

CMST II

Packet 3

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1. **This man’s friend Jeremy Bentham drafted a never-enacted law code on his behalf. After several kidnapping attempts, Catherine the Great granted him Russian diplomatic immunity. The U.S. arrested Samuel Ogden and William Stephens Smith for financing this man’s expeditions. This man assumed dictatorial powers after an 1812 earthquake on Maundy Thursday that was widely perceived as divine retribution for a “Supreme Junta to Preserve the Rights of Ferdinand VII” created exactly two years earlier. An ex-ally called him a (*) traitor for trusting an armistice he was offered after losing the Battle of La Victoria. This leader of the *Leander* expedition designed a tricolor flag consisting of horizontal yellow, blue, and red bands and proposed a government with a hereditary executive called the “Inca.” Domingo de Monteverde gave Simón Bolívar a passport for arresting this man after the First Republic of Venezuela collapsed. For 10 points, name this South American revolutionary dubbed “The Precursor.”**

ANSWER: (Sebastián) Francisco de **Miranda** (y Rodríguez de Espinoza)

<CK - History: World>

In 1978, this man controversially married 27 women at once in a public embrace of polygamy meant in part to make a political statement exhibiting his post-colonial nationalist ideals. For 10 points each:

[10m] Name this Nigerian musician who merged influences from Black American musical styles like funk, jazz, and soul with West-African genres like highlife to create the Afrobeat style.

ANSWER: Fela (Aníkúlápó) **Kuti** [or Olufela Olusegun Oludotun Ransome-**Kuti**; or **Abami Eda**]

[10e] Kuti often played electric variants of this keyboard instrument. Laurens Hammond’s electric variant of this instrument, central to soul jazz, was inspired by acoustic versions often found in churches.

ANSWER: **organ** [accept specific types of organ such as electric **organ** or pipe **organ**]

[10h] This city lends its name to a legendary West African “orchestra,” a band whose hit songs like “Se Ba Ho” and “Cherie Coco” merged ideas from the regional soukous style of dance music with highlife sounds.

ANSWER: **Cotonou** [accept T.P. Orchestre Poly-Rythmo de **Cotonou** or Tout Puissant Orchestre Poly-Rythmo de **Cotonou**]

<JM - Arts: Other Music>

2. **In an epic, this character tells another that “like a pig searches out filth, the fool seeks out evil words” after saying, “You see the faults of others, even though they are as small as a mustard seed. But you do not see your own.” An epigram asks, “Wilt thou with one short word encompass the earth and the heaven?”, and concludes that “all is said if I name only” this character. This character was born after Indra sent a water spirit to seduce a threateningly patient meditator. A sage named this child of Vishwamitra after finding her abandoned in infancy (*) protected by birds. This character, christened by Kanva, is reunited with her son after her husband finds him counting a lion’s teeth. The sage Durvāsa curses this character’s husband into forgetting her until her signet ring is found in the belly of a fish. For 10 points, name this wife of Duṣyanta, mother of the title character of the *Mahābhārata*, and subject of a Kālidāsa play titled for her “*Recognition*.”**

ANSWER: **Shakuntala**

<JM - Literature: World (Mythology)>

Perhaps the definitive text on this philosophical approach is Peter Lipton's book of the same name. For 10 points each:

[10h] Name this idea in analytic epistemology, debatably identifiable with abduction, that describes how we derive conclusions that are not logically entailed by premises. Introduced by Gilbert Harman, this idea proposes that we choose among competing hypotheses that fit with observations.

ANSWER: **inference to the best explanation** [or **IBE**; accept **Explanation As Inference** or **EAI**]

[10e] Harman introduced IBE in contrast to the theory that explanation consists in this procedure, which was called the *this*-nomological Model. This kind of reasoning is contrasted with inductive reasoning.

ANSWER: **deductive** [accept word forms like **deduction**; accept **deductive**-nomological model; prompt on **DN**]

[10m] This thinker introduced the Deductive-Nomological model. He also observed that the logical equivalence of "all ravens are black" and "all non-black things are non-ravens" problematically suggests that seeing a red apple is evidence that all ravens are black.

ANSWER: Carl (Gustav "Peter") **Hempel**

<JM - Thought: Philosophy>

3. Under El Lissitzky's leadership, the *Molposnovis* collective signed all works with a shape of this color to forgo credit per their communist ideals. An artist gave a painting of a cross using only two slightly different shades of this color to his college friend Thomas Merton after Merton requested an aid for contemplative prayer. Painting series in this color, like one including *The Marriage of Reason and Squalor*, brought (*) Ad Reinhardt and Frank Stella to notoriety. Recurrent ovoid shapes of this color appear in a series partly named for the Spanish Republic by Robert Motherwell. A painting named for this color was displayed in the corner of the room like an icon at the 0,10 ("zero ten") exhibition. For 10 points, give this color that titles a Kazimir Malevich ("mal-YEH-vich") painting depicting only a title square.

ANSWER: **black** [accept **Black Paintings**; accept **Black Square**]

<JM - Arts: Painting and Sculpture>

The mechanism of many enzymes involves lowering the activation energy by orienting the substrate so that it resembles this state as closely as possible. For 10 points each:

[10e] Name this state which corresponds to the highest potential energy during a reaction.

ANSWER: **transition state** [prompt on **TS**]

[10m] Independently of Henry Eyring, this chemist co-developed transition state theory with Meredith Evans in the 1930s. Also with Meredith Evans, he co-names the principle that, for two reactions in the same family, differences in activation energy are proportional to differences in enthalpy.

ANSWER: Michael **Polanyi** [accept (any name-)Evans-**Polanyi** principle, there are like 5 people who sometimes co-name it]

[10h] For reactions in which bond breaking does not occur, transition state theory is supplanted by Marcus theory, whose central equation states that, as a function of the Gibbs free energy change ΔG and reorganization energy λ , activation energy equals *this expression* over four times λ . You have 10 seconds.

ANSWER: **($\lambda + \Delta G$) squared** [or **(Gibbs free energy change plus reorganization energy) squared**; accept **$\lambda^2 + 2\lambda\Delta G + \Delta G^2$** or the equivalent with the names substituted]

<SS - Science: Chemistry>

4. **Changes in the status of these things in cases of “winning by winning” and “losing by losing” are discussed in a “Critique of” these things by Mark Tushnet. Amartya Sen proposed a hybrid between “status” and “instrumental” variants of these entities in a 1982 paper titled for them “and Agency.” A revolutionary catchphrase inspired Karl Vasak to schematize three “generations” of these entities. A theorist of these concepts posited that “molecular” ones are composed of four “incidents” named for him and treated them as “correlative” of duty. Wesley Hohfeld introduced the (*) “claim” variety of these non-jurisdiction things and rejected the distinction between “in rem” and “in personam” types of them. Jeremy Bentham derided a version of these concepts as “nonsense upon stilts.” It’s not “liberty,” but libertarian theorists emphasize “negative” forms of these concepts, which some argue can be “natural” and “inalienable.” For 10 points, give these social norms establishing entitlements like freedom of religion or speech.**

ANSWER: **rights** [accept more specific answers such as human **rights** or legal **rights**]

<JM - Thought: Soft Social Science>

Answer the following about the varied misdeeds of Albrecht von Wallenstein, for 10 points each.

[10e] After some Catholics got tossed out a window, Wallenstein raised an army for this conflict with organized pillaging and extortion of peasants, re-popularizing the phrase “bellum se ipsum alit” or “war will feed itself.”

ANSWER: **Thirty Years’ War** [anti-prompt on the **Bohemian Revolt**]

[10h] Wallenstein made a killing off this financial episode, partly named for the sleight-of-hand that money changers used to screw peasants into buying hyper-debased coins and to deliberately pump them into neighboring economies.

ANSWER: **Kipper und wipperzeit** [accept answers of any TWO of **tip**ping, **clip**ping, **see-saw**ing, **tilt**ing, or **wag**ging]

[10m] One of the best records of Wallenstein’s assassination is a “holographic account” by a mercenary of this non-Italian ethnicity, many of whom spearheaded the plot. Soldiers of this ethnicity created a tactic of firing a close-range musket volley and attacking through the resulting smoke with swords and shields.

ANSWER: **Scottish** people/soldiers [or **Scots**; accept **Highlanders**] (The tactic described is the “Highland Charge.”)

<JG - History: European>

5. **Shadrivov et al. produced a “giant” form of one result of this phenomenon by generating polaritons at the interface between left-handed and right-handed materials. One form of IR spec uses this phenomenon to analyze samples by placing them in contact with a germanium or zinc selenide crystal. Charles Kao sparked a manufacturing race by predicting that the attenuation limit of a system that relies on repeated occurrences of this phenomenon was under 20 decibels per kilometer. A Fresnel rhomb converts linear (*) polarization to elliptical polarization by exploiting the phase shift introduced by this phenomenon. Energy can be transferred between media that are not in contact by means of the evanescent wave generated by this phenomenon. This phenomenon occurs repeatedly between the core and the cladding of optical fibers, since the beam is always incident with an angle larger than the critical angle. For 10 points, name this phenomenon that results in an incoming wave fully returning to its original medium with no refraction.**

ANSWER: **total internal reflection** [or **TIR**; prompt on **reflection**]

<DE - Science: Physics>

As a child, this author was profoundly influenced by the book *Animals and Plants of the European Coastal Region*. For 10 points each:

[10h] Name this fictional author whose novel *D'Arsonval* (“dar-sohn-VALL”) forms a trilogy with his English-themed *The Garden* and Polish-themed *The Leather Mask*. This author’s first novel, *Bifurcaria Bifurcata*, was first translated into Italian in 1988 by Piero Morini.

ANSWER: Benno von **Archimboldi** [or Hans **Reiter**]

[10m] Archimboldi is a fictional author whose life is recounted in the fifth section of this novel. This novel’s third section follows Oscar Fate, an American journalist who is sent to cover a boxing match in Santa Teresa.

ANSWER: **2666**

[10e] Before his death, this Chilean author requested that his novel *2666* be divided into five books corresponding to its five parts.

ANSWER: Roberto **Bolaño** (Ávalos)

<EL - Literature: World>

6. **This English word is the second title concept of a book which argues that an *earlier* book titled in part for this concept self-defeatingly posits groundlessness as a ground instead of recognizing the groundlessness of groundlessness. This is the second title concept of a book that argues that eschatological dimensions of Christian theology impede overcoming the “Great Doubt” in a chapter title for a related Buddhist concept “and History,” which was the magnum opus of an East-Asian Heidegger student. In English, that (*) Keiji Nishitani book is titled for “*Religion and*” this concept. This is the latter title concept of a book that claims that sexual desire arises from “double reciprocal incarnation” by way of “the look,” and discusses a woman on a first date and an overenthusiastic waiter to illustrate freely denying one’s own freedom. That “*Essay on Phenomenological Ontology*” titled in part for this concept discusses the “facticity” of one’s situation and reflects on “bad faith.”** For 10 points, “*Being and*” what concept title Jean-Paul Sartre’s (“SART’s”) magnum opus?

ANSWER: **nothingness** [accept *Religion and Nothingness* or *Being and Nothingness*; accept *L'Être et le néant*; prompt on *Śūnyatā* or *Mu*]

<JM - Thought: Philosophy>

This dynasty is said to have ended with an invasion by the thunder god Nan Sapwe’s son Isokelekel, who in some accounts speared his own lieutenant’s foot to the ground to prevent retreat. For 10 points each:

[10h] Name this dynasty that controlled the island of Pohnpei between the 12th and 17th centuries following the *Mwehin Kawa* or “Period of Building.” Their collapse ushered in the *nahnmwarki* tribal system.

ANSWER: **Saudeleur** dynasty [or *Mwehin Sau Deleur*; or *Chau-te-leur*]

[10m] The Saudeleur dynasty is best known for constructing this complex stone city on Pohnpei, featuring artificial islands and canals in a lagoon. It is sometimes called the “Venice of the Pacific.”

ANSWER: **Nan Madol**

[10e] Pohnpei is now part of Micronesia, whose international status is defined by a Compact of Free Association with this country, like the Marshall Islands and Palau. This country’s other Pacific territories include Guam.

ANSWER: **United States** of America [or **USA**; accept **America**]

<JM - History: Ancient/Other>

7. **A text with this name that only survives in quotations by the Alexandrian Fathers presents the Holy Spirit as Jesus's divine mother and uniquely claims his first post-resurrection appearance was to his brother James. Because of its uncharacteristic eloquence, the traditional Pauline authorship of an epistle by this name was doubted by early writers like Eusebius and Origen, who said that "only God knows" who wrote it. Scholars hypothesize that, when that text by this name argues that Christianity is superior to Judaism since the latter is only its "shadow," it likely references (*) Plato's Cave. That text by this name solves the problem of how Jesus could have priestly legitimacy without being a Levite with the minor Torah character Melchizedek, in whose lineage he could be High Priest, and insists that Christ is greater than the angels and prophets. For 10 points, give this name for an epistle written to address theological concerns from Christians in the title cultural group, Jesus's own people.**
ANSWER: **Hebrews** [accept "The Epistle/Letter to the **Hebrews**" or "The Gospel of the **Hebrews**;" accept *Evangelion/Epistolos pros **Ebraious** or (to) kath **Ebraious** Evangelion*; do not accept or prompt on answers like "the Jews" or "the Israelites"]
<JM - Religion>

IPTG can induce the production of this enzyme in the absence of its desired substrate or a light-sensitive analogue. For 10 points each:

[10m] Name this enzyme whose activity assesses whether a colony has been successfully cloned in the blue-white screen. The gene encoding this enzyme is co-transcribed with the genes for permease and transacetylase.

ANSWER: **beta-galactosidase** [prompt on **lacZ**]

[10e] Beta-galactosidase is produced following the transcription of the *lac* example of these genetic units in *E. coli*. These constructs consist of multiple genes under the control of one promoter and also include *trp*.

ANSWER: **lac/trp operons**

[10h] The metabolic activity of a beta-galactosidase can be measured by performing spectrophotometry on the solution formed after adding this lactose mimic to the media. In contrast to the blue of X-gal, this compound turns bright yellow after being hydrolyzed.

ANSWER: **ONPG** [or **ortho-Nitrophenyl-β-galactoside**]

<SS - Science: Biology>

8. **This author's anal fixation is discussed in the chapter "Shame, Theatricality, and Queer Performativity" in the critical book *Touching Feeling*. In a novella by this author, a character follows his teacher's advice to avoid getting married by taking a vacation to avoid his love interest, returning to find Marian Fancourt married to his literary advisor Henry St. George. A protagonist created by this author who refuses his friend's love is interpreted as repressing homosexuality in an Eve Kosofsky (*) Sedgwick ("SEdge-wick") essay that puns on this author's title with the phrase "in the closet." The protagonist's conviction that he is fated to a catastrophe leads him to spend his life worrying in this author's novella about May Bartram and John Marcher. In another novella, this author narrated the apparition of Peter Quint to an unnamed governess. For 10 points, name this author of *The Lesson of the Master*, *The Beast in the Jungle*, and *The Turn of the Screw*.**
ANSWER: Henry **James** (Eve Kosofsky Sedgwick's essay is "The Beast in the Closet.")
<JM - Literature: British>

The distinctive glass-and-steel awnings over subway station entrances in this city are commonly referred to as “Fosteritos,” as the city’s metro system was designed by architect Norman Foster. For 10 points each:

[10e] Name this Spanish city which is also home to a white tied-arch bridge called the *Zubizuri* designed by Santiago Calatrava, as well as a distinctive Guggenheim Museum designed by Frank Gehry in the late 1990s.

ANSWER: **Bilbao**, Spain [or *Bilbo*]

[10m] The Paris Metro is renowned for its ornate Art Nouveau station entrances designed by this architect, who also created buildings like the Castel Béranger (“beh-rah-n-ZHAY”) and the Maison Coilliot (“may-ZAW KOOee-yo”).

ANSWER: Hector **Guimard**

[10h] Rem Koolhaas designed a building for this university with a metal tube for the metro to ride through. Its State Street Village dormitory was likewise designed with special noise-reducing glass due to the adjacent train tracks.

ANSWER: **I**llinois **I**nstitute of **T**echnology

<JM - Arts: Architecture>

9. **Polyaenus’ *Stratagems* claims this leader once said he “did not run away, but retreated like rams ready to renew the fight with greater strength” while running away. Theopompus’s lost history of this ruler’s reign was, unaccountably, 58 volumes long. This leader prompted another politician to advocate ending rules against directing the Theoric Fund towards military efforts. This leader was exiled after Ptolemy of Aloros assassinated his eldest brother. This target of the Third Olynthiac killed Onomarchus after the (*) Thessalian League brought him into one conflict. This leader was killed by a man that Cleitarchus claims had been sexually abused by Attalus. This leader won the Battle of Crocus Field in the Third Sacred War and used his victory at the Battle of Chaeronea to establish the League of Corinth. Demosthenes’s speeches often targeted this man, whose son by Olympias succeeded him after he was assassinated by his bodyguard Pausanias of Orestis. For 10 points, name this Argead king of Macedon and father of Alexander the Great.**

ANSWER: **Philip II** of Macedon [or **Philippos II**; prompt on just Philip/Philippos of Macedon/the Great]

<JM - History: Ancient/Other>

A historical shift in this discipline saw a move from an idiographic or descriptive focus to a nomothetic or empirical law-making paradigm with the introduction of spatial autocorrelation and other techniques. For 10 points:

[10e] Name this discipline that underwent a “Quantitative Revolution” in the mid-20th-century due to increases in mapping technology and statistical methods. It is sometimes divided into “human” and “physical” subfields.

ANSWER: **geography** [accept human **geography** or physical **geography**]

[10h] This thinker captured the logic underlying the advancements of the “Quantitative Revolution” with his “First Law of Geography,” “everything is related to everything else, but near things are more related than distant things.”

ANSWER: Waldo (Rudolph) **Tobler**

[10m] Giuseppe Arbia’s “Second Law of Geography” defined “relatedness” in terms of this quantity rather than distance. In remote sensing, lower values for this quantity increase the visibility of large-scale correlations but homogenize the underlying data.

ANSWER: spatial **resolution**

<JM - Hard Social Science: Other>

10. **The squared modulus of one of these functions is summed on the left-hand side of Bessel's inequality. When its input is on the unit sphere, the Rayleigh quotient reduces to one of these functions. Any element of the dual space can be written uniquely in terms of this type of function via the Riesz ("Reece") representation theorem. An equality involving one of these functions must hold at every point to satisfy the definition of a Hermitian (*) adjoint. The only L^p ("ell-pee") space with one of these functions is L^2 ("ell-two"), in which this function equals the integral of "f times g-bar." A Banach space equipped with one of these functions is called a Hilbert space. These bilinear functions are related to norms via the Cauchy-Schwarz inequality and are written by sandwiching their two arguments between angle brackets. For 10 points, name these functions that generalize the dot product.**

ANSWER: **inner product** [prompt on **dot product**; prompt on **quadratic form** by asking "those are defined using what type of function?"; do not accept or prompt on "product"]

<TM - Science: Mathematics>

The construction of this city began by intentionally sinking ships to serve as foundations for a network of artificial platforms connected by trestle bridges, upon which the Soviets built a full range of amenities. For 10 points each: [10h] Name this industrial city in present-day Azerbaijan constructed to access its namesake resource. Its facilities include the first ever offshore drilling rigs and permanent undersea pipelines.

ANSWER: **Neft Daşları** ("NEFT DAHSH-lah-ruh") [or **Neftyanje Kamni**; or **Oil Rocks**]

[10e] Neft Daşları sits about 100 kilometers off the coast of Baku in this largest lake on earth. A saline endorheic basin, this body of water is actually a landlocked portion of oceanic crust fed primarily by the Volga River.

ANSWER: **Caspian** Sea [or **Daryaye Khezer**; or **Girkansk**; or **Kaspiskoye More**; or **Khazarisk**; or **Khvalynsk**]

[10m] This country on the Caspian Sea is home to the Galkynysh Gas Field, the second largest in the world. This country's village of Derweze is home to a crater that has been burning for 50 years after a drilling disaster.

ANSWER: **Turkmenistan** [or **Turkmenia**]

<JM - Geography>

11. *Type of piece and composer required.* **In the first movement coda of one of these pieces, the composer chains a sequence of overlapping one five flat-six cadences such that the flat-six of a cadence becomes the one of the next to loop from D major back to D major. That eighth of these pieces repeats a theme their composer repeatedly employed that goes (read slowly) "long C, rising short E flat, F, G, low G." The idiosyncratic sixth of these pieces opens its *Majestoso* first movement with the composer's namesake (*) 2+3 rhythm in the violins. Liszt refused the dedication of the second of these pieces, nicknamed for its long pauses. The composer's namesake "problem" is sorting out his revisions to these pieces, like replacing the fourth's finale with a "*Volksfest*" version and its third movement with a "Hunting Scherzo." For 10 points, name these orchestral pieces by an Austrian composer, including a fourth nicknamed "Romantic."**

ANSWER: **symphonies** by (Josef) Anton **Bruckner** [or (Josef) Anton **Bruckner's symphonies**; prompt on incomplete answers by asking for the genre or composer as appropriate] (The lead-in is the coda of the 6th symphony's *Majestoso* first movement, and the repeatedly used theme from the eighth symphony is nicknamed for "Deutscher Michel.")

<JM - Arts: Classical Music>

The Latin translation of this maxim coined by Victor Cousin (“koo-SAW”) is the motto of Metro-Goldwyn-Mayer, appearing on a scroll around the company's mascot Leo the Lion in their title screens. For 10 points each:
[10m] Give this phrase popularized by Théophile Gautier (“go-TYAY”), the rallying cry of Parnassianism. Reacting to Romantic literature, this phrase emphasizes creativity without moralizing, didactic, or political purpose.

ANSWER: “**art for art’s sake**” [or “*l’art pour l’art*,” or “*ars gratia artis*”]

[10e] More closely associated with subsequent Symbolist poetry, this author of the *Saturnine Poems* and partner of Arthur Rimbaud (“ram-BOW”) published a number of works in *Le Parnasse contemporain*, the movement’s journal.

ANSWER: Paul(-Marie) **Verlaine** (“ver-LEN”)

[10h] On account of his influence on Verlaine and his contemporaries—having published the most in *Parnasse*—this poet mounts a spirited defense of the movement in Jean Moréas’s *Symbolist Manifesto* as its only real-life character.

ANSWER: Théodore Faullain de **Banville**

<JM - Literature: European>

- HALFTIME -

12. **The manifesto of an ex-policeman in this city strangely lamented that he won’t see *The Hangover III*, called Charlie Sheen “effin awesome,” and endorsed Hillary Clinton while declaring “unconventional and asymmetric warfare.” This city’s police perpetrated the Bloody Christmas beatings under its “outwardly racist” chief William H. Parker. Russell Poole helped uncover a scandal after discovering that several of this city’s policemen moonlit as bodyguards for Suge (*) Knight. Irresponsible tear gas use by this city’s police killed Ruben Salazar during the Chicano Moratorium. This city was attacked in 2013 by a former officer seeking an admission that he was fired for reporting excessive force, Christopher Dorner. Widespread misconduct in this city’s Community Resources Against Street Hoodlums program led to the Rampart Scandal. Actions by this city’s police triggered the Rodney King riots. For 10 points, name this largest county and city in California.**

ANSWER: **Los Angeles**, California [or **LA**]

<JM - History: American>

This artist depicted herself at the canvas with her students Marie-Marguerite Carreaux de Rosemond and Marie-Gabrielle Capet standing behind her in a *Self-Portrait with Two Pupils*. For 10 points each:

[10h] Name this 18th-century French painter and miniaturist who advocated for female artists as one of the first women in the Royal Academy and as the first to set up a studio for her female students in the Louvre.

ANSWER: Adélaïde **Labille-Guiard** des Vertus

[10e] Labille-Guiard is usually categorized with this Baroque-derived 18th-century artistic movement that emphasized ornate decoration, exemplified by Jean-Antoinette Watteau’s work.

ANSWER: **Rococo** [prompt on late Baroque]

[10m] This Rococo sculptor is best known for a bronze equestrian statue of Peter the Great whose pedestal, the “Thunder Stone,” is the largest single rock ever moved by humans.

ANSWER: Étienne Maurice **Falconet** (“FAL-CON-ay”)

<JM - Arts: Painting and Sculpture>

13. **These animals are the only host of the wingless, eyeless beetle genus *Platyp-syllus*. Justin Wright and colleagues found that these animals' positive effect on habitat heterogeneity can cause landscape species richness to increase by over 33%. Because the two species of these animals were once thought to be subspecies, the North American species was brought to Finland in a reintroduction program. The introduction of these animals has caused a major decline in *Nothofagus* forests in eastern Tierra del Fuego. To mark territory, these animals secrete (*) castoreum from sacs near their anal glands. Declines in these animals caused stream flow velocity and channel incision to increase in the Yellowstone area following wolf extirpation. Wood decomposition is slowed by flooding in the namesake "meadows" these animals create. For 10 points, name these ecosystem engineers, a genus of semi-aquatic rodents known for constructing lodges and dams.**
ANSWER: **beavers** [or *Castor canadensis* or *Castor fiber*; or *C. canadensis* or *C. fiber*; accept specific types of beaver such as the North American **beaver**]

<JM - Science: Biology>

Śāntideva ("shahn-tee-DAY-vuh") followed an earlier philosopher in arguing that this concept cannot possibly be reflexive, opposing a more popular opinion that it could be "self-illuminating" like a "lamp." For 10 points each: [10e] Give this concept called *citta* ("CHIT-uh") in Sanskrit. Descartes advanced a "dualism" between this concept and the body.

ANSWER: **mind** [or **consciousness** or **awareness**, which are valid translations of *citta*]

[10h] Like Śāntideva, this earlier Mādhyamaka ("mud-HYUHM-uh-kuh") thinker held that *citta* is not reflexive. This originator of the Prāsaṅgika ("prah-SAWN-gih-kuh") school advocated reductio arguments in works like the *Prasannapadā* ("pruh-sawn-uh-PAHD-ah").

ANSWER: **Candrakīrti** ("chawn-druh-KEER-tee")

[10m] Buddhist scholastics used this word to refer to "phenomena" or consciously experienced things, following a school named for it prefixed with "Abhi." This kind of "*kāya*" or "body" refers to a buddha's "inconceivable" aspect.

ANSWER: ***dharmas*** [or ***dhammas***; accept "Abhi**dharm**a/Abhi**dh**amma," "**dharm**a/**dh**amma body" and "***dharmakāya/dhammakāya***"]

<JM - Thought: Other Philosophy>

14. **It's not Turkey, but this is the largest country home to a syncretic religion for which the Tambur instrument is a key symbol, called Yarsanism. The winter solstice is celebrated by reading poetry and eating fruit all night in this country's "Chelle" or "Yaldā Night" tradition. For a festival in this country, items corresponding to alphabet letters such as pudding, apples, and garlic are arranged with a mirror, candles, and a live goldfish for a display called "Haft-seen." This contemporary country is the origin of an evaporative cooling system where (*) "windcatcher" towers circulate air through underground irrigation tunnels called Qanat. A celebrated mosque in this country with ornate floral tilings and colorful stained glass is called the Nasir al-Mulk or "Pink Mosque." The New Year is celebrated on the vernal equinox in this country's festival of Nowruz. For 10 points, name this country whose largest cities include Mashhad, Shiraz, and Tehran.**

ANSWER: (Islamic Republic of) **Iran** [or *Jomhuri-ye Eslāmi-ye Irān*; accept **Persia**]

<JM - Geography>

This actor and Derek Jacobi presented the heterodox “Declaration of Reasonable Doubt” about the Shakespearean authorship question, ideas that this actor explored in his play *I Am Shakespeare*. For 10 points each:

[10h] Name this first artistic director of Shakespeare’s Globe, whose wife Claire van Kampen wrote the historical play *Farinelli and the King*. This actor premiered the role of Johnny “Rooster” Byron in Jez Butterworth’s play *Jerusalem*.

ANSWER: Mark **Rylance** [or Sir David Mark Rylance **Waters**]

[10m] Rylance has posited that Francis Bacon actually wrote *The Tempest* and this other play. A king breaks a three-year oath by falling for the Princess of France in this early Shakespeare comedy.

ANSWER: ***Love’s Labour’s Lost***

[10e] The “Declaration of Reasonable Doubt” cites a skeptical article by Hugh Trevor-Roper, which is titled for this character’s question “What’s in a name?” This woman laments that “my only love sprung from my only hate.”

ANSWER: **Juliet** Capulet [reject “Capulet”]

<TM - Literature: British>

15. **A movement by this choreographer begins with a *pas de deux* accompanied by a men’s chorus scatting on the syllables “dum” and “doo” before silk-clad dancers gradually *piqué* onto the stage holding a large white umbrella. While working on his first high-profile show alongside Carmen De Lavallade, this choreographer met Geoffrey Holder, with whom he collaborated on “The Prodigal Prince.” This choreographer dedicated a 3-section dance solo depicting a woman with a long white skirt and sash “coming out of a world of pain and trouble” to “all (*) Black women everywhere.” This choreographer of “Cry” called for eighteen yellow-robed dancers to use stools and fans for a joyous reenactment of a rural church sermon, contrasting with the preceding Lester Horton-inspired spiritual dance called “Take Me to the Water.” Judith Jamison directed this choreographer’s namesake “American Dance Center” after his death from AIDS in 1989. For 10 points, name this gay African-American choreographer of *Revelations*.**

ANSWER: Alvin **Ailey** Jr.

<WJ - Arts: Misc>

The first book dedicated to this event, partly fueled by expansion of paper money to fund wars after the charter of the First Bank of the US elapsed, was Murray Rothbard’s doctoral dissertation. For 10 points each:

[10m] Name this first major American financial crisis, in which a sharp drop in cotton prices burst a bubble created by state-chartered banks that speculated on land booms without maintaining sufficient specie reserves.

ANSWER: **Panic of 1819**

[10e] The Panic of 1819 occurred under this president, who acquired Florida and whose two terms were roughly equivalent to the “Era of Good Feelings.” He supported chartering the Second Bank under his predecessor.

ANSWER: James **Monroe**

[10h] As the President of the Second Bank preceding Nicholas Biddle, this South Carolinian secessionist’s “stern procedures” restored its balance sheets but deepened the recession. Joseph Le Conte claimed that he discovered natural selection decades before Darwin but never published his findings.

ANSWER: Langdon **Cheves**

<JG - History: American>

16. In an article titled for playful names for positions on these concepts, Michael Devitt analogized Quine's view to an "Ostrich," but concluded the contrary view is still a "Mirage." These concepts are defended as indispensable for scientific realism in texts including "*An Opinionated Introduction*" to them by D.M. Armstrong. A modern, "transcendental" variant of a position rejecting these things was proposed by Ian Hacking. Boethius used a regress argument to refute the idea that these entities could subsist as the (*) "genus" collections relevant thereto. William of Ockham held that these things have no *fundamentum* outside of the mind, a position which is, with Peter Abelard's, called "conceptualism." The "Ness-Itty-Hood" principle is the observation that those three suffixes can generate these concepts in English. Along with abstract objects, these things are held to be non-entities and merely labels by nominalists. For 10 points, give these things that name a key "problem" in medieval philosophy, contrasted with particulars.

ANSWER: **universals** [or *universale*; or *universalia*; accept "(the) problem of **universals**"] (Devitt's article is "'Ostrich Nominalism' or 'Mirage Realism?'" and Hacking's position is "transcendental nominalism.")

<JM - Thought: Other Philosophy>

Answer the following about the mysterious lower mantle structures known as large low-shear-velocity provinces or LLSVPs, for 10 points each:

[10e] Geophysicists disagree about whether LLSVPs are compositionally distinct from their surroundings or merely display anomalously high values of this quantity. Differences in this quantity drive convection in the mantle.

ANSWER: **temperature**

[10m] According to one theory, LLSVPs are "graveyards" of these structures which are pulled into the mantle at subduction zones. Their displacement causes a namesake "suction."

ANSWER: **slabs**

[10h] In support of the compositional theory, LLSVPs coincide with maxima of two of these quantities on the oceanic floor known as the Dupal anomaly. In addition to its namesake property, HIMU ("high-myu") basalt is distinguished by its extreme value of one of these quantities.

ANSWER: (lead or strontium) **isotopic ratios** [accept word forms; prompt on answers about how much of certain isotopes there are]

<JM - Science: Earth/Environmental>

17. In a novel in this language, the ferryman protagonist's only customer is a lumberjack who falls in love with the protagonist's sister, to whom he repeatedly fails to explain the significance of a woodcock flying over his house. A novel in this language is a diary of a woman who cheats with her cousin that begins, "I have been unfaithful to my husband." After her son dies despite a superstition against naming children after a dead relative, the main character of a series in this language decides to nurse (*) plague victims at a convent. That protagonist hides her pregnancy by wearing her family bridal crown in a series in this language in which she falls in love with Erlend. *Marta Oulie* and *Wreath* were written in this language, as was a novel that details a man's relationship with Ylajali ("ee-la-YALL-ee"), as well as his personal code that leads him to almost eat his pencil and finger while refusing a free breakfast. *Hunger* was written in—for 10 points—what language used by Tarjei Vesaas ("TAR-yay VASE-OSS"), Sigrid Undset, and Knut Hamsun?

ANSWER: **Norwegian** [or *Nynorsk*; accept *Bokmål* also even as some works in each standard form are clued] (The Vesaas novel in the lead-in is *The Birds*.)

<JM - Literature: European>

A perplexing passage in Second Thessalonians suggests that worship of these beings was common among early Christians before Pauline doctrine became dominant. For 10 points each:

[10e] Name these heavenly beings found in some religions. A passage in Ezekiel describing these beings with four wings and four faces accompanied by “wheels within wheels” has inspired “Biblically accurate” depictions in art.

ANSWER: **angels** [accept **cherubim**; or **mal'āk** 'ēlōhīm, or **angelos**, or **angelus**]

[10h] First-century rabbi Elisha ben Abuyah was expelled as a heretic for turning to angel worship after seeing a vision of this figure sitting down in God’s throne room and concluding that “there are two powers in heaven.”

ANSWER: **Metatron** [or **Mattatron**; or **Mītrātūr**]

[10m] In this scriptural text, the protagonist repeatedly bows to worship angels who then tell him to stop. This text describes a “star” called “wormwood,” sometimes interpreted to be an angel, that poisons the water supply.

ANSWER: Book of **Revelation** (to John) [reject the plural “Revelations;” accept “**Apocalypse of John**,” accept **apokalypsis**]

<JM - Religion (Mythology)>

18. A 2019 book by Elaine Fehrman et. al. from the “Stories Told by Data” series works out correlations between forms of this psychological condition and the “big five” personality traits. In a 2021 book, a Columbia psychology professor specializing in this disorder controversially admitted to relevant personal experiences. Overexpression of the splice variant Delta-FosB plays a crucial role in this disorder. Forms of this general disorder studied by Carl Hart are assessed using the Fagerstrom Test or the CAGE questionnaire. Patients with this disorder can experience (*) “cue-induced wanting” and reward sensitization. E.M. Jellinek promoted the idea that one type of this disorder should be treated as a disease. This condition was studied in animal models through Bruce Alexander’s “Rat Park” experiment. This psychological disorder is distinguished from underlying physiological dependence, which can cause negatively reinforcing withdrawals. For 10 points, give this pattern of behavior in which one feels compelled to consume drugs.

ANSWER: drug/substance **addiction** [accept (severe) **substance abuse disorder** or **SUD**; prompt on **drug abuse** or **substance abuse**; prompt on drug/substance **dependence** by asking “which can result in what psychological problem?”; accept **alcoholism** or heroin **addiction** or nicotine/smoking **addiction**] (Carl Hart’s controversial 2021 book is *Drug Use for Grown-Ups: Chasing Liberty in the Land of Fear.*)

<JM - Hard Social Science: Psychology>

While this composer focused on integral serialism in the 50s—with tones, dynamics, and rhythm being deterministic—his 60s work was largely stochastic or aleatoric. For 10 points each:

[10m] Name this acerbic and polemical French composer of works like *The Hammer without a Master* and *Fold by Fold*, which set the poetry of René Char and Stéphane Mallarmé, respectively.

ANSWER: Pierre (Louis Josef) **Boulez** (“boo-LEZ”)

[10h] Boulez once publicly remarked that this composer’s *Three Small Liturgies of the Divine Presence* was “brothel music” and claimed that another of his pieces made him vomit, straining their relationship for years.

ANSWER: Olivier (Eugène Prosper Charles) **Messiaen** (“oh-liv-YAY mess-YAH”) (The other piece is the *Turangalila-Symphonie.*)

[10e] Boulez infamously stated that musicians who did not “truly experience the necessity” of serialist music were “USELESS.” Serialist composition uses permuted “rows” of this many pitches, each tone of the chromatic scale.

ANSWER: **twelve**

<JM - Arts: Classical Music>

19. **Hadrius Junius and Ulrich Zell left textual evidence that an early worker in this industry developed its key technology, recounting a story in which that worker had the idea while amusing his grandchildren in the Haarlemmerhout. In the 19th century, Richard March Hoe and William Bullock perfected a “rotary drum” technology for this industry, based on a technique that may have independently arisen with Laurens Coster. Francesco Griffo invented another key technique in this industry while working for the Jewish Soncino family and for (*) Aldus Manutius. In the 1730s, French apprentices in this industry protested their harsh conditions by holding “trials” for and executing pets, as recounted in Robert Darnton’s *The Great Cat Massacre*. Before 1500, this industry relied on “incunables.” Historians often credit innovation in this industry with catalyzing the Protestant Reformation by allowing the wide dissemination of Luther’s thought. For 10 points, name this industry that flourished after Johannes Gutenberg popularized movable type.**

ANSWER: **printing** [accept **publishing** or **publication**; accept **printing** press; prompt on **press**; reject answers indicating the news] (Griffo invented italics)

<JM - History: European>

This phenomenon was originally postulated in an attempt to reconcile aether theory with the Michelson-Morley experiment. For 10 points each:

[10e] Name this phenomenon predicted by special relativity in which a moving object is measured to be shorter than an object at rest.

ANSWER: **length contraction** [or **Lorentz-FitzGerald contraction**]

[10h] A passing object does not actually appear to be contracted to a moving observer because of the differing light delay from different parts of the object. Instead, this effect occurs, in which the object appears to rotate due to perpendicular straight lines appearing as hyperbolas.

ANSWER: **Terrell** effect/rotation [or (Lampa-)**Terrell-Penrose** effect/rotation or **Penrose-Terrell** effect/rotation]

[10m] Coordinates named for this scientist are often used to analyze the experience of observers rotating at relativistic speeds. This scientist also proposed a highly restrictive definition for rigid bodies in a relativistic context.

ANSWER: Max **Born** [accept **Born** coordinates or **Born** rigidity]

<DE - Science: Physics>

20. **A blues guitarist based in this city who played with a glass bottle-neck and moved there in service of his moonshining career was named Kokomo Arnold. While leading the “house trio” for a hotel in this city, Ahmad Jamal recorded the 1958 album *Live at the Pershing: But Not for Me*. Muhal Richard Abrams founded the Association for the Advancement of Creative Musicians, or AACM, in this city, out of which coalesced an influential avant-garde jazz group featuring Lester Bowie and Roscoe Mitchell called its (*) Art Ensemble. After New Orleans and before New York, King Oliver and Louis Armstrong came to prominence playing in this city, where Benny Goodman grew up. Big Bill Broonzy helped spearhead this city’s style of blues, whose best-known singer was Muddy Waters. For 10 points, name this city whose jazz and blues scenes thrived after the Great Migration in neighborhoods like Bronzeville on its South Side.**

ANSWER: **Chicago**, Illinois

<JM - Arts: Jazz>

Answer the following about Flannery O'Connor stories in which characters discuss Jesus's miracles, for 10 points each.

[10m] In this story, the protagonist's babysitter Mrs. Connin reads him a picture book that relates Jesus's exorcisms. The boy Bevel drowns at this story's title location, where he had earlier attended a Christian revival meeting.

ANSWER: "The **River**"

[10e] This character claims that Christ "shown everything off balance" by raising the dead during a conversation with the Grandmother, whom he murders at the end of "A Good Man Is Hard to Find."

ANSWER: the **Misfit**

[10h] A priest in O'Connor's story "The Displaced Person" likens one of these animals roaming the farm to Christ's Transfiguration. O'Connor's *Complete Stories* are typically published with a cover depicting one of these animals, which she raised in her later years.

ANSWER: **peacock** [or **peafowl**]

<TM - Literature: American>

21. **Chao-Yang Wang found that undoing this process can be optimized by heating a device to 60 degrees celsius followed by rapid cooling. In one device, *blanc fixe*, or barium sulfate, serves as a seed crystal at the beginning of this process. The time to perform this process is related to the rated time and capacity by Peukert's law. This process can be reversed in one device by using constant current, balance, and constant voltage stages to drive the (*) intercalation of metal ions. Cell reversal is a common mode of failure in devices undergoing this process. Undergoing this process multiple times causes one type of device to degrade due to accumulation of lead sulfate crystals. Performing this process to a high depth generally decreases a device's life cycle. Whether they can undergo this process more than once distinguishes "primary" and "secondary" batteries. For 10 points, name this process in which a battery is drained.**

ANSWER: battery **discharging** [accept (re)**charging**; accept word forms of either; prompt on descriptions of energy storage in batteries; prompt on using a battery or similar answers; reject "depletion" and word forms]

<SS - Science: Chemistry>

The most influential discussion of this anthropological concept argued that it is so insecure and intense that the necessary stabilization thereof forms strong social bonds in a "normative *communitas*." For 10 points each:

[10m] Give this term popularized by Victor Turner's *The Forest of Symbols*, which refers to the ambiguous status of a person or situation in the middle of rituals that cause a change of state.

ANSWER: **liminality** [accept word forms such as **liminal**]

[10e] To analyze these practices, Turner adopted the concept of liminality from Arnold van Gennep's *Rites of Passage*, which is an alternate name for them. This type of ritual brings the subject into membership in a group.

ANSWER: **initiation** rites/rituals/etc.

[10h] In his best-known book, this infamously inscrutable postcolonial theorist argued that the liminal "third space" arising with cultural confrontations "displaces the narrative of the Western written in homogeneous, serial time."

ANSWER: Homi K. **Bhabha** [or Homi Kharshedji **Bhabha**] (The book is *The Location of Culture*.)

<JM - Thought: Soft Social Science>

22. **This author wrote a play that satirizes Andy Warhol's relationship with Jean-Michel Basquiat by depicting Warhol as a literal vampire. In one of his poems, this author warns, "Statistics: the US bureau of missing persons reports that in 1968, 100,000 disappeared." A racist mayor created by this author of "Beware: Do Not Read This Poem" is killed by iron-jawed pigs after being outwitted by the Black cowboy Loop Garoo Kid, who also appears in his poem "I Am a Cowboy in the Boat of Ra." A novel by this author of (*) *Yellow Back Radio Broke-Down* depicts Hinkle Von Vampton's attempts to create a "Talking Android." A play by this author features the ghost of Harriet Tubman calling a man "but Ron Chernow." In a novel, this "Neo-Hoodoo" advocate depicted the struggle between the Wallflower Order and the Harlem-based houngan Papa LaBas over a virus called "Jes' Grew." For 10 points, name this author of the anti-*Hamilton* polemic *The Haunting of Lin-Manuel Miranda* and the novel *Mumbo Jumbo*.**

ANSWER: Ishmael (Scott) **Reed** (The first clue refers to Reed's most recent play, *The Slave Who Loved Caviar*, featuring much of the cast from *The Haunting of Lin-Manuel Miranda*.)

<JG - Literature: American>

According to legend, a politician from this political party, which allied with Abdulrahman Mohamad Babu's far-left Umma Party, became an evil spirit called the popobawa upon his 1972 assassination. For 10 points each:

[10h] Name this political party that merged with TANU after the death of its leader Abeid Karume ("uh-BAYD kah-ROO-may"). Its bloody overthrow of Jamshīd ("jam-SHEED") bin 'Abdullāh was led on the ground by, inexplicably, the Christian fanatic John Okello.

ANSWER: **Afro-Shirazi** Party [or *Chama cha Afro-Shirazi*]

[10m] "Popobawa" sightings began after the Afro-Shirazi Party overthrew this sultanate. The slaver Tippu Tip hailed from this sultanate, which the British forced to abolish the slave trade under Barghash bin Sa'īd ("sah-EED").

ANSWER: Sultanate of **Zanzibar** [or *Usultani wa Zanzibar*; or *Sulṭanat Zanjībār*; prompt on Oman]

[10e] In another origin story, the "popobawa" was one of these creatures from Islamic mythology released by an angry Sheikh. Possession by these beings of "smokeless fire" are blamed for sleep paralysis in the Middle East.

ANSWER: **Jinn** [accept **Genies**] (The Afro-Shirazi Party merged with TANU to form Chama Cha Mapinduzi)

<VA - History: World>