

Chicago Open 2014: A Redoubtable Coupling of Editors

Packet by Errday Bertrand's Muscling (Auroni Gupta, Will Nediger, Jerry Vinokurov, Richard Yu)

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

Tossups

1. At the end of the first of this poem's two books, one character is unbound from the four iron pillars that comprise Satan's throne and states that "nature is a vision of the science of the Elohim." Kenzaburo Oe's novel *Rouse up O Young Men of the New Age!* takes its title from this epic, which begins by comparing the perverted writings of Homer and Ovid to the sublimity of the Bible. Another character in this poem travels around the world as a comet and enters the author's foot to get to Golgonooza, the city of art and imagination. This poem's title character descends to the Earth and is united with the river Ololon, his feminine aspect. The prefatory poem to this epic asks whether a "countenance divine" shone forth "upon our clouded hills" among "these dark satanic mills." This poem begins with the lyric "Jerusalem," which asks whether its title character's "feet in ancient time / walk[ed] upon England's mountains green." For 10 points, name this prophetic book by William Blake titled for an English poet.

ANSWER: Milton, a Poem

2. One type of these devices, known as the "ring of three," is the subject of an orthogonal tuning algorithm. Another type of these devices is characterized by an elliptic rational function that varies either between zero and one, or between infinity and the discrimination factor. Lattice phase equalizers and bridged-T Zobel sections are examples of these devices that have constant image impedance. The Parks-McClellan algorithm can be used to design these devices when a finite impulse response is desired. Other design paradigms for these devices include the Sallen-Key and ladder topologies. Gain equals "one over the square root of one plus the square of the ripple factor" at the cutoff frequency of their Chebyshev variety. The simplest kind of these devices exhibits 20 decibels per decade of roll-off from passband to stopband and consists of an RL or RC circuit. For 10 points, name these electronic devices that selectively enhance or attenuate the frequency components of a signal.

ANSWER: electronic filters [accept more specific answers containing filters]

3. One character with this last name gives his son a name meaning "the mind is at last at rest" because he is grateful to sire a son after having many daughters. A character of this name divorces his wife Ma Blackie, and refuses to let Chike marry Aku-nna because he is descended from slaves in Buchi Emecheta's *The Bride Price*. Another man with this last name visits Funchal while on a boat trip with Mr. Macmillan, and declares that he is tired of "boiled potatoes" while at a restaurant with his friend Joseph. That character with this surname is sent to England to study law thanks to a scholarship from the UPU, is put on trial for taking bribes after being caught in a sting operation, and has a controversial relationship with the *osu* Clara. Another character with this name kills his adopted son Ikemefuna and hangs himself after chafing against the British colonial presence in Umuofia. For 10 points, give this name of the main character in *Things Fall Apart*.

ANSWER: Okonkwo [accept Isaac Okonkwo or Obi Okonkwo]

4. Late in life, this painter created landscapes depicting an abandoned white house in the countryside and the mouth of a river at Cinquale, which reflect his membership of the Strapaese group led by Giorgio Morandi. He painted elongated marble busts with melancholy expressions in *The Drunken Gentleman* and *The Engineer's Lover*. Another painting by this artist depicts a red-faced figure in the center about to bring a spear down on a man riding a horse as a tumultuous mob waves black banners in the background. Before joining Giorgio de Chirico's school of metaphysical painting, this artist used a style that can be seen in his depiction of faceless, elongated figures *Leaving the Theatre*, a depiction of a moving vehicle in *Jolts of a Cab*, and a menacing portrait of Filippo Marinetti. Another painting by this man is a scene dominated by black and red that depicts protesters clashing with police at a 1904 burial. For 10 points, name this painter of *The Funeral of the Anarchist Galli*.

ANSWER: Carlo Carra

5. One book that describes this modern day country's lore contains an account of a one-armed people with three eyes who ride piebald horses and build amazing flying machines. This country's lore is also described in *A Treatise on Research into Nature*, which states that one of its heroes was transformed into a yellow bear after he was executed for stealing some ensorcelled soil from its sacred paradise. Another source on this country's lore titled *The Garden of Stories* contains an account of the "Foolish Old Man of 90 years" who tries to separate two mountains. A tree that grows pearls beside a lake of gems can be found in this country's mythic paradise named Kunlun, which is home to the Queen Mother of the West's immortality conferring peaches. This country's version of the great flood story features a miner named Yu the Great who stops it. For 10 points, name this country that is supposedly home to the paradise Shangri-La.

ANSWER: [People's Republic of] China [or PRC; or Zhongguo]

6. A group that preceded this organization was set up by Friedrich Hecker and Gustav Struve in Heidelberg. A military tribunal under Prince Windischgratz killed one of this group's members, Robert Blum. Factions within this group were named for hotels in which its members met, including the Café Milani, the Donnersberg, and the Casino. A year after this organization's collapse, the "humiliation of Olmutz" ended a similar effort based in Erfurt. This organization adopted Heinrich von Gagern's proposal to create a government led by Prince Karl Leiningen and Anton von Schmerling. The Weidenbusch and Mainlust groups within this body disputed whether to give a "greater" or "lesser" answer to a national "question." Frederick Wilhelm IV rejected this body's offer to make him Emperor of the Germans, bringing an end to the reforms of the March Revolution. For 10 points, what body that met in 1848 at the St. Paul's Church was the first freely elected German parliament and is named for the city in which it met?

ANSWER: Frankfurt Parliament [or Frankfurt National Assembly; or Frankfurter Nationalversammlung]

7. Patients are predisposed to infection by this agent in the Lewandowsky-Lutz disorder. Tissue infected by this agent can be detected by immunostaining to detect co-expression of INK4a and Ki67. Two strains of this agent that infect the respiratory tract cause the disease RRP. An early gene in this agent significantly increases the degradation of Rb protein, which contributes to a process integral to Harald zur Hausen's hypothesis. This agent is known to undermine defense mechanisms by protecting host cells from TRAIL-induced apoptosis. Infection by a particularly virulent strain of this virus resulted in the HeLa cell line, and its 16 and 18 strains are examples of its "high-risk" strains. This virus causes intra-epithelial neoplasia in the region it targets. The Bethesda system is used to score a test to detect its effects, and a preventative measure against it is the vaccine Gardasil. For 10 points, name this virus that can cause genital warts and cervical cancer, infection with which can be diagnosed with a "smear."

ANSWER: HPV [or human papillomavirus; do not accept or prompt on "pap"]

8. One character in this opera sings “According to the law? What does that word mean?,” which was among the reasons that official censors banned this opera during its composer’s lifetime. A trumpet call that juxtaposes the triads of D flat and E major represents the title being of this opera. In its epilogue, one character reassures the audience that the opera’s events were merely an illusion. Ivan Bilibin designed sets for the premiere of this opera, whose musical highlight is the second act “Hymn to the Sun.” This opera, in part a satire on the disastrous conduct of the recent Russo-Japanese war, and indirectly based on Washington Irving’s *Tales of the Alhambra*, includes a difficult tenor altino role for the eunuch Astrologer, who verbalizes his desire for the Queen of Shemakha. In this opera, King Dodon decides to attack Shemakha after hearing the prophetic crowing of the title creature. For 10 points, name this Nikolai Rimsky-Korsakov opera based on a Pushkin fairy tale about a magic bird.

ANSWER: *The Golden Cockerel* [or *Zolotoy petushok*; or *Le coq d’Or*]

9. This philosophical position was influentially stated in a 1956 paper by John Kemeny and Paul Oppenheim. The champions of this position’s “new wave” include Clifford Hooker and John Bickle. Another influential model of this position, which was amended by Kenneth Schaffner, distinguishes between homogeneous and heterogeneous forms of this position’s central concept, and relies on derivations assisted by bridge laws. In *The Structure of Science*, Ernest Nagel set forth his model of this position. Dan Dennett’s book *Darwin’s Dangerous Idea* supports a form of this position that attempts to explain apparent design without “skyhooks,” rather than without “cranes.” The argument from multiple realizability opposes this position, which is attacked along with the analytic-synthetic distinction in W.V.O. Quine’s “Two Dogmas of Empiricism.” For 10 points, name this philosophical doctrine stating that complex phenomena can be fully explained in terms of lower-level phenomena.

ANSWER: reductionism

10. In this state, William Loring shouted “Great God! Do I command cowards?” after soldiers withdrew in response to John Adams foolishly charging earthworks and getting killed. Soldiers in this state sang “so now we’re going to leave you; our hearts are full of woe” in a parody of “The Yellow Rose of Texas.” A general named States Rights Gist died at another battle in this state, whose losers crossed the Duck River and engaged in a skirmish at the Battle of Columbia. After the failure of a campaign in this state, the pursuing Union army was turned back at the Battle of Anthony’s Hill by Nathan Bedford Forrest. That campaign’s fate was sealed when John Schofield slipped behind Confederate lines at the Battle of Spring Hill in this state. George Thomas fought a campaign in this state contemporaneous with the beginning of William Sherman’s March to the Sea. For 10 points, what state’s namesake 1864 campaign saw John Bell Hood drag an army from Franklin to Nashville?

ANSWER: Tennessee [Campaign]

11. This location is described as lying further inland from the Agriophagoi, or “wild animal eaters,” and the Moschophagoi, or “shoot eaters,” in the second entry of the *Periplus of the Erythraean Sea*. Pseudo-Callisthenes records the legend that a female ruler of this city intimidated Alexander the Great into turning back his invading army. Giuseppe Ferlini’s destruction of the “N6” building in this place led copycat treasure hunters to destroy only the tops of certain buildings. Ferlini also made off with some gold belonging to Amanishakheto, a *kandake* or queen of this city. Despite being in the middle of a desert, its position bounded by three rivers led people to refer to it as an “island” that also includes the sites of Naqa and Musawwarat es Sufra. The Begarawiyah site is home to this city’s pyramid complex. It supplanted Napata as the capital of a kingdom that ruled the 25th Dynasty of Egypt, and it was eventually conquered by Axum. For 10 points, name this capital of the Kingdom of Kush.

ANSWER: Meroe [or Medewi; or Meruwah]

12. In one experiment, this researcher instructed his cohorts to report that they heard the words “hollow,” “thud,” and “empty.” That experiment, in which this man reported that no one noticed him and his cohorts flushing medication down the toilet, was criticized by Robert Spitzer, who compared it to drinking blood and driving to an emergency room. In another experiment, this researcher told administrators that he was sending them dummy subjects, leading to 41 individuals being identified as potential dummies, despite this man actually sending no dummies at all. In the first experiment, he found that the average time that an asymptomatic person spent in a hospital was 19 days after he and seven associates to feigned hallucinations to gain admittance. For 10 points, name this psychologist whose paper “On Being Sane in Insane Places” is based on an experiment in which he sent healthy people into mental institutions.
ANSWER: David L. **Rosenhan**
13. This one-act play’s central character says that “you may remark that my vocabulary has taken a turn for the Anglo-Saxon” immediately after barfing. A philistine in this drama claims that the textbook *Enzyme Kinetics* was more poetic than the lectures of the author of *Made Cunningly*. This play, which was written while its author was a kindergarten teacher in Atlanta, has a central character who is chastised for reading an edition of a poem that is inauthentically punctuated during a flashback scene with Professor Evelyn Ashford; the professor later reads its protagonist Margaret Wise Brown’s *The Runaway Bunny*. It ends as the protagonist takes off her two gowns as she nakedly walks toward a heavenly light as Dr. Jason Posner realizes that he mistakenly responded to a patient with a DNR order. For 10 points, name this play centering on a cancer-stricken scholar of John Donne named Vivian Bering, which earned its author Margaret Edson a Pulitzer Prize.
ANSWER: **W;t** [or **Wit**] [The pronunciation is the same.]
14. One property available to these substances can be calculated using Wodak and Janin’s analytical formula or Futamara et al.’s Monte Carlo algorithm. That property available to these substances has a “re-entrant” form and a “contact” form, whose sum can be calculated using the “rolling-probe” approach of the Shrake-Rupley algorithm. That property available to these substances factors in the van der Waals radius of these substances in derivatives of the Lee-Richards method, and is known as the accessible surface area. High-speed devices with “vibrating” or “planetary” motions are used in ball-milling methods to eliminate these substances. These substances can have significant effects on substitution reactions. Green chemistry principles eschew these substances when possible. SN2 reactions proceed well in aprotic ones, while SN1 reactions require protic ones such as methanol. For 10 points, name these types of compounds that provide the liquid phase in which reactants dissolve, exemplified by DMSO and water.
ANSWER: **solvents**
15. The first real battle of this conflict, which erupted from attempts to suppress the so-called “assemblies of the desert,” was a stalemate at Champ-Domergue. Jacques de Julien waged a literal scorched-earth campaign in the region where this conflict was fought, and many civilians opposed to this conflict assembled into units known as “cadets of the cross.” The last battle of this conflict was a comprehensive defeat for the rebels at Saint-Benezet, prompting the surrender of one rebel leader, Elie Marion. This conflict was effectively ended with the death Roland Laporte and surrender of Jean Cavalier, after which a peace negotiated by the Marechal de Villars offered amnesties to many of the rebel leaders. This revolt erupted in the Cevennes region in response to sustained persecution that resulted when the Edict of Nantes was revoked by Louis XIV. For 10 points, identify this Huguenot rebellion lasting from 1702 to 1704, which takes its name from the white smocks worn by participants.
ANSWER: **Camisard** revolt [prompt on “Protestant Revolt” or “Huguenot Revolt” before mention; accept **Cevennes** Rebellion before mention]

16. In the first movement of Handel's Organ Concerto in B-Flat Major, Opus 7, No. 1, two of these instruments play the theme from Handel's G-minor keyboard passacaglia. Handel's only non-organ solo concertos are three for this instrument. At the beginning of "He Gave Them Hailstones" from Handel's *Israel in Egypt*, these instruments alternate with the strings. The second movement of Handel's *Water Music* is a solo for this instrument. Two of them in unison play a plaintive tune in the "Suscepit Israel" from Bach's *Magnificat*. In "The Arrival of the Queen of Sheba" from Handel's *Solomon*, busy tutti passages alternate with passages for two of these instruments. Three of them play the baseline in the second trio from Bach's first *Brandenburg Concerto*. Handel's *Music for the Royal Fireworks* calls for 24 of them. The "Quia respexit" from Bach's *Magnificat* features a solo part for a lower-pitched "d'amore" variety of this woodwind instrument. For 10 points, name this high double-reed instrument.

ANSWER: **oboes** [accept **oboe d'amore**]

17. George Polya introduced the toroidal version of the problem named for these objects and showed that the problem is only solvable when the number of them is not divisible by two or three. In Donald Knuth's paper "Reducing Links," he reduces the problem named for these things to an exact cover problem by constructing a matrix with "n to the 4th" entries in it. Bizarrely, the number of fundamental solutions for the problem of these items is greater for the case when there are five of them rather than when there are six of them, for which there is only one solution. A depth-first search backtracking algorithm for the constraint satisfaction problem named for these items was given by Dijkstra. For an n-by-n grid, these objects can be placed on the grid in a non-attacking fashion if n is four or greater. For 10 points, name these pieces that must be validly arranged on a chessboard in a problem from computer science.

ANSWER: **queens** [prompt on "chess pieces" or equivalents]

18. One ruler of this region leaked details about illegal foreign trade to force his father's chief advisor, Zusho, to commit suicide. A bronze statue of a man hunting with his dog commemorates one of this province's statesmen, who used the motto "revere heaven and love man." A retinue of warriors serving the ruler of this region killed a merchant named Charles Lennox Richardson, leading to the Namamugi incident, in which the captain of the HMS *Euryalus* was killed while bombarding this historical state's capital. This region was ruled by the Shimazu clan, which expanded its holdings by conquering the Ryukyu Islands. This region formed an alliance with Tosa and Choshu to provide most of the Imperial forces in the Boshin War. A man from this region, who offered to sacrifice himself in order to provoke a war with Korea, eventually died near its capital of Kagoshima in a last stand with 500 samurai. For 10 points, name this historical region in Kyushu where Saigō Takamori led a failed 1877 rebellion.

ANSWER: **Satsuma** Domain [or **Satsuma-han**; accept **Kagoshima** Domain before "Kagoshima"]

19. Members of this country's Union of the Plant drink hoasca tea to induce psychedelic hallucinations. One of this country's festivals includes the Washing of Bonfim, and in another festival, many people faint while holding a rope connected to an image of Our Lady of Nazareth. This country contains the world's largest following of Kardecist Spiritism, due in large part to the popularity of psychographic author Chico Xavier. In 1995, a televangelist kicked an icon of this country's patron saint during a live broadcast on that saint's feast day. This country, whose patron saint is Our Lady of Aparecida, is home to a religion whose adherents worship ancestral spirits called Baba Egum and attend *terreiro* to perform dancing ceremonies honoring *orixas*. This country's Yoruba-based religions include Umbanda and Candomblé. For 10 points, name this country that is home to a giant statue of Christ the Redeemer near Rio de Janeiro.

ANSWER: [Federative Republic of] **Brazil** [or República Federativa do **Brasil**]

20. Charlotte Mandell, who translated this book into English, has suggested that its opening is intended to echo Francois Villon's "Ballad of the Hanged Men." At the end of this novel, the main character uses an iron bar to kill his friend Thomas, who had just saved him from being shot in a zoo. In this book's longest section, the narrator is pursued by Weser and Clemens for killing his own mother shortly before being recruited for a project by Dr. Mandelbrot. The chapters of this novel are titled after musical movements, such as "Courante," during which the narrator is shot in the head at the Battle of Stalingrad, and "Air," in which the narrator has sex with a tree. In "Gigue," its narrator bites Hitler's nose. Much of this novel is devoted to SS officer Maximilian Aue's reminisces about the Final Solution. For 10 points, name this novel written by Jonathan Littell and titled after the Eumenides.

ANSWER: *The Kindly Ones* or *Les Bienveillantes* [do not accept or prompt on "The Eumenides" at any point]

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Bonus

1. Saul Lieberman took issue with Jacob Neusner's attempt at this undertaking, stating that it belonged in "the waste basket." For 10 points each:
[10] Name this undertaking that resulted in the authoritative Steinsaltz edition, which is paired with color maps and commentary by Rashi in the Noe edition that is still being serially released.
ANSWER: English translations of the Talmud [accept equivalents such as Talmud translations; prompt on "Talmud(s)" or "Talmud edition(s)" or similar answers]
[10] The Talmud as people understand it was compiled by rabbis in, and is sometimes named for, this city, which in the Book of Revelation is the embodiment of all evil, ruled by a whore who rides a seven-headed beast.
ANSWER: Babylon [or Bavli]
[10] The earlier Jerusalem Talmud, and not the Babylonian one, includes the tractates of Seder Zeraim, which deal with this domain of law that scholars surmise is more relevant to Jerusalem than it is to Babylon.
ANSWER: agriculture [accept broad equivalents such as farming or land cultivation, etc.]
2. Recent scholarship indicates that this sculpture is seated on a panther's skin, not the skin of the Nemean Lion. For 10 points each:
[10] Name this sculpture that is prominently signed "Apollonios, son of Nestor." Michelangelo quoted its pose for that of St. Bartholomew in *The Last Judgment*, which is housed just a few rooms away.
ANSWER: *The Belvedere Torso*
[10] The Belvedere palace also lends its name to a sculpture of this Greek god. The Praxiteles sculpture of this god "Sauroktonos" depicts him killing a lizard.
ANSWER: Apollo [accept Apollo Belvedere or Apollo Sauroktonos]
[10] This 4th-century BCE sculptor of the *Diana of Versailles*, who worked on the Mausoleum of Halicarnassus, is thought to be the creator of the *Apollo Belvedere*.
ANSWER: Leochares
3. This effect can be modeled by a cubic growth equation in which the right side of the logistic growth equation is modified by an " $\frac{N}{A} - 1$ " term. For 10 points each:
[10] Name this effect in which the per-capita growth rate of a population increases with population size. One cause of this effect is mate limitation, in which males and females do not interact frequently at low population densities.
ANSWER: Allee effect
[10] Population ecologists estimate that the "maximum sustainable" value of this concept occurs when the population size of a logistically growing population is at half carrying capacity. This concept is important in fishery management.
ANSWER: [maximum sustainable] yield
[10] Fisheries can be considered an example of one of these benefits humans derive from the natural world. Other examples of these benefits include wetlands detoxifying wastewater and the free pollination of agricultural crops.
ANSWER: ecosystem services [prompt on partial]

4. Schubert often based instrumental pieces on songs. For 10 points each:

[10] This large piano piece by Schubert in C major is based on a song with a pervasive “long, short-short” rhythm. Its use of thematic transformation inspired Liszt, who arranged it for piano and orchestra.
ANSWER: “Wanderer” Fantasy, Opus 15, D. 760 [accept any underlined part; prompt on “Fantasy in C”]

[10] Schubert based a dramatic D-minor piece for this ensemble on his song “Death and the Maiden.” His 15th piece for this ensemble is a huge piece in G major. Haydn used fugues as finales in three of his six “Sun” pieces for this ensemble, and Beethoven emulated that with his “Razumovsky” set of them.
ANSWER: string quartet [accept two violins, a viola, and a cello, I suppose]

[10] Schubert wrote variations on his song “Trockne Blumen” from *Die schöne Müllerin* for this instrument and piano. After the second trumpet fanfare in Beethoven’s third “Leonore” Overture, this instrument has a duet with a bassoon. It also has a high solo in the “Et Incarnatus” section of Beethoven’s *Missa Solemnis*.
ANSWER: flute
5. This creator of the Logo programming language introduced a computer-based learning environment called the Microworld in his book *Mindstorms*. For 10 points each:

[10] Name this cognitive scientist and educational theorist who co-wrote *Perceptrons* with Marvin Minsky.
ANSWER: Seymour [Aubrey] Papert

[10] Papert was strongly influenced by this thinker’s constructivist learning theory. He argued that infants learn by the manipulation of schemata, and created a four-stage theory of cognitive development.
ANSWER: Jean Piaget

[10] Constructivism influenced the Harkness education method, which was developed at this private prep school in New Hampshire, where students sit around oval tables and learn by discussion instead of lecturing.
ANSWER: Phillips Exeter Academy [accept PEA]
6. This author wrote about a pair of siblings hiding in a lead chest after being shipwrecked; later, those protagonists discover Megamicres, creatures who communicate only by singing. For 10 points each:

[10] Name this Italian lothario and author of *Icosameron*, who detailed his sexual conquests in his memoir *The Story of My Life*.
ANSWER: Giacomo [Girolamo] Casanova

[10] This Hungarian author imagined Casanova reconnecting with Francesca, or “the One,” in a book in which Casanova duels the duke of Parma. In addition to *Casanova in Bolzano*, he wrote *Embers*.
ANSWER: Sandor Marai [or Sándor Károly Henrik Grosschmied de Mára]

[10] This Austrian author detailed Casanova’s interest in science and mathematics in *Casanova’s Homecoming*. He created the character of Lieutenant Gustl and wrote *Le Ronde*.
ANSWER: Arthur Schnitzler
7. An expansion to the Sussex County courthouse turned up the skull of this woman, who cemented her status in American folklore with the 1841 publication of the “Female Fiend” pamphlet. For 10 points each:

[10] Name this woman who ran a “reverse underground railroad” by kidnapping free blacks and selling them back into slavery. She skirted the law by walking between different states from her house to her barn.
ANSWER: [Martha] Patty Cannon [accept Lucretia P. Cannon]

[10] As a karmic counterweight to housing Patty Cannon’s barn, this state was where Peter Spencer founded the AUMP Church, the first independent black denomination in America. It received one of its nicknames from the game fowl that amused its Revolutionary War militia.
ANSWER: Delaware [those are the Blue Hens]

[10] Cannon’s gang took advantage of the spike in slave prices in this year, in which the twenty-year Constitutional protection of the slave trade ended. Charles Cotesworth Pinckney lost the election of this year to James Madison.
ANSWER: 1808 [prompt on “‘08”]

8. These types of reactions are sometimes named for Hans Goldschmidt, who discovered one example of them between aluminum and iron. For 10 points each:

[10] Name this type of reaction, commonly demonstrated in intro chemistry classes, in which the oxidation of one metal is exergonic enough to drive the reduction of another. It is often used for underwater welding.

ANSWER: **thermite** reactions [or **aluminothermic** reaction]

[10] Thermite reactions are a tool in this paradigm, in which inorganic, solid substances such as metallics, intermetallics, and composites can be produced using a redox reaction. They usually occur at temperatures lower than chemical or physical vapor deposition, and one example of this technique is the Pechini reaction.

ANSWER: **combustion synthesis** [accept **CS**; antiprompt (i.e. “can you be less specific?”) on “self-propagating high-temperature synthesis”]

[10] Chick et al. pioneered a combustion synthesis of ceramic oxides using a combination of metal nitrates and this simplest, non-chiral amino acid.

ANSWER: **glycine** [accept: **G** or **Gly**]

9. This historian argued that democracy was not the inevitable outcome of 20th-century European history in his book *Dark Continent*. For 10 points each:

[10] Name this Columbia professor whose recent books, *No Enchanted Palace* and *Governing the World*, deal with the history of international organizations like the UN.

ANSWER: Mark A. **Mazower**

[10] Mazower is an expert on this European peninsula, whose name has become a byword for fragmentation. A pair of wars in 1912 and 1913 are named after this region.

ANSWER: **Balkan** Peninsula [or **Balkans**; accept **Balkan Wars** or **Balkanization**]

[10] A book by Mazower describes this Greek city as a “city of ghosts.” Theodosius I angered Ambrose of Milan by massacring many people in this city.

ANSWER: **Thessaloniki** [or **Thessalonica**; or **Salonica**]

10. The text of this novel ends with a number of postscripts by the characters, who supposedly read the main text and then offered their own versions of the story. For 10 points each:

[10] Name this novel in which Bradley Pearson is convicted for the murder of Arnold Baffin after falling in love with Baffin’s daughter Julian.

ANSWER: *The* **Black Prince**

[10] This other novel is narrated by the arrogant, retired playwright Charles Arrowby, as he recalls his past loves and encounters some possibly supernatural monsters in the title location near his house.

ANSWER: **The Sea, The Sea**

[10] *The Black Prince* and *The Sea, The Sea* are by this novelist and philosopher, who wrote *Under the Net*.

ANSWER: Dame [Jean] Iris **Murdoch**

11. One artist of this group depicted rows of office workers walking home in *Collins Street, 5 pm* and used his country’s “six o’clock swill” as the basis for his painting *The Bar*. For 10 points each:

[10] Name this group of seven artists including Robert Dickerson and John Brack.

ANSWER: **Antipodeans**

[10] The Antipodeans were one of the major art movements from this country. It was home to the late-19th-century “Heidelberg School,” which is sometimes called its version of Impressionism.

ANSWER: [Commonwealth of] **Australia**

[10] Brack’s *The Bar* reimagines an Édouard Manet painting showing a woman in front of a bowl of oranges at a bar at this Parisian nightclub.

ANSWER: **Folies Bergère** [accept A **Bar at the Folies Bergère**; or Un **bar aux Folies Bergère**]

12. In April 2014, NASA reported evidence from *Cassini* that this moon has an underground ocean. For 10 points each:
- [10] Name this moon of Saturn whose south polar region features active cryovolcanoes and “tiger stripe” terrain.
- ANSWER: **Enceladus**
- [10] Enceladus has the highest value for this quantity of any object in the solar system. Opposition surge causes this quantity to increase as the phase angle approaches zero.
- ANSWER: geometric **albedo** [prompt on “brightness”; do not accept or prompt on “reflectance” or “Bond albedo”]
- [10] This semi-empirical model describes the photometric properties of solar system objects with regolithic surfaces. Its parameters include the single scattering albedo and effective surface tilt.
- ANSWER: **Hapke** model
13. Faith is defined as “believing in” as opposed to “believing that” in this book’s second volume, *Faith and Reality*. For 10 points each:
- [10] Name this two-volume 1951 book of Christian existentialism, based on its French author’s Gifford Lectures. It discusses the importance of reflection and “feeling as a mode of participation.”
- ANSWER: *The **Mystery of Being*** [or *Le **Mystere de l’être***]
- [10] *The Mystery of Being* is the magnum opus of this Christian existentialist philosopher who also wrote *Homo Viator* and *Man Against Mass Society*.
- ANSWER: Gabriel [Honoré] **Marcel**
- [10] Marcel was a fan of this concept, which is the basis for much of Emmanuel Levinas’s ethics. Simone de Beauvoir wrote in *The Second Sex* that woman was the “privileged” example of this concept.
- ANSWER: the **other** [or **autrui**]
14. This man’s government invited British management guru Stafford Beer to create Project Cybersyn, a plan to use telex machines to control the economy under “cybernetic principles.” For 10 point each:
- [10] Name this Chilean leader, whose “way to socialism” caused a depression and hyperinflation of the *escudo*, contributing to his overthrow in a 1973 coup d’etat.
- ANSWER: Salvador [Guillermo] **Allende** [Gossens]
- [10] Allende’s government implemented this ethnically Croatian economist’s plan to utilize the Chilean economy’s idle capacity and stimulate demand by implementing wage increases. He later went into exile in Mexico.
- ANSWER: Pedro **Vuskovic** [Bravo]
- [10] Allende nationalized the mines of this resource at Chiquicamata and El Teniente; they were later merged during Pinochet’s regime to create Codelco, largest company dedicated to mining this resource in the world.
- ANSWER: **copper** [or **cobre**]

15. One legend states that this god possessed a magical cauldron from which guests could endlessly drink and become younger and healthier. For 10 points each:
[10] Name this god, who worked with Dian Cecht to provide Nuada with a silver arm.
ANSWER: Goibniu [or Goibne; or Gaibnenn; or Gobnenn]
[10] Goibniu also created the spear that Lugh used to wound Balor, the leader of this race of giants who fought against the Tuatha de Danaan.
ANSWER: Fomorians
[10] Goibniu was unable to become ruler of Ireland because he would have been a king of this type. These kings are infertile and rule over a wasteland, and Balin turned the Fisher King into one by giving him the Dolorous Stroke.
ANSWER: maimed king [or blemished king; accept anything that indicates they are a wounded king]
16. One poem about this item notes that “his hands had put instead an artificial wilderness and a sky like lead.” For 10 points each:
[10] Name this object, the subject of a W. H. Auden poem, which is also described at length in the 18th book of the *Iliad*, when its owner uses it in his fight against Hector.
ANSWER: shield of Achilles [accept apsis in place of “shield”]
[10] This Greek word is used to refer to a description of a work of art within another work of art. Classical examples include the description of the shield of Achilles, as well as the description of Aeneas’s shield in the *Aeneid*.
ANSWER: ekphrasis [or ekphrastic]
[10] Book 18 of the *Iliad* is the basis for part of *GBH*, a section of this multi-volume Christopher Logue poem based on the *Iliad*, whose other sections include *Patrocleia* and *Pax*.
ANSWER: War Music
17. This album samples a man ranting about getting arrested over some parking tickets, and a mysterious transmission from the film *Prince of Darkness*, in its track “Stem/Long Stem/Transmission 2.” For 10 point each:
[10] Name this album that also features an obnoxious voice sample saying “it’s the money!” in the track “Why Hip-Hop Sucks in ‘96.” Daniel Nakamura helped produce this debut album of DJ Shadow.
ANSWER: Endtroducing...
[10] *Endtroducing...* was supposedly made using only an Akai audio sampler, a tape recorder, and the Technics SL1200 model of these machines, which are colloquially known as “decks.”
ANSWER: turntables [prompt on “record player(s)” or “phonograph(s)” or equivalents]
[10] Two turntables were used in the first of this set of five pieces by the composer of *Sonatas and Interludes*. Its fourth entry uses twelve radios and its fifth entry uses magnetic tape of any 42 recordings.
ANSWER: Imaginary Landscapes [by John Cage]

18. The ballad of Sir Patrick Spens describes a king drinking “blood-red wine” in this town, whose first abbot was a monk named Geoffrey of Canterbury. For 10 point each:

[10] Name this town in the county of Fife where David I established a Benedictine abbey. Like the monastery at Iona, many Scottish royals are buried in this city.

ANSWER: **Dunfermline**

[10] Although this man’s heart is interred at Melrose, the rest of his body, along with those of many other Scottish royals, is buried at Dunfermline. This king defeated Edward II at the Battle of Bannockburn.

ANSWER: **Robert the Bruce** [or **Robert I** of Scotland; or **Roibert a Briuis**; prompt on “Robert” or “Roibert”]

[10] This Wessex-born Scottish queen established a ferry to bring pilgrims to Dunfermline in the 1070s. This sister of Edgar Aetheling died shortly after her husband Malcolm III was killed at Alnwick, and was later canonized.

ANSWER: Saint **Margaret** [of Wessex]

19. This megastructure contains The Factory in the Dog Solitude, where Slick Henry makes enormous sculptures. For 10 points each:

[10] Name this giant city on the Eastern Coast of the United States. It provides the setting to *Mona Lisa Overdrive* and is actually a series of geodesic domes that spans from Boston to Atlanta.

ANSWER: The **Sprawl**

[10] This South Carolinian novelist is this author of “Burning Chrome” and *Neuromancer*, the latter of which is one of the novels in his *The Sprawl Trilogy*.

ANSWER: William Ford **Gibson**

[10] William Gibson’s autobiographical poem *Agrippa (a book of the dead)* was distributed in an art book using one of these devices, and it would encrypt itself after a single use.

ANSWER: a three-and a half inch **floppy** disk [prompt on “disks” or “computer storage” or other similar answers]

20. This bonus on Feynman diagrams has nothing to do with ghosts, penguins, or ghost penguins. For 10 points each:

[10] Because this equation contains an infinite number of interactions, the ladder approximation is used to convert it to a Feynman diagram. This equation describes the bound states of a two-particle system in quantum field theory.

ANSWER: **Bethe-Salpeter** equation

[10] Using this method to calculate the S-matrix generates expansion terms that correspond to Feynman diagrams. This theory approximates a quantum system in terms of a simpler system subject to a small corrective disturbance.

ANSWER: **perturbation** theory

[10] The standard perturbative expansion of the S-matrix is this physicist’s namesake series. His namesake equation sets the self-energy operator equal to the inverse of the bare propagator minus the inverse of the dressed propagator.

ANSWER: Freeman **Dyson** [or **Dyson** series; or **Dyson** equation]