

CMST II

Packet 9

Written and Edited by: John Marvin, Adam Fine, Jason Golfinos, Wonyoung Jang, Clark Smith, Tim Morrison, Davis Everson-Rose, Vikshar Athreya, Caleb Kendrick, Connor Mayers, Eddy Liu, Shan Kothari, Shahar Schwartz, and James Lasker

1. **Description acceptable. Frederick Crawford and Wilfred Spender smuggled weapons for this cause by having the captain of the *SS Balmerino* be as suspicious as humanly possible to distract customs officers. A long-running dispute centers on the route of an annual parade supporting this cause near Drumcree Church. Supporters of this cause like the Apprentice Boys burn bonfires on a holiday known as the Eleventh Night. The Shankill Butchers gang backed this cause. A 1974 general strike was called by supporters of this cause to protest the (*) Sunningdale Agreement. A militia supporting this cause killed several members of the Miami Showband. The evangelical preacher Ian Paisley founded the largest party associated with this ideology, the DUP. A red open hand is a symbol commonly associated with this cause, whose namesake “volunteers” clashed with the IRA during the Troubles. For 10 points, identify this cause which advocates for the continued incorporation of a certain region into the United Kingdom.**

ANSWER: **keeping Northern Ireland in the U.K.** [accept Ulster **Unionism** or **Irish Loyalism**; accept any answer describing **opposition to Republicanism** or any answer describing **keeping Ulster/Northern Ireland separate from (the Republic of) Ireland** or **opposing Irish reunification**; prompt on answers like Irish **Protestantism**]
<CK - History: European>

For 10 points each, answer the following about contemporary women novelists in Japan:

[10m] In this novel by Banana Yoshimoto, Mikage sleeps in the title location every night after the death of her grandmother. This novel is typically published with Yoshimoto’s novella *Moonlight Shadow*.

ANSWER: **Kitchen** [or **Ukigumo**]

[10h] This Japanese author wrote a novel that follows a math professor who can only remember new memories for 80 minutes. In her novella *Diving Pool*, the protagonist is charmed with Jun and watches him practice diving in the orphanage pool room.

ANSWER: Yoko **Ogawa** [accept names in either order] (The first novel is *The Housekeeper and the Professor*.)

[10e] Minae Mizumura’s *A True Novel* retells this novel in postwar Japan, subbing in Yoko Utagawa for Catherine Earnshaw and Taro Azuma for Heathcliff.

ANSWER: **Wuthering Heights** (by Emily Brontë)

<EL - Literature: World>

2. **A misconception about a culture in this country arose from testimony to Marcel Griaule by the blind elder Ogotemeli. Walter van Beek repudiated that claim of Robert Temple’s *The Sirius Mystery* that an indigenous group in this country knew the title star is a binary system without telescopes. The mythology of that culture from this country tells that all beings were hermaphroditic before a single-sexed soulless Jackal caused trouble, and centers on divine twins named Nummo. Those people, who live in complex mud dwellings on the cliffs of the (*) Bandigara Escarpment in this country, are the Dogon. In 2012, the northeastern portion of this country was declared the breakaway state of Azawad. The Bozo people live along the Niger River in this country, which is home to the Sankore Madrasa and a Great Mosque in Djenné. For 10 points, name this Saharan country home to Timbuktu.**

ANSWER: (Republic of) **Mali** [or (*République du*) **Mali**]

<JM - Geography (Mythology)>

19th century art historian Louis Courajod (“koo-rhuh-ZHOE”) was the first to demarcate a late period of this style that spread from Burgundy and northern Italy to the rest of Europe. For 10 points each:

[10e] Name this medieval European artistic style that succeeded the Romanesque period. Its “International” form was predominant in the transitional period before and through the start of the early Renaissance.

ANSWER: **Gothic** [accept International **Gothic**]

[10h] This anonymous International Gothic work with gold leaf depicts Richard II kneeling in front of John the Baptist, Edward the Confessor, and Edmund the Martyr facing a group of angels around the Madonna and child.

ANSWER: ***Wilton Diptych***

[10m] These artists produced a International Gothic illuminated manuscript featuring scenes for each month with astrological charts as well as miniatures like the *Man of Sorrows* with Duke Charles I of Savoy and his wife.

ANSWER: (van) **Limbourg** brothers [or the **Limbourgs**; or *Gebroeders Van Lymborch* or **Limburg**; accept Herman, Paul, and Johann (van) **Limbourg**] (The work is the “Très Riches Heures du Duc de Berry” or “The Very Rich Hours of the Duke of Berry.”)

<JM - Arts: Painting and Sculpture>

3. **A pioneering synthpop group from this country achieved global influence with their record *Solid State Survivor*, whose track “Behind the Mask” was covered by Eric Clapton and Michael Jackson. The chord sequence four major seven, five seven, three minor seven, six minor is so ubiquitous in this country’s popular music that it is referred to as the “royal road progression,” as seen in a genre’s hits like “RIDE ON TIME.” In the late 70s and early 80s, the prevalence of car stereos in this country led to the rise of the (*) “city pop” genre with tracks like “Plastic Love.” In the same period, artists like Candies became the industry model for this country’s “idol” culture, represented today by groups like AKB48 and Babymetal. This country is the origin of “vocaloid” software, which is used to create music for its virtual pop stars. For 10 points, name this country home to artists like Tatsuro Yamashita, Mariya Takeuchi, and Hatsune Miku.**

ANSWER: **Japan** [or **Nippon**-koku; or **Nihon**-koku] (The group in the opening clues is Yellow Magic Orchestra.)

<JM - Arts: Other Music>

In writings preserved in texts including the *Panchvani*, this person emphasized the mystical state of *Sahaj*, in which the truths “of the many” are understood simultaneously with/as the truths “of the one.” For 10 points each:

[10h] Name this 15-16th century Hindu poet-saint who emphasized *nirguna* or abstract approaches to a monistic deity. His teachings live on in a bhakti-movement sect bearing his name.

ANSWER: **Ravidas** [or **Raidas**] (The religious movement is Ravidassia.)

[10m] Ravidas is an especially sacred figure to these people, teaching that all humans are these people relative to God. B.R. Ambedkar started a movement among these people promoting conversion to Buddhism.

ANSWER: **Dalits** [or **dalita**; or **panchama**; accept **untouchables**]

[10e] 41 of Ravidas’s poems are included in the Guru Granth Sahib, the holy text of this South Asian religion with a significant Dalit population. Its followers adopt the surnames “Singh” and “Kaur” to erase caste distinctions.

ANSWER: **Sikhism** [or **Sikhi**; or **Sikh** Dharma]

<JM - Religion>

4. **Mustonen and Lässig used the fluctuation-dissipation theorem to show that the average of the cumulative flux of this quantity is bounded below by the relative entropy between initial and final frequency distributions. Different distributions corresponding to different life cycle events are combined into hierarchical aster models of this quantity. Confusingly, a gamma distribution is often used to model a distribution over *de novo* values of this quantity denoted gamma, known as the DFE. The Robertson-Price identity states that mean trait change equals the (*) covariance between the trait and this quantity. This quantity is the z-axis of plots that become “rugged” in the presence of epistasis. The rate of increase of this quantity equals its variance according to Fisher’s fundamental theorem of natural selection. Populations evolve towards peaks on “landscapes” of this quantity. For 10 points, name this quantity denoted *w* that quantifies an organism’s reproductive success.**
ANSWER: (relative or absolute) **fitness** [accept **fitness** landscapes; accept distribution of **fitness** effects]
<AF - Science: Biology>

This thinker originated a practice of “thinking with more than patterns” for developing inchoate ideas called “Thinking at the Edge” as part of his general orientation toward “the philosophy of the implicit.” For 10 points each:

[10h] Name this thinker who coined the term “felt sense” for subtle bodily perception of pre-verbal feelings recognized and processed in his psychotherapeutic technique of “focusing.”

ANSWER: Eugene (Tovio) **Gendlin** (“JEND-lin”)

[10m] Gendlin studied with this psychologist who referred to Snygg and Combs’ phenomenal field theory in the first of 19 propositions that also describe a “self-actualizing potential” key to his concept of the “fully functioning person.”

ANSWER: Carl (Ransom) **Rogers**

[10e] Rogers identified the phenomenon of “incongruence” as arising from a misalignment between the “real” and “ideal” forms of this concept. Psychotherapists often try to help patients with issues regarding this kind of “esteem.”

ANSWER: **self** [accept real **self**, ideal **self**, or **self**-esteem]

<JM - Hard Social Science: Psychology>

5. **In a *Paris Review* interview, this author famously stated that the “common conception of how novels get written” is “an exact description of writer’s block.” That sentiment is echoed in one of this author’s novels by a self-proclaimed “reliable” narrator whose “page is briefly stained by” his “tears of gratitude” because he has something to write about. In a novel by this author set during “The Crisis,” the protagonist assumes from reading diary entries that the aspiring darts player (*) Keith Talent will murder the novel’s “murderee,” Nicola Six. This author drew on his own experiences to depict the terminally ill novelist Samson Young in his 1989 black comedy novel *London Fields*. In a novel by this author that is narrated by a detached consciousness, the Holocaust doctor Odilo Unverdorben appears to resurrect dead Jews because the novel moves in reverse chronology. For 10 points, name this author of *Time’s Arrow*, the son of a novelist with the first name Kingsley.**
ANSWER: **Martin** (Louis) **Amis** [prompt on **Amis**]
<JM - Literature: British>

Ferdinand Magellan acquired a man named Enrique as a slave from this city, though Antonio Pigafetta says he was from Sumatra. For 10 points each:

[10e] Name this city in what is now Malaysia, the capital of a sultanate last led by Mahmud Shah. The Portuguese conquered this city to control trade through its namesake strait.

ANSWER: **Malacca** City [or Bandaraya **Melaka** or Kota **Melaka**; accept Strait of **Malacca** or Selat **Malaka**; accept **Malacca** Sultanate or Kesultanan Melayu **Melaka**]

[10m] Although Malay Chronicles depicted Malacca as unfamiliar with Portuguese cannons, it did possess *cetbang*, or cannons produced by this polity. This polity's fall to the Demak Sultanate led to its home island's Islamization.

ANSWER: **Majapahit** Empire [or Kerajaan **Majapahit**]

[10h] Raja Mudaliar, who held this influential position, helped doom Malacca's defense by convincing the Sultan to execute the commander Tun Mutahir for treason. The Safavids also used this Persian term for a harbormaster.

ANSWER: **syahbandar** [or **Shāhbandar**] ("Bandar" means "port" in Persian; Mutahir was innocent.)

<VA - History: World>

6. **An essay laments that key sources on this identity like so-called "O.T.F.s" are "invisible to many library systems" and argues that prevalent conceptions of it "foreclose on a life grounded in [its] intertextual possibilities." Aspects of this identity are likened to being a specific kind of "Junkie" in a Paul Preciado book. A "Post-[this identity] Manifesto" highlights the restrictive sense of this identity in Jan Morris's notoriously Orientalist autobiography. Sandy Stone titled that essay "The Empire Strikes Back," referencing a book by Janice (*) Raymond. Susan Stryker illustrated this identity's "rage" via a scene from Mary Shelley's *Frankenstein*. An analogy between race and this identity in a 2017 Rebecca Tuvel article caused a controversy in the journal *Hypatia*. Stone noted that Harry Benjamin's writings on this identity were "accurate" only because those identifying with it deliberately matched Benjamin's binary prescriptions to become "legible" to medical authorities. For 10 points, name this identity "excluded" by "TERFs" and often involving dysphoria from one's sex assigned at birth.**
- ANSWER: **transgender** identity [or being **trans**; accept **trans**sexual; accept more specific answers such as "**trans**(gender/sexual) (wo)**man**" or answers mentioning **both assignment at birth and trans** identity but do NOT accept or prompt on answers like "assigned male at birth" alone; prompt on **LGBTQ**, **queer**, or **non-binary** and equivalents]

<JG - Thought: Other Philosophy>

Examples of these constructs that have fixed partial atomic charges are called nonpolarizable. For 10 points each:

[10h] Name these constructs that typically consist of sums of bond, angle, dihedral angle, electrostatic, and van der Waals terms. Coarse-grained examples of these constructs include MARTINI and SAFT.

ANSWER: **force fields** [prompt on interatomic **potentials**]

[10m] Force fields are used to compute interatomic forces in this computational chemistry method that numerically integrates Newton's laws to approximate the physics of N-body systems.

ANSWER: **MD** [or **molecular dynamics**]

[10e] The bond term in most MD force fields is a potential derived from this law, since deviations from bond length equilibrium are typically small. This law states that the restoring force equals a spring constant times displacement.

ANSWER: **Hooke's** law

<AF - Science: Chemistry>

7. **A writer who married into this family compared “warmth and sunny skies” to “Arctic castaway dreams” in the poem “Hyssop.” That writer misquoted John Milton’s “Comus” in a response to a poem by another writer from this family that describes how “the crickets sang, and set the sun, and workmen finished, one by one.” A writer from this family met her close friend and muse Kate Scott Turner through her brother Austin’s wife. Some have speculated that a line describing a “breast” that is “fit for pearls” signifies that writer from this family harboring a secret (*) lesbian attraction towards both Turner and her sister-in-law, Susan Gilbert. A writer from this family wrote a series of letters addressed to an unnamed “Master” who some have speculated could have been her publisher Thomas Wentworth Higginson. A writer from this family described hearing one poem’s title entity “in the chilliest land, and on the strangest sea.” For 10 points, name this American family, one member of which wrote a poem that describes “Hope” as “the thing with feathers.”**

ANSWER: the **Dickinson** family [accept Susan (Huntington Gilbert) **Dickinson**; accept Emily (Elizabeth **Dickinson**)]

<WJ - Literature: American>

In a prologue to an epic, Ailill (“ELL-ull”) and Medb (“MATHB”) discuss their riches in bed, realizing this figure went to Ailill rather than be owned by a woman. For 10 points each:

[10h] Name this former pig-keeper for Bodb Dearg (“bawthb DYAYRG”) who got into a shapeshifting battle with a colleague that ended with both being turned into worms and eaten by cattle. This figure was then reborn as a white-horned bull.

ANSWER: **Finnbhennach** (“finn-BEN-uk”)

[10e] *The Cattle Raid of Cooley* is the centerpiece of a *Cycle* named for this region, which Cú Chulainn (“KOO KULL-in”) defends from Queen Medb’s attempt to capture the bull Donn Cúailnge (“DOHN KULL-in”), Finnbhennac’s counterpart.

ANSWER: **Ulster** [accept *Ulster Cycle*; or *Ulaid*, or *Ulidia*; prompt on *Ireland*, *Éire*, or *Airlann*]

[10m] Medb sends this foster-brother to duel Cú Chulainn with the promise of Finnabair’s (“FINN-uh-bur’s”) hand in marriage, but despite his reluctance Cú Chulainn ends up slaying this character with the Gáe Bulg spear.

ANSWER: **Ferdiad** (“FAYR-thiath”)

<JM - Literature: European (Mythology)>

8. **At the 2019 Met Gala, a designer with this surname shocked contemporaries by walking the carpet with green hair and a gown emblazoned “More Divine.” A designer with this surname engineered a revolutionary 1996 *haute couture* show by having models walk on a runway over a swimming pool at the Hôtel Ritz Paris. That designer with this surname attracted controversy for a 1992 Fall collection of *prêt-à-porter* pieces titled “Miss S&M.” Naomi Campbell was discovered by a designer with this surname who then featured her in a 1991 Fall show where the models (*) lip-synced to George Michael’s “Freedom! ‘90.” The plunging neckline of a tropical-green silk chiffon dress by a designer with this surname attracted attention after Jennifer Lopez wore it to the 2000 Grammys. The FBI speculated that a designer with this surname may have had a relationship with spree killer Andrew Cunanan that led to his murder outside the Casa Casuarina in Miami Beach. For 10 points, give this surname shared by Italian sibling fashion designers Donatella and Gianni.**

ANSWER: **Versace** [accept (Giovanni Maria) “Gianni” **Versace** or Donatella (Francesca) **Versace**]

<WJ - Arts: Misc>

A composer with this surname claimed to use an odd melody “improvised” by his cat Pulcinella to compose a one-movement fugal keyboard sonata. For 10 points each:

[10e] Give this surname of the baroque composer Domenico, whose Cat Fugue is numbered among his 555 sonatas along with 30 *Essercizi*.

ANSWER: **Scarlatti**

[10m] Some musicologists claim the Cat Fugue’s odd intervals inspired the third piece of an Opus 6 collection of Handel works in this genre. In this baroque genre, eventually eclipsed by the solo concerto, a group of instrumental soloists trade melodies with the orchestra.

ANSWER: **concerto grosso** [or **concerti grossi**]

[10h] This composer claimed she placed her cat Hamlet on the keys in the hopes it’d summon something interesting for her *Fantasia Fugata*. She adapted her songs, including “Twilight” and “Empress of Night,” into an ambitious *Piano Concerto in C-Sharp Minor*.

ANSWER: Amy (Marcy Cheney) **Beach**

<JM - Arts: Classical Music>

9. **Porphyrius wrote that in this kingdom, a boy’s throat was sacrificially slit every year at Dumat. This kingdom began worshiping one of its kings after he killed Antiochus Dionysus in battle and repelled Alexander Jannaeus’s invasion of its Gaulanitis region in quick succession. This rival of the Lihyanites harbored Hyrcanus II during the Hasmonean Civil War. Residents of this kingdom’s capital city, known natively as (*) “Raqmu,” revered a four-sided stone as a moon goddess. A city named for its ruler Obodas I was found along the Incense Route. This kingdom was incorporated into the Roman Empire after the death of Rabbel II Soter. The Roman province of Arabia was named for a capital city of this kingdom, where the mausoleum of Aretas IV may be located in a sandstone structure known as “The Treasury.” For 10 points, name this Arab kingdom centered in contemporary Jordan that built the city of Petra.**

ANSWER: **Nabataean** Kingdom [or al-Mamlakah an-**Nabatīyyah**]

<VA - History: Ancient/Other>

Measurements of this quantity using “early universe” methods give a value significantly smaller than the value obtained using “late universe” methods. For 10 points each:

[10e] Name this quantity measured in kilometers per second per megaparsec. This quantity named for an American astronomer is the constant of proportionality between a galaxy’s distance from Earth and its recessional velocity.

ANSWER: **Hubble constant** [or **Hubble parameter**; prompt on H_0]

[10h] This proposed structure may explain the Hubble constant discrepancy because galaxies within it experience a gravitational pull from outside it. This triply eponymous structure is a large, mostly empty region of space containing the Milky Way.

ANSWER: **KBC void** [or **Local Hole**; prompt on Hubble **bubbles**; prompt on **voids**; reject “Local Void”]

[10m] There is debate over whether the KBC void is consistent with this prevailing model of cosmology. In this model, the universe contains three components - baryonic matter, dark matter, and dark energy.

ANSWER: **lambda-CDM** model [or **lambda-cold dark matter** model]

<DE - Science: Astronomy>

10. **Some scholars contend these people had a myth where their social order emerged from a class war called the “War of the Foundation.” In this myth system, the Otherworld’s gate was guarded by a multi-headed creature possibly named with a word for “spotted.” In one version of this group's mythology, the serpent Nghwi steals Triton’s cattle sacrifice after Yemo is killed by his twin Manu to create humanity. Marija (“MARIA”) Gimbutas refined Otto Schrader’s theory that these people originated in the Pontic (*) Steppe, the Kurgan hypothesis. The theory that this culture had priestly, warrior, and commoner classes is the trifunctional hypothesis, proposed by Georges Dumézil. Along with the earth-mother Dhéghōm, these people worshiped the sky-father Dyēus, which evolved into a Rigvedic deity, Zeus, and Jupiter. For 10 points, name this prehistoric culture that spoke the ancestor language of Sanskrit and Greek.**

ANSWER: Proto-Indo-Europeans [accept variations like “Proto-Indo-European speakers/myth(ology)/culture;” prompt on Indo-European(s) speakers/myth(ology)/culture/etc.]

<JM - Thought: Soft Social Science (Mythology)>

The day before this event, nearly five hundred people in wheelchairs gathered outside the White House for the so-called Wheels of Justice Campaign. For 10 points each:

[10m] Identify this 1990 protest during which Jennifer Keelan, a second-grader with cerebral palsy, dragged herself up the steps of the namesake building.

ANSWER: Capitol Crawl

[10e] In the same year, George H.W. Bush signed into law this bill which requires that public accommodations be handicap accessible and employers make “reasonable accommodations” for disabled employees.

ANSWER: Americans with Disabilities Act

[10h] Activists protesting the government’s delay in implementing this law’s Section 504 conducted the longest occupation of a federal building to date in 1977. This 1973 predecessor to the ADA was the first federal law to contain explicit protections against disability discrimination.

ANSWER: 1973 Rehabilitation Act

<CK - History: American>

11. **This property is possessed by a system named for Goryachev and Chaplygin only when angular momentum is perpendicular to gravity. Equations with this property admit Lax pairs, allowing the use of the inverse scattering transform to generate soliton solutions. Phase spaces of systems with this property foliate by invariant tori with local action-angle coordinates according to the (*) Liouville-Arnold theorem. The only holonomic tops with this property are the Euler, Lagrange, and Kovalevskaya tops. Deformation of the phase space of systems with this property under small perturbations is governed by the KAM theorem. Poincaré proved that a system of three masses under Newtonian gravity *lacks* this property. Systems with this property have a maximal set of conserved quantities and lack chaotic orbits. For 10 points, give this property of a dynamical system so named because such systems can be solved using antiderivatives.**

ANSWER: complete integrability [accept completely integrable, prompt on solvable or solvability with “which is a stronger form of what other property?”; reject “integral”]

<DE - Science: Physics>

This thinker's "Paradox" consists of an infinite list of sentences, each of which asserts that all the following sentences are false. For 10 points each:

[10h] Name this contemporary philosopher and professor at MIT also known for his single-word-titled books *Thoughts*, *Things*, and *Aboutness*.

ANSWER: Stephen **Yablo**

[10e] Yablo's Paradox was introduced as a counterexample to Graham Priest's claim that all paradoxes share this structure. Arguments with this shape can be "vicious" or "virtuous."

ANSWER: **circle** [or **circular**, or **circularity**; accept vicious or virtuous **circle**; prompt on cycle or loop by asking "which usually is referred to as what kind of shape in an argument?"]

[10m] This earlier thinker used an infinite list of meta-languages to construct his definition of truth. He also proved that arithmetical truth cannot be formalized within a given system in his namesake Undefinability Theorem.

ANSWER: Alfred **Tarski** [or Alfred **Teitelbaum**]

<JM - Thought: Philosophy>

- HALFTIME -

12. **Yitzhak Melamed pointed out how a misremembered quote from this thinker's letter to Jelles ("YELL-es") gave a later thinker his idea that "all determination is negation." Pierre Macherey ("mash-ur-AY") argued that later thinker misinterpreted this earlier thinker when presenting his philosophy as "immobile" in the monograph "Hegel or" this thinker. Friedrich Schelling claimed to inherit this thinker's philosophical system and once copied his format, but later in his career he began to oppose this philosopher's ideas. In the 1780s, Moses Mendelssohn and Freidrich Jacobi ("yah-KOH-bee") got into a public dispute when (*) Gotthold Lessing announced he was a follower of this philosopher. This thinker posited infinite attributes and a single substance, and an early work of his attempts to demonstrate Cartesian philosophy in the manner of Euclidean proofs, a "Geometrical Order" he later used in a work that explores "God or Nature." For 10 points, name this thinker who wrote the *Principles of Cartesian Philosophy* and the *Ethics*.**

ANSWER: Baruch (de) **Spinoza** [or Benedict(us) (de) **Spinoza**; or Baruch **Espinosa**; or "Bento" **Spinoza**] (The Lessing-Mendelssohn-Jacobi dispute is called the "Pantheism controversy.")

<JM - Thought: Philosophy>

Defects in conductors cause characteristic changes in a coil's impedance in a form of non-destructive testing using these phenomena. For 10 points each:

[10m] Name these current loops induced in conductors by changing magnetic fields that are partially responsible for power loss in transformer cores. Inductive stovetops work via inducing these phenomena.

ANSWER: **eddy** currents [or **eddies**]

[10h] An alternative to eddy currents commonly used for nondestructive testing of steel relies on this effect, whose strength increases with the number of material defects and the amount of residual stress. For nondestructive testing setups, this effect is induced by running AC in a U-shaped "yoke" and detected using a pickup coil.

ANSWER: **Barkhausen** effect [accept (magnetic) **Barkhausen** noise analysis/testing; prompt on MBN testing]

[10e] The Barkhausen effect is the microscopic manifestation of this phenomenon in magnets. Transformer losses are due to eddy currents and this phenomenon, in which a system's state is dependent on its history.

ANSWER: magnetic **hysteresis**

<DE - Science: Physics>

13. **This song's composer nearly destroyed its manuscript upon hearing that he had unconsciously quoted Beethoven's *Coriolan Overture*. This song does not include the moralizing final stanza of the poem it sets, which warns young women about predatory men. This song's last stanza deviates from strophic form until the final couplet, in which the singer describes "blood boiling" at the sight of a "cheated creature." This song in D-flat major names a (*) later piece commissioned by a group used to playing Hummel's rearrangement of his own Septet. Variations on this song make up the *Andante* fourth movement of an A major chamber piece that unusually employs a double bass, departing from its genre's usual lineup of a piano and string quartet. For 10 points, name this Franz Schubert lied for which his piano quintet is named.**

ANSWER: "Die **Forelle**" [or "The **Trout**;" reject "Trout Quintet" or *Forellenquintett*]

<CS - Arts: Classical Music>

A controversial *Foreign Affairs* article argued that Iran getting these things would lead to political stabilization, something its author argued is counterintuitively true in general in a paper subtitled "More May Be Better." For 10 points each:

[10e] Name these powerful devices whose use against another entity armed with them would almost certainly entail mutually assured destruction.

ANSWER: (thermo)**nuclear weapons** [accept **nukes**, (thermo)**nuclear missiles**, (thermo)**nuclear bombs**, and **InterContinental Ballistic Missiles**; prompt on **Weapon(s) of Mass Destruction** and "the **bomb**"]

[10m] This author of "Why Iran Should Get the Bomb" debated Scott Sagan in *The Spread of Nuclear Weapons*.

ANSWER: Kenneth (Neal) **Waltz**

[10h] John Mearsheimer, who penned a *Foreign Affairs* article making "The Case for a Ukrainian Nuclear Deterrent," wrote a 2011 monograph analyzing *this phenomenon* in international relations. Dividing it into five types, the book claims this type of political action often leads to unintended "blowback."

ANSWER: **lying** [or equivalents like **deceit**, **deception**, "telling (a) **lie(s)**," "**spreading disinformation**," etc.; accept **Why Leaders Lie**; prompt on **concealment** or **spinning** by asking "which, on Mearsheimer's account, are a form of what general kind of political action?"]

<JM - Thought: Soft Social Science>

14. **Will Self reads excerpts from this story while walking around its author's home city in a 2015 *London Review of Books* video accompanying his essay on the "Wound" of this story's author. The protagonist finds himself old and unable to reach his fur coat behind him at the end of this story, which titles the second of two collections published in its author's lifetime, a follow-up to the collection *Contemplation*. When this story's protagonist kicks the cracked door of a pigsty, a man emerges crawling on all fours. A children's choir in this story sings a song beginning, "Take his (*) clothes off," after which the protagonist is stripped naked and dragged into another character's bed. After being transported nearly instantly through a blizzard in a horse-drawn carriage, this story's protagonist is haunted by the fact that he has left a lecherous "groom" alone with his servant Rosa while he tends to a sick boy. For 10 points, name this surrealist story about the title physician, written by Franz Kafka.**

ANSWER: "A **Country Doctor**" [or "*Ein **Landarzt***"]

<TM - Literature: European>

At one point in this book, the author argues that the title discipline should be descriptive and focused on explanation, declaring “the mania for making judgments” to be the “satanic enemy of” its “true” form. For 10 points each:

[10h] Name this book by Marc Bloch outlining a “wider and more human” vision for the title enterprise, targeted at non-specialists and lamenting the professionalized circle he called “the guild.”

ANSWER: *The **Historian’s Craft*** [or *Apologie pour l’histoire ou **Métier d’historien***]

[10m] Like his Annales School colleagues Lucien Febvre and Fernand Braudel, Bloch emphasized *this* historical scale in his work, focusing on developing social and economic forces over “evental” history. Specific term required.

ANSWER: **Longue durée** (“long due-RAY”)

[10e] *The Historian’s Craft* was published after Bloch’s execution for his work as a courier for this movement that fought against Vichy-based “collabos” (“coh-lah-BOH”) like Philippe Pétain (“pay-TAN”).

ANSWER: French **Resistance** [or *La **Résistance***]

<JM - History: Other/Ancient>

15. **A battle in this colony ended after a boat carrying the losing side’s gunpowder exploded, forcing them to abandon the “Fort of the Young Saplings.” The guide Kashpak revealed a secret route up a fortress-like rock face, allowing this colony’s settlers to murder over three hundred natives in the Refuge Rock Massacre. The German physician George Anton Schäffer nearly bankrupted a joint-stock company in this colony by attempting to overthrow (*) Kamehameha I. This colony was provisioned by John Jacob Astor’s subsidiary company PFC. This colony’s Fort Ross on Bodega Bay was ultimately sold to Swiss settler John Sutter. This colony was established several decades after Vitus Bering led the Great Northern Expedition. For 10 points, New Archangel was the capital of what North American colony which was sold to the U.S. in “Seward’s Folly?”**

ANSWER: **Russian America** [accept clear knowledge equivalents like **Russia’s** North **American** colony; accept **Russian California**; accept **Russian Alaska**; prompt on partial answer]

<CK - History: American>

A woman with this name titles a 1914 Giovanni Pastrone film set during the Second Punic War that introduced the recurring Hercules-like character Maciste (“mah-CHEES-tay”). For 10 points each:

[10h] Give this name. At the end of a 1957 film starring Giulietta Masina, a group of young musicians surround a crying woman with this name walking along a road, causing her to smile.

ANSWER: **Cabiria** [accept *Nights of **Cabiria*** or *Le notti di **Cabiria***]

[10e] Pastrone’s strongman character Maciste influenced the brutish circus performer Zampanò in *La Strada*, a film by this director of *Nights of Cabiria* and *8 1/2*.

ANSWER: Federico **Fellini**

[10m] Fellini often spoke of the awe he felt as a boy watching a 1925 film titled for Maciste in this location. In a 1950 Jean Cocteau film, the second of a trilogy, the title poet dons gloves to enter this location with Heurtebise.

ANSWER: **Hell** [or the **Underworld**; or **Hades**; accept *Maciste in **Hell*** or *Maciste all’**inferno***; prompt on the **afterlife**] (The Cocteau film is *Orpheus*.)

<TM - Arts: Film>

16. This sect preserved a unique orthography derived from Babylonian supralinear punctuation in books called *tikālil* containing ancient Baladi-rite prayers. The cleric Yiḥyah Qafiḥ founded the *Dor Daim* (“dor dah-EEM”) movement to preserve these people's customs from mystical innovations. Along with Kurdish counterparts, this is the only sect where children read Aramaic scriptural translations in the synagogue. Maimonides (“my-MAWN-ih-deez”) wrote an “Epistle” to these people in response to a messianic claimant, after which this ethnoreligious group mostly follows his *Mishneh Torah* with influences from Lurianic Kabbalah. These people were forced to live in harsh wilderness after the (*) Exile of Mawza‘. Unlike other Mizrahim, most of these people didn't adopt Sephardic customs. In 1949-50, almost all of these people migrated to Israel through “Operation Magic Carpet.” For 10 points, name this ethnoreligious group originating in their namesake country in the southwest of the Arabian Peninsula.

ANSWER: Yemenite Jews [or Teimanim; or Yehudei Teman; prompt on Mizrahi Jews or Mizrahim before mention; generously prompt on Jews or Jewish people before “synagogue”]

<JM - Religion>

This play ends with a character saying the work's ending wasn't written and advising the audience to go home in a scene following a play-within-the-play where “non-actors” like a janitor continue the action. For 10 points each: [10m] Name this surreal play about the Antrobus family that allegorizes the story of Cain and Abel and the myth of Lilith in Excelsior, New Jersey.

ANSWER: *The Skin of Our Teeth*

[10e] This author of *The Skin of Our Teeth* followed citizens of Grover's Corners over twelve years in a play that likewise features a fourth-wall-breaking Stage Manager, *Our Town*.

ANSWER: Thornton (Niven) Wilder

[10h] Like *The Skin of Our Teeth*, history passes with surreal speed in this one-act Wilder play that follows 90 years of the Bayard family through a continuous, fused portrayal of the title annual event.

ANSWER: *The Long Christmas Dinner*

<JM - Literature: American>

17. One method for analyzing this process relies on tracking the values of “V bits” and “A bits.” The glibc (“gee-lib-see”) algorithm for this process uses an in-place bitwise trie algorithm below a certain threshold. Early versions of Unix performed this process using the system calls `brk` (“burke”) and `sbrk` (“S-burke”). A utility that runs programs on a virtual machine and is mostly used for its reimplementations of the standard C function for this process is called (*) `valgrind`. In the RAII paradigm, this process and object initialization form an atomic operation. Algorithms for this process can be made more efficient by reducing fragmentation. C# (“cee-sharp”) and Java prevent “leaks” in this process with the aid of a garbage collector. For 10 points, C uses the `malloc` function to perform what process of determining where to store a new variable?

ANSWER: memory (de)allocation [or memory management; accept memory debugging]

<DE - Science: Computer Science>

This country's city of El Alto is the epicenter of a contemporary “Neo-Andean” architectural style led by the self-taught designer Freddy Mamani. For 10 points each:

[10e] Name this country where evangelical politician Jeanine Áñez was recently imprisoned for her role in a 2019 political crisis that ousted its popular indigenous president, the former cocalero Evo Morales.

ANSWER: (Plurinational State of) **Bolivia** [or *Estado Plurinacional de Bolivia*, *Tetã Hetãvoregua Mborivia*, *Wuliwya Walja Suyunakana Marka*, *Puliwya Achka Aylluska Mamallaqta*]

[10m] El Alto’s population is dominated by this ethnic group, from which Morales descends. This group, whose women often wear distinctive bowler hats, originated the grid-patterned Wiphala (“wee-PALL-uh”) flag.

ANSWER: **Aymara**

[10h] The signature dish of the Aymara, the *chairo* stew, is thickened with starch from this freeze-dried potato product. Found at pre-Columbian sites like Tiwanaku, Incan soldiers used this product for its long shelf-life.

ANSWER: **chuño**

<JM - Geography>

18. **The economist Michael Lipton introduced the concept of a “bias” named for these entities in *Why Poor People Stay Poor*. Edward Soja and Michael Dear belonged to a Los-Angeles-based School that studied these things. Another scholar from that school asked whether the “Latinization of America” could revitalize the labor movement in a book titled for a *Magical* version of the study of these places. An earlier theory of these locations was refined into a “sector model” by Homer Hoyt. The study of these places cannot be “objective” due to associated ills according to a book on (*) “*Social Justice and*” this place by David Harvey. Ernest Burgess proposed a theory of these places yielding the “bid rent curve” based on “concentric zones.” “Decentrist” programs for these places were critiqued by Jane Jacobs in her best-known book, which discussed “renewal” strategies that “cleared” slums in these places. For 10 points, name these places studied in urbanism.**

ANSWER: **city** or **cities** [accept answers of places with the adjective “**urban**” and answers of “**urbanism**” before the word is read; prompt on more general answers like **settlements** or **municipality/ies**, but reject “small towns,” “villages,” “rural” places, etc.] (*Magical Urbanism* is by Mike Davis of the Los Angeles School, and Jacobs’s book is *The Death and Life of Great American Cities*.)

<JM - Hard Social Science: Other>

This musician’s harmonically complex arrangements for the vocal group The Hi-Lo’s made such an impact on Herbie Hancock that he stated “I wouldn’t be me without” this musician. For 10 points each:

[10h] Name this influential pianist best known for composing “Morning” and “Pensativa,” two of the most beloved and widely played Latin Jazz standards, despite his German-American heritage.

ANSWER: (Douglas) Clare **Fischer**

[10e] This drummer recorded a driving rendition of “Pensativa” on the record *Free for All* with his band, The Jazz Messengers, with whom he also released *Moanin*’.

ANSWER: (Arthur) “Art” **Blakey** [or Abdullah Ibn **Buhaina**]

[10m] Fischer's “Morning” is written in a Latin style named for the African diaspora population of *this country*, popularized in the US by Kenny Dorham on a 1955 album of that style’s name. This country’s music uses rhythmic motifs called *claves* (“CLAH-vays”).

ANSWER: (Republic of) **Cuba** [or (*República de*) **Cuba**; accept “Afro-**Cuban** jazz/music,” “jazz afro**cubano**,” or “**musica afro**cubana**”]**

<JM - Arts: Jazz>

19. *Description Acceptable* A ruler apocryphally failed to flee an instance of this action because he was “a few moves from checkmating” his eunuch. The Battle of Dayr al-‘Aqūl ended Ya‘qūb ibn al-Layth al-Ṣaffār’s (“yah-KOOB ib-nul-LAYTH us-suf-FAR’s”) attempt at this action. Proletariat irregulars stopped an instance of this action until “Ṭāhir (“TAW-her”) with Two Right Hands” bribed nobles to cut pontoon bridges for Ma‘mūn (“meh-MOON”) the Great. The Fifth Fitna consisted of one of these actions during the Anarchy at Sāmarrā. To remove the Buyids, al-Qā’im (“KAH-im”) hired (*) Tughril Beg to perform this action. Rashīd al-Dīn (“rah-SHEE-duh-DEEN”) Hamadānī reports that Berke (“BER-keh”) swore revenge for this action before a civil war. Doquz protected Christians in that instance thereof, which followed her husband’s capture of Alamūt, the Assassins’ headquarters. That husband kept “royal blood” from touching the earth during this action by rolling the Caliph into a carpet. For 10 points, name this action by Hulugu Khan that allegedly turned the Tigris black with ink and ended the Islamic Golden Age.

ANSWER: **sacking Bāghdād** [accept word forms of **besiege, capture, conquer, invade**, or any other clear equivalent as long as the correct city is identified; prompt on answers that give Mesopotamia, Iraq, or ‘Abbāsīd capital as the object; prompt on answers like deposing/killing the Caliph/an ‘Abbāsīd with “in the process of what other specific military action?”] (The first sentence concerns al-Ma‘mūn’s coup against al-‘Amīn, which is further described in the third sentence.)

<JG - History: World>

This thinker radically argued that *all* entities, including non-sentient ones, possess the entire Buddha-nature, which he theorized to be identical with emptiness or impermanence itself. For 10 points each:

[10m] Name this author of the *Shōbōgenzō* or *Treasury of the True Dharma Eye*, a 13th-century philosopher and founder of the Sōtō school who taught that daily life and earnest practice is identical to enlightenment.

ANSWER: **Dōgen** (Zenji) [or **Dōgen** Kigen; or Eihei **Dōgen**]

[10h] Dōgen’s metaphysics is based around the idea that change and becoming are reciprocally identical with existence itself, which he denoted with this concept, usually translated “Time-Being” or “Being-Time.”

ANSWER: **Uji**

[10e] In his essay “Bendōwa,” Dōgen advocated clearing the mind rather than contemplating koans during *zazen*, a form of meditation centered on this activity, which one can perform in the cross-legged “lotus position.”

ANSWER: **sitting** (down)

<JM - Thought: Other Philosophy>

20. A phrase used by this character titles the novel *Water with Berries* by George Lamming, whose collection *The Pleasures of Exile* includes a review of C. L. R. James’s *The Black Jacobins* titled for him. This character is offered as a symbol of the Cuban people in an essay by Roberto Fernández Retamar, which refutes an earlier José Enrique Rodo essay that associates this male character with North American utilitarianism. A relative of this character names the typographical “video style” used by Barbadian poet (*) Kamau Braithwaite. In a closing monologue, this character exclaims “I hate that image... and it’s false!” to a man who had criticized his use of the word “Uhuru.” This character plots a revolution and demands to be called “X” in that play, which adds a prologue featuring a Master of Ceremonies and reimagines a duke of Milan as a slave owner. For 10 points, name this son of Sycorax who rebels against Prospero in Aimé Césaire’s play *A Tempest*.

ANSWER: **Caliban** [prompt on **X** before mentioned]

<TM - Literature: World>

In honor of monoclonal gammopathy of undetermined significance, or MGUS, becoming a condition qualifying for the Agent Orange registry, answer some questions about related conditions and effects, for 10 points each:

[10e] MGUS often progresses to multiple myeloma or Waldenström macroglobulinemia, since abnormal Ig production suggests dysfunction in the plasma subtype of these antibody-producing lymphocytes.

ANSWER: **B** cells [accept specific subtypes other than plasma cells; prompt on leukocytes or white blood cells]

[10h] In Waldenström's, excessive IgM production often causes this key health parameter to dangerously increase. The cell-free marginal layer model explains why it counterintuitively decreases in the Fåhrus-Lindqvist effect.

ANSWER: **blood viscosity** [accept **blood viscoelasticity**; prompt on blood thickness; prompt on blood flow-rate, hemodynamics, or hemorheology; prompt on hematocrit or descriptions of percent/amount of red blood cells in the blood; prompt on answers about viscosity that do not mention blood by asking "in what fluid?"]

[10m] Detection of Bence Jones protein indicates that a gammopathy is damaging this organ. Juvenile cancers of this organ are mostly the result of mutations in the WT1 gene, whose inactivation causes Denys-Drash syndrome.

ANSWER: **kidneys** [or **nephrons**]

<JG - Science: Biology>

21. **A number of these objects—one of which is labeled “ROXY TEA”—appear above some tunnel entrances in a painting by Fortunato Depero, who is also known for a similar futurist painting of these things with a Biblical title. A man holds a saxophone atop a large gear in front of these objects in a mural from a WPA-commissioned series titled *Aspects of Negro Life*. That Aaron Douglas mural is titled the “*Song of*” these objects. An equestrian statue is cut off by a wall at the right of two similar Giorgio de Chirico paintings of these things, one (*) “*Red*” and one “*Rose*.”** Using concrete, rebar, and a variety of found objects, Simon Rodia assembled a number of these things for a naïve art landmark found in its namesake Watts neighborhood. For 10 points, give this sort of structure that Pieter Breughel (“BROY-gull”) the Elder twice depicted in Babel.

ANSWER: **towers** [accept **skyscrapers**; accept “**Tower** of Babel;” prompt on buildings; prompt on monuments before mention; prompt on city or cities] (The second Depero painting mentioned is *The New Babel*.)

<JM - Arts: Painting and Sculpture>

“Touchwood,” a British idiom analogous to the phrase “knock on wood,” was a surprisingly common character name in 17th and 18th-century comedies. For 10 points each:

[10e] The devious Maskwell schemes to steal Touchwood's property and win over Cynthia in William Congreve's *The Double Dealer*, a comedy from this period following the Interregnum.

ANSWER: English **Restoration**

[10m] In a city comedy by this author about Moll Yellowhammer, Touchwood Senior is so virile that he must leave his wife for fear of having another child. Thomas Dekker co-wrote the comedy *The Honest Whore* with this Jacobean playwright.

ANSWER: Thomas **Middleton** (The first play is *A Chaste Maid in Cheapside*.)

[10h] Lady Frances dupes her jealous husband George Touchwood at a masquerade ball in a subplot in this play.

Harriet Smithson made her name starring as Letitia Hardy in this comedy by Hannah Cowley, whose title alludes to an earlier play by George Farquhar.

ANSWER: *The Belle's Stratagem* (Farquhar's play is *The Beaux' Stratagem*.)

<TM - Literature: British>

22. **A methylated derivative of this compound reacts with isobutylene to form the preservative BHT. This is the smallest compound that can be detected by a mixture of phospho·molybdate and phospho·tungstate. It doesn't contain nitrogen, but Frémy's salt can weakly oxidize this compound, while zinc dust can reduce it. The enzyme TPST acts on an amino acid with this compound as its side chain to strengthen its protein-protein interactions via sulfation. This compound is the higher molar mass product of the (*) Hock rearrangement of cumene hydroperoxide. A mixture of TE buffer and this compound can be used for DNA purification; results from that technique can be improved by the addition of chloroform, which is miscible with this compound. Hydroxylation of phenylalanine forms an amino acid with this compound as its side chain, tyrosine. For 10 points, name this compound formed by oxidation of benzene, the simplest aromatic alcohol.**
ANSWER: **phenol** ("FEE-nol") [reject phenyl ("fennel"); ask the player to spell if you aren't sure]
<VA - Science: Chemistry>

The *Gesta Hammaburgensis Ecclesiae Pontificum* was compiled by a historian from this city. For 10 points each:
[10h] Name this non-Hamburg German city, whose Archbishop St. Ansgar was called the "Apostle of the North" for his early efforts to preach Christianity in Scandinavia and the Baltic.

ANSWER: **Bremen** [or Prince-Archbishopric of **Bremen** or Fürsterzbistum **Bremen**; accept Hamburg-**Bremen** or the Archbishopric of Hamburg and **Bremen**]

[10m] The Prince-Archbishopric of Bremen broke off from a Duchy named for these people, to whom St. Ansgar preached before becoming archbishop. The Massacre of Verden targeted these people, who venerated the Irminsul.

ANSWER: **Saxons** [or **Sachsen** or **Sassen**; accept **Saxony** or Lower **Saxony**; accept Duchy of **Saxony** or Herzogtum **Sachsen** or Hartogdom **Sassen**]

[10e] Adam of Bremen's *Gesta Hammaburgensis* is one of the only non-Icelandic sources to mention this man's exploration of North America and establishment of the short-lived colony of Vinland there.

ANSWER: Leif **Erikson**

<VA - History: European>