

Chicago Open 2015

Packet by sometimes in this life u must steal submarine (Rob Carson, Andrew Hart, Shan Kothari, and Adam Silverman)

1. The protagonist of a novel set in this country is whipped after spilling soup on the chaperone of Isobel Roget, whose parents she later murders. Five daughters of Jack Wilkins with mythological names are led by a woman named Homer in that novel, which is narrated by the daughter of Robert Quinn and Lilith. The Storm Posse fights a gang war in Copenhagen City in this country in a novel in which Josey Wales tries to arrange the death of "The Singer"; that novel was written by the author of *The Book of Night Women*. Paul H.'s family is murdered by Christopher in this country, and the transsexual Harry/Harriet convinces (*) Clare Savage to return here, in the novel *No Telephone From Heaven*. This country is the location of the Coulibri plantation, the setting of the first section of *Wide Sargasso Sea*. For 10 points, name this home country of Michelle Cliff and Marlon James, whose novel *A Brief History of Seven Killings* describes the attempted assassination of Bob Marley.

ANSWER: Jamaica

2. In the early days of this king's reign, his praises were sung in a series of five prophetic poems by a self-proclaimed marshal of Stratford-at-Bow named Adam Davy. In the poem "The Sayings of the Four Philosophers," this king's rule is criticized by "four wise men" who lament that he broke regulations imposed by the Lords Ordainers. A poem that begins "whii werre and wrake in londe and manslauht is i-come," titled for this ruler's "Evil Times," is a social commentary on the ineffectiveness of his rule and the widespread famine (*) that struck Europe during his reign. He himself was credited with writing a "Lament" after his removal from the throne at Kenilworth Castle and subsequent imprisonment at Berkeley Castle at the behest of his wife, Isabella of France. For 10 points, name this English king whose unpopularity stemmed from his relationship with Piers Gaveston and the disastrous defeat at Bannockburn.

ANSWER: Edward II [prompt on "Edward"]

3. The restoring force in the flexure equation equals gravity times the deflection times this quantity. This quantity is roughly equal to the one-fourth power of velocity, times 310, in SI units, according to the empirical Gardner's equation. The Bouguer correction is proportional to both the plate thickness and this quantity, all multiplied by big G times two pi. The Pratt model allows this quantity to vary laterally, whereas the Airy model (*) assumes that it is constant for all blocks. Like velocity, this quantity decreases with radius, with discontinuities, on a preliminary reference Earth model. Evaluating Pascal's Law at the zone of compensation explains the interplay between height and this quantity in isostasy. Mohorovicic realized that an increase in P-wave velocity implied that this quantity must abruptly increase at the mantle. For 10 points, name this quantity which is about 2700 kilograms per cubic meter for the crust.

ANSWER: crustal density [or rho]

4. In a myth about this deity, a boy named Sunahsepa is offered as a sacrifice to him in place of the treacherous king Harishchandra's child. The Paravar people claim to be descended from this deity, who is the subject of a hymn telling of how he is always present when two people plot and how he uses his "knotted nooses" to entrap liars; that hymn is from the *Atharvaveda*. A chariot with a *kapidhwaj* banner, two inexhaustible quivers, and a bow he had possessed for a hundred years were this deity's gifts to Arjuna. Like (*) Ganga, this deity rides a half-piscine creature called a *makara*. This deity is responsible for maintaining *rta*, or order, often alongside his counterpart and fellow Aditya, Mitra. After this god fails to respond to a three-day penance, Rama threatens to destroy him with the *brahmastra*, but this god apologizes and then pacifies his domain so Nala can build a bridge across it. For 10 points, name this Vedic sea deity.

ANSWER: Varuna [or Baruna; or Waruna]

5. The second theme of this piece's first movement is introduced by the two lowest voices playing in thirds and sixths in the distant key of E-flat major. The last four bars of this piece's second movement modulate from E major to F minor and back, reflecting the key changes between that adagio movement's A and B sections. After the exposition of the first movement ends with a G major chord, it modulates to A major at the outset of the development. A noted recording of this piece was produced with Pablo Casals and Paul Tortelier at the 1952 Prades Festival. The scherzo of Brahms's *Piano Quintet* alludes to this piece's final cadence, which

features all instruments in unison playing a D-flat grace note slurred to a C. This work was premiered posthumously in 1850, and its long first movement was likely inspired by Mozart's (*) K. 515 in the same genre and key. Mstislav Rostropovich produced recordings of this piece with both the Melos and Emerson Quartets. For 10 points, name this final chamber work by Franz Schubert that uses an extra cello instead of a second viola.

ANSWER: String Quintet in C major by Franz Peter Schubert [or D. 956; accept Op. Posth. 156 or Cello Quintet in place of "String Quintet"; don't require "Schubert" after he's mentioned; prompt on partial answer]

6. This man's research efforts were aided by a transfer of patents from inventor and Slovakian-Pennsylvanian priest Jozef Murgas. This man introduced an historical address by Pope Pius XI by mentioning that God "places so many mysterious forces of nature at man's disposal" after this man supervised the installation of a structure still in use at the Vatican today. He also supervised the building of a structure on a bluff near Wellfleet, Massachusetts, on the Cape Cod peninsula, (*) to compete with a venture started by Cyrus Field. He used a spark-gap device in his initial experiments, including a demonstration in which the message "are you ready?" was conveyed from Flat Holm Island to Lavernock Point across the Bristol Channel. Harold Bride and Jack Phillips, who worked for this man's namesake company, sent distress signals from the *Titanic*. For 10 points, name this Italian electrical engineer often credited with inventing radio.

ANSWER: Guglielmo Marconi

7. They are not disembodied wax limbs, but visual artist Robert Gober has created over 50 increasingly abstract objects of this type in response to the AIDS epidemic. These objects were disparagingly invoked in the title of an article in *Encounter* by British art critic David Sylvester, who mentioned them in the body of the article after "babies' nappies on the line." A group known as the (*) Beaux-Arts Quartet, including Derrick Greaves, Edward Middleditch and Jack Smith, formed the core of an artistic movement better known as a group named after these objects. That art movement was named after a painting depicting one of these objects by John Bratby. For 10 points, identify these objects that name a gritty school of 1950s "realist" British painters who depicted working class lives and associated with the Angry Young Men.

ANSWER: kitchen sinks [accept kitchen sink realism or equivalents]

8. The question "What Might an Anthropology of [this concept] Look Like?" appears in a book that opens by challenging Rawls's distinction between "core principles" and "background justifications." That book on the "Formations of" this concept is by Talal Asad. Another book on this concept rejects the "subtraction story" of its origin, and claims that it created a "Nova Effect" resulting in intense cross-pressures on individual belief. That book claims that the ascendance of this idea is characterized by the transition from porous to buffered selves and the creation of an "immanent frame." Peter Berger backtracked on his prediction in *The Sacred Canopy* that (*) industrial capitalism and pluralism would cause the triumph of this notion. This kind of "Age" gives its title to a Charles Taylor book. Max Weber's three pronged theory of the development of this notion is hinged on social stratification, individualism, and scientific achievement. A key text for its development in the United States was a letter sent to the Danbury Baptist Association, which used the phrase "wall of separation". For 10 points, name this concept, exemplified by French *laïcité*, in which religion is severed from public life.

ANSWER: secularity [or secularism; or secularization; accept separation of church and state]

9. The inability to distinguish between legitimate and illegitimate explicability arguments has led Michael Della Rocca to embrace this philosophical idea. Peter van Inwagen and Jonathan Bennett considered the conjunction of all contingent true statements in a paper that argues that this statement implies necessitarianism. Anaximander is often credited with first invoking this idea to explain why the Earth is stationary. Kant identifies this idea with the causal principle in the Second Analogy of Experience in the *Critique of Pure Reason*, and earlier attacked Christian Wolff's (*) argument that this statement is self-evident in the *New Elucidation*. Though it notably does not appear explicitly in the axioms of *Ethics*, Spinoza uses this principle to deduce the necessary existence of God and to reduce concepts like existence and causation to intelligibility. The Principle of Contradiction and this idea ground the philosophy of Leibniz, who coined this idea's name. Another philosopher distinguished forms of this principle grounded in becoming, knowing, being, and acting. For 10 points, name this principle stating that events and truths must have a rational explanation, whose "fourfold root" was explicated by Schopenhauer.

ANSWER: Principle of Sufficient Reason [or PSR]

10. 11. This book's source material has been traced to the so-called "Talbot Wilson" notebook. The preface to this book includes "stand up for the stupid and crazy" and "love the earth and sun and the animals" in a list of advice following the declaration "This is what you shall do." William Douglas O'Connor wrote a "vindication" of the author of this book, which is the subject of the final chapter in D. H. Lawrence's *Studies in Classic American Literature*. Its original frontispiece featured the (*) "carpenter" portrait of its author, in which he stands with his hand on his hip while wearing his work clothes. Its author advertised it by highlighting the line "I greet you at the beginning of a great career" from a congratulatory letter sent by Emerson. This book's preface claims "The United States themselves are essentially the greatest poem," and its final, "deathbed" edition was released in 1892. For 10 points, name this poetry collection that includes clusters of poems called "Children of Adam" and "Calamus," as well as hundreds of other poems by Walt Whitman.

ANSWER: Leaves of Grass

11. Negotiations with this group during one incident were aided by former Special Forces member Gene Yu. The Muktadir brothers were accused of selling captives to this organization. A group of 12 "prayer warriors" from the Jesus Miracle Crusade visited this group's headquarters, only to be captured. One attack carried out by this group was done using several pounds of TNT stuffed into a television. That attack, which notably killed six students on their way to a national journalism competition, was the bombing of Superferry 14. This group coordinated with 14K to kidnap several tourists at a dive resort in order to exchange them for Ramzi Yusef, one of the perpetrators of the (*) 1993 WTC bombings. This group's leader Isnilon Totoni Hapilon has a 5 million dollar bounty on his head due to his role in the Dos Palmas kidnappings. This group broke off from the MNLF after being given six million dollars by Osama Bin Laden, and its name means "father of the swordsmith". For 10 points, name this Islamist terror group from the Philippines.

ANSWER: Abu Sayyaf

12. The eighth chapter of this work, which describes the murder of Billy Brooks Jr., takes its title from a phrase in a 1965 speech given at Howard University by Lyndon Johnson. The first chapter of this work profiles a man who, as a ten-year-old boy, was forced to sell a horse with a red coat for \$17; the man's response, "so that's just one of my losses," titles the chapter. The three epigraphs to this piece are from Deuteronomy 15:12-15, Locke's *Second Treatise*, and an anonymous person who said "we have earned the right to the soil, and now we are determined to have it." This long essay contains an extended discussion of Clyde Ross, (*) who bought a home "on contract" in the North Lawndale neighborhood of Chicago and helped form the Contract Buyers League to combat predatory housing sales. The intro to this piece states that America must "reckon with our compounding moral debts" after mentioning "thirty five years of racist housing policy," "sixty years of separate but equal," and "two hundred fifty years of slavery." For 10 points, name this June 2014 essay in *The Atlantic* by Ta-Nehisi Coates, which argues in favor of compensating the descendants of slaves.

ANSWER: "The Case for Reparations"

13. This author wrote a farce in which a divorce court judge listens to four oral arguments, then declares that he won't let anybody divorce in his courtroom. Philip Massinger's *The Renegado* is based on a play by this author titled for the baths of a city where this author lived. The sorcerer Marquino wets his lance with a drop of water, then strikes a coffin, resurrecting a corpse, in a play by this author. Later in that drama, a young lad jumps off a tower in the midst of metaphorical ravaging by the Four Horsemen of the Apocalypse. Aurelio (*) and Silvia love each other in captivity in a play by this author titled for a treaty. The first act of one of his tragedies ends with a discussion between Spain and the river Duero after a heroic speech given by Scipio Africanus in preparation for a bloody incident of the Celtiberian Wars. For 10 points, name this author of the *The Voyage of Parnassus* and *The Siege of Numantia*, who set many of his plays in Algiers, where he was imprisoned before he wrote *Don Quixote*.

ANSWER: Miguel de Cervantes Saavedra

14. The Jones-Imboden raid and the McNeill raid both aimed at disrupting this company, which was led by Daniel Willard during the early decades of the 20th century. This company exclusively used the Bollman Truss, which was designed by one of its engineers. Its president John W. Garrett alerted Lew Wallace about

Confederate activity before the Battle of Monocacy, which was fought to protect its local junction. Peter Cooper designed the Tom Thumb to convince the owners of this railroad to use (*) steam power. The Great Railroad Strike of 1877 began in response to this railroad cutting wages three times in one year. After John Brown's raid seized one of its trains, this railroad transported government soldiers to Harper's Ferry. Stonewall Jackson conducted a campaign to sabotage this railroad in 1861 because it was the only railroad into Washington D.C. After being incorporated in 1827, it was the first American railroad to offer regular passenger and freight service. For 10 points, name this mid-Atlantic railroad that spanned from a port city to a Midwestern state.

ANSWER: Baltimore and Ohio railroad [or the B and O railroad]

15. At low temperature, this quantity decreases when there is an odd number of atoms in a droplet, but stays the same for even number of atoms, due to the alternation of a singlet at the Fermi level with overall spin-zero SETs. A model for this quantity gives it proportional to the sum of temperature squared, temperature to the fifth, and the logarithm of one over temperature. One over the temperature is given as a third-order power series of the logarithm of this quantity in the Steinhart-Hart equation. The Anderson model explains why this quantity is minimized at a given temperature due to tunnel-coupling from impurities. Four times Boltzmann's constant times temperature (*) times this quantity gives the constant spectral density of Johnson-Nyquist noise. Bolometers used for measuring radiation use NTDs, because of this quantity's strong temperature dependence. At low temperatures, this quantity will show nonlinearities due to the Kondo effect. For 10 points, name this quantity which drops to zero at low temperatures in superconductors.

ANSWER: electrical resistance [or electrical resistivity]

16. The McConnell stacking rule for these compounds uses the so-called */non-* ("star non star") rule to predict if their orbitals will be disjoint or nondisjoint. The Beckwith-Houk transition state model explains why the 5-hexenyl ring closure of these compounds is exo. The rate of rearrangement of these compounds is listed in an horlogerie. Many reactions involving these compounds have an order of 1.5 with respect to them. Geminate recombination limits the reactivity of these compounds according to their namesake cage mechanism. Sigma donors and acceptors on these compounds will synergistically reduce their overall energy. These compounds form stable adducts with nitroso or nitrone groups. One of these compounds with a propeller-like structure is formed by reacting trityl chloride with (*) silver, and turns a darker shade of yellow when exposed to air. By definition, these compounds have a SOMO. The release of nitrogen gas from AIBN is coupled to the synthesis of two of these compounds. Anti-Markovnikov addition of hydrogen bromide across a double bond forms one of them in the first step. For 10 points, name these paramagnetic compounds which have an odd number of electrons.

ANSWER: free radicals [or biradicals]

17. The pyrrolo-pyridine derivative RK-20449 inhibits Hck in these cells, after a spontaneous phenotypic switch causes them to overproduce SFKs. The Cairns-Nowell model proposes that these cells are the ones that respond earliest to selective pressure. A conventional Aldefluor assay can detect these cells, which are killed after treatment with 3-BrOP due to inhibition of glycolysis. They turn up in a FACS assay susceptible for CD34 positive, CD38 negative cells. The potassium ionophore salinomycin selectively targets these cells. John Dick discovered these cells by xenografting NOD/SCID mice and showing that only about 4% developed (*) AML. Subclonal diversity implies that the concentration of these cells is much higher than expected. These cells are enriched in patients with minimal residual disease, which explains how they lead to remissions. These cells are further classified into sphere-forming neoplastic and culture-forming neoplastic. For 10 points, name these non-differentiated cells which turn into tumors.

ANSWER: cancer stem cells [or CSCs; or tumor stem cells; or TICs; or tumor-initiating cells; prompt on stem cells; prompt on cancer or tumor cells]

18. Jeffrey Masson argues that Romain Rolland's concept of the "oceanic feeling" was drawn from both this religious figure and his most famous student, both subjects of biographies by Rolland. This man's practice of both Islam and Christianity led him to have separate visions of Jesus and Mohammad merging with his body. In a tract subtitled "Didn't Anyone Check the Documentation?", Swami Tyagananda alleged systematic mistranslations in a previous book noting a homoerotic strain in this man's thought. That book is *Kali's Child* by Jeffrey Kripal. He advocated the renunciation of *kama-kanchana*, or "lust and gold," and taught that all living things are Shiva. Mahendranath Gupta compiled a five-volume work about this man that Swami (*)

Nikhilananda translated as *The Gospel of this man*. Bhairavi Brahmani initiated this man into Tantra, and as a priest at the Dakshineswar Kali Temple, he received a vision of Kali as the universal mother and reached the state of *bhava samadhi*. For 10 points, name this 19th century Bengali mystic, the namesake of a Vedanta mission founded by his student Vivekananda.

ANSWER: Sri Ramakrishna Paramahansa [or Gadadhar Chatterji; or Gadadhar Chattopadhyay]

19. One of this artist's films stars Victoria Lust as a nude woman who allows several insects to traverse her body as this artist hums menacing buzzing noises. This filmmaker of *Fly* appeared onstage and invited audience members to cut the clothing off of her body in the performance work *Cut Piece*. This woman's appearance onstage sitting cross-legged with a man in a giant expanse of velvet at an artists' gathering called The Alchemical Wedding spawned an art movement she called "bagism," which encouraged dressing up in person-sized bags to (*) protest racial discrimination. With La Monte Young, she organized concerts in her Chambers Street loft in Tribeca, which led her to become a major exponent of the Fluxus movement. At one of her performance pieces called *Painting to Hammer a Nail*, she first met a collaborator with whom she staged a seven-day anti-war event in Amsterdam in March 1969 during their honeymoon. For 10 points, name this conceptual artist from Japan who organized the first Bed-In for Peace with her husband, John Lennon.

ANSWER: Yoko Ono

20. The "radical insincerity" of a member of this group was criticized by George Eliot in the essay "Worldliness and Other-Worldliness." A "silken son of pleasure" named Lorenzo is the addressee of the last seven parts of a nine-part poem by a member of this group; that poem fictionalizes his wife's daughter and her husband Henry Temple as "Narcissa" and "Philander," and is sometimes published as "The Complaint." Another poem by a member of this group describes the title entity as a "dread thing" which causes men to "shiver when thou'rt nam'd." That (*) Robert Blair poem gave its name to this group of poets, whose most famous member contemplated a "Cromwell guiltless of his country's blood" and a "mute inglorious Milton" lying in a location where the "curfew tolls the knell of parting day." For 10 points, name this group of poets which included "Night Thoughts" author Edward Young and Thomas Gray, who set an "elegy" in its namesake location.

ANSWER: the Graveyard poets/school/etc. [or the Churchyard poets; or the Boneyard poets]

1. A silver denarius displayed at Newcastle University shows an unusually sharp, pointed version of this feature, to match the hooked one belonging to Mark Antony on the other side. For 10 points each:

[10] Identify this body part of an Egyptian ruler, which according to a quote from Blaise Pascal's *Pensees* would have "changed the face of the world", had it been shorter.

ANSWER: Cleopatra's nose [accept obvious synonyms; accept Cleopatra VII Philopator for "Cleopatra"]

[10] A number of this former Librarian of Congress's "essays on the unexpected" are collected in a book titled *Cleopatra's Nose*. This exponent of "consensus history" included *The Discoverers* and *The Seekers* in his "Knowledge Trilogy".

ANSWER: Daniel J. Boorstin [or Daniel Joseph Boorstin]

[10] Cleopatra's nose also lends its name to an essay collection, including many pieces on fashion designers, by this *New Yorker* staff writer. Her books include *Secrets of the Flesh*, a biography of Colette, and *Isak Dinesen: The Life of a Storyteller*.

ANSWER: Judith Thurman

2. This enzyme regulates the replication of the 2 micron plasmid in yeast. For 10 points each:

[10] Name this recombinase that can be used to delete the DNA sequence between two FRT sites. Another enzyme with this same name moves phospholipids from the outer leaflet to the inner leaflet.

ANSWER: flippase [or Flp "flip" recombinase]

[10] The sequence removed by flippases often encodes proteins with this function. To select for successful transformants, plasmids often code for enzymes with this function, like beta-lactamases.

ANSWER: antibiotic resistance or drug resistance

[10] Flippase and homologous recombination were used to construct this 3895-member deletion library in *E. coli* which contains knockouts of every non-essential gene in K-12 strains.

ANSWER: Keio collection

3. Before you answer the following about the life and times of Hieronymus Cock, I want you to know that his wife had the incredibly Belgian name of "Volcxken Diericx". For 10 points each.

[10] In 1559 and 1561, Cock published two series of etchings of 44 views of locations in and around Antwerp. The anonymous artist of those etchings is now referred to by this name.

ANSWER: the Master of the Small Landscapes [or den Meester van de Kleine Landschappen]

[10] Cock also published this engraving by Bruegel the Elder, which depicts a man in a boat in the foreground directing his son's attention toward the central scene, in which a helmeted figure with a huge knife guts a gigantic creature, causing a number of similar creatures to spill out.

ANSWER: *The Big Fish Eat the Little Fish* [or *Grandibus exigui sunt pisces piscibus esca*; accept close translations like *"Small Fish are Food for Big Fish"* or anything that indicates larger fish consuming smaller ones]

[10] In an effort to increase sales of *Big Fish Eat Little Fish*, Cock attributed it to this earlier artist of *The Seven Deadly Sins and the Four Last Things*, whose many triptychs include *The Haywain*.

ANSWER: Hieronymus Bosch [or Jheronimus van Aken; also accept Jeroen, Joen, or Yeronimus as first names with either surname]

4. James Wood's review "The Uses of Oblivion" called this novel's allegory "too literal and too vague.". For 10 points each:

[10] Name this 2015 novel about the Briton couple Axl and Beatrice, who are joined by a Saxon warrior named Wistan and the knight Sir Gawain on a journey to discover the source of the amnesia-causing "mist" plaguing the world.

ANSWER: *The Buried Giant*

[10] *The Buried Giant* is the newest novel by this author. Wood was much more approving of his 2005 dystopian sci-fi novel about cloning, *Never Let Me Go*.

ANSWER: Kazuo Ishiguro [accept names in either order]

[10] Wood also savaged this dreamlike 1995 novel by Ishiguro, in which a classical pianist named Ryder arrives in an unnamed European city to give a concert, but somehow never quite manages to.

ANSWER: *The Unconsolated*

5. Ioannis Kolettis is credited with inventing this term, which was reflected in George I's title "King of the Hellenes" instead of "King of Greece." For 10 points each:

[10] Give the Greek term for this irredentist concept, whose broad goal was to unite all Greeks under one flag.

ANSWER: Megali idea [prompt on "Great (idea)"]

[10] The death of the Megali idea is usually traced to the population exchange between Turkey and Greece resulting from this 1923 treaty signed in Switzerland; it replaced the rejected Treaty of Sevres.

ANSWER: Treaty of Lausanne

[10] The Treaty of Lausanne was signed in the wake of a ten-day "great fire" that devastated this Turkish port on the Aegean in 1922.

ANSWER: Smyrna [or Izmir]

6. Hasdai Crescas initially argued against this philosopher's view that human and divine attributes share a common essence. For 10 points each:

[10] Name this early 14th century philosopher, astronomer, and proponent of astrological determinism who discussed six philosophical questions in *The Wars of the Lord*, which claimed that God does not know particulars.

ANSWER: Gersonides [or Levi ben Gershon; or the RaLBaG]

[10] Like his fellow Aristotelian, Maimonides, Gersonides belonged to the rationalist tradition within this religion, as did thinkers of the Haskalah.

ANSWER: Judaism [accept answers about being Jewish]

[10] In the first book of *The Wars of the Lord*, Gersonides defended the immortality of the soul, which was also defended by another Jewish philosopher, Moses Mendelssohn, in this text, which is named similarly to the Socratic dialogue which proposes four arguments for it.

ANSWER: Phaedon, or the Death of Socrates [do not accept or prompt on "Phaedo" the Socratic dialogue; ask for spelling if necessary]

7. This nickname was first bestowed in the 1196 *Gesta* of Rigord, and was given to a territorial expander who was originally known as "Dieudonne" or "God-given." For 10 points each:

[10] Give this nickname bestowed upon the first ruler to call himself the "king of France" rather than "King of the Franks."

ANSWER: Augustus [or Augusti or Auguste; accept Philip II Augustus]

[10] Philip Augustus earned his epithet shortly after crushing Philip I, the count of this region, in a territorial dispute. This county, near Picardy and Artois, was in a personal union with Burgundy after 1405.

ANSWER: County of Flanders [or Flandre]

[10] Philip Augustus gained even more territory after this disastrous 1214 defeat for King John of England that prompted the signing of the Magna Carta.

ANSWER: Battle of Bouvines

8. Answer the following about Armenian mythology, for 10 points each.

[10] The Armenian war god Vahagn the Dragonslayer later came to be identified with the deified form of this Greek hero, who completed twelve labors in service of King Eurystheus of Tiryns.

ANSWER: Heracles [or Hercules]

[10] Due to identification with the earlier Urartian storm god worshipped in Armenia, Vahagn adopted some aspects of this Hurrian sky god, who was conceived when Kumarbi ate the genitals of his father Anu.

ANSWER: Teshub [or Taru; or Tarhunt; or Teshup]

[10] After her husband Ninus abandoned her, this legendary Assyrian queen sent a proposal to the Armenian warrior Ara the Beautiful, which he rejected due to his marriage to Nvard. As a result, this woman started a war in which Ara was killed.

ANSWER: Semiramis [or Shamiram; or Shammuramat]

9. Senator-elect John S. Carlisle authored a "Declaration of the People" during this meeting. For 10 points each:

[10] Name this 1861 meeting that elected Francis Harrison Pierpont the governor of a "restored government."

ANSWER: Wheeling Convention [accept First Wheeling Convention or Second Wheeling Convention; prompt on less-specific answers including "Wheeling" such as "Wheeling meeting"]

[10] The dire working conditions of antebellum Wheeling inspired Rebecca Harding Davis to pen this short realist story that follows the travails of consumptive puddler Hugh Wolfe.

ANSWER: **Life in the Iron Mills**

[10] From 1849 to 1851, Wheeling was home to the largest structure in the world of this type, designed by Charles Ellet Jr. One designed by John Augustus Roebling that employs steel cable staying spans the East River between Manhattan and Brooklyn.

ANSWER: **suspension bridges** [prompt on “bridge(s)”]

10. This historian’s only known work is an commentary on a lost history by Gnaeus Pompeius Trogus. For 10 points each:

[10] Name this Roman historian whose epitome on Trogus was likely written sometime between AD 100 and 500.

ANSWER: **Justin** [or Marcus Junianus **Justinus**; accept **Justin Martyr**]

[10] Justin is one source for the corruption of Ashurbanipal into the name of this legendarily decadent and likely fictional Assyrian ruler, whose “death” was shown by Eugene Delacroix.

ANSWER: **Sardanapalus**

[10] Trogus is also known through quotations in this work, published around the time of its author’s death in AD 79, which was translated into English by Philemon Holland.

ANSWER: Pliny the Elder’s **Natural History** [or **Naturalis Historia** or **Historia Naturalis**]

11. Despite being paralyzed by two strokes, a character in one of this man’s novels tries to write “Thérèse and Laurent killed Camille,” but fails part of the way through.. For 10 points each:

[10] Name this French naturalist writer, the leader of the Médan group. He wrote *Thérèse Raquin* and a series of novels that feature the Lantier family.

ANSWER: Émile Édouard Charles Antoine **Zola**

[10] In an amusing letter to the creator of this fictional animal, Zola wrote that he was glad it died because “it would have crapped the carpet.” This animal was purchased from the Palais Royal to complement an Oriental rug, then encrusted with rare jewels in the shape of a bouquet of flowers.

ANSWER: the **tortoise** from **À Rebours** [or **Jean** des Esseintes’s **tortoise**; or Jean des **Esseintes**’s **tortoise**; accept **turtle** in place of tortoise; accept **Against Nature** or **Against the Grain** in place of **À Rebours**]

[10] Evelyn Waugh paid homage to Huysmans’s tortoise in *Brideshead Revisited* by having this ambitious Canadian businessman give a diamond-studded tortoise to Julia Flyte, from whom he later separates.

ANSWER: **Rex** Mottram [or Rex **Mottram**]

12. This text outlines eight *rasas*, or overriding emotional themes, as well as four types of expression: song, gesture, costume, and emoting. For 10 points each:

[10] Identify this ancient Indian manual of stagecraft attributed to the sage Bharata. It was the subject of the famed commentary *Abhinavabharati*.

ANSWER: the **Natya Shastra**

[10] Among the genres laid out in the *Natya Shastra* is the *bhana*, which are one-act plays about dissolute heroes that share this production characteristic with Chekhov’s *On the Harmful Effects of Tobacco* and Samuel Beckett’s *Krapp’s Last Tape*.

ANSWER: they’re written for only **one character** on stage [accept answers involving **monodrama** or the idea that they’re **monologues**]

[10] The author of the *Natya Shastra* shares the name “Bharata” with the son of this literary character, whose signet ring is eventually recognized by her husband Dushyanta in the most famous play of Kalidasa.

ANSWER: **Shakuntala**

13. The right-hand side of this equation, often symbolized *Q*, accounts for collisions. For 10 points each:

[10] Name this fundamental equation of microscopic fluid dynamics, which reduces to a Maxwellian distribution at equilibrium. The Maxwellian distribution is sometimes co-named for the German namesake of this theorem.

ANSWER: **Boltzmann** transport equation

[10] If the collision term is set to zero, then the Boltzmann transport equation reduces to this other equation, which sets the convective derivative of the probability density function f equal to negative $\mathbf{v} \cdot \nabla f$.

ANSWER: Vlasov-Poisson equation

[10] Linearization of the Vlasov equation according to first-order perturbation theory gives the linear form of this quantity as proportional to the cube of the angular frequency over the wavenumber squared. It is usually symbolized γ .

ANSWER: Landau damping rate/decrement [prompt on partial answer]

14. In the Outrage of Gibeah, men of this tribe raped to death a concubine of a man in the Tribe of Levi, sparking a war that led the other tribes to nearly wipe this tribe out. For 10 points each:

[10] Name this Tribe of Israel, sandwiched geographically between Ephraim and Judah. It later joined the Judah to form the Kingdom of Judah.

ANSWER: Tribe of Benjamin

[10] The Outrage of Gibeah is described in the epilogue to this seventh book of the Hebrew Bible. The title characters, including Deborah and Gideon, are divinely inspired leaders who deliver the Israelites from unfaithfulness and hardship.

ANSWER: Book of Judges [or Sefer Shoftim]

[10] The Song of Deborah and Barak praises this wife of Heber for killing the Canaanite general Sisera by driving a tent peg through his forehead.

ANSWER: Jael [or Yael]

15. In this opera, “Glück das mir verblieb,” also known as the “Lute Song,” is a duet sung by Marietta and Paul, who believes that Marietta is a reincarnation of his wife Marie. For 10 points each:

[10] Name this 1920 opera based on the Georges Rodenbach novel *Bruges-la-Morte*. Its title refers to the city of Bruges, and its libretto was written by its composer and his father under the pseudonym “Paul Schott.”

ANSWER: *Die Tote Stadt* [accept *The Dead City* or close translational equivalents]

[10] This Jewish-Austro-Hungarian composer of *Die Tote Stadt* collaborated on the libretto with his father Julius. Before moving to the United States, he was the first composer commissioned to write a left-hand piano concerto for Paul Wittgenstein.

ANSWER: Erich Wolfgang Korngold

[10] Erich Wolfgang Korngold was one of the first major composers of music to accompany this medium, along with Max Steiner and Alfred Newman. Korngold’s scores for this medium include *The Adventures of Robin Hood* and *Anthony Adverse*.

ANSWER: film scores [accept any answers suggesting music for films or movies]

16. This political theorist’s state autonomy theory emphasized the ability for state bureaucracies to pursue ends that are not simply reflective of society’s desires, a view later modified in *Protecting Soldiers and Mothers*. For 10 points each:

[10] Name this Harvard political scientist who claimed that revolutions in France, Russia, and China resulted in both state and class transformation in *States and Social Revolutions*.

ANSWER: Theda Skocpol

[10] Skocpol shared a historical institutionalist outlook with this fellow Harvard political scientist who claimed that modernization begets instability in *Political Order in Changing Societies* and that the aftermath of the Carnation Revolution saw a “third wave” of democratization.

ANSWER: Samuel Phillips Huntington

[10] Proponents of state autonomy theory emphasize the role of this institution in maintaining state autonomy. In his first book, Huntington argues that the best way to maintain civilian control over this institution is to professionalize it.

ANSWER: the military [or armed forces; accept obvious equivalents]

17. For 10 points each, answer the following about the Federal Theater Project.

[10] One of the project's most controversial productions was this Marc Blitzstein musical, in which Larry Foreman attempts to unionize Steeltown, U.S.A. against the opposition of Mr. Mister. After the WPA shut it down, it was performed almost entirely from the audience of the Venice Theater.

ANSWER: The Cradle Will Rock

[10] The project formed several Negro Theatre Units, where this author and Countee Cullen staged an adaptation of *Conjur' Man Dies*. This author of the children's history *The Story of the Negro* and the historical novel *Black Thunder* edited the anthology *American Negro Poetry*.

ANSWER: Arna Bontemps [or Arnaud Wendell Bontemps]

[10] The Federal Theater Project also staged an adaptation of this author's novel *It Can't Happen Here*. He refused the 1926 Pulitzer Prize for his novel about an idealistic doctor, *Arrowsmith*.

ANSWER: Sinclair Lewis

18. The falling motif that opens this piece begins with an A, which resolves the leading tone that ends the previous song, "I Saw My Lady Weepe." For 10 points each:

[10] Name this song from its composer's *Second Booke of Songes or Ayres of 2, 4, or 5 Parts*. It originated as an instrumental whose theme was the subject of seven variations by the composer in his *Lachrimae*, and was also transcribed as a set of keyboard variations by Jan Pieterszoon Sweelinck.

ANSWER: "Flow my tears, fall from your springs"

[10] "Flow my tears" was written by this Elizabethan lutenist and composer of such melancholy songs as "Come again." His galliards include "Can she excuse my wrongs."

ANSWER: John Dowland

[10] The original instrumental form of "flow my tears" was one of these slow processional dances of early modern Europe. Ravel gave the opening melody to a valveless horn in his orchestration of one of his own early piano pieces of this type, written "for a dead princess."

ANSWER: pavane

19. Answer the following about the partial derivative of temperature with respect to pressure, for 10 points each:

[10] At constant enthalpy, it is equal to this quantity, which is the volume over heat capacity, times the quantity thermal compressibility times temperature, minus one. It is negative for hydrogen at room temperature, which is one reason why hydrogen is so difficult to store.

ANSWER: Joule-Thomson coefficient [or μ]

[10] At constant entropy and number of moles, the partial derivative of temperature with respect to pressure is exactly equal to this other partial derivative, at constant pressure, according to a Maxwell relation.

ANSWER: partial derivative of volume with respect to entropy [or dV/dS ; or equivalents]

[10] At constant volume, the partial derivative of temperature with respect to pressure, assuming temperature is high and pressure is small, equals the volume over this constant. For a monotomic ideal gas, it is equal to heat capacity at constant pressure minus heat capacity at constant volume.

ANSWER: ideal gas constant [or R]

20. Brodal applied the pigeonhole principle to the meld of these structures by marking passive nodes, allowing their "strict" form to achieve the amortized runtime of their "simple" form even in the worst case. For 10 points each:

[10] Name these data structures which delay consolidation until future delete-min operations, which gives them constant-time insertion, compared to their binomial counterparts.

ANSWER: Fibonacci heaps [prompt on partial answer]

[10] A Fibonacci heap is used to implement a priority queue in the best case of this shortest path algorithm, which was developed into A*. This algorithm doesn't do well with negative edge weights.

ANSWER: Dijkstra's algorithm

[10] The amortized analysis for a Fibonacci heap sets this function equal to the number of trees plus two times the number of nodes. In amortized analysis, this function takes into account pre-paid allocations, in contrast to the accounting method.

ANSWER: potential function [or potential method]