## Chicago Open 2014: A Redoubtable Coupling of Editors

Packet by Stephen Harper’s War On Quizbowl Science (Aaron Dos Remedios, Patrick Liao, Brendan McKendy, Jay Misuk, Joe Su, Di Xiao, Neil Walford)
Edited by Austin Brownlow, Andrew Hart, Ike Jose, Gautam \& Gaurav Kandlikar, and Jacob Reed

## Tossups

1. This man was condemned in memoirs by sisters Elissa and Rebecca Wall, the latter of whom recounted how she testified against him while wearing a sleeveless red dress. In a 2003 speech, this man used the codename R17 to refer to plans to move his operations from Colorado City to the YFZ Ranch. In a Lifetime Original Movie, Tony Goldwyn played this man, who was also profiled in Laurie Allen’s 2005 documentary Banking on Heaven. In 2006, he was discovered driving a late-model Cadillac Escalade just outside of Las Vegas, carrying 15 cell phones and 3 wigs. This man succeeded his father, Rulon, as the leader of the Fundamentalist Church of Jesus Christ of Latter-Day Saints, allegedly by marrying all but two of his father’s widows. For 10 points, name this fundamentalist Mormon who landed on the FBI's most wanted list and was convicted of sexual assault in Arizona for his role in marrying lots of underage girls.
ANSWER: Warren [Steed] Jeffs
2. Garedew et al. showed that this complex regulates OPA1 and TFAM, which are important in the biogenesis of mitochondria. Experiments by Almeida et al. and Colombo et al. have shown that this complex regulates PFKFB3 ["P-F-K-F-B-3"] and GLS1, which suggests that this complex has tight control over glycolysis and glutaminolysis. This complex is inactive when its activators are localized by Mad and Bub proteins. Like SCF, this complex has substrates with consensus sequences like the D-box and the KEN-box. Activators of this complex that help it bind to those substrates are the cdc20 and cdh1 proteins. This complex has 13 subunits, and is best known for its E3 ubiquitin ligase activity. One substrate of this complex undergoes degradation to release separase, which cleaves cohesin to dissociate sister chromatids and allow them to move towards opposite poles of the cell. For 10 points, name this protein complex that helps move the cell cycle along from metaphase to its namesake phase.
ANSWER: anaphase promoting complex [or anaphase promoting cyclosome; or anaphase promoting complex/cyclosome; or APC/C; accept SCF complex or Skp, Cullin, F-box containing complex until "SCF"]
3. One artist of this style used the same young brunette as the model for his The Young Shepherdess, The Goose Girl, and The Bohemian. Another artist of this style designed every aspect of an opulent Viennese parade for the Silver Wedding Anniversary of the Austrian royals. A winged youth points to the sky as a nude woman in his arms throws her head back in a depiction of Psyche and Cupid by a proponent of this style, who also painted Cupid and Psyche as children in a work incorrectly called "the first kiss." Hans Makart was an Austrian proponent of this style, which flourished in Brazil under the guidance of Joachim Lebreton and is exemplified by the history paintings of Jean-Paul Laurens. Five cupids tumble in the air above a nude woman lying atop a cresting wave in a version of The Birth of Venus exemplary of this style. For 10 points, name this art style practiced by Alexandre Cabanel, William-Adolphe Bouguereau, and other painters inspired by formal institutions for teaching art.
ANSWER: academic art [or academism; accept word forms]
4. A collection of stories titled after the "Episodes of" this character was discovered by Lewis Melville and describes Prince Barkiarokh having sex with the corpse of his wife Gazahide. This man hires an expert to translate the foreign text on the French swords he has just purchased, but one day, the text on those weapons changes into a menacing message, so he tries to imprison the expert. Later, this character sacrifices fifty youths in a chamber of ebony to receive a golden key and constructs a palace devoted to touch, hearing, taste, sight, and smell in his kingdom. This fictional ruler attempts to have a merchant named the Giaour imprisoned, and he possesses the ability to use an evil eye against scholars who disagree with him. This character, who is enchanted with his mother Carathis, ends up staying in the infernal palace of Iblis as punishment for pursuing arcane knowledge. For 10 points, name this Abbasid caliph who titles a novel by William Beckford.
ANSWER: Vathek
5. As recently as the late imperial period, an 18 -armed form of this figure known as Cundi ["tsun-di"] was popular among various esoteric-practicing communities in China. Adherents of the Tiantai school identify six different forms of this figure, each corresponding to a realm of existence, including pretas, asuras, and devas. In Tibet, this figure is believed to have been a co-disciple of Vajrapani, and has seven forms, including one with eleven faces and another with the head of a horse. Chapter 25 of a Mahayana text describes 33 manifestations of this figure, who vows to aid every sentient being. In China, this figure possesses a thousand arms and is venerated as the lord of the world known as Guanyin. The mantra "om mani padme hum," which roughly translates to "purifying jewel in the lotus," is associated with the fourarmed version of this figure who is alternately known as the "lotus holder." For 10 points, name this bodhisattva who embodies the compassion of all Buddhas.
ANSWER: Avalokiteshvara [accept Padmapani; accept Guanyin or Natha or Lokanat or Cundi before those names are read]
6. One synthesis for this compound proceeds via an 18-step mechanism with an early Bischler-Napieralski cyclization and reduction in cyano-boro-hydride to give the C and D rings of this compound. Another synthesis of this compound was developed by Overman and uses a key intramolecular Heck reaction. In the first total synthesis of this compound, an aza-Diels-Alder reaction generates its C ring and a copper chromite reduction forms its D ring. This compound, which is produced in the Rice total synthesis, was also synthesized by Marshall Gates, whose experiments confirmed Robert Robinson's prediction for its structure. Stork, Fukuyama, and Chida all have developed different total synthetic routes for this compound, whose biosynthesis begins with a reticuline precursor. Many synthetic routes for this compound terminate at di-hydro-codeine-one, and it differs from codeine by a single methyl group. For 10 points, name this compound, an analgesic that is found in opium.
ANSWER: morphine [accept dihydrocodeinone or codeine until "Robert Robinson"]
7. This location was where Teias, the last Ostrogoth king, camped and tried to secure a naval supply line before attacking the army of Narses in the Battle of Mons Lactarius. Before a second battle named for this location, Titus Manlius Torquatus instilled discipline in his troops by putting his own son to death for engaging the enemy without orders. At that same 340 BCE battle at this location, the Romans allied with the Samnites, and Publius Decius Mus performed a devotio self-sacrifice in a victory over the Latin League. In a third battle here, Praetor Gaius Claudius Glaber lost a siege when the defenders used vines to rappel from this location, leading to the first victory of Spartacus's revolt. The death of the admiral of the Misenum fleet and a plume shaped like an umbrella pine over this location were described in two letters to Tacitus written in 79 CE by Pliny the Younger. For 10 points, name this mountain by the Bay of Naples that destroyed nearby Herculaneum and Pompeii when it erupted.
ANSWER: Mount Vesuvius [or Monte Vesuvio; prompt on "Campania"]
8. The title character of this opera sings "Finor non m'han baciata" while using the dance of the kiss to try to seduce her lover, who is supposedly engaged to Afra. A friend of this opera's title character warns her of danger in the aria "Luogo sicuro questo non è più!" after the title character rescues her lover from a ravine. That friend begins this opera by foreshadowing the title character's fate in "Un di, verso il Murzoll," also known as the Edelweiss song. A story by Wilhelmine von Hillern inspired this opera, whose Act I ends with the title character rejecting a forced engagement to Gellner by singing that she would rather go far away and live amid clouds of gold and white snow. This opera closes with Giuseppe Hagenbach calling out to the title character, triggering an avalanche that she jumps into after watching Giuseppe die. For 10 points, the aria "Ebben? Ne Andro Lontana" is sung by the title Tyrolean woman of what opera by Alfredo Catalani?
ANSWER: La Wally
9. This book, which quotes W.R. Greg's description of a "careless, squalid, unaspiring Irishman," observes that Thomas Woolner's sculpture of Puck has pointy ears. It is written in two volumes, one of which refutes the Duke of Argyll, and the other of which describes a war between a selfish, anarchic tribe and a courageous, disciplined tribe to show that "praise and blame," rational reciprocity, or group selection might justify acts of self-sacrifice. This book's author uses the death rates in France to illustrate that single men are less healthy than married men, an intended chapter of which was spun off into The Expression of the Emotions. It explains that certain "secondary characters" like musical talent and odor glands are ornaments that are useful because of male competition and female choice. It uses the example of a female peacock choosing the male with the most beautiful plumage to illustrate its central thesis. For 10 points, name this Charles Darwin book about sexual selection and human evolution.
ANSWER: The Descent of Man and Selection in Relation to Sex
10. One of this author's essays concludes that, if the characters in the film you are watching take longer than you'd like to get from A to B, you are watching a porno. This author wrote an "illustrated essay" that puts forth a "rhetoric of enumeration" necessary to construct the title objects. Another book by this writer is a natural history of imaginary places that have created "flows of belief" from time immemorial. This author of The Book of Legendary Lands wrote an essay asking why Dumas anachronistically situated the Rue Servandoni in the Paris of 1625. The first edition of this author's analysis of beauty in the Middle Ages comes packaged with his book On Ugliness. This author of The Infinity of Lists, Serendipities, and Six Walks in the Fictional Woods wrote an essay in which he recalls being charged for alcohol in a mini-bar, which he removed to make room for the title fish. For 10 points, name this literary theorist who wrote How to Travel with a Salmon, an Italian novelist also known for The Name of the Rose. ANSWER: Umberto Eco
11. One of this poem's speakers wonders "if I think of a king at nightfall, of three men, and more...why should we celebrate these dead men more than the dying?" A stanza of this poem compares love to the shirt of Nessus. The speakers of this poem state "we shall not cease from exploration / and the end of all our exploring / will be to arrive where we started / and know the place for the first time." This poem asserts that "a people without history is not redeemed from time," because "history is a pattern of timeless moments." This poem references the spirit of Arnaut Daniel by describing "the pyre of pyre." Its section on the Battle of Britain is written in terza rima. The fifth and final part of this poem imagines "tongues of flame" folded into the "crowned knot of fire," so that the "fire and rose are one." This poem, which is named after an Anglican monastery, appears after "The Dry Salvages" [SWAY-juz] in a series that first appeared in 1944. For 10 points, name this last of Eliot’s Four Quartets.
ANSWER: "Little Gidding" [prompt on "(The) Four Quartets" before "Four Quartets"]
12. In the middle section of Beethoven's Consecration of the House overture, these instruments play quick Cmajor scales under trumpet fanfares. In the scherzo of Beethoven's ninth symphony, the "Ritmo di tre battute" sections begin with these instruments playing the main theme. In the last movement of Beethoven's fourth symphony, right before the recapitulation, one of them has a very difficult solo playing the main theme. In the first movement of Beethoven's fifth symphony, during the recapitulation, a pair of them in unison plays the second theme, and, in the third movement, during the recapitulation, one of them doubles pizzicato cellos. The second orchestral statement of the "Ode to Joy" theme includes one of these instruments playing a countermelody. Mozart wrote an early B-flat major concerto for this instrument, and one of them doubles the strings at the beginning of the overture to The Marriage of Figaro. For 10 points, Haydn represented a fart using what a low double-reed instrument?
ANSWER: bassoons
13. In a 1992 jury trial, a scheme to allow protection of 37 individuals, called the "Plan B" type of this status, was found to violate antitrust law. A proposed "16th-man" compensation to offset the loss of people who achieved and utilized this status led to labor unrest in 1981. Restrictions that stalled a move from Liege to Dunkerque were struck down under Article 39 of the EC Treaty in the 1995 Bosman ruling, which mandated that certain people be allowed to achieve this status in Europe. In another context, individuals were allowed to achieve this status in the Seitz decision after a challenge by Andy Messersmith and Dave McNally. In that realm, this status was demanded in a letter declaring "I do not feel I am a piece of property to be bought and sold irrespective of my wishes" directed to Bowie Kuhn, who refused to allow this status by upholding the reserve clause system. For 10 points, name this status that Curt Flood demanded so that he could negotiate his next contract with whatever baseball team he chose.
ANSWER: free agency [accept word forms such as free agent; accept free transfer; prompt on "Bosman (transfer)" before "Bosman"; prompt on "free"]
14. A memorial to this man on Hut Point Peninsula's Observation Hill is inscribed with the last line of Tennyson's Ulysses. One part of a group led by this man was trapped on Inexpressible Island, where Dr. George Murray Levick blamed the wildlife's homosexual and necrophiliac tendencies on "hooligan males." This discoverer of Camp Evans tried to reach the One Ton Depot, but was hindered by keeping rock samples from the Beardmore Glacier, during another expedition in which a doomed Lawrence Oates committed suicide by exposing himself to the elements to free up supplies. "It seems a pity, but I do not think I can write more" is the last entry in his diary that was found in a tent and describes the disappointment of his Terra Nova expedition upon reaching their goal, only to find a letter for King Haakon V and the Norwegian flag. For 10 points, name this British explorer who died in 1912 shortly after he realized that his Antarctic expedition failed to beat Roald Amundsen to the South Pole.
ANSWER: Robert Falcon Scott
15. This physicist used the example of an ink droplet to show the difference between implicate and explicate order. This physicist is the first namesake of the equation [read slowly] "angular frequency squared equals plasma frequency squared plus three times wavenumber squared times electron thermal velocity," which gives the dispersion of a Langmuir wave. This physicist developed the first complete hidden-variable interpretation of quantum mechanics using his many-particle pilot wave theory. Boltzmann's constant times temperature over mass, all to the one-half power, is the minimum speed of an ion entering the Debye sheath, according to this physicist’s namesake criterion. This physicist is the second namesake of an effect in which the electromagnetic four-potential interacts with the wavefunction despite the absence of an electromagnetic field. For 10 points, name this physicist who discovered that a charged particle experiences a phase shift when passing by a solenoid with his student Yakir Aharonov.
ANSWER: David Bohm
16. This man quoted a poem that compared a sunrise to a boiling lobster as an example of a non-mean-spirited joke in a refutation of Hobbes's "superiority theory" of laughter. He defined beauty as "uniformity amidst variety" and said that a square was more beautiful than a triangle. This man's equation "B equals M over A" helps calculate the benevolence of an action as equaling the moment of good divided by our ability to do good. This author of Thoughts on Laughter described beauty as an instinct that is raised or triggered in us when we see a beautiful thing, and he compared the way we sense good and evil to the way we sense sweetness and bitterness. A sense of beauty and a moral sense were both described by this author, who wrote a materialist interpretation of Lord Shaftesbury's "universal benevolence" theory in his System of Moral Philosophy. For 10 points, name this proto-utilitarian author of An Inquiry into the Original of Our Ideas of Beauty and Virtue, the teacher of Adam Smith.
ANSWER: Francis Hutcheson
17. This man's two spies confirm that another character's "self-torture" flogging ruse was actually legitimate, leading this man to be misled during a major engagement. This man dies after developing rheumatism in the skull and refusing a physician's offer to split his skull open with an axe to extract fluid. He built the Bronze Bird Pavilion and has his son compose a rhapsody to demonstrate his intent to capture a pair of sisters. This man has a conversation in which he says that there were only two heroes in the realm: himself and the man with whom he is having tea. This man has a falling out with his mentor Yuan Shao after trying to curb the power of the Ten Attendants. He escapes from Luoyang after failing to use the Seven Star Sword to assassinate Dong Zhuo. His linked ships are destroyed by a fireship strategy devised by Zhou Yu and Zhuge Liang. For 10 points, name this founder of the Northern Wei state, who lost at the Battle of the Red Cliffs, an antagonist of most of the Romance of the Three Kingdoms.
ANSWER: Cao Cao [or Cao Mengde; or Cao Ahman; or T'sao Ts'ao; prompt on "Cao" or "T'sao"]
18. Zhong et al. used this mathematical procedure as part of an algorithm to create digital watermarks. This procedure is applied to the covariance matrix to find the rotation matrix that minimizes the root mean square deviation in the Kabsch algorithm. Most methods of performing this procedure begin with a Householder reduction of the input so that the input is bidiagonalized; such methods include the GolubKahan algorithm. This operation is often visualized as a procedure that rotates, scales, and re-rotates a coordinate axis, leaving the system sheared. This procedure is used to compress an image by repartitioning the RGB values in matrices into a rank-R truncation of the terms this operation produces. This operation is used to quickly compute the pseudoinverse, and it is a generalization of the spectral factorization for rectangular matrices. For 10 points, name this operation that factors a matrix into three other matrices, the second of which contains the namesake numbers on its diagonal.
ANSWER: singular value decomposition [or SVD]
19. Three historical figures with this surname inspired a contemporaneous 1607 play by John Day, William Rowley, and George Wilkins that fictionalizes a real meeting between one man with this name and the actor William Kempe, which may have inspired Shakespeare to reference the "Sophy" in Twelfth Night. In 1604, Parliament drafted The Form of Apology and Satisfaction after James I imprisoned a man with this surname. Another man with this surname, who married a Circassian woman named Teresia, was a forerunner to Dodmore Cotton, the first English ambassador to an Asian country, and was painted by Anthony van Dyck in an eastern costume and turban. Robert Devereux, the Earl of Essex, sponsored the embassy of two men with this surname, who ventured to Isfahan to establish an anti-Ottoman alliance with Shah Abbas I. For 10 points, give this surname of Anthony and Robert, English brothers who travelled to Persia in the early 1600s and helped modernize the Safavid army.
ANSWER: Shirley [or Sherley]
20. Isidore of Seville claimed that this region is inhabited by sciopodes, which are humans who only have one foot. A story states that Apollonius of Tyana travelled to this region's capital and saved its inhabitants from a phantom satyr who had been terrorizing the city. Pliny the Elder's Natural History describes an animal from this region that has a deadly gaze, but has a head so incredibly heavy that it is unable to look at anything other than the ground. This region home to the catoblepas was also home to a warrior whose blood is used to create a huge river that annually reeks of human flesh when it flows. Poseidon sent a sea monster named Cetus who terrorized a ruler of this kingdom named Cepheus. A group of warriors that turned into birds were present at the funeral of a son of Eos who served as king of this region and was slain in the Trojan War. For 10 points, name this portion of Africa that was ruled by Memnon.
ANSWER: Ethiopia [or Aethiopis; prompt on "Africa" before "Africa"]

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## Bonuses

1. These constructs are necessary for one solution of the function argument problem. For 10 points each: [10] Name these duples whose first element is a function and whose second element is the namespace for non-local variables of that function. They are used in continuation passing style.
ANSWER: function closures
[10] In this programming language, named after a British TV show, function closures are used to implement function decorators. This scripting language is an alternative to PHP that uses indented white space for syntactic purposes.
ANSWER: Python
[10] Python and PHP are the scripting languages that comprise the last component of this acronym for a solution stack. The other three components are a certain operating system, a certain web server, and a database solution.
ANSWER: LAMP stack solution [accept anything that mentions LAMP]
2. This author wrote a play in which Rombus mediates a debate between Rixus and Dorcas. For 10 points each:
[10] Name this author of The Lady of May who wrote about Basilius, a foolish duke whose children suffer misfortunes after visiting the Delphic Oracle, in Arcadia.
ANSWER: Sir Philip Sidney
[10] An anonymous author adapted Sidney's Arcadia into this play, named for one of its principal characters. Its title character rescues Amadine from a bear before eloping with her.
ANSWER: Mucedorus
[10] This Shakespearean character, the father of Edgar and Edmund, was inspired by characters from Sidney's Arcadia. In a grotesque scene, his eyes are gouged out by the Duke of Cornwall.
ANSWER: Earl of Gloucester
3. These people were accused of being guilty of the three sins of perjury, rebellion, and blasphemy, in a text arguing that people should hunt them down for the same reasons one would hunt a mad dog. For 10 points each:
[10] Name these people whom Martin Luther accused of forming "murderous, thieving hordes" during a namesake war that culminated at the Battle of Frankenhausen.
ANSWER: peasants [or bawren; accept Peasants' War or Bauernkrieg; accept no other answers] [10] Luther felt that the rebelling German peasants had erred by using his spiritual teachings to guide their drafting of the Twelve Articles against this league, which won at Frankenhausen.
ANSWER: Swabian League [or Schwäbischer Bund; accept word forms of Swabia]
[10] Luther's eyes were opened to the peasants' capacity for murder and thievery during a tour of this German region, whose city of Mühlhausen was the home of peasant leader Thomas Müntzer.
ANSWER: Thuringia [or Thüringen]
4. In this technique, the stationary phase has functional groups that participate in Coulombic interactions with the analyte of interest. For 10 points each:
[10] Name this chromatography technique that allows for the isolation of compounds based on their charge. ANSWER: ion-exchange chromatography [or ion chromatography; prompt on partial]
[10] When isolating ions from coal, one observes an increasing selectivity of ion exchange for divalent cations from manganese through copper. That series mirrors this series that shows an increasing stability of high-spin octahedral metal complexes of first-row transition metals for replacing water by other ligands.
ANSWER: Irving-Williams series [prompt on partial answer]
[10] The Irving-Williams series is predicted by this theory, which assumes fully electrostatic interactions between the metal and the ligand. It predicts a splitting of $d$ orbitals into e-sub-g and t-sub-2g levels. ANSWER: crystal field theory
5. The "free play of imagination and faculty" is central to this thinker's aesthetic theory, which was developed in a book that analyzed teleological judgment in its other half. For 10 points each:
[10] Name this philosopher whose aesthetic works include Observations on the Feeling of the Beautiful and Sublime and the Critique of Judgment.
ANSWER: Immanuel Kant
[10] Kant's treatise on the beautiful and sublime was inspired by the distinction between those concepts made in this man's A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful. ANSWER: Edmund Burke
[10] Walking tours through this region inspired the conceptions of the sublime articulated by Lord Shaftesbury, Joseph Addison, and John Dennis, the latter of whom described the terrible and sometimes despairing feeling he got while contemplating the beauty of this region.
ANSWER: The Alps [accept more specific answers including Alps]
6. This daimyo from the Tohoku region loyally served Toyotomi Hideyoshi and Tokugawa Ieyasu, but was always seen as a suspicious rival. For 10 points each:
[10] Name this daimyo frequently called the "one-eyed dragon" because he lost an eye to smallpox.
ANSWER: Date Masamune [accept either; accept Dokuganryu]
[10] Date Masamune pulled off an unlikely feat of international diplomacy when he sent Hasekura Tsunenaga on the Keicho embassy, which crossed Mexico to reach Europe and meet with this pope, born Camillo Borghese.
ANSWER: Paulus $\underline{\mathbf{V}}$ [prompt on "Paul(us)"]
[10] Date Masamune served loyally during Toyotomi Hideyoshi’s invasions of this Korean kingdom, which were foiled by Admiral Yi Sun-shin’s turtle ships and a Ming fleet at the Battle of Noryang Point.
ANSWER: Kingdom of Great Joseon [or Choson]
7. This composer replaced the catchy "Alleluia sur la trompette, alleluia sur la cymbale" movement of his symphony L'ascension with the even more fun "Transports de joie" when he transcribed it for organ. For 10 points each:
[10] Name this 20th-century French composer of the Quartet for the End of Time.
ANSWER: Olivier Messiaen ["messy" "aw"]
[10] Messiaen included a proto-serialist piece titled for these musical concepts "of values and intensities" in his Quatre études de rythme. In general, he used several of them "of limited transposition," such as the octatonic scale.
ANSWER: modes
[10] Messiaen's serialist pupils included Pierre Boulez, who wrote Le marteau sans maître and this piece, which begins with the dramatic "Don" and includes his three "Improvisations sur Mallarmé."
ANSWER: Pli selon pli [accept Fold by Fold or Fold upon Fold]
8. This collection's "Et Cetera" section includes a tale of a sorcerer who creates a pool of ink to show a vision of a caliph's doppelganger that ultimately murders the caliph himself. For 10 points each:
[10] Name this book that opens with a story in which Lazarus Morell liberates slaves, only to resell them again and again before murdering them. Another section of this collection describes the atrocities of Ching Shih, the "lady pirate."
ANSWER: A Universal History of Infamy [or A Universal History of Iniquity; or Historia universal de la infamia]
[10] A Universal History of Iniquity was penned by this master of the philosophical short story, whose other collections include Dr. Brodie's Report and The Aleph.
ANSWER: Jorge Luis Borges
[10] This short-story collection, which includes "Blue Tigers" and "The Rose of Paracelsus," is Borges's last. Its title story focuses on a scholar who gives away the thoughts of an English dramatist to a random person over the phone.
ANSWER: Shakespeare's Memory [or La memoria de Shakespeare]
9. Uesugi Kenshin is historically associated with this deity because he fervently worshipped him, and many of his supporters likened his combat prowess to that of this god. For 10 points each:
[10] Name this god of war who reigns over Mount Sumeru. A large statue of him is featured at the Todai-ji in Nara.
ANSWER: Bishamonten [or Tamonten or Vaiśravana]
[10] The god of war Bishamon was sometimes conflated with Hachiman, the god of war from Shinto.
Hachiman was one of these kinds of deities that protected a particular place or person.
ANSWER: tutelary deity
[10] Bishamon is a member of a group of this many gods of fortune. The Pleiades were comprised of this many sisters.
ANSWER: $\underline{\text { Seven Gods of Fortune [or Seven Lucky Gods or other reasonable equivalents; accept Shichi }}$ Fukujin]
10. The Buckingham-Reiner equation gives the laminar flow friction factor for these materials. For 10 points each:
[10] Name this kind of material that does not flow below a threshold value of shear stress, then behaves as a fluid above that threshold. Examples include sludge and toothpaste.
ANSWER: Bingham plastic fluids [prompt on, but do not reveal, "non-Newtonian (fluids)"]
[10] Bingham plastics are, like thixotropic fluids, an example of this class of fluids. Most of them have a viscosity dependent on the shear rate.
ANSWER: non-Newtonian fluids
[10] The first term in the Buckingham-Reiner equation is the Darcy friction factor, which is equal to this number divided by the Reynolds number in the case of laminar flow.
ANSWER: $\underline{64}$
11. This author wrote a comic novel that ends with Teodorico getting expelled from Aunt Titi's house after Titi discovers that the sought-after title object is really a lace nightdress from one of Teodorico's carnal exploits. For 10 points each:
[10] Name this Portuguese author of The Relic who was part of a group of radical positivists known as the Generation of 1870. He also wrote Cousin Bazilio and The Sin of Father Amaro.
ANSWER: Jose Maria Eça de Queiroz [prompt on partial last name]
[10] Eça de Queiroz's masterpiece is this 1888 novel in which the young aristocrat Carlos, with his friend Joao da Ega, observes the title family's financial and moral decline in 19th-century Lisbon. ANSWER: The Maias [or Os Maias]
[10] Eça de Queiroz translated this British author’s King Solomon's Mines into Portuguese.
ANSWER: [Sir Henry] H. Rider Haggard
12. Tammany Hall first came to prominence after successfully electing this candidate in New York's 1854 mayoral election. For 10 points each:
[10] Name this Democratic mayor of New York who served from 1854 to 1857 and again from 1860 to 1863. His mayoral terms were sandwiched between terms in the U.S. House of Representatives.

ANSWER: Fernando Wood
[10] Fernando Wood and other Tammany Hall members were supported by this gang of New York immigrants, who often clashed with the Bowery Boys and Atlantic Guards. Hell-Cat Maggie was a member of this gang, which names an 1857 riot.
ANSWER: Dead Rabbits [accept Black Birds]
[10] Fernando Wood left the mayor's office just before violent 1863 New York riots over this wartime practice.
ANSWER: Civil War draft [accept equivalents like conscription]
13. This thinker expanded on an article with the 1999 book Social Theory of International Politics. For 10 points each:
[10] Name this influential German-born international relations professor at Ohio State who criticized neoliberals and the ideas of Kenneth Waltz in his 1992 article "Anarchy is What States Make of It." ANSWER: Alexander Wendt
[10] Wendt as a scholar of this school of IR that argues that a history of repeated nation-to-nation interactions creates the manner in which modern nations interact, not any inherent qualities of the international system itself.
ANSWER: social constructivism [accept word forms such as constructivist]
[10] In the article, Wendt attacks this school of IR championed by Kenneth Waltz in his 1979 book Theory of International Politics. Unlike its classical predecessor, this school split into offensive and defensive subtypes and believes that international politics happen the way they do because of intrinsic factors. ANSWER: neorealism [or structural realism; accept word forms such as neorealist; prompt on "realism"; do not accept or prompt on "classical realism"]
14. This artist and student of Michelangelo was so incompetent that he couldn't even adequately copy his master's Epifania. For 10 points each:
[10] Name this writer who wrote a life of Michelangelo to counter some false claims by Vasari.
Unfortunately, he also introduced several errors to glorify Michelangelo, such as declaring him completely self-taught.
ANSWER: Ascanio Condivi
[10] Condivi propaganda aside, Michelangelo was taught by this artist, who painted the Last Supper in the Ognissanti of Florence and helped paint the Stories of Moses and Stories of Jesus on the walls of the Sistine Chapel.
ANSWER: Domenico Ghirlandaio
[10] Vasari was hardly critical of Michelangelo, calling this statue "a miracle" and "perfection that nature is scarcely able to create in the flesh." It shows a man with a sling over his shoulder preparing to battle Goliath.
ANSWER: David
15. The statistical power of these studies can be increased by imputing genotypes to predict the character states at loci that were not assayed, and their results are often displayed on Manhattan plots. For 10 points each: [10] Name this class of studies in which lots of genetic markers, typically SNPs, from across the genome are surveyed for relationships with phenotypic traits, such as susceptibility to diseases.
ANSWER: GWAS [or GWA studies; or WGA studies; or genome wide association studies; or whole
genome association studies]
[10] This is the name given to sets of SNPs or other polymorphisms that tend to be inherited together. Many projects seek to build maps to show the geographic distribution of these entities.
ANSWER: haplotypes [prompt on haplogroups]
[10] One of the first GWA studies identified complement factor H as a risk factor for the age-related degeneration of this structure. The degeneration of this retinal structure occurs in "dry" and "wet" forms. ANSWER: macula [accept macular degeneration; antiprompt, i.e. "can you be less specific?" on "fovea"]
16. These officials, who are split into "teaching" and "ruling" classes, form governing bodies called "sessions" or "consistories." For 10 points each:
[10] Name these church elders who form the governing polity in most Reformed churches.
ANSWER: presbyters
[10] This Scottish associate of John Calvin founded the protestant denomination called Presbyterianism. ANSWER: John Knox
[10] This document that begins with the Nicene Creed and contains the Heidelberg Catechism comprises, along with the Book of Orders, the constitution of the Presbyterian U.S.A. branch.
ANSWER: Book of Confessions
17. In Solzhenitsyn’s Gulag Archipelago, this word is said to "descend from the judicial bench like the blade of a guillotine, stopping short of beheading the prisoner but breaking the spine." For 10 points each:
[10] Name this penal labor camp system based mainly in Siberia that was started in 17th century tsarist Russia. Its name, which is Greek for "galley," was reintroduced in 1943 by Stalin.
ANSWER: katorga
[10] While serving as aide-de-camp to the governor of Transbaikalia in the Russian Far East, this anarchist author of The Conquest of Bread inspected the katorga system and compared it to the French penal system. ANSWER: Pyotr [Alexeyevich] Kropotkin
[10] This katorga alum was exiled to Omsk, an experience mirrored by a man he wrote about, Rodion Raskolnikov.
ANSWER: Fyodor [Mikhailovich] Dostoyevsky
18. After meeting with the Lord Mayor of London and other members of high society, this poet was finally able to get published; her first book of poetry is dedicated to the Countess of Huntingdon. For 10 points each: [10] Name this poet wrote a poem in praise of the commander-in-chief of the Continental Army, "To His Excellency, George Washington."
ANSWER: Phillis Wheatley
[10] This African-American poet collected Wheatley's and Jupiter Hammon's poetry in an Anthology of Negro Poets in the U.S.A. His own books include a fictionalization of Prosser's rebellion titled Black Thunder.
ANSWER: Arna Bontemps
[10] This African-American poet compiled The Penguin Anthology of 20th Century American Poetry, which Helen Vendler blasted for including too many second-rate poets for the sake of multiculturalism.
ANSWER: Rita [Frances] Dove
19. This artist's best-known work consists of phrases like "your actions are pointless if no one notices," which were originally printed on sheets of paper and plastered around Manhattan. For 10 points each:
[10] Name this American feminist artist whose Truisms inspired her to project similar phrases on scrolling light pillars on the wall of the New York Public Library.
ANSWER: Jenny Holzer
[10] Holzer resides in Hoosick Falls, New York, the longtime home of this "primitive" artist who was discovered by Louis Caldor in 1938 at age 78.
ANSWER: Grandma Moses [or Anna Mary Robertson Moses]
[10] Holzer participated in the 2004 Terminal 5 exhibition held at this iconic Eero Saarinen-designed standalone terminal at New York's JFK Airport.
ANSWER: TWA Flight Center [or Trans World Flight Center; accept TWA Terminal]
20. Because publications of this type can fall victim to the "file drawer problem," they increasingly depend on pre-registration through CTRs. For 10 points each:
[10] Name these publications that have been criticized for exhibiting publication bias toward significant results and for publishing results that are non-reproducible even though they were based on randomized controlled trials. A prominent one is published in New England.
ANSWER: medical journals [or public health journals; accept journals of medicine or other close equivalents]
[10] This Greek-American doctor and meta-analyst, who was profiled in the 2010 Atlantic article "Lies, Damn Lies, and Medical Science," published a 2005 article in the journal PLOS Medicine titled "Why Most Published Research Findings Are False."
ANSWER: John P.A. Ioannidis
[10] In February 2010, this weekly peer-reviewed journal, considered the gold standard of British medical journals, fully retracted an Andrew Wakefield-led study from 1998 linking childhood vaccines to autism. ANSWER: The Lancet

