

Chicago Open 2018: The spice must flow

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Packet by Let's Remember Some Goys (Mike Cheyne, James Lasker, Tamara Vardoms kaya, and Sam Bailey); and by The fixation of belief in the me who believes in you (Michael Coates, Rahul Keyal, Kenji Shimizu, and Ben Zhang)

Tossups

1. *Description acceptable.* Music meant to accompany *this* art form was the starting point for Canadian composer Colin McPhee's long series of transcriptions for two pianos. During performances in this art form, the *pathet* gradually rises over the course of several hours. In one tradition, the musicians accompanying this art form use their fingertips, wrists, forearms, and the sides of their hands to rapidly damp a note after it's been played. This art form includes songs classified as either *pathetan*, *sendhon*, or *ada-ada*, called *sulukan*. In one tradition, this art form is accompanied by extremely fast, rhythmically interlocking music played on either two or four vibraphone-like (*) *gendèr* [ghehn-dehr]. In this art form, all of the singing and musical cues are done by the *dalang*, who is also the only performer. The music accompanying this art form is typically in *slendro* tuning in Bali. *Wayang Kulit* is the best-known example of—for 10 points—what Javanese theatrical form, in which images are thrown against a cloth screen?

ANSWER: **shadow puppet** theater [prompt on partial answer or equivalents like plays; accept *gender wayang* until "*Wayang Kulit*"; prompt on gamelan performances or similar by asking "What is the gamelan accompanying?"]
<Auditory Arts>

2. *Warning: two answers required.* Alongside Margaret Whitford's monograph, the major text on the debate between *these* two philosophers is a book edited by Slovak Academy of Sciences Professor Jon Stewart. One of these philosophers wrote a eulogy for the other titled "[that philosopher] Vivant". One of these philosophers claimed that a distinction made by the other cut consciousness off from the world and committed him to the "outside spectator" approach; that criticism led a contemporary to criticise him for attacking a "pseudo-" form of his opponent. After the Korean War, one of these men quit the other's journal (*) *Les Temps Modernes* [lay taw moh-DEHRN]. In *Adventures of the Dialectic*, one of these philosophers criticised the other for the "Ultrabolshevism" of *The Communists and Peace*. For 10 points, name these two French philosophers, the authors of *Phenomenology of Perception* and *Being and Nothingness*.

ANSWER: Maurice **Merleau-Ponty** AND Jean-Paul **Sartre**
<Philosophy>

3. *Note: Author and type of work required.* The recommendation to not "look down into the street at the song of the plaintive flute" in one of these works illustrates their author's role as "urbane and experienced consultant" in matters of love, according to a commentary on these works by Margaret Hubbard and R. G. M. Nisbet. In one of these works, a love interest notes that even though a rival is "more beautiful than a star and you more unstable than cork," she would choose the author. One of these works by this author asks a figure who arrives "aloft on purple swans" to choose a younger person, and closes with an image of the speaker dreaming of pursuing (*) Ligurinus through Mars' field. The first nine of these works by this author are often denoted with the term "Parade," and the first three books of these works were published eight years before the fourth book. One of these works describes their author's creations as "higher than the Pyramids' regal structures" that "no wild north wind can destroy" because they are a "monument more lasting than bronze." For 10 points, name these lyric poems by a Roman poet, the original source of the phrase "carpe diem."

ANSWER: **Horace's Odes** [accept more specific answers like **love odes** by **Horace**, prompt on poems by Horace]

<Poetry>

4. Nalewajski and Parr showed that minimizing the Kullback–Leibler entropy deficiency gives the “stockholder partitioning” of this quantity originally proposed by Hirshfield. In the AIMPAC software, atomic surfaces are defined by setting the flux of this quantity to zero. Bonds contain saddle points of this quantity in Bader’s Atoms in Molecules theory. This quantity exhibits cusps at atomic nuclei according to Kato’s theorem. The von Weizsacker kinetic energy formula depends only on this quantity and its gradient, which are also the only variables in the (*) “generalized gradient approximation” to the exchange–correlation energy. In the ground state, this quantity uniquely determines the potential energy function according to the Hohenberg–Kohn theorems. It is calculated by summing the squares of the occupied Kohn–Sham orbitals. For 10 points, identify this quantity that describes the spatial distribution of electrons, the fundamental variable of its namesake “functional theory.”

ANSWER: electron density [accept charge density; accept density functional theory]

<Chemistry>

5. Stephanos Bibas argued that this process can be “skewed” by numerous structural factors, potentially invalidating the “shadow of the law” model through which this process is usually understood. A non-binding form of this process is an 11(c)(1)(B) agreement. In 2012, the Supreme Court held in *Lafler v. Cooper* and *Missouri v. Frye* that the Sixth Amendment right to effective counsel extends to this kind of process. Byron White authored a majority opinion arguing that references to “grim alternatives” do not invalidate the result of this process, in *North Carolina v. (* Alford*, a case that lends its name to an unusual form of this process. More than 90% of criminal cases in the United States are resolved by this process, which may involve the use of prosecutorial discretion to charge a defendant with a lesser offense, resulting in a lighter sentence for the defendant, who agrees to admit to the charges against them. For 10 points, identify this type of process in which the defense reaches a deal with the prosecution to admit their guilt.

ANSWER: plea bargaining [accept plea agreement, plea deal, or plea in mitigation, copping a plea; prompt on “guilty plea” or equivalents, but accept other answers indicating that an agreement regarding the plea has been reached]

<Other Academic>

6. In one series, this artist used prisms of iron mesh to enclose furniture, mirrors, and other everyday objects. This artist used fabric for a number of late works, including a clay-colored piece depicting seven people having sex all squished together in a row. In an early series, this artist attacked domestic repression by painting women with various body parts replaced by houses. An enormous sculpture by this artist includes a metal sac containing marble (*) “eggs.” In one installation, this artist placed flesh-like bulges above and surrounding a surface that resembles both a dinner table with a carved animal on it and the bed where her father committed flagrant adultery when she was a child. A two-foot latex sculpture by this woman resembles both a distended woman’s bust and a grotesque phallus. For 10 points, name this French sculptor of *Destruction of the Father* and *Fillette*, whose *Maman* is a giant steel spider.

ANSWER: Louise (Joséphine) Bourgeois

<Visual Arts>

7. After a publication of this name accepted the first poems by Francis Thompson, its editor Wilfrid Meynell paid to have the poet treated for opium addiction, during which time Thompson wrote “The Hound of Heaven.” A character criticizes this concept by calling it “the home-made pottery crowd, the organic husbandry crowd, the recorder playing crowd, the Esperanto.” G. K. Chesterton’s essay about *A Midsummer Night’s Dream* extols the play as the “last glimpse” of this concept. In an essay celebrating cricket and other (*) traditional rural pastimes, William Hazlitt popularized the rallying cry: “St George for [this concept]!” After receiving a black eye from Bertrand for sleeping with Christine Callaghan, a character drinks excessively and subsequently mocks Professor Welch and passes out during his public lecture about this subject. The title character of Kingsley Amis’s *Lucky Jim* studies, for 10 points, what supposedly idyllic period of a certain country’s medieval past?

ANSWER: Merry England [or Merrie England]

<Miscellaneous Lit>

8. The Constitution League sent lawyers to this city after events here that prompted its member Mary Church Terrell to send a letter to the president. This city’s namesake “Tigers” fought a man who shot town marshal Robert Shears for brutalizing a ranch hand, then declared a republic in this city, during the Cortina Wars. An inflammatory cartoon referencing events in this city prompted a Gridiron Dinner rant against the president by Senator Joseph Foraker. In May 1865, Rip Ford’s troops repulsed an attack on a fort near this city in the so-called (*) “last battle of the Civil War,” the Battle of Palmito Ranch. For maintaining a “conspiracy of silence” regarding the murder of a bartender in this city, 167 members of the 25th Infantry Regiment were dishonorably discharged by Theodore Roosevelt, a decision later reversed in 1972. For 10 points, name this Texas city whose residents faked evidence against African-Americans stationed here in a 1906 affair.

ANSWER: Brownsville

<American History>

9. In a theory developed by Khalatnikov and Abrikosov, a “weight” named for these phenomena gives the jump in the momentum occupation number at the Fermi surface, and is the residue of the Green’s function. The namesake “interference” of these phenomena is used to measure the local density of states in high-temperature superconductors such as BSCCO. These phenomena arise in the modeling of low-temperature helium-3 by Landau’s Fermi liquid theory, where they are analogous to the “dressed” states of a renormalized field theory. When these objects are bosonic, they are also called (*) collective excitations. Examples of these phenomena include magnons, phonons, and holes. For 10 points, in many cases the complicated interactions of a quantum many-body system result in behavior reminiscent of a gas of what objects, which are not true particles?

ANSWER: quasiparticles [accept collective excitations before “collective”; prompt on dressed states or dressed particles before “dressed”]

<Physics>

10. This man wrote “how could the sun in heaven be so dark?” after learning of his mother’s death while in battle. This man’s posthumous reputation was bolstered by *The Book of Corrections*, whose author was a childhood friend of his who did little to protect him when he was imprisoned and tortured, then stripped of his rank and forced to serve as a common soldier. This leader described telling his officers that “those who seek death shall live. Those who seek life shall die” in his war diary, which is one of the National Treasures of his country. This leader’s forces (*) feigned defeat before forming a “crane-wing” at one engagement, and made use of dragon heads that produced sulfurous smoke screens at a battle where they were outnumbered 1 to 10. This man commanded, “Beat my war drums. Do not announce my death” after he was fatally shot at the Battle of Noryang. For 10 points, name this commander who won the Imjin War by deploying armor-plated “turtle ships” against Toyotomi Hideyoshi’s fleet, a hero of Joseon-era Korea.

ANSWER: Yi Sun-Sin

<World History>

11. One of this author’s characters fantasizes about a woman stripping down to a cocktail dress at a religious banquet and singing “Falling in Love Again” on a table. This author wrote the lines “Stop the noise / Fear death / Shut her mouth” in a poem presented as a translation of Swahili phrases. Aunt Lily moves in with the Crump family after Godfrey brings them to Brooklyn in search of Father Divine in this author’s play *Crumbs from the Table of Joy*. (*) Salima watches her baby’s head get crushed by a soldier’s boot before being sold to the traveling salesman Christian in a play by this author in which Sophie and Josephine sing and dance for rebel soldiers at a brothel owned by Mama Nadi. Stan tells the bar patrons Cynthia, Tracey, and Jessie that they could be laid off if the steel tubing factory moves to Mexico in this author’s play about factory workers in Reading, Pennsylvania. For 10 points, name this contemporary playwright who won the Pulitzer for her plays of *Ruined* and *Sweat*.

ANSWER: Lynn Nottage

<Drama>

12. Four photos of grid-like arrangements in *this material* were composited to make an early work by a female sculptor, titled [*This material*] *Visions*. Four tubes of this material were arranged to make a cross shape in the middle of nowhere, Utah, by Nancy Holt. The artistic use of this material was pioneered by Auguste Perret. Denys Lasdun’s extensive use of this material was attacked by Nikolaus Pevsner, who savaged Paul (*) Rudolph’s use of it in a “dedicatory” speech for one of Rudolph’s works. “Paulistas” like Paulo Mendes da Rocha emphasize the use of this material. This material was hammered at to create a “pitted” surface at the Barbican. This was the primary material used in the paired-tower designs of Ernő Goldfinger. This material was used, undecorated, for the roof of Notre Dame du Haut, and it’s the main material used in the Marseille *Cité radieuse*. For 10 points, name this building material whose “raw” form gives the name to Brutalist architecture.

ANSWER: reinforced concrete [accept *béton brut*; accept Concrete Visions]

<Other Fine Arts>

13. By deep sequencing 1135 genomes from a Dutch cohort, Zhernakova et al. showed that, though it is *not* produced by this system, chromogranin A levels inversely correlate with its function. In a 2011 metagenomic study, Peer Bork divided humans into three “types” based on differences in this system that are completely independent of gender, age, and nationality. An affiliate of the Cleveland Clinic developed a blood test for heart attack and stroke risk measuring trimethylamine-N-oxide, a compound mainly produced by this system. Bicarbonate ions are exchanged for the short-chain (*) fatty acids produced by this system in the crypts. *Firmicutes* and *Bacteroides* are the major constituents of this system, which modulates a bidirectional “axis” linking the central and enteric nervous systems. A side effect of antibiotic usage is disruption of this system, resulting in diarrhea. For 10 points, identify this community of microorganisms that occupy the digestive tract.

ANSWER: gut microbiota [or gut flora; or gut bacteria; or gut microbiome; or gastrointestinal flora; or gastrointestinal bacteria; or gastrointestinal microbiota; or gastrointestinal microbiome; prompt on bacteria or microbiome or microbiota; prompt I guess on digestive system]

<Biology>

14. An early member of the Bonaparte family, Jacopo, wrote a primary source on this event. Alfonso de Valdes and his twin brother Juan argued that this event was the will of God in *The Dialogue of Lactantio and an Archdeacon*. Georg von Frundsberg pawned off his castle and his wife’s jewels in order to raise the forces involved in this event. The leader targeted by this event started a fashion for long beards by not shaving in mourning over this event, which he was able to escape via a secret passage thanks to the suicidal stand of Kaspar Röst’s troops. Early in this event, the (*) white-cloaked Constable of Bourbon was shot by an arquebusier who may have been Benvenuto Cellini. A man ruled on Henry VIII’s annulment while holed up in the Castel Sant’Angelo due to this event, during which troops fighting the League of Cognac forced artists like Parmigianino to flee. For 10 points, what 1527 pillaging of Clement VII’s capital is often said to mark the end of the Renaissance?

ANSWER: 1527 Sack of Rome

<European/Other History>

15. Applying the ethics of Iris Murdoch, Australian theologian Sarah Bachelard wrote that this event revealed a new world in which to live for those immediately affected, in a 2014 book about this event *and Moral Imagination*. A 1950 study by the French priest François-Xavier Durrwell is often credited with single-handedly reviving interest in the theology of this event. A decade after he significantly contributed to the Second Vatican council, Edward Schillebeeckx was summoned before the Congregation for the Doctrine of the Faith for suggesting that the supposed (*) “evidence” for this event was invented post hoc. David Strauss originated the “subjective-visions” hypothesis to account for this event. 1 Corinthians is the source for the Nicene Creed’s claim that this event happened “in accordance with the Scriptures.” The Gospel of Matthew contains the only reference to an angel rolling back the stone in front a tomb after this event. For 10 points, name this event that came three days after the Crucifixion.

ANSWER: the Resurrection of Christ [or the Resurrection of Jesus]

<Religion>

16. **Supporters of this movement covered a train carrying its leader with posters carrying a phrase translated as “He Will Return.” This movement was funded by Count Arthur Dillon, although it temporarily lost support when its leader was embarrassed after losing a duel to the elderly Charles Thomas Floquet. After the Daniel Wilson scandal forced a president to resign, this movement’s leader was frozen out of the cabinet created by the new government. This movement was based on the three principles of (*) “Revision,” “Restoration,” and “Revanche,” and after its collapse its leader killed himself while standing over the grave of his mistress in Brussels. This movement declined after its leader fled Paris prior to the elections of 1889. For 10 points, name this conservative movement which was backed around the aggressive nationalism of a namesake French general in the Third Republic.**

ANSWER: **Boulangism** [or **Boulangisme**; or **Boulangist**; accept any answer indicating supporters of General Georges **Boulangier**; prompt on revanchism until “Revanche”]
<European/Other History>

17. **Many routines for this task are sped up using Peter Wynn’s epsilon algorithm, or by an algorithm that combines values from a triangular table of estimates to cancel out 2 orders of error per row of the table. The QAGS subroutine can perform this task in cases where there is a singularity and is part of the QUADPACK library, which is useful for doing this task more generally. The Clenshaw-Curtis algorithm for this task begins by using a Chebyshev polynomial expansion to approximate a given function. This task may be accomplished in multidimensional settings using importance sampling or (*) MCMC methods. This operation may be performed with function values given at evenly spaced points using Newton-Cotes rules, while algorithms for it that choose points and weights simultaneously are often based on Gaussian quadrature. Romberg’s method is an algorithm for this task that is based on the trapezoid rule. For 10 points, name this operation that approximates the area under a curve.**

ANSWER: numerical **integration**
<Other Science>

18. *Specific term required.* **Rob Ellis and Mike Tucker argued for a “micro” form of this concept on the basis of a study that tested the relationship between high and low pitches and “power” and “precision” grips. William Gaver categorized this concept as “false,” “hidden,” or “perceptible,” depending on the level of information available. The thinker who popularized this concept used a story about his friend being trapped between two sets of glass doors to argue that if this quality cannot be discerned, it must indicated by a (*) “signifier.” One thinker argued that infants engage in “perceptual learning” to discover these qualities in their environment, drawing on her husband’s definition of this concept in in *The Ecological Approach to Visual Perception*. Don Norman wrote about a “perceived” form of this concept in his book *The Design of Everyday Things*, which discusses examples of things that provide this quality such as buttons and door handles. For 10 points, name this term coined by James J. Gibson to describe opportunities for human action provided by the environment.**

ANSWER: **affordances** [accept micro-**affordances** or perceived **affordances**]
<Social Science>

19. In a 2011 novel, an English professor and an enthusiast of the landscape painter Thomas Karvel escape from being enslaved by a two-hundred year old version of this character. An author's note identifies an Ethiopian verbal root meaning "to be shady" that can be formed from this character's drawings of the chasms that he descends. An all-black mining crew meets this character from an earlier novel in a satiric book by Mat Johnson, who modeled a race of hairy white giants called the "Tekelians" after the massive (*) human figure with skin "of perfect whiteness of the snow" mentioned in the last sentence of the novel titled for this man. Though he immerses several men in water to stave off their hunger-induced madness, this character eventually joins them in eating the flesh of the mutineer Parker. After natives with black teeth slaughter most of the crew of the *Jane Guy*, this character and Dirk Peters continue alone to the South Pole. For 10 points, name this resident of Nantucket who stows away on the *Grampus* at the start of the bizarre only novel by Edgar Allan Poe.

ANSWER: Arthur Gordon Pym

<Long Fiction>

20. Robert de Boron attributed this man's behavior to being suckled on peasant breast milk. This man kicks a female dwarf senseless after she mocks Efrog's son as a paragon of chivalry and knighthood even though this man offends Peredur. In the Welsh tradition, this man died at the hands of Menestyr's son Gwyddawg. This man taunts Calogrenant for his defeat by Esclados, prompting (*) Yvain to avenge his cousin. In the *Tale of Culhwch and Olwen*, this man traps the giant Dillon Farfog in order to obtain his beard. Legends about this man's ability to hold his breath for nine days and nine nights earned him a spot among the Three Enchanter Knights of Britain. This man is commanded to cut off the head of a giant terrorizing Mont Saint Michel when his lord is on his way to fight Emperor Lucius. This knight's forgetfulness causes his foster brother to pull a sword from a stone. For 10 points, name this son of Sir Ector who served as the seneschal, or steward, at King Arthur's court.

ANSWER: Sir Kay [or Sir Cai]

<Mythology/Geography/Current Events>

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Bonuses

1. An alloy of this element exposed to superheated steam was the cause of the explosion at the Fukushima nuclear power plant. For 10 points each:

[10] Identify this element produced industrially via a modified version of the Kroll process, because of its extreme similarity to titanium.

ANSWER: **zirconium** [or **Zr**]

[10] Samples of zircon, the primary source of zirconium in nature, are often used for this radiometric dating technique that uses two parallel decay chains starting from atoms with 238 or 235 nucleons.

ANSWER: **uranium-lead** dating

[10] In organic synthesis, hydrozirconations are predominantly carried out using this reagent, which consists of hydrides bridging two zirconium atoms that are each bound to a chlorine atom and two cyclopentadienyl rings.

ANSWER: **Schwartz**'s reagent

<Chemistry>

2. The final movement of a B-flat major piece in this genre is a Hornpipe stolen from Gottlieb Muffat's *Componimenti Musicali*. For 10 points each:

[10] Name this genre of the works collected as Handel's Opus 3 and 6. Francesco Geminiani added an extra viola for his works in this genre, and his student Charles Avison arranged 12 Scarlatti sonatas as works in this genre.

ANSWER: **concerto grosso** [or **concerti grossi**; accept **grand concertos**; prompt on partial answer]

[10] Geminiani is probably more important for his 1751 book *Art of Playing on the Violin*, which is famously conservative when compared to *this* man's influential 1756 *Treatise* on violin playing.

ANSWER: (Johann Georg) **Leopold Mozart** [do not accept or prompt on partial answer]

[10] Geminiani and Leopold Mozart especially disagree on the handling of *this* part of the instrument, which is controlled by the player's right hand. Later in the 18th century, François Tourte added a screw to the end of this device to adjust its tension.

ANSWER: **bow**

<Auditory Arts>

3. Harriet Martineau wrote against these acts, which allowed the confinement of women near Army and Navy posts to “lock hospitals.” For 10 points each:

[10] Name these these acts in 1860s Britain that Josephine Butler led a widely-publicized campaign to repeal. These acts led to many poor women being arrested and invasively examined under the pretense of preventing STIs.

ANSWER: **Contagious Diseases Act**

[10] During Butler’s campaign to raise the age of consent, she, W.T. Stead, and a member of this family purchased a 13-year-old girl to demonstrate, in highly illegal fashion, the pervasiveness of child prostitution. This family’s member William founded the Salvation Army.

ANSWER: **Booth**

[10] Butler and Stead’s efforts led to the 1885 Criminal Law Amendment Act, whose anti-”gross indecency” Labouchere Amendment was used to convict the subjects of this 1889 scandal, in which Lord Somerset and Prince Albert Victor were accused of visiting a male brothel in London.

ANSWER: **Cleveland Street** scandal

<European History>

4. This animal “counteracts the powers of darkness by / his electrical skin and glaring eyes,” and can “spraggle upon waggles at the word of command.” For 10 points each:

[10] Name, or describe, this animal, a “servant of the Living God” whom the speaker “considers” in an extremely wholesome and loving passage of the fragmentary poem *Jubilate Agno*.

ANSWER: Christopher **Smart’s cat** [or **Jeoffry**]

[10] Smart’s cat can “swim for life,” unlike poor Selima, who “mewed to every watery god” yet still “Drowned in a Tub of Goldfishes” in an ode by this churchyard poet.

ANSWER: Thomas **Gray**

[10] Another cat named Selima pictures a heaven full of “golden fish and wingless bird” in a “dying soliloquy” by this “Swan of Lichfield,” a lesbian Romantic poet whose verse was posthumously collected by Sir Walter Scott.

ANSWER: Anna **Seward**

<Poetry>

5. In a section of his most famous book, this man recommended adding the yolk of a “country-laid” egg if an azure pigment turns out too pale. For 10 points each:

[10] Name this first European author to write extensively about the use of egg tempera in painting, doing so in his *Il libro dell’arte*, sometimes translated as *The Craftsman’s Handbook*.

ANSWER: Cennino (d’Andrea) **Cennini**

[10] In his discussion of *this* pigment, Cennini warned that unless it is tempered or mixed with oil, it tends to decompose into elemental mercury and turn black. Titian made heavy use of this cinnabar-based scarlet pigment, which was later replaced by the less toxic cadmium red.

ANSWER: **vermillion**

[10] Cennini also recommended the use of white lead as an undercoat in the finishing stages of *fresco-secco*. This later artist’s decision to use that technique throughout his work on a painting in the refectory of the Santa Maria delle Grazie caused it to start peeling off the wall almost immediately.

ANSWER: **Leonardo da Vinci** [accept either underlined part] (The work is *The Last Supper*.)

<Visual Arts>

6. For 10 points, answer the following about ways of determining the concentration of viruses in a sample.

[10] A simple method is just to count the number of these clear spots that the viruses generate in an agar plate.

ANSWER: **plaques**

[10] The “plaque forming unit” calculated using the above method is equal to 0.69 of the “tissue culture infected dose,” which measures how much virus is needed to kill this percentage of infected hosts. An analogous measure of toxicity is the “lethal dose” needed to kill this percentage of a tested population.

ANSWER: **50%** [or **half**]

[10] The probability that a given cell will absorb n viral particles follows a Poisson distribution with respect to this quantity, the ratio of viruses to cells.

ANSWER: **multiplicity of infection** [or **MOI**]

<Biology>

7. This field of study was often considered to be the culmination of the Roman educational system, though it was sometimes followed by study in philosophy. For 10 points each:

[10] Identify this field of study, which focuses on the art of speaking well. Students often went to schools to study this field after having studied with a *grammaticus*.

ANSWER: **rhetoric**

[10] Among the foremost teachers and theorists of rhetoric in the Roman Empire was this first-century man, who hailed from Hispania. His *Institutio Oratoria* served as a popular textbook of rhetoric, and advocates, among other things, for early primary education.

ANSWER: **Quintilian** [or Marcus Fabius **Quintilianus**]

[10] Rhetoric students in the Roman Empire made use of these writing exercises, which progressed in difficulty from storytelling to argumentation. A surviving handbook of them by Aphthonius of Antioch drew on the popular set of them developed by his teacher Libanius.

ANSWER: **progymnasmata**

<European History>

8. In March 2017, booksellers in this city gave away 30,000 books, one for each person who disappeared during its country’s dictatorship. For 10 points each:

[10] Identify this world capital, which has the highest number of bookstores per capita of any city in the world. Many of those bookshops are located along its Avenida Corrientes, which native writer Roberto Arlt called “the street that never sleeps.”

ANSWER: **Buenos Aires**

[10] This Argentine-Canadian translator and bibliophile recalled reading aloud to a blind Borges while working at the Pygmalion bookstore as a teenager, in his memoir *The Library at Night*. With Gianni Guadalupi, he compiled a *Dictionary of Imaginary Places*.

ANSWER: Alberto **Manguel**

[10] The Librería de Las Madres, a bookstore run by relatives of Argentina’s disappeared, maintains one of the world’s largest collections about this native Argentine, who chronicled his travels through South America in *The Motorcycle Diaries*.

ANSWER: Che **Guevara** [or Ernesto **Guevara**]

<Miscellaneous Lit>

9. This country's many shopping malls include the adjacent complexes of Greenbelt and Glorietta in Makati, one of the sixteen cities in its capital's metropolitan area. For 10 points each:

[10] Name this country that contains over a quarter of the world's 100 largest shopping malls, many of which are managed by the company SM. Its largest mall is located along the Epifanio de los Santos Avenue, or EDSA.

ANSWER: Republic of the **Philippines** [or Republika ng **Pilipinas**]

[10] The popularity of shopping malls in the Philippines is driven in part by the lack of *this* technology in most households. Willis Carrier pioneered the modern form of this technology by introducing the ability to control humidity.

ANSWER: **air conditioning** [or HVAC; or **air con**, as most Filipinos call it]

[10] The spread of megamalls has cut into the business of *these* ubiquitous Filipino convenience stores, which still sell the majority of the country's manufactured food products.

ANSWER: **sari-sari** stores [or **tindahan**]

<Mythology/Geography/Current Events>

10. The emblem of this organization features a gigantic swan representing the Supreme Self with a rising sun, indicating *jnana*, in the background. For 10 points each:

[10] Name this Advaita Vedanta organization that carries out philanthropic and educational work across the world. Like a monastic order called the "Math," it was founded by the mystic who taught Vivekananda.

ANSWER: **Ramakrishna Mission** [accept answers that drop the second "a" in "Ramakrishna," such as **Ramkrishna Mission**]

[10] The philanthropic activities of the Ramakrishna Mission are tied to *this* teaching of Ramakrishna's, which declares that God can be found in every living being, even the poor and weak. Give either the original Sanskrit phrase or the rhyming English translation.

ANSWER: **jiva is Shiva** [or **jatra jiv tatra Shiv**]

[10] This honorific, which is derived from a Sanskrit word meaning "he who is one with the self" and is sometimes abbreviated "sw," is bestowed upon Hindu monastic leaders such as Vivekananda.

ANSWER: **swami** [accept **swami Vivekananda**]

<Religion>

11. Recent incarnations of these events have produced documents titled *Vision and Voyages in Planetary Science* and *New Worlds, New Horizons in Astronomy and Astrophysics*. For 10 points each:

[10] Name these events in which NASA assembles a panel of top astronomers from around the US to sort out its funding priorities for proposed missions. They are named for the typical interval between iterations.

ANSWER: **Decadal** Surveys [accept **Decadals** or **Decadal** Reports or Reviews or Assessments]

[10] The next decadal survey is probably going to be delayed until the launch of this space telescope. This successor to Hubble is named for NASA's administrator from 1961-1968.

ANSWER: James **Webb** Space Telescope [or **JWST**]

[10] An early frontrunner for "winning" the 2020 decadal is the Habitable Exoplanet Imaging Mission, which proposes to directly image exoplanets using one of two different methods: one blocks starlight within the telescope pupil, while the other uses a large petal-shaped vehicle that blocks starlight before entering the telescope. Name either method.

ANSWER: stellar **coronagraph** or **starshade** [or **space sunshade** or **sunshield**; prompt on **occulter** or **occulting disk**]

<Other Science>

12. For a scene in which the protagonist and his friends are punished by the Headmaster for smoking, this film's director had the actors actually caned onscreen. For 10 points each:

[10] Name this 1969 film, in which the working-class teenager Billy tames the title bird. Its director insisted on using local, untrained boys from Yorkshire, which meant that he later had to overdub some of the thicker accents.

ANSWER: **Kes**

[10] Ken Loach, the director of *Kes*, was deeply influenced by *this* movement in Italian cinema, which is exemplified by Vittorio de Sica's use of non-professional actors in *Bicycle Thieves*.

ANSWER: **neorealism** [or **neorealismo**]

[10] Loach was also inspired by the on-site shooting and non-professional cast of this director's film *Loves of a Blonde*. Later, this European director profiled the founder of *Hustler* in the biopic *The People vs. Larry Flynt*.

ANSWER: Miloš **Forman** [or Jan Tomáš **Forman**]

<Other Fine Arts>

13. Words that obey these constraints but nonetheless do not exist in a language are called "accidental" or "lexical" gaps. For 10 points each:

[10] Give this adjective that describes a language's constraints on consecutive sounds within a syllable. For instance, one of these constraints for English holds that all three-consonant clusters at the beginning of a syllable must begin with "s."

ANSWER: **phonotactics**

[10] Thus, phonotactic constraints govern the ordering of *these* components of a syllable, which include an optional onset followed by the nucleus and coda. Prosodic features like stress and length are often described by a term meaning that they apply "above" this level, instead affecting syllables or whole words.

ANSWER: **segments** [accept **suprasegmentals**]

[10] Another example of a suprasegmental is *this* feature of a syllable, which can change in a namesake "sandhi" based on context. Unlike English, Chinese uses this pitch-based property to distinguish between words.

ANSWER: **tones** [accept **tonal** languages]

<Social Science>

14. NOW head Molly Yow warned this man's confirmation to the Supreme Court would mean the "end [of] freedom for women in this country." For 10 points each:

[10] Name this relatively unknown nominee to the Supreme Court recommended by former New Hampshire Governor John Sununu, who was seen as attractive due to a lack of documentation of his opinion on issues such as abortion and affirmative action.

ANSWER: David (Hackett) **Souter**

[10] Souter had supposedly been on Ronald Reagan's short list when he nominated this man to the Supreme Court in 1987. As a key "swing voter," he authored the majority opinion on *Obergefell v. Hodges*.

ANSWER: Anthony (McLeod) **Kennedy**

[10] Although viewed by conservatives as a right-wing vote, Souter voted with the majority in this case, which ruled that schools could not sponsor clerics in even non-denominational prayers. This case dealt with a rabbi delivering a prayer at a graduation ceremony.

ANSWER: **Lee** v. **Weisman** [accept either name]

<American History>

15. This author created a cough syrup-addicted character who subsists only on two-dimensional food as part of his “Flatlander” diet. For 10 points each:

[10] Name this author who lived in Redmond and Silicon Valley to research that novel, *Microserfs*. This Canadian’s debut novel potentially coined, and definitely popularized, the term “Generation X.”

ANSWER: Douglas **Coupland**

[10] Coupland is also a visual artist, depicting a pixelated killer whale in his sculpture *Digital Orga*, which sits next to the convention center of this large Canadian city on the Pacific coast.

ANSWER: **Vancouver**

[10] This novel by Coupland centers on a family from Vancouver that tries to travel to the Kennedy Space Center to see the space shuttle launch of one of its members, the astronaut Sarah Drummond.

ANSWER: ***All Families Are Psychotic***

<Other Academic>

16. The protagonist of this novel thinks of her “hand, foot, tongue, gaze” as “weapons from which nothing is safe” and asks herself, “Why, is it such a bad thing to die?” For 10 points each,

[10] Name this novel about Yeong-Hye, whose sudden change in behavior after a disturbing dream devastates her life and relationships. The English translation of this Han Kang novel won the Man Booker International prize in 2016.

ANSWER: *The **Vegetarian*** [or ***Chaeshikjuija***]

[10] In the second section of *The Vegetarian*, Yeong-Hye’s brother-in-law paints her entire body with flowers, save for a “Mongolian” birthmark on her left buttock. Two actual Mongolians skin a spy alive, buttocks and all, in a horrifying scene from this Japanese author’s novel *The Wind-Up Bird Chronicle*.

ANSWER: Haruki **Murakami** [accept names in either order]

[10] This experimental, multilingual, “auto-ethnographic” novel by Theresa Hak Kyung Cha is split into sections named for the Greek muses. Its characters include Joan of Arc, Demeter, and Cha’s own mother.

ANSWER: ***Dictée***

<Long Fiction>

17. Juan Pablo Pérez Alfonzo, a development minister, called this resource “the devil’s excrement” in a warning about his country’s overdependence on it. For 10 points each:

[10] Name this resource managed by the company PDVSA, which bought out Citgo in 1990. Nearly all of Venezuela’s economy is dependent on this resource, leading to extreme cases of “Dutch disease.”

ANSWER: **oil** [or **petroleum**]

[10] Pérez Alfonzo worked under this two-time Venezuelan president, guiding his administration into co-founding OPEC. His refusal to recognize any government that arose via coup sparked the ire of Rafael Trujillo, who attempted to assassinate him by car bomb.

ANSWER: Rómulo **Betancourt** [or Rómulo Ernesto **Betancourt** Bello]

[10] This journalist, who specialized in covering the petroleum industry, arranged a fateful meeting between Pérez Alfonzo and his Saudi counterpart, Abdullah Tariki, eventually earning her the nickname “the midwife of OPEC.”

ANSWER: Wanda **Jablonski**

<World History>

18. For 10 points each—answer the following about difficult stage directions:

[10] Directors have long been torn between ruining suspension of disbelief by using an actor in a suit and bringing in a convincing but dangerous animal, for this direction indicating Antigonus's death in *The Winter's Tale*.

ANSWER: "**Exit, pursued by a bear**"

[10] In a direction usually considered too brutal to adapt, one of the title characters of this play smashes his head against an oak tree as penance for leading an insurrection against his father, as his beloved Amalia watches in horror.

ANSWER: *The **Robbers*** [or *Die **Räuber***]

[10] Exasperated theater directors have actors playing conquistadors mime this action called for by a notorious stage direction from Peter Shaffer's *The Royal Hunt of the Sun*.

ANSWER: **climbing the Andes** [or **crossing the Andes**; accept the stage direction "The men **climb the Andes**" or "They **cross the Andes**"; prompt on **climbing a mountain** or equivalent answers that don't specify which range it is]
<Drama>

19. The Irish namesake of this process used a photoelectric current to trigger it in experiments where it resulted in a final current equal to the initial photoelectric current times an exponential in the distance over which this process occurred. For 10 points each:

[10] Name this phenomenon in which free electrons in a gas are accelerated by an applied field and collide with gas particles to free more electrons, thus generating a rapidly growing electric current.

ANSWER: **Townsend avalanche** [or **Townsend discharge**]

[10] A Townsend avalanche initiated by high-energy particles such as gamma rays is used to generate a current in these devices, which often signal the detection of radioactivity using a series of audible clicks.

ANSWER: **Geiger counters**

[10] High-energy photons can lose energy in the walls of a Geiger–Mueller tube due to Compton scattering, the photoelectric effect, and through this phenomenon if their energy is above 1.02 MeV.

ANSWER: **pair production**

<Physics>

20. Hugh LaFollette argued that states should require licenses for citizens to become these kinds of people by analogy with driving or practicing medicine, because "it is theoretically desirable that we regulate" any "activity that is potentially harmful to others." For 10 points each:

[10] Name this type of person. David Benatar argued that becoming this kind of person involves causing all the bad aspects affecting a particular person, but none of the good aspects.

ANSWER: **parents** [accept **father** or **mother** or synonyms, I suppose]

[10] In "Against Marriage and Motherhood" this philosopher argued that LGBT marriage-rights advocacy fails to criticise western parental norms. In *The Atrocity Paradigm*, this philosopher distinguished evil from other sorts of wrongdoing by the actor's culpability as well as the foreseeability of the intolerable harm caused.

ANSWER: Claudia (Falconer) **Card**

[10] In "The Science of Right" section of his *Metaphysics of Morals*, this philosopher stated that children have a congenital rather than hereditary right to be cared for by their parents. Card rejected the notion of "radical evil" that this man analysed in *Religion within the Bounds of Reason Alone*.

ANSWER: Immanuel **Kant**

<Philosophy>