Struck by Orca" are elements of this system's 10th revision, whose "Clinical Modification" is slated to go into effect on October 1, 2015. For 10 points each:

[10] Name this scheme that is used to codify diagnoses, symptoms, and ailments in health records, making it easy to compare health data internationally. It is maintained by the World Health Organization.

ANSWER: ICD [9 or 10] [or International [Statistical] Classification of Diseases [and Related Health Problems]]

[10] In its surveys, the WHO uses these units to report on the impact of a disease or intervention. The "disability adjusted" metric of this type incorporates time costs due to mortality and morbidity, and the "quality adjusted" metric with these units scales incremental longevity by a factor representing a "health utility" score.

ANSWER: life years [or LY; accept life months or life days]

[10] Recent surveys show that the global burden of this disease peaked around 2005, thanks to greater access to antiretroviral therapies such as a combination of Tenofovir, Efavirenz, and Lamivudine.

ANSWER: HIV/AIDS [or human immunodeficiency virus/acquired immunodeficiency syndrome; prompt on "HIV" or "human immunodeficiency virus"]

10. Prandtl proposed the existence of these regions in order to resolve d'Alembert's paradox. For 10 points each:

[10] Name these fluid layers with thickness given by the distance from the surface to the point where the flow velocity is 99% of the free-stream velocity. They are subject to the no-slip condition.

ANSWER: boundary layers

[10] In this kind of boundary layer, the pressure gradient force, Coriolis force, and turbulent drag are all balanced.

ANSWER: Ekman layer

[10] Stirring a teacup makes the leaves settle in the center, not at the sides. This physicist showed that the effect is caused by a secondary flow in the Ekman layer and extended his result to prove Baer's law of riverbank erosion.

ANSWER: Albert Einstein

11. The Old form of this language was the basis for the Jewish Ladino language. For 10 points each:
 [10] Name this Romance language whose castellano variety is protected by a national Royal Academy.
 ANSWER: **Spanish** [or **español**; accept **Old Spanish** or **Medieval Spanish** or **español medieval**]
 [10] At some point after the Greek name Iakobos was Latinized, it diverged into “James” in English via French, and into these two names that are equivalent to “James” in Spanish. One of these two names, which is more prominent in Portuguese, incorporates the final “T” from “Sant,” an example of a process called sandhi.
 ANSWER: **Diego** and **Tiago** [accept **Diago** or **Diogo** in place of “Diego”; accept **Iago** or **Thiago** in place of “Tiago”]
 [10] The modern form of Spanish spoken in this country uses vulgar slang called “pachuquismos” and idioms called “tiquismos.” Expressions in this country’s Spanish include “isoquele” for “hurry up” and “pura vida” for a happy outburst.
 ANSWER: [Republic of] **Costa Rica** [República de **Costa Rica**; accept **Costa Rican** Spanish]
12. After reading Aldous Huxley’s remark that this was the “greatest picture in the world,” British artillery officer Tony Clarke defied orders to save it during World War II. For 10 points each:
 [10] Name this 1463 fresco in Sansepolcro that incorporates an image of the relic stone of Christ’s tomb, and shows a pink-robed Jesus carrying a white flag with a red cross while stepping out of a Roman-style vessel as four other men close their eyes.
 ANSWER: *The **Resurrection***
 [10] This author of a treatise on perspective painted the Sansepolcro *Resurrection* as well as the 1460 *Flagellation of Christ* and the *Brera Madonna*.
 ANSWER: **Piero** della Francesca [prompt on “(della) Francesca”]
 [10] The Church of San Francesco in Arezza contains Piero’s fresco cycle on the “history” or “legend” of this relic, which was supposedly made from wood from the Garden of Eden.
 ANSWER: **True Cross** [accept *The History* (or *Legend*) of the **True Cross**; prompt on “cross”]
13. Answer the following about Afghan art, for 10 points each.
 [10] The towns of Shindand and Adraskan are the namesake of two of the most prominent Afghan varieties of these objects. Other Afghan varieties of these objects include Aqche and Beloutches.
 ANSWER: **carpets** [or **rugs**]
 [10] Giant statues of the Buddha hewn from the sandstone cliffs near this city northwest of Kabul stood from their creation in the 6th and 7th centuries until their destruction by the Taliban in 2001.
 ANSWER: [Buddhas of] **Bamiyan** [or **Bamyan**; or **Bamian**]
 [10] *Buz-baz* is an Afghan art form centering on these objects, which are used in the Vietnamese *mua roi nuoc*, the Ottoman Karagoz and Havicat shadow plays, and the Japanese *bunraku*.
 ANSWER: **puppets**
14. This work begins with an apology in which the author asserts that “particularity” and “universality” are two opposing forces that comprise both the world and spirit. For 10 points each:
 [10] Name this series of five orations addressed to “cultured despisers” who would rather study philosophy or poetry than the title discipline, which the author calls a “sense of taste for the Infinite in the finite.”
 ANSWER: **On Religion**: *Speeches to its Cultured Despisers* [or **Über die Religion**]
 [10] *On Religion: Speeches to its Cultured Despisers* was written by this German Protestant philosopher who wrote *The Christian Faith*.
 ANSWER: Friedrich [Daniel Ernst] **Schleiermacher**
 [10] Friedrich Schleiermacher is often held to be the first philosopher who started this study of understanding the deeper meaning of texts. It was expanded by Wilhelm Dilthey and Hans-Georg Gadamer.
 ANSWER: **hermeneutics**

15. Answer the following about extremes in Russian Orthodox spirituality, for 10 points each.
- [10] On Great Saturday, the day before Easter, this extra-Biblical event is remembered with intense icons and a sudden change of the liturgical colors from somber dark purple to celebratory white. The righteous pagans were brought to God during this event, which preceded the Resurrection.
- ANSWER: **Harrowing** of **Hell** [accept **Christ in Hell** or **Christ breaking the gates of Hell** or equivalents; prompt on descriptive answers such as “Jesus conquering death;” do not accept or prompt on “the Resurrection”]
- [10] The Russian Orthodox Church has canonized 36 of these people, who feigned a bizarre or destructive persona while remaining internally serene and devoted. They included the Byzantine saint Simeon of Emesa and Saint Basil of cathedral fame.
- ANSWER: **holy fools** [or **yurodivy**; or **fools** for **Christ**]
- [10] The Orthodox Great Feast commemorating this occurrence on August 15 is preceded by a two-week fast, during which believers refrain from eating meat, dairy, oil, or wine.
- ANSWER: **Dormition** of the Theotokos [or of the Virgin Mary; accept **Dormition** Fast (or Feast)]
16. A hydride shift is an example of this type of reaction. For 10 points each:
- [10] Name this type of reaction, in which the carbon skeleton of a molecule undergoes a change. Two pericyclic examples of this type of reaction are the sigmatropic Cope and Claisen reactions.
- ANSWER: **rearrangements**
- [10] This rearrangement involves the loss of nitrogen from an alpha-diazo-carbonyl compound and the 1,2-rearrangement of an alkyl group to generate a ketene. This reaction is also an intermediate step in a separate one-carbon homologation of carboxylic acids.
- ANSWER: **Wolff** rearrangement [the homologation is the Arndt-Eistert synthesis]
- [10] For a rearrangement to be pericyclic, it must possess a cyclic transition state and also possess this property. SN2 reactions have this property, but SN1 reactions do not.
- ANSWER: **concerted** [or **one step** or **single step** or any clear equivalents]
17. This social organization system was solidified under the 1901-to-1905 rule of the Anti-Revolutionary Party. For 10 points each:
- [10] Name this scheme for social harmony, under which Catholic, Protestant, and secular segments of the country each had their own complete, vertically integrated set of institutions and did not interact socially.
- ANSWER: **pillar** system [or **pillarization**; or **verzuiling**]
- [10] The pillar system was the principal fact of pre-World War II society in this country, which also was confronted with evidence of colonialist abuses in Indonesia and Suriname.
- ANSWER: The **Netherlands** [or **Holland**; or **Nederland**]
- [10] This leader of the “Doleantie” movement in Dutch Protestantism was a Reformed pastor who became prime minister in 1901 and formally implemented the Pillar System.
- ANSWER: Abraham **Kuyper**
18. In an effort to stop this enterprise, its high-profile leaders, including Willie Moretti, Joe Adonis, and Frank Costello, were dragged in front of TV cameras by a Tennessee senator. For 10 points each:
- [10] Name this illegal enterprise that was targeted in the 1950s Kefauver hearings.
- ANSWER: **organized crime** [or **mafia**; accept equivalents; prompt on “crime” or equivalents]
- [10] The hearings brought out several associates of this man, a Jewish affiliate of Meyer Lansky and Lucky Luciano in “Murder Inc.,” whose gambling racket out of the Flamingo Hotel helped build up Las Vegas.
- ANSWER: [Benjamin] Bugsy **Siegel**
- [10] Siegel was shot in the home of this woman, his alleged girlfriend and a renowned depositor of money for the mob. After she refused to snitch as a star witness in front of the Kefauver committee, she punched several reporters on her way out, exclaiming “I hope an atom bomb falls on all of you!”
- ANSWER: Virginia **Hill** [accept Virginia Hill **Hauser**]

19. Name the following about Roman ranks, for 10 points each.

[10] On the *cursus honorum*, or course of offices, men progressed from tribune to this office of financial oversight.

ANSWER: **quaestor** [or **quaestores**]

[10] This term described persons from the non-noble *equites* class who got their families into the senatorial class for the first time, most notably by getting elected consul. Successful people of this type included Sallust and Cicero.

ANSWER: **novus homo** [or **new man**; or **novi homines**; accept answers that switch the Latin word order]

[10] This key documentary source for late Roman history is a book listing every imperial and military office that existed in the Empire around 400 CE. Many of its pages display the painted shields of each military division, a key precursor to medieval heraldry.

ANSWER: **Notitia Dignitatum**

20. The easternmost extent of power of these peoples was the Tarim Basin, and their other military conquests include destroying the Kushan Empire. For 10 points each:

[10] Name this group of nomadic peoples who terrorized Central Asia in the 400s and 500s CE; they invaded the northwest Gupta Empire around 480 CE and destroyed Pataliputra.

ANSWER: **Hephthalite** Empire [or **Ephthalites**; or **White Huns**; or **Hunas**]

[10] This Persian leader allied with the Turks under Sinjibu to conquer the White Huns. He signed the “Eternal Peace” in 532 CE, but broke it just eight years later by invading Syria and sacking Antioch.

ANSWER: **Khosrau I** [or **Chosroes I**; or **Kasra**; or **Anushirvan**; prompt on “Khosrau” or “Chosroes”]

[10] This other signatory of the Eternal Peace was this Byzantine emperor who was the namesake of a plague outbreak and oversaw the rewriting of a law code.

ANSWER: **Justinian I** [or **Justinian the Great**; or Flavius Petrus Sabbatius **Justinianus** Augustus; prompt on “Justinian”]