# Saturnalia: Packet 2

Edited by Justine French, Avinash Iyer, Laurence Li, Robert Condron, Connor Mayers, Eric Yin, Karan Gurazada, Nick Dai, Ethan Ashbrook, Dylan Bowman, Jeffrey Ma, Daniel Ma, Benjamin McAvoy-Bickford, and Lalit Maharjan. Written by the editors and Vikshar Athreya, Maxwell Ye, Felix Wang, Danny Kim, William Orr, Jason Lewis, Tiffany Zhou, Gabe Forrest, Ariel Faeder, Josh Rollin, Louis Li, Advaith Modali, Raymond Wang, Auden Young, Aadi Karthik, Ned Tagtmeier, Rohan Venkateswaran, Victor Li, and Richard Lin

THESE TOSSUPS ARE PAIRED WITH BONUSES. IF A TOSSUP IS NOT CONVERTED, SKIP THE PAIRED BONUS AND MOVE ON TO THE NEXT TOSSUP. DO **NOT** COME BACK TO THE SKIPPED BONUS.

1. Exposing the brutality of this country's security forces earned J. Ross Baughman a Pulitzer Prize. Ronald Reid-Daly was inspired by Portuguese Flechas ("FLEH-shah's") to create the Selous ("suh-LOO") Scouts in this country, which saw the establishment of a UANC government after the Internal Settlement. The Lancaster House Agreement ended this country's Second Chimurenga. Members of this country's (\*) African People's Union party were massacred in Matabeleland by the North Korean-trained Fifth Brigade in the Gukurahundi massacres, after which the ZANU-PF ("ZAH-noo P-F") party was formed here. This country changed its name from Rhodesia in 1980. For 10 points, name this country once led by Robert Mugabe. ANSWER: Zimbabwe [accept Rhodesia or Zimbabwe-Rhodesia until "African People's Union" is read; do NOT

accept or prompt on "Southern Rhodesia" or "Northern Rhodesia"] (The second Chimurenga is another name for the Bush War.)

<World History — Iyer> [Edited]

1. Members of this group believe in a messiah-like figure called the Taheb who will come at the end of times. For 10 points each:

[H] Name this ethnoreligious group that rejects the Oral Torah, Talmud, and all prophets and scriptures except for Joshua. Members of this group believe in a different set of Ten Commandments that set Mount Gerizim ("GEH-rih-zim") as their holiest site.

ANSWER: **Samaritan**s [or **Shamerim**]

[E] Samaritans believe that the Taheb will be identified by carrying the staff of this man who led the Israelites out of Egypt and split the Red Sea.

ANSWER: Moses [or Moshe]

[M] According to Samaritan beliefs, the Taheb will be descended from either the tribes of Ephraim ("eff-RYE-eem") or Manasseh ("muh-NOSS-uh"), the sons of this man. This man was falsely accused of raping Potiphar's wife.

# ANSWER: Joseph [or Yusuf]

<Religion — McAvoy-Bickford, Dai> [Ed. Dai]

2. Spanish-inspired works by this artist include one depicting *Mademoiselle V* ("vee") dressed as a bullfighter and another depicting *A Young Man Dressed as a Majo* ("MAH-hoh"). This artist used Titian's *Pastoral Concert* as the basis for a painting originally titled *The Bath*. In another painting by this artist, a man is reflected at an unphysical angle in the large mirror behind a (\*) bartender. A painting by this artist with a disproportionately large bather in the background was rejected from the 1863 Salon des Refusés for depicting a nude woman picnicking with fully dressed men. For 10 points, name this painter of *A Bar at the Folies-Bergère* ("fah-lee ber-ZHER") and *The Luncheon on the Grass*.

ANSWER: Edouard Manet

<Painting and Sculpture — Jeffrey Ma> [Ed. Bowman]

2. This experiment used the anisotropy of emitted gamma rays to compute the degree of polarization of nuclei that had been polarized by the Rose-Gorter method. For 10 points each:

[H] Name this 1956 experiment, which detected electrons emitted from the beta decay of cobalt-60 nuclei. This experiment found significant asymmetry in the direction of emitted electrons.

ANSWER: Wu experiment [or parity conservation experiment or parity violation experiment]

[E] The Wu experiment found that this fundamental interaction can violate parity symmetry, which was previously thought to be a universal law. This interaction is not as strong as the strong interaction.

ANSWER: weak interaction [or weak force or weak nuclear force]

[M] The Wu experiment hinted that the weak interaction could only create left-handed examples of these particles, a result later confirmed by the Goldhaber experiment. In beta-plus decay, a proton decays into a neutron by emitting a positron and one of these particles.

ANSWER: **<u>neutrino</u>**s [accept left-handed <u>**neutrino**</u>s; do NOT accept or prompt on "anti-neutrino"] <Physics — Ye> [Ed. French]

3. One method for this technique adds a parameter k to the diagonal of a matrix to mitigate problems arising from multicollinearity. Another method for this technique is optimal only if its errors are homoscedastic, according to the Gauss-Markov theorem. High leverage points may have an undue (\*) influence on the result of this technique. A method for this technique that minimizes the sum of squares of residuals is called "least squares." This technique estimates the relationship between a dependent variable and a set of independent variables. For 10 points, name this technique whose linear type finds a line of best fit.

ANSWER: <u>regression</u> [accept linear <u>regression</u> or least squares <u>regression</u> or ordinary least squares <u>regression</u> or ridge <u>regression</u>; prompt on descriptive answers like <u>finding a line of best fit</u> before "best fit"] </bd>

3. This city is home to the Gur-e Amir mausoleum of Timur the Lame. For 10 points each:

[M] Name this Central Asian city that grew under Timurid patronage. Ulugh Beg built a great observatory in this city, which was later the economic hub of the Uzbek Khanate of Bukhara.

#### ANSWER: Samarkand

[H] Samarkand was a city in this historical region of Central Asia, which contains the Ferghana Valley and is named for its position beyond the Amu Darya.

ANSWER: Transoxiana [or Transoxania or Māwarā'al-Nahr or Turan]

[E] Samarkand and other Transoxanian cities were important nodes along this trade route. This route, named for its primary trade good, connected China to the Mediterranean Sea.

ANSWER: Silk Road

<Geography — Rollin> [Edited]

4. The phrase "thruster holding me tight" and other erotic passages in this poem's first edition were removed from subsequent versions. A section of this poem ends with the declaration, "I witness and wait," after describing the "real or fancied indifference of some man or woman I love." The speaker of this poem claims,

**"I (\*)** loafe and invite my soul, / I lean and loafe at my ease." In the fifty-first section of this poem, the speaker states, "Do I contradict myself? / Very well then I contradict myself, / (I am large, I contain multitudes)." For 10 points, name this long poem from Walt Whitman's *Leaves of Grass* that begins "I celebrate myself, and sing myself."

ANSWER: "Song of Myself"

<Poetry — Laurence Li> [Ed. Condron]

4. This director weaved four interrelated storylines around the accidental shooting of Susan Jones in his film *Babel*. For 10 points each:

[H] Name this director. Another of this director's films stars Michael Keaton as a washed-up film star trying to adapt to theater after years of acting in superhero films.

ANSWER: Alejandro González Iñárritu [prompt on González] (The unnamed film is Birdman.)

[E] Iñárritu is one of three Mexicans in the past decade to have won one of these film awards for Best Director, along with Alfonso Cuarón and Guillermo del Toro. The golden statuettes for these awards have a male name. ANSWER: **Oscar**s [or **Academy Award**s]

[M] Guillermo del Toro won the Oscar for Best Director in 2017 for his work on this film about a mute woman, Elisa, who falls in love with a swamp creature that she discovers while working at a government research facility. ANSWER: *The Shape of Water* 

<Film — Faeder> [Ed. Bowman]

5. In a senate race, this candidate compared his opponent's voting record to that of alleged Communist Vito Marcantonio. In a primary to unseat this politician, a candidate gave the so-called "crying speech" after the Manchester Union published a letter suggesting that that candidate was biased against French-Canadians. This politician employed Ken Clawson and (\*) Donald Segretti to orchestrate "dirty tricks" campaigns against opponents like Edmund Muskie. The book *All the President's Men* by Carl Bernstein and Bob Woodward details how this politician wiretapped the DNC during the 1972 election. For 10 points, name this president who faced the Watergate Scandal.

ANSWER: Richard **Nixon** [or Richard Milhous **Nixon**]

<U.S. History — Louis Li, Iyer> [Ed. Iyer]

5. In a story told by this character, Paganino of Monaco steals a judge's wife, who decides to stay with Paganino despite the judge's attempts to get her back. For 10 points each:

[H] Name this expert storyteller from the *Decameron* who doesn't have to follow the topic of the day. This character tells a story about Patient Griselda at the end of the collection in which he appears.

## ANSWER: **Dioneo**

[M] In Dioneo's first story, one of these people has sex with a woman, but he avoids trouble by catching his superior with the same woman. In *The Name of the Rose*, William of Baskerville investigates murders committed by Jorge of Burgos, a blind one of these people who works as a librarian.

#### ANSWER: **monk** [accept **abbot**]

[E] Dioneo's story is one of the hundred stories that Giovanni Boccaccio wrote in *The Decameron*, which he wrote in this language. Dante's *Divine Comedy* is also written in this language.

ANSWER: Italian [or lingua italiano; accept Tuscan or dialetto toscano]

<Short Fiction — Iyer> [Ed. Condron]

6. This quantity divided by a quantum form of it is raised to the power of particle number in the partition function of an ideal gas. This quantity is raised to a constant exponent in the defining equation of a polytropic process. For a process in which this quantity does not change, the change in internal energy equals the heat added, since the process must do no work. This quantity is constant in an (\*) isochoric ("ice-oh-CORE-ick") process. Pressure times the change in this quantity equals work. This quantity varies inversely with pressure according to Boyle's law. For 10 points, name this quantity that can be measured in liters or cubic meters. ANSWER: volume [accept quantum volume]

<Physics — French> [Edited]

6. This phylum contains a group of microscopic parasites, the Myxozoa ("mix-uh-ZOH-uh"), that were mistakenly classified as protists for over a century due to their highly-reduced body structure. For 10 points each:
[M] Name this animal phylum whose other members include corals and sea anemones ("uh-NEH-muh-nees"). Members of this phylum possess specialized stinging organelles called nematocysts ("ne-MAT-oh-sists").
ANSWER: <u>Cnidaria</u> ("nye-DAIR-ee-uh") [or <u>cnidarian</u>s]

[E] Cnidarians possess the "radial" form of this property, which is also present in echinoderms

("eh-KYE-noh-derms"). Most other animals, including vertebrates, possess the "bilateral" form of this property. ANSWER: <u>symmetry</u>

[H] Cnidarians are classified as diploblasts ("DIP-loh-blasts") because they lack this germ layer. In most animals, the coelom ("SEE-lum"), or body cavity, develops out of this germ layer.

#### ANSWER: mesoderm

<Biology — Yin> [Edited]

7. This country did not renew the franchise of the news agency ABS-CBN ("A-B-S C-B-N") after this country's leader said it swindled him by supposedly not airing advertisements he had paid for. This country convicted Maria Ressa, who founded the news agency Rappler, for cyberlibel after Rappler published stories critical of its policies. This country's president claimed that he would create a (\*) "separation" from the U.S. during a meeting with China, despite territorial disputes with China in the Spratly Islands. The current leader of this country supported extrajudicial death squads that killed drug dealers when he served as the mayor of Davao ("DAH-bow") City. For 10 points, name this country currently led by Rodrigo Duterte ("doo-TER-tay"). ANSWER: <u>Philippines</u>

<Current Events — McAvoy-Bickford> [Edited]

7. *Jojo's Bizarre Adventure* creator Hirohiko Araki makes it very clear in his work how much he loves rock music. For 10 points each:

[M] A ripple master that briefly appears in the manga is named after this musician who played with the Heartbreakers. His solo hits include "I Won't Back Down" and "Free Fallin."

ANSWER: Tom **Petty** [prompt on <u>Tonpetty</u>]

[E] The character Caesar Zeppeli is a not-so-subtle reference to this rock band best known for the song "Stairway to Heaven."

#### ANSWER: Led Zeppelin

[H] Two other ripple users take their names from this British rock band behind the hits "Romeo and Juliet," "Money for Nothing," and "Sultans of Swing."

ANSWER: Dire Straits [prompt on Dire or Straitzo]

<Popular Culture — Ma> [Ed. Maharjan]

8. This thinker distinguished between "normal" and "pathological" traits based on whether they are held by the average person in a book discussing the "normality" of one concept throughout civilization. This thinker argued that modernity led to the death of "the old gods" in a book that defines religion as "a unified system of beliefs and practices relative to sacred things." This thinker described (\*) "social facts" like crime that change but cannot be changed by individuals in his *Rules of the Sociological Method*. In another book, this thinker defined egoistic, altruistic, fatalistic, and anomic forms of the title subject. For 10 points, name this French sociologist and author of *Suicide*.

#### ANSWER: Emile Durkheim

<Other Social Science — Tagtmeier> [Ed. Ashbrook]

8. Despite his initial victories, this tsar lost the Livonian War. For 10 points each:

[E] Name this Russian tsar who aimed to create a corridor between the Baltic and his newly conquered territories on the Caspian Sea. This tsar was given the epithet "*grozny*," meaning "terrible."

ANSWER: Ivan the Terrible [or Ivan IV or Ivan Grozny]

[M] Ivan the Terrible was defeated during the Livonian War by an alliance between this state and Sweden. This state was formed from a personal union between two states, one of which was ruled by the Jagiellonian

("yah-g'yuh-LOH-nee-uhn") dynasty.

ANSWER: **Polish-Lithuanian** Commonwealth [or **Poland-Lithuania**; do NOT accept or prompt on "Poland" or "Lithuania"]

[H] After conquering the Khanates of Kazan and Astrakhan, Ivan the Terrible sent Cossack adventurer Yermak Timofeyevich toward this region, where he conquered a khanate ruled by Kuchum Khan.

ANSWER: Siberia [or Khanate of Sibir]

<European History — Athreya> [Edited]

9. Gullah folk music is combined with the *tresillo* rhythm in "Charleston," a song for this instrument composed by James P. Johnson. Harlem rent parties featured cutting contests between players of this instrument, such as Fats Waller and Art Tatum, who performed its (\*) "stride" style. A player of this instrument was billed as a "Genius of Modern Music" and composed the standards "Straight, No Chaser" and "Round Midnight." The Maple Leaf Club in Sedalia, Missouri, names a song for this instrument written in the ragtime style. For 10 points, Scott Joplin composed "The Entertainer" for what keyboard instrument?

ANSWER: **piano** [or **piano** forte] ("Straight, No Chaser" and "Round Midnight" are by Thelonious Monk.) <Jazz — French> [Edited]

9. C does not support these things, but C++ ("C-plus-plus") does. For 10 points each:

[E] Name these things, which are often instances of a class and have properties in the form of instance variables and methods. Java and C++ support the programming paradigm "oriented" around these things.

ANSWER: **<u>object</u>**s [or <u>**object-oriented**</u> programming or <u>**OOP**</u>]

[M] Many object-oriented programming languages use this mechanism, in which one object or class extends the implementation of another object or class. The extends keyword implements this mechanism in Java. ANSWER: **inheritance** 

[H] Good object-oriented programming practices include encapsulation, which restricts direct access to objects' instance variables and instead forces external methods to use these two general types of methods to access instance variables.

ANSWER: <u>getters</u> AND <u>setters</u> [or <u>get</u> AND <u>set</u> or <u>mutator</u>s AND <u>accessor</u>s; accept answers in any order] <Computer Science — Gurazada> [Edited]

10. Distinct lineages called microspecies arise after plants with this trait propagate through apomixis ("ap-uh-MIX-is"). Sympatric speciation commonly occurs when plants with this trait produce offspring that are allopolyploid. Organisms with this trait tend to be concentrated in namesake "zones" located where the ranges of differing populations overlap. The frequency of this trait increases as (\*) reproductive barriers are weakened. Organisms with this trait often receive different numbers of chromosomes from each parent, rendering them sterile. For 10 points, ligers and mules exemplify what trait that describes offspring produced by a cross between two different species?

ANSWER: **hybrid** [accept interspecific **hybrid**s or interspecies **hybrid**s or intraspecific **hybrid**s or intraspecies **hybrid**s or **hybrid** zones; accept word forms like **hybrid**ization; accept accept any answer indicating a **cross** between two **species** or **population**s until "cross" is read; prompt on <u>sterile</u> or <u>sterility</u> until "sterile" is read] <Biology — Yin> [Edited] 10. An aspect of this character is said to be "the intensifying agent in things the most appalling to mankind" and to "[stab] us from behind with thoughts of annihilation." For 10 points each:

[H] Name this character who is stabled at "from hell's heart" by a man he strangles in their final confrontation. ANSWER: **Moby-Dick** [or the **white whale**; prompt on the <u>whale</u>]

[E] This author wrote about Captain Ahab's feverish hunt for the title white whale in *Moby-Dick*.

ANSWER: Herman Melville

[M] After spotting Moby-Dick, Ahab claims the gold doubloon that he nailed to the main mast of this ship at the beginning of the voyage.

ANSWER: *Pequod* 

<Long Fiction — Faeder> [Ed. Condron]

11. The title character of an opera by this composer uses the opening minor triad to sing her father's name in *"Allein! Weh, ganz allein."* The title character of another opera by this composer is a trouser role, so the trio *"Hab' mir's gelobt"* is performed by three female voices. Another of this composer's operatic characters seductively removes the seven veils she is wearing to convince (\*) King Herod to give her the head of John the Baptist. A "sunrise" fanfare begins a tone poem by this composer inspired by Friedrich Nietzsche ("NEE-chuh"). For 10 points, *Electra, Salome,* and *Der Rosenkavalier* are operas by what late Romantic composer of *Also sprach Zarathustra*?

ANSWER: <u>**R**</u>ichard <u>Strauss</u> [prompt on <u>Strauss</u>; do NOT accept or prompt on "Johann Strauss"] <Classical Music — McAvoy-Bickford> [Ed. Jeffrey Ma]

11. The ruins of Fort Massac in this state were the launching point of a campaign where John Duff's hunting party provided intelligence about one of its objectives. For 10 points each:

[H] Name this modern day state, where George Rogers Clark and his men trekked 50 miles inland to capture Kaskaskia. This state's namesake campaign ended after Clark captured a *neighboring* state's Fort Sackville. ANSWER: **Illinois** [or **Illinois** Campaign]

[E] Clark led the Illinois campaign during this conflict's western theater. The British surrender at Yorktown in 1781 effectively marked the end of this conflict.

ANSWER: <u>American Revolution</u> [or <u>Revolutionary</u> War or <u>American War</u> of <u>Independence</u>]

[M] Clark's campaigns consolidated American control over this territory. A 1787 ordinance named for this territory formally established provisions for governing and settling this territory.

ANSWER: Northwest Territory [or Northwest Ordinance]

<U.S. History — Athreya> [Ed. Iyer, Laurence Li]

12. One New Year's ornament from this country is a type of bitter orange that can stay on its tree for multiple years, giving it its name. In this country, a curry roux ("ROO") is often served alongside a breaded pork cutlet. In this country, KFC started a tradition of serving its food for Christmas. Until recently, this country maintained a (\*) "scientific whaling" program that also sold whale meat, before in 2019 allowing commercial international whaling. In this country, *nori* seaweed is often placed in aluminum containers used to hold takeout food called bento. For 10 points, name this home country of sushi.

ANSWER: Japan

<Other — McAvoy-Bickford> [Edited]

12. Tariq ibn Ziyad ("ta-REEK ib-in zee-YAD") led Berber forces that toppled this kingdom in the early 8th century, forcing its remaining nobility to flee to Northern Iberia. For 10 points each:

[H] Name this originally-Germanic kingdom of Iberia. Its last king, Roderick, died during the Battle of Guadalete ("g'wah-duh-LEH-tay") in 711, paving the way for the Umayyad conquest of the peninsula.

ANSWER: <u>Visigoth</u>ic Kingdom [accept <u>Visigoth</u>s; prompt on <u>Goths</u>]

[E] Pelagius's defeat of Umayyad forces at Covadonga signaled the beginning of the Reconquista

("reh-cohn-KEE-stah"), which ended in this year when Granada fell to Christian forces. Christopher Columbus's first voyage started in this year.

ANSWER: 1492

[M] This kingdom took over the *taifa* of Valencia under its ruler James I ("the first"). This kingdom's later ruler Ferdinand II ("the second") would end the Reconquest when he took back Granada from caliphate rule.

ANSWER: <u>Aragon</u> [accept James I of <u>Aragon</u> or Ferdinand II of <u>Aragon</u>; do NOT accept or prompt on "Spain"] <European History — Rollin> [Ed. Iyer]

13. A story by this author describes a man who wishes to throw bricks at temples after he realizes that nature "would not maim the universe by disposing of him." In another story by this author, a character uses paper stuck to the wall with a knife for target practice in the Weary Gentleman saloon before learning that Sheriff

(\*) Jack Potter has returned to the title town. In a novel by this author of "The Bride Comes to Yellow Sky," a "tattered soldier" asks the protagonist where his wound is after he deserts Wilson and Jim Conklin. In that novel, Henry Fleming leads a charge against Confederate lines. For 10 points, name this author of "The Open Boat" and *The Red Badge of Courage*.

ANSWER: Stephen Crane

<Short Fiction — Raymond Wang> [Ed. Condron]

13. The companies Fannie Mae and Freddie Mac were accused of offering these assets with too little restriction. For 10 points each:

[M] Name these assets. Lehman Brothers was forced to declare bankruptcy after their securities backed by these assets rapidly lost their value.

ANSWER: **mortgage**s [accept subprime **mortgage**s or **mortgage**-backed securities; prompt on <u>loans</u> or <u>collateralized debt obligations</u> or <u>CDOs</u>; do NOT accept or prompt on "houses"]

[E] Lehman Brothers filed for bankruptcy during this year's financial crisis, which was catalyzed by the subprime mortgage crisis. Barack Obama defeated John McCain in this year's presidential election.

ANSWER: 2008 [prompt on 08]

[H] A major factor in the subprime mortgage crisis was the proliferation of these contracts, in which a seller agrees to reimburse a lender if a debtor does not repay their loan. The insurance corporation AIG ("A-I-G") sold many of these contracts to insure collateralized debt obligations, but it could not fulfill them during the crisis.

ANSWER: credit-default swaps [or CDS]

<Economics — French> [Edited]

14. After receiving a telegraph with news of a major defeat while playing tennis, this ruler allegedly stuffed the telegraph in his pocket and continued playing. This ruler was urged to sign the October Manifesto by his chief minister, Sergei Witte. The death of this ruler was hastened by the arrival of the Czechoslovak legion. Father (\*) Georgy Gapon's march on this ruler's palace led him to create a *Duma* in 1905. This successor to Alexander III was defeated by Japanese forces at the battle of Tsushima, and he was later ousted during the February revolution. For 10 points, name this last tsar of Russia, who along with his family was killed by the Bolsheviks in 1918.

ANSWER: **Nicholas II** ("the second") [or **Nikolai II** or **Nikolai II** Alexandrovich Romanov; prompt on <u>Nicholas</u> or <u>Nikolai</u>; do NOT accept or prompt on "Nicholas I" or "Nikolai I"]

<European History — Laurence Li> [Ed. Iyer]

14. The speaker of this poem describes "the hour of the spell that blazed like a lighthouse" and the "turbulent drunkenness of love." For 10 points each:

[M] Name this poem in which the speaker laments, "It is the hour of departure," and, "In you everything sank!" This poem is paired with twenty love poems in a 1924 collection.

ANSWER: "Song of Despair" [or "La canción desesperada"]

[E] *Twenty Love Poems and a Song of Despair* is a collection by this Chilean poet who also wrote *The Heights of Macchu Picchu* and *Canto General*.

ANSWER: Pablo Neruda [or Ricardo Eliécer Neftalí Reyes Basoalto]

[H] Neruda included his poem "Walking Around" in a poetry collection titled for his residence on this place. In the title of a section of "Canto General," Neruda claims this place's name is Juan.

ANSWER: the **Earth** [or la **Tierra**; accept *Residence on Earth* or "The **Earth**'s Name is Juan" or *Residencia en la tierra* or "La **Tierra** se llama Juan"]

<Poetry — Orr> [Edited]

15. Data is collected in this technique by applying RF ("R-F") current to four parallel metal rods arranged in an electric quadrupole. Odd-numbered data from this technique indicates an odd number of nitrogen atoms. In this technique, the presence of bromine results in an M+2 ("M plus 2") peak nearly identical in height to the M peak. Samples may be prepared for this technique using electrospray or electron impact (\*) ionization. This technique analyzes ions by deflecting them with an applied magnetic field. For 10 points, name this lab technique that separates fragments of molecules by their mass-to-charge ratios.

ANSWER: **mass spectrometry** [or **mass spec** or **MS**; accept **mass spectroscopy**; prompt on <u>spectrometry</u>; do NOT accept or prompt on "spectroscopy"]

<Chemistry — Yin> [Edited]

15. Hiroshige depicted a turtle hanging from a vendor's pole near one of these objects in his *100 Famous Views of Edo*. For 10 points each:

[H] Name this type of object. In the sixth of Hokusai's *36 Views*, Mt. Fuji can be seen under one of these things named Mannen.

ANSWER: a bridge [accept Mannen Bridge or Under the Mannen Bridge]

[E] The first entry of Hokusai's *Thirty-six Views of Mount Fuji* uses Prussian blue dye to depict one of these natural phenomena "off Kanagawa" capsizing three fishing boats.

ANSWER: great <u>wave</u> [accept <u>tsunami</u>]

[M] The *Thirty-six Views of Mount Fuji* were created in this art genre. *Shin-hanga* and *sosaku-hanga* were 20th-century movements that stemmed out of this genre of woodblock printing. ANSWER: *ukiyo-e* [prompt on pictures of the <u>floating world</u>]

<Painting and Sculpture — Zhou> [Ed. Bowman]

16. A character created by this author sings, "my oppressor and lover... were one and the same." In another song with lyrics by this author, a vision of a "Black Freighter / with a skull on its masthead" is described by "Low-Dive." This author created a mute girl who plays the drums to warn her town about the arrival of a Catholic army. Earlier in that play, this author described (\*) Swiss Cheese hiding a paybox while assisting the title character during the Thirty Years' War. This inventor of epic theater used the "distancing effect" in his collaboration with Kurt Weill ("vile") in the *Threepenny Opera*. For 10 points, name this Marxist playwright of *Mother Courage and her Children*.

ANSWER: Bertolt **Brecht** <Drama — Iyer> [Ed. Condron]

16. These compounds may reach their intended targets via enteral or parenteral ("puh-REN-ter-uhl") routes. For 10 points each:

[E] Name these xenobiotic ("zee-noh-bye-AW-tick") compounds used to treat diseases. This general class of compounds includes antibiotics and opioids.

ANSWER: pharmaceutical <u>drug</u>s [or <u>medicine</u>s or <u>medication</u>s]

[H] For a drug, an index described by this adjective is the ratio between a toxic dose and an effective dose. The Certain Safety Factor is a more conservative measure of drug safety than the index described by this adjective. ANSWER: **therapeutic** [accept **therapeutic** index or **therapeutic** ratio]

[M] This element has a low therapeutic index of between 1.5 ("one point five") and 1.8 ("one point eight"). This element is bonded to carbonate in a common medication for bipolar disorder.

ANSWER: <u>lithium</u> [accept <u>lithium</u> carbonate]

<Chemistry — Condron> [Edited]

17. Cepheid ("SEF-ee-id") variables calibrate a class of these phenomena in the most precise measurements of the Hubble constant. Another class of these phenomena is divided into L and P subtypes based on the shape of their light curves; the presence of hydrogen emission lines defines that class of these phenomena. The force of gravity exceeds that of radiation pressure in the (\*) core-collapse mechanism for these phenomena. These phenomena often leave behind a namesake "remnant" such as the Crab Nebula. White dwarfs are sources of the Type Ia ("one-A") variety of these phenomena. For 10 points, name these huge explosions which most commonly occur at the end of a massive star's life cycle.

ANSWER: **supernova**e [or **supernova**s; accept Type I **supernova**e or Type Ia **supernova**e or Type II **supernova**e or core-collapse **supernova**e or **supernova** remnants; prompt on <u>standard candle</u>s; do NOT accept or prompt on "nova" or "kilonova"]

<Astronomy — Yin> [Edited]

17. When presented with a libretto by Baron Gottfried van Swieten ("SVEE-tin") with scenes depicting the croaking of frogs, this composer supposedly derided it as "Frenchified trash." For 10 points each:

[H] Name this composer of the oratorio *The Seasons*, in which Simon, Hanne, and Lukas lead the audience through peasant life.

#### ANSWER: Franz Joseph Haydn

[M] Both *The Seasons* and Haydn's other oratorio *The Creation* were composed after his return to Vienna from this city in 1795. Johann Peter Salomon invited Haydn to this city, where he composed twelve symphonies including "Surprise" and "Clock."

### ANSWER: London

[E] A few years after his return to Vienna, Haydn composed a set of six pieces in this genre dedicated to Count Joseph Georg von Erdődy ("AIR-der-dee"). Pieces in this genre are written for two violins, a viola, and a cello. ANSWER: <u>string quartet</u> [prompt on <u>quartet</u>]

<Classical Music — Daniel Ma> [Ed. Jeffrey Ma]

18. A poem describing this battle states "See, thou did spend yesterday killing hundreds of thousands. Thou art come today and hast left no heirs." That poem, the Poem of Pentaur, may have been fictionalized to support a leader's claim that their forces won this battle. Bedouins deceived that side in this battle by claiming the other side's forces were hundreds of miles away. During this battle, one side drove looters to the (\*) Orontes river before giving chase on their lighter chariots. The first known international peace treaty was signed by Muwatalli II ("the second") after this battle. For 10 points, name this victory for Ramses II ("the second") over the Hittites, the largest chariot battle in history.

ANSWER: Battle of Kadesh

<World History — McAvoy-Bickford> [Ed. Laurence Li, Iyer]

18. Enki speaks through the walls of a reed hut to command Atrahasis ("ah-trah-HAH-siss") to build one of these things in an Akkadian epic. For 10 points each:

[M] Name these things. In the *Epic of Gilgamesh*, Utnapishtim ("oot-nah-PISH-tim") recounts building one of these things that gets stuck on the top of Mount Nimush.

#### ANSWER: **boat** [or **ship** or **ark**]

[E] Ea tells Utnapishtim to build a boat to survive one of these events, which was sent to kill all of humanity. Noah survives one of these events in the Book of Genesis.

#### ANSWER: a Great **Flood** [or **Deluge**]

[H] In both the *Epic of Gilgamesh* and the *Epic of Atrahasis*, the Flood is sent by this Mesopotamian god, the leader of the Annunaki. This god of the air and wind receives the Tablets of Destiny from his father, Anu.

#### ANSWER: Enlil [or Ellil or Elil]

<Mythology — McAvoy-Bickford> [Ed. French]

19. Two men in this novel become pregnant when they drink river water from the Kingdom of Women. In order to appease a character in this novel, he is given the low-level position of "Protector of the Horses." Another character in this novel wears a golden ring around his head that constricts when a spell is chanted. After urinating on what he thought were the five (\*) pillars of heaven, this novel's protagonist is trapped under a mountain for five-hundred years. After hatching from a stone egg, a character in this novel becomes king of the Monkeys. For 10 points, name this Chinese novel in which the monk Xuánzàng and Sūn Wùkōng retrieve Buddhist texts in India.

ANSWER: *Journey to the West* [or Xī Yóu Jì or *Hsi-yu chi*; accept *Monkey*: A Folk-Tale of China before "Monkeys" is read]

<Long Fiction — Louis Li> [Edited]

19. During one scene, this character is given stockings by the title character during a "business trip" to Boston. For 10 points each:

[H] Identify this character. A high school football player drops out of school after he walks in on his father having an affair with this unnamed character.

ANSWER: "The <u>Woman</u>" [accept "<u>Willy</u> Loman's <u>mistress</u>" or Miss <u>Francis</u>]

[M] In *Death of a Salesman*, this former high school football player discovers that his father, Willy Loman, is having an affair with "The Woman" and steals a fountain pen from the loan officer Bill Oliver. ANSWER: **Biff** Loman

[E] Death of a Salesman is a play by this American playwright of The Crucible.

<Drama — Modali> [Ed. Condron]

20. This religion's followers believe in four types of bondage of the soul, including wrong belief, non-abstinence, negligence, and passions. Followers of this religion believe in fourteen steps of spiritual growth through right faith, right knowledge, and right conduct, which are the "three jewels." Using *nirjara* ("NEER-juh-ruh"), members of this religion achieve emancipation by shedding (\*) particles of karma. Unlike the "white-clad" *Svetambara* ("sh'weh-TUM-buh-ruh"), the "sky-clad" *Digambara* ("dih-GUM-buh-ruh") sect of this religion believes women cannot attain *moksha*, or freedom from reincarnation. Mahavira ("mah-HAH-vee-ruh") is the twenty-fourth tirthankara ("teer-TAHN-kuh-ruh") of this religion. For 10 points, name this religion that emphasizes nonviolence, or ahimsa.

ANSWER: Jainism

<Religion —Dai> [Edited]

This ruler was replaced by his brother, Cuitláhuac ("kwee-T'LAH-wok"), who succumbed to smallpox. For 10 points each:

[M] Name this emperor who may have been killed while trying to address his people during riots after the Massacre in the Great Temple. Cuitláhuac succeeded this emperor after this emperor was placed under house arrest. ANSWER: <u>Moctezuma II</u> ("the second") [or <u>Montezuma II</u>; prompt on <u>Moctezuma</u> or <u>Montezuma</u>]

[H] Moctezuma was imprisoned by Hernán Cortés, who left this conquistador as acting commander while he confronted a hostile expedition led by Pánfilo de Narváez ("PON-fee-loh day nar-VYE-ezz"). This conquistador later ordered the Massacre in the Great Temple.

#### ANSWER: Pedro de Alvarado

[E] After Montezuma's death, Cuitláhuac led these people in defending their capital city. These people were eventually defeated and conquered by Cortés in 1521.

ANSWER: <u>Aztec</u>s [or <u>Mexica</u>; accept <u>Aztec</u> empire; prompt on <u>Nahua</u>]

<World History — Athreya> [Ed. Laurence Li]

ANSWER: Arthur Miller