

**Chicago Open 2016: "An Insatiable Kingpin of International Meme-Laundering"**

**Packet by How Much Canada Can A Canada Can Can If A Canada Can Can Can Canada? (Jay Misuk, Rein Otsason, Joe Su, Huma Zafar)**

**Edited by John Lawrence, Mike Cheyne, Matt Jackson, Adam Silverman, Mike Bentley, Aaron Rosenberg, Jake Sundberg, and Shan Kothari, with contributions from Ewan Macaulay and Jonathan Magin**

**Tossups**

1. David Barner and Justin Wood have studied comprehension of this linguistic concept using a setup asking children to reach into a box. A 2000 book by Greville Corbett revived Smith-Stark's idea that each language's way of marking this concept splits the "animacy hierarchy" at some level. In Sundanese, this concept is conveyed using the *infix* "ar" after the first consonant. In the Hopi language and the conlang High Valyrian, some uses of it are instead taken over by the "paucal". Some Arabic words have the irregular (\*) "broken" type of this form. Young kids used this inflection properly after seeing an image of a blue bird-like creature in Jean Berko Gleason's "wug test." As shown in the rightmost column of a paradigm, all Latin genitives of this type end in *-um*. For 10 points, identify this word form which is unmarked in the grammatical sentence "Deer saw sheep." ANSWER: plural nouns [or pluralization; or putting something in the plural; accept any answer indicating the singular-plural dichotomy or a language's grammatical number system or number of things until "*infix* 'ar'"]

2. A planned attack on this location was partially foiled when the attackers simply warned villagers who discovered their camp not to go to the police because they didn't want to dig graves in freezing weather. Because of events that targeted this location, various criminals were organized and trained on the island of Silmido, but the group mutinied against their guards and hijacked a bus. A controversial 2005 satire film about a man's (\*) "last bang" is mostly set at this location, and portrays events here as caused by a man's hate for a chief bodyguard. A failed 1968 raid on this location was carried out by the Unit 124 commando squad. During an October 1979 dinner at a safe house here, the creator of the Yushin Constitution was shot to death by his own security chief. For 10 points, name this location where Park Chung-hee was killed, the residence of the South Korean President.

ANSWER: Blue House [or Cheong Wa De, prompt on descriptive answers, prompt on Seoul]

3. A protein in this pathway is named for the city of Hakata, Japan and also for the fact that it has collagen-like and fibrinogen-like regions. Porins in *Neisseria gonorrhea* bind an inhibitor of this process. The decay-accelerating factor speeds degradation of proteins involved in this process. This pathway is overactive in GPI-anchor deficiencies like PNH or in atypical hemolytic uremia. An effector protein for it polymerizes in a ring after a (\*) proteolytic cascade of factors B, D, and P. When present together, CD59 and sialic acid block this process from occurring. This pathway initiates when a convertase cleaves an isopeptide bond to form anaphylatoxin C4a. Serum is heat-inactivated before use to destroy this pathway. Its three forms are lectin, classical, and alternative. For 10 points, name this innate immune pathway in which the membrane attack complex kills pathogens. ANSWER: complement system [or classical complement system; or alternative complement system; or lectin complement system; prompt on innate immunity]

4. This object is hated on as a "mere episode...executed solely for the sake of ornaments" in the 18th section of Gotthold Lessing's essay *Laocoon*. A Latin text says that it shows many "*pugnata... in ordine bella*," and suggests that you might mistake some of it for uprooted islands or mountains clashing with mountains. Much of this object is covered in gold depicting the billowing sea, with leaping dolphins in silver. A man appears with twin jets of flame and "his father's star" above his head on one side of it, opposite twin snakes who loom behind a sistrum-wielding queen as "barking (\*) Anubis" is beaten back. Book VIII of a poem ends by noting that its recipient is ignorant of such images as a "triple triumph" in its center and a cliff in Tartarus where Catiline hangs. For 10 points, name this fictional object of a long *ekphrasis* describing inlaid images of the future up to Actium, which Venus brings to her son in an epic by Virgil.

ANSWER: shield of Aeneas [or clipeum Aeneae; prompt on armor of Aeneas or arms of Aeneas] <MJ>

5. In the second movement of this piece, the left hand enters in the third measure playing entirely in parallel ninths, with the fifth filled in. One of Ivo Pogorelich's earliest studio recordings was a 1983 recording of this piece, which was paired with Prokofiev's Sixth Piano Sonata. This piece opens with the pianist's right hand oscillating rapidly between a C-sharp major triad and a lone A-natural. This piece's first movement is inspired by the same legend as the eighth piece in the second book of Debussy's (\*) *Preludes*. A series of repeated B-flats in the right hand run through this piece's entire second movement, depicting a bell tolling near the corpse of a hanged man. Its finale is a scampering piece in G-sharp minor depicting a goblin, and its first movement depicts a water nymph. Aloysius Bertrand's poetry inspired this piece, whose finale was intended by its composer to top Balakirev's *Islamey* in difficulty. For 10 points, "Ondine" and "Scarbo" are part of what piano suite by Maurice Ravel?

ANSWER: *Gaspard de la Nuit*: *Trois poèmes pour piano d'après Aloysius Bertrand*

6. In one of this author's plays, a man who secludes himself in a cave in his quest for the "infinite," emerges from the cave seeking a little girl he has grown to care for, only to find that the girl has died. One play by this author features a story about a frog that was preserved in a stone for thousands of years, which was "saved from existing forever" when a character crushes the stone out of boredom. In a play by him, queen Sudarshana meets a man at a night festival whom she mistakes for her unseen (\*) husband, and is horrified when she finally sees her husband's true face. In a play by this author of *Sanyasi* and *King of the Dark Chamber*, Bishu is arrested by the Governor for trying to leave his job as a gold miner after he and other inhabitants of Yaksha Puri are inspired to revolt by Nandini, who wears a garland of the title flowers around her neck. For 10 points, name this author of *Red Oleanders*, a Bengali poet.

ANSWER: Rabindranath Tagore [or Ravīndranātha Thākura]

7. This thinker argued that the only true property is self-possession, which can only be obtained through self-enjoyment or *Selbstgenuss*. He is not Russian, but Benjamin Tucker translated this thinker's major work into English and was a proponent of his philosophy. This philosopher claimed that to be unique or *einzig* is synonymous with existence. He criticized a rival for merely transferring man's essence from God to inside man himself, rather than eliminating the idea of essence altogether, in his attack on Feuerbach. Besides Feuerbach and Bruno Bauer, he is the third target of Volume I of (\*) Marx's *The German Ideology*. He railed against "humanists" and "realists" for teaching knowledge rather than self-knowledge in his *The False Principle of Our Education*. His most famous work claims that humans go through "realistic" and "idealistic" stages before reaching the title stage. For 10 points, name this German proto-anarchist philosopher of *The Ego and Its Own*.

ANSWER: Max Stirner [or Joseph Kaspar Schmidt]

8. Former U.S. Consul to Mexico Henry Perrine died in this war while trying to run his Tropical Plant Company. A precipitating event leading up to this war was the death of Kinsley Dalton while delivering the mail. In a battle during it fought on Christmas Day, a Missouri Volunteers commander was killed by Sam Jones' force, who used a hammock of trees surrounded by sawgrass as cover. During this war, Quartermaster General (\*) Thomas Jesup captured an enemy leader who arrived for a meeting under a white flag of truce. After this war, thirteen years of peace were ended by a guerrilla war led by Billy Bowlegs. Zachary Taylor earned the nickname "Old Rough and Ready" during this war, in which over 100 U.S. soldiers died during the Dade Massacre. For 10 points, what war began after the Treaty of Payne's Landing was resisted by Osceola?

ANSWER: Second Seminole War [prompt on Seminole War]

9. One character in this work has a packet of matches inscribed with the words, "These Matches Were Stolen from Bob and Edie Burwick's House." Reading the word "happy" later causes this work's narrator to slam a diary shut. That diary in this work relates a story about a Buddhist master who states that a dead cat is the most valuable thing because no one can put a price on it, leading the diarist to answer a question about his future plans by saying that he would like to be a dead cat. The narrator is mistaken for Dickie Braganza by Mrs. (\*) Silsburn, and forms a bond with a tiny man in a top hat, who turns out to be the deaf-mute uncle of the father of the bride, at a wedding that the narrator attends after receiving a letter from his sister Boo-Boo. Taking its title from a Sappho line that Buddy finds written on his bathroom mirror, for 10 points, name this novella by J. D. Salinger about Seymour Glass' wedding.

ANSWER: *Raise High the Roof Beam, Carpenters*

10. Martin Bazant's group has pioneered an approach to this process that uses a shock to create an over-limiting current and make ICP zones. The SIROTHERM form of this process is used exclusively in Australia. One type of this process uses an ammonia-CO<sub>2</sub> draw solution. A device for this process has a heat reject and a heat gain section, each of which has stages called "effects". Devices used in this process were fabricated using phase inversion by Loeb and Sourirajan, but today are made of phenylene-diamine in a thin-film composite that's spiral-wound. (\*) Algae cause fouling in this process. The energy requirement for it equals the volumetric flow rate times molarity times RT in the Morse equation. This process can be done using multi-stage flash distillation, electrodialysis, or reverse osmosis. For 10 points, name this process by which sea water is made potable.

ANSWER: water desalination [or reverse osmosis or RO until it is read; or forward osmosis; or FO; or electrodialysis; or multi-stage flash distillation; or multiple-effect distillation; prompt on water purification or water treatment; prompt on water filtration or ultrafiltration or nanofiltration or UF or NF; prompt on dialysis; prompt on osmosis]

11. One sanctuary of this religious denomination claims that it found beehives on all its interior walls as soon as it was built, and has produced a curative "holy honey" ever since. A man revered by this sect is known as "revealer of light," or *Kesate Birhan*. This religious group uses a book of liturgical chants divided into four parts for the four seasons, called *Deggua*, and its sanctuaries must each contain a small tablet called a *tabot*. Fasilides' Bath was built to help believers immerse themselves during its (\*) Timkat festival. This religious group is the largest which puts trust in wandering holy men called *debtera*, and its priests are addressed as *abuna*. This Miaphysite group treats the angelicious book of Enoch as canon, and reveres its founding father Frumentius, who baptized Ezana. For 10 points, what Christian denomination, which cut the rock at Lalibela into churches, became autocephalous in 1959 with permission of the Coptic church to its north?

ANSWER: Ethiopian Orthodox Tewahedo Church [prompt on Tewahedo Church since there's an Eritrean one too; prompt on Miaphysite before mention; prompt on Christianity, if you must, before "*tabot*"; do NOT accept or prompt on "Coptic" at any point]

12. One work by this poet describes the title feeling as "Revenge of a mortal hand" and begins with the question, "Why does this written doe bound through these written woods?" This author of "The Joy of Writing" asked, "Was there anyone to love anyone? Did anybody have someone to fight?" in a poem about the inhabitants of Atlantis. This author wrote a poem that declares "down there, we've got Wednesday, / bread and alphabets." That poem by this author, whose work has been translated by Clare (\*) Cavanagh, describes a place that is "neither moon nor earth" where the speaker performs a certain action "inside four walls of avalanche." Another poem by her describes a person stretched out "In the grass that has overgrown / causes and effects," and opens with the lines "After every war / someone has to clean up"; that is "The End and the Beginning." For 10 points, name this author of *Calling Out to Yeti* and *View With a Grain of Sand*, a Nobel-winning Polish poet. ANSWER: Wislawa Szyborska-[Wlodek]

13. Bodenheimer et al. invented the "difference" form of this technique in a paper that also described the "breathing" of carbon tetrachloride. The Albrecht-Hutley equation predicts this technique's signal enhancement. This technique is used to determine the ratio of crystalline and amorphous silicon in photovoltaic cells. The sensitivity of this technique improves by up to 10<sup>14</sup> by first adsorbing the sample to a colloidal gold surface, such as on the tip of a microscope. Its cross section varies with the inverse-fourth power of (\*) wavelength. The CARS form of this technique is a common mechanism for two-photon microscopy. The "resonance" form of this technique has greater signal enhancement. This technique identifies the vibrational modes of symmetric molecules but usually has lots of noise from Rayleigh photons. For 10 points, name this form of spectroscopy which measures Stokes and anti-Stokes shifts after inelastic scattering.

ANSWER: Raman spectroscopy [or Raman scattering; or resonance Raman spectroscopy]

14. This man once defended his decision calling for an unordered assault with a wry couplet about “sitting on a rock” and observing an unconquered city. Fond of writing doggerel, he was called by a poet “so witty, [he] could rhyme like Nero, o’er a burning city.” Legendarily, this man only entered the military after encouragement from the African-born Abram Gannibal. He was temporarily banished to his estate after objecting to his ruler’s obsession with (\*) Prussian uniforms and training methods. This man’s triumphs included a masterful retreat from the Alps with minimal losses when fighting the French and winning the Siege of Izmail against the Turks. He died before he could face off against Napoleon, whom he had been dispatched to counter by his despised ruler, Paul I. For 10 points, name this Russian general who went undefeated on the battlefield.  
ANSWER: Alexander Suvorov [the poem quoted above is by Lord Byron]

15. This phenomenon is said to occur when the primary equilibrium path bifurcates into two secondary paths. A 2011 paper by Zaccaria et al. demonstrates that this phenomenon can occur in tension when a structural member is divided by a “slider.” “Snap-through” is sometimes considered a form of this phenomenon although it occurs at a limit point rather than the usual bifurcation point. A formula for determining the onset of this phenomenon in plates has a leading coefficient which depends on the (\*) “wavelength” parameter, and asymptotically approaches 4 as aspect ratio increases. Classically, this phenomenon happens when the load exceeds pi-squared times stiffness divided by effective length squared, a formula named for Euler. For 10 points, identify this failure mode, which most commonly occurs when a slender column fails below its ultimate strength when loaded in compression.  
ANSWER: buckling [prompt on failure before mention]

16. A CT scan of this work of art by Dietrich Wildung revealed creases and other now-hidden age marks, and also put to bed Henri Stierlin's theory that it was a forgery. This work was briefly attached to a bronze companion piece made by the artists Little Warsaw which was controversially exhibited at the 2003 Venice Biennale. It's not a golden hat, but this work of art is exhibited in a special room in the Neues Museum. The subject of this work wears a broken (\*) Uraeus. Quartz and a speck of black paint can be found in this sculpture's right eye, but not the left eye, leading some art historians to believe that it was intended as a model. This work was rediscovered by Ludwig Borchardt and now is an icon of Berlin. This piece was sculpted in approximately 1345 BCE by Thutmose. For 10 points, name this portrait of the wife of Akhenaten.  
ANSWER: Bust of Nefertiti

17. A farcical event at this location involved Lancelot Errington and his nephew Mark using such lame excuses as “needing a shave” and “losing the key to a watch” to gain access to a castle, which they promptly conquered. That incident was an attempt to use this location as the landing site for Thomas Forster’s 1715 Jacobite Rising. According to Symeon of Durham, numerous people here were killed or “drowned in the sea” while celebrating Saint Medard’s Day. A letter by Alcuin about an incident at this location lamented that “a place more venerable than all in Britain is given as a prey to (\*) pagan peoples.” A monastery here was abandoned in 875, forcing monks to move the bones of Saint Cuthbert. A 793 raid on this island is credited with beginning the “Viking Age of Invasion.” For 10 points, what island off the English coast also names an illuminated manuscript of the Gospels?

ANSWER: Lindisfarne [or Holy Island; accept anything about castle or abbey or monastery on Lindisfarne; prompt on Northumbria; prompt on Northumberland]

18. This initiative often repeats a narrative about a middle school dropout whose only talent was playing trumpet for the forest police. The court case *Doe v. Cisco Systems Inc.* alleges Cisco's complicity in this initiative, whose opponents created the newspaper *Epoch Times* and the software Freegate. The last section of *Wild Grass* by Ian Johnson is about this campaign, which Johnson won a Pulitzer for reporting on in the *Wall Street Journal*. This initiative led to an expansion of the (\*) Masanjia facility and the creation of the 6-10 Office, which coordinates it. A January 2001 incident in which five people set themselves on fire is cited as justification for this course of action. In writings such as *The Slaughter*, Ethan Gutmann alleges that this campaign has harvested up to 65,000 organs for transplant. By living in the US, Li Hongzhi has evaded, for 10 points, what campaign carried out since 1999 by the Communist Party of China against Li's spiritual movement?

ANSWER: persecutions of Falun Gong [accept answers indicating torture, imprisonment, government crackdown, re-education, etc. in place of "persecution"; accept answers with Falun Dafa or Law Wheel Practice or Dharma Wheel Practice in place of "Falun Gong"; prompt if a player's answer contains qigong instead of Falun Gong]

19. A creature in the foreground of this painting is drawn from Apollinaire's evocation of Merlin in his poem "The Decaying Magician." A photo of this painting by Jose Maria Hinojosa was accompanied by dream texts by Michel Leiris and Max Morise in the fifth edition of *La Revolution surrealiste*. A diagonal line running down the right of this canvas casts the rear of an ox into darkness. The folded newspaper with the word "Jour" on it in the foreground of this painting is partially obscured by a lizard wearing a conical hat. A large ear protrudes from the tree which dominates the right-hand side of this canvas. The house in the background of this painting is similar to that of the artist's (\*) *The Farm*, painted two years earlier. The flags of France, Spain and the artist's home region of Catalonia can be seen in this painting. For 10 points, name this Joan Miro painting of the title agricultural plot.

ANSWER: *The Tilled Field* [or *Terre labouree*]

20. In one work in this language, a character has a dream in which he witnesses a ceremony where two adulterers are bound in a golden chain and have their hearts locked with a golden key by a goddess. In another poem in this language, one title character is accused by the other of being a "wretched snowbound hen," to which she replies, "Do you possess a thing of note / Besides your ever-shrilling throat?" That earliest debate poem in this language concludes with the two title characters flying off in search of a wise man to settle their argument. This language of *The* (\*) *Owl and the Nightingale* was also used to write a poem in which one title character is punished for mocking Love by being made to fall in love with Calchas' daughter. *The Temple of Glas* was inspired by another poem in this language, *The House of Fame*. Two title lovers are aided by Pandarus during the Trojan War in, for 10 points, what language in which *Troilus and Criseyde* was written by Chaucer?

ANSWER: Middle English [prompt on "English"; do NOT prompt on or accept "Old English"]

21. This man fled with his family's silver to Paris after it was revealed he could not marry Therese Gelle. While under house arrest for that crime, he wrote an epic poem about a young illegitimate son of a bishop named Antoine Organt. He once scared the citizens of Strasbourg into coughing up thousands of shoes and shirts for the troops and rallied the troops at Fleurus the next spring. A body that this man presided over passed the Ventose Decrees. This thinker argued for a constitutional monarchy in his treatise, *The* (\*) *Spirit of Revolution and the Constitution of France*, but declared, "those who make revolutions by halves do but dig their own graves" in his first speech to the National Convention. He was executed at age 26 alongside fellow Committee of Public Safety member Maximilien Robespierre on 9 Thermidor. For 10 points, name this "Angel of Death" during the French Revolution.

ANSWER: Louis-Antoine de Saint-Just [or Louis Antoine Léon de Saint-Just]

## Bonuses

1. Alu elements, which constitute around 11% of the human genome, encode this enzyme. For 10 points each:  
[10] Name this protein encoded by a class of transposons derived from viral genomes that persist in humans. This protein converts an RNA molecule to DNA.

ANSWER: **reverse transcriptase** [or **RT**]

[10] The two types of retrotransposons are classified by whether or not they have these sequences. Alu elements, like other SINEs and LINEs, do *not* include these sequences, which are present at both the 5' and 3' ends of ERV retrotransposons in humans and *copia* elements in *Drosophila*.

ANSWER: **long terminal repeats** [or **LTRs**; do NOT accept "long tandem repeat"]

[10] The other major class of eukaryotic LTR retrotransposons is this 6-kbp element from *Saccharomyces*. A different genetic element with nearly the same name has a cloning site between two sequences called the left and right borders.

ANSWER: **Ty** element [or **Ti** plasmid]

2. A lot of social science research concerns the "feminization of poverty," a trend coexisting with growing female participation in the labor force. For 10 points each:

[10] Arlie Hochschild studied this type of labor, a component of service work which involves regulating one's disposition for customers' sake. Cameron Macdonald has written that it is largely uncompensated and very gendered. ANSWER: **emotional** labor [prompt on **intimate** labor; do NOT accept or prompt on "affective labor," as that term is not used by Hochschild]

[10] This author collaborated with Arlie Hochschild on *Global Woman*, a study of working poor migrants. She took several minimum-wage jobs while writing *Nickel and Dimed: On (Not) Getting By In America*.

ANSWER: Barbara **Ehrenreich**

[10] This University of Maryland sociologist described the conflicting attitudes of black women toward unpaid family labor in her 1990 book *Black Feminist Thought*. She co-edited the 2010 *SAGE Handbook of Race and Ethnic Studies* with John Solomos.

ANSWER: Patricia Hill **Collins**

3. Former Governor General Adrienne Clarkson's family received special permission to circumvent this policy. For 10 points each:

[10] Name this policy which was implemented with a 1923 law. It affected people who were the subject of a law setting a head tax of \$50 passed shortly before the completion of a project at Craigellachie in 1885.

ANSWER: **Canada banning Chinese** immigration [accept **restricting** or **excluding** for "banning"]

[10] The 1885 Chinese Immigration Act occurred during this man's tenure as Prime Minister. He had earlier resigned after his party was accused of taking bribes in the Pacific Scandal, ending his stint as the first Canadian PM.

ANSWER: John **MacDonald**

[10] Australia passed its own restrictive immigration policy in 1901. The policy was controversially used to try to exclude this German Communist from entering in the 1930s. A farcical moment occurred when this man was asked to dictate a passage in Scottish Gaelic.

ANSWER: Egon **Kisch**

4. After burying his normal clothes in a pine grove, a character dons this item of clothing and accidentally scares away a couple who were sitting on a rock staring at a view of the city. For 10 points each:

[10] Name this item of clothing. It is originally worn by a guy who says “go to hell” to a young man who waits in line to shake hands with him, leading that young man to murder the original wearer with a sharpened broken umbrella.

ANSWER: gorilla costume [accept any obvious equivalent for costume]

[10] Enoch Emery murders a man and steals his gorilla suit in *Wise Blood*, the first novel of this Southern Gothic author of the stories “Good Country People” and “The Life You Save May Be Your Own.”

ANSWER: Flannery O’Connor

[10] In *Wise Blood*, Hazel Motes founds this Christian denomination, “where the blind don’t see and the lame don’t walk and what’s dead stays that way.”

ANSWER: the Church Without Christ [do NOT accept or prompt on “the Holy Church of Christ Without Christ,” which is a rival faction]

5. A contributing factor to this event was the building of a sanctuary of Artemis with the epithet “Of Best Counsel,” which angered the city. For 10 points each:

[10] Name this event, which ultimately resulted in a man becoming governor of Magnesia in Asia Minor after contacting Artaxerxes I and asking for a year’s grace to learn the Persian language.

ANSWER: the ostracism of Themistocles from Athens [or the exile of Themistocles]

[10] Themistocles won this 480 BC naval battle against his future Persian employers, forcing Xerxes to retreat to Asia and leave the invasion in the hands of Mardonius’ army.

ANSWER: Battle of Salamis

[10] This slave of Themistocles reportedly managed to sucker the Persians into thinking the Greeks were in a panic before Salamis. His skill in the deception earned him citizenship.

ANSWER: Sicinnus

6. James Montmarquet, a proponent of this paradigm, wrote a book titled for its central concept “and Doxastic Responsibility.” For 10 points each:

[10] Name this philosophical paradigm, which was spearheaded by Ernest Sosa’s paper “The Raft and the Pyramid.” It suggests that knowledge should be understood in terms of the character traits that are conducive to truth.

ANSWER: virtue epistemology [or epistemic virtue; prompt on “epistemology”; prompt on “value epistemology” or “epistemic value”]

[10] Virtue epistemology is generally oriented against this 1969 paper by Quine, in which he argues that epistemology should be merely a psychological study of how people transform sensory data into beliefs.

ANSWER: “Epistemology Naturalized”

[10] This English philosopher argued that modern epistemology misunderstood “to be true” as “to be thought in a certain way,” by confusing truth with the criterion of truth. That argument appears in his *Principia Ethica*.

ANSWER: G(eorge) E(dward) Moore

7. *The Malahat Review* is based in this province, and one poet from this province chronicled his middle school crush on classmate Donald Wisdom in his long poem, *Academic Festival Overtures*. For 10 points each:

[10] Name this Canadian home province of Daryl Hine. Other poets from this province include Diana Hartog, as well as the author of the collection *Peacock Blue*, Phyllis Webb.

ANSWER: British Columbia [or BC]

[10] Another work of BC poetry is bpNichol’s life-long poem about Rand, Orm, Ranglehold, and other people of this type. A collection of hagiographies about these people was collected in Jacobus de Voragine’s *Golden Legend*.

ANSWER: saints

[10] Like bpNichol, this other Canadian poet of *David and Other Poems* and *Now Is Time* is associated with the concrete poetry movement. The title character’s misadventures in World War II are chronicled in first novel, *Turvey*.

ANSWER: Earle (Alfred) Birney

8. In one version of this scene in Paris' Musee Jacquemart-Andre, a couple standing in front of the city wall in the background are actually the parents of the princess who is praying in the foreground. For 10 points each:  
[10] Identify this scene, also depicted in a London painting by the same artist made around 1460. In the London version of this scene, the princess holds a leash as the armored title character drives his lance into the creature's head.

ANSWER: Saint George and the Dragon [or Saint George Slaying the Dragon]

[10] The *Saint George and the Dragon* paintings are typically attributed to this Italian artist of *The Battle of San Romano*.

ANSWER: Paolo Uccello

[10] Uccello's *Miracle of the Desecrated Host* series was painted for the predella of the Church of Corpus Domini in this city, whose Maiolica factories made istoriato-style pottery. Joos van Wassenhove travelled to the court of a ruler of this city who was the dedicatee of Piero della Francesca's *De prospectiva pingendi*.

ANSWER: Urbino

9. The author of this play was called into court when it inspired a group of women to imitate the mass looting depicted in it. For 10 points each:

[10] Name this play in which Antonia attempts to hide her participation in a food riot from her husband, Giovanni.

ANSWER: We Won't Pay! We Won't Pay! [or Can't Pay? Won't Pay! or We Can't Pay? We Won't Pay! or Low Pay? Won't Pay! or They Don't Pay? We Won't Pay! or Non Si Paga! Non Si Paga!]

[10] *We Won't Pay! We Won't Pay!* is by this contemporary Italian playwright, who also wrote *Elizabeth: Almost by Chance a Woman* and *Accidental Death of an Anarchist*.

ANSWER: Dario Fo

[10] In another play by Fo, a gangrenous soldier who is abandoned by his comrades is nursed back to health by one of these animals. Another Italian author, Emilio Salgari, created the pirate Sandokan, who is nicknamed for this animal.

ANSWER: tiger

10. One algorithm developed by this man and improved by Gabow receives two nodes u and v as input and recursively runs a union-find operation before looping again and looking for the colored node. For 10 points each:

[10] Identify this computer scientist who developed an off-line least-common ancestors algorithm. His namesake algorithm uses depth first searches to find strongly connected components in linear time.

ANSWER: Robert Tarjan [or Bob Tarjan]

[10] Tarjan and Michael Fredman developed an efficient priority queue known as the Fibonacci version of these data structures. Binary data structures of this type are usually implemented with a binary tree.

ANSWER: heaps [or binary heaps]

[10] Another important data structure formulated by Tarjan is this one, which uses zigs, zig-zigs and zig-zags in order to maintain balance. It has an amortized search, insert and delete time of  $O(\log n)$ .

ANSWER: splay tree

11. What would a Hitchcock film be like without its movie score? Name some of the composers who wrote those scores, for 10 points each.

[10] Perhaps the most iconic composer to work with Hitchcock is this man, who composed the scores for *Psycho*, *Vertigo*, and *North by Northwest*, among others. His non-Hitchcock work includes *Citizen Kane* and *Taxi Driver*.

ANSWER: Bernard Herrmann [or Max Herman]

[10] This German-Jewish composer wrote the score for *Rebecca* and the piano tune played in the background in *Rear Window*. He won Oscars for his scores for *Sunset Boulevard* and *A Place in the Sun*.

ANSWER: Franz Waxman [or Franz Wachsmann]

[10] This Russian composer's collaborations with Hitchcock include *Strangers on a Train* and *Dial M for Murder*. His acclaimed score for *High Noon* is centered around his song "Do Not Forsake Me, O My Darlin'," and Nina Simone popularized his song "Wild is the Wind."

ANSWER: Dimitri (Zinovievich) Tiomkin



12. Philip Wayne Powell described prejudice against this country in his book *Tree of Hate*. For 10 points each:  
[10] Name this country described as evil in the Black Legend, whose mutinous soldiers carried out the Sack of Antwerp.

ANSWER: Kingdom of **Spain**

[10] The earliest example of a “Spanish Fury” was when the Duke of Alba’s son ordered this city in modern-day Belgium looted in October 1572. The Duke reported to Philip II that “no nail was left in the wall.”

ANSWER: **Mechelen**

[10] The *French* Fury was when Antwerp residents kicked the ass of this French nobleman who tried to conquer it in 1583. He might be best known for being the “frog” suitor of Elizabeth I whose attempts at marriage were discouraged by Walsingham. Name or title is acceptable.

ANSWER: **Francis** [or **Francois**; or the **Duke of Anjou**; or the **Duke of Alençon**; or the **Duke of Alençon, Chateau-Thierry, Anjou, Berry, and Touraine**]

13. Users of this system are ostensibly forbidden from fighting during Muharram, whose tenth day is the lamentation Day of Ashura. For 10 points each:

[10] Identify this strictly lunar reckoning system. Fighting is also discouraged during a subsegment of time within it at which the *iftar* meal is eaten after sunset.

ANSWER: **Islamic** calendar [or **Hijri** calendar; or **Islamic year**; prompt on AH dating system]

[10] This *sura* claims that God made twelve months and condemns any postponement, or *nasi*, which would align the months with seasons. Its "Sword Verse" urges killing "polytheists" wherever they may live.

ANSWER: Surat **at-Tawbah** [or Sura **9**; or The **Repentance**; or **al-Barā'ah**; or The **Repudiation**]

[10] In one account, the audience at this event heard a reaffirmation of the ban on *nasi*, along with injunctions against blood feud and mistreating women. It took place at Mount Arafat in Islamic year 10, which is 632 CE.

ANSWER: **Farewell Sermon** of Muhammad [or **final sermon** of Muhammad; or **last sermon** of Muhammad; or **Khutbatul Wada'**; prompt on Muhammad's Farewell Pilgrimage to Mecca; prompt on Muhammad's hajj; do NOT accept or prompt on "death of Muhammad"]

14. This company was the defendant in a 2013 Supreme Court case which held unanimously that merely isolating a DNA sequence is not sufficient to qualify the isolated gene for a patent if the gene is "naturally occurring." For 10 points each:

[10] Name this Utah-based diagnostics company. Its attempt to patent genes that often get mutated in breast and ovarian cancer got them sued by the Association of Molecular Pathology.

ANSWER: **Myriad** Genetics Inc. [accept *Association of Molecular Pathology v. Myriad Genetics Inc.*]

[10] Myriad's courtroom adversaries included this legal nonprofit, founded in 1920 by such people as Roger Baldwin. It has represented such clients as neo-Nazis who marched through Skokie to advocate a maximalist view of individual rights.

ANSWER: **ACLU** [or **American Civil Liberties Union**]

[10] Earlier, this 1980 Supreme Court case ruled that patents on genetically-modified organisms, such as the namesake General Electric employee's patent on an oil-metabolizing bacterium, are valid.

ANSWER: *Diamond v. Chakrabarty* [or *Chakrabarty v. Diamond*]

15. On a diagram with these two variables as the axes, alpha-ferrite is located near the origin and austenite, symbolized gamma, is in the upper left. For 10 points each:

[10] Name these two variables plotted on a phase diagram that shows phases like martensite and pearlite.

ANSWER: absolute **temperature** and percent **carbon** [either order acceptable; anything mentioning the concentration or mass fraction or mole fraction or amount of **carbon** or **C** is fine]

[10] At 4.3% carbon and 1147°C, steel has one of these points at a mixture called ledeburite, below which there are two solid phases: pearlite and cementite. These points are the minima in melting temperatures on a phase diagram for an alloy.

ANSWER: **eutectic** points

[10] [*Read slowly.*] You cool a ledeburite mixture to below its eutectic point. Let L be the carbon concentration in ledeburite, P be the carbon concentration in pearlite, and C be the carbon concentration of cementite. In terms of L, P, and C, what fraction of the total mass of the system will be cementite?

ANSWER: **(L-P)/(C-P)** [or **L minus P over C minus P**; or **(P-L)/(P-C)**; or **P minus L over P minus C**; that's the lever rule]

16. Sisters Mary, Teresa, and Catherine recall conflicting memories of their childhoods while trapped by a snowstorm on their way to their mother's funeral in her play *The Memory of Water*. For 10 points each:

[10] Name this English author who wrote a play that alternates between Armstrong's pursuit of a maid with a twisted spine in 1799 and the discovery of that maid's dissected body in the same house by Ellen and Tom in 1999, titled *An Experiment with an Air Pump*.

ANSWER: Shelagh **Stephenson**

[10] Another play which moves back and forth between two different timelines in the same location is this work by Tom Stoppard set at Sidley Park in which Hannah discovers the young Thomasina Coverly's notes on chaos theory.

ANSWER: **Arcadia**

[10] This other English playwright wrote a series of philosophically-inspired "Time Plays" throughout the 1930's and 40's, including *Dangerous Corner*, *Time and the Conways*, and *An Inspector Calls*.

ANSWER: J(ohn) B(oynton) **Priestley**

17. This element is the dopant in the phosphate glass amplifiers that make up the National Ignition Facility. For 10 points each:

[10] Name this element, which is the most common dopant of yttrium aluminum garnet, or YAG, for laser applications. Those lasers emit at a fundamental wavelength of 1064 nanometers.

ANSWER: **neodymium** [or **Nd**]

[10] Unfortunately, because the host crystal itself is an insulator, most neodymium lasers must be optically pumped, typically by a laser made from one of these devices, which consist of a p-n junction.

ANSWER: semiconductor **diodes**

[10] Pump diodes are prone to this failure mode, in which the beam generates so much heat that the end facets melt and recrystallize.

ANSWER: **catastrophic** optical damage

18. Jaap Kunst, notable for his research into gamelan ensembles, coined the name for this field of study as a means of describing the ultimate goal of his archive for the Batavia Museum. For 10 points each:

[10] Name this area of study focused on the cultural context of music. It frequently draws upon tenets of anthropology, and its major practitioners have included Bruno Nettl, Bela Bartok, and Alan P. Merriam.

ANSWER: **ethnomusicology** [or **comparative musicology**; prompt on "**musicology**"]

[10] This American family were the pre-eminent folk-song collectors in America, running the Library of Congress' Archive of Folk Culture. Alan, a member of this family, invented "cantometrics" and wrote extensively on the blues singer Leadbelly.

ANSWER: **Lomaxes**

[10] Ethnomusicologist Mantle Hood advocated for the acquisition of this capacity: competence in performing in and understanding both one's native musical culture and another musical culture. Its name is an analogy to a linguistic concept.

ANSWER: **bi-musicality**

19. In one foundation legend from this country, the son of the minor trickster god 'Eitumatupu'a overthrew the descendants of Kohai, Koau, and Momo, three men who spontaneously generated from maggots. For 10 points each:

[10] Name this kingdom. Legendarily, its islands of 'Eua, Kao, and Tofua were made by wood chips that dropped into the sea as a god was carving.

ANSWER: Kingdom of **Tonga**

[10] According to a Tongan creation myth, the Tangaloa gods shared the task of creation with this trickster cousin. In many Polynesian myths, he drags up islands from the sea with a hook made from a jawbone.

ANSWER: **Maui** [or Maui-**tikitiki**; or **Ti'iiti'i**]

[10] In a Ma'ori myth, the underworld goddess Hine-nui-te-po killed Maui using this unusual apparatus. Sigmund Freud coined a Latinate term for this thing, which he claimed to be a universal fear imagined by boys.

ANSWER: obsidian **teeth** in her **vagina** [or **vagina dentata**; or obsidian **toothed vagina**; accept answers indicating **spikes** or **blades** in the **vagina** rather than teeth; prompt on **teeth** or **vagina** alone]

20. This event was broadcast on national television and featured a giant beach ball being thrown around by audience members. For 10 points each:

[10] Name this 2002 event criticized as being an overly partisan event for the Democratic Party, which Jesse Ventura walked out of. Many cited it as a reason why Walter Mondale lost an election that year.

ANSWER: the memorial service for Paul Wellstone [or funeral for Paul Wellstone]

[10] The 2002 election featured Norm Coleman defeating Mondale for this position, which Wellstone held from 1991 until his death in a 2002 plane crash.

ANSWER: Senator from Minnesota

[10] In his 1984 presidential campaign, Mondale contemplated this man as his running mate. After losing a 1982 campaign, this man became the namesake of a phenomenon in which voters are reluctant to truthfully tell pollsters they will vote against a non-white candidate.

ANSWER: Thomas “Tom” Bradley

21. A type of these structures called *kurgan* is the namesake of a hypothesis that the Indo-European languages first emerged between the Black and Caspian seas. For 10 points each:

[10] Identify this type of structure exemplified by the Devil's Humps of West Sussex and the *mamo* of northern Portugal. In Germanic mythology, a type of *draugr* called the *haugbui* haunted this type of site.

ANSWER: burial mounds [or tumulus; or tumuli; or barrows; or Hügelgräber; accept any answer indicating a hill with a tomb in it; or a hill with stuff buried in it; prompt on hill; prompt on tomb]

[10] This site in Suffolk is home to well-stocked burial mounds, including an undisturbed ship burial which may have belonged to Raedwald of East Anglia. Study of this place helps validate descriptions of items in *Beowulf*.

ANSWER: Sutton Hoo

[10] In Hungary, many burial mounds are named after these peoples, whose own burial practices rarely featured any hill-building. These Turkic people formed a confederation with the Kipchaks.

ANSWER: Cumans [or Polovtsy; or Polovtsians]