## Saturnalia: Packet 10

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. King Flann Sinna commissioned a *cumdach* ("COOV-daw") to house one of these artworks created at Durrow. Many of these artworks depict pillars spanned by arches to separate columns in their tables of the Eusebian ("yoo-SEE-bee-ihn") canons. Curvilinear and zoomorphic (zoh-UH-mor-fick") forms characterize the Hiberno-Saxon style of these artworks, which is exemplified by one created at Lindisfarne Abbey. The Duc de Berry commissioned one of these artworks from the Limbourg brothers to be used during (\*) canonical hours. Intricate knots and links decorate initials in one of these artworks held by the Abbey of Kells. For 10 points, name these artworks which were illuminated in medieval monasteries.

ANSWER: **book**s [or illuminated **manuscript**s or **codex** or **codices**; accept **gospel**s or **Book** of Durrow or **Book** of Kells or Lindisfarne **Gospel**s]

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

1. For 10 points each, answer the following about the presidential election of 1876:

[E] The heavily contested election featured the only electoral commission in U.S. History, which resolved the election in favor of this Republican President over Samuel Tilden.

ANSWER: Rutherford B. Haves

[M] Prior to the election, Tilden played a major role in reducing the power of this Grand Sachem of Tammany Hall. He was depicted with a bag of money for a head in many cartoons by Thomas Nast.

ANSWER: William Marcy **Tweed** [or Boss **Tweed**]

[H] This former Supreme Court justice was elected as Senator from Illinois in an attempt to sway his vote on the Electoral Commission. However, this man promptly resigned and was replaced by Joseph P. Bradley.

ANSWER: David **Davis** 

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

2. This author described a character as "no vulgar assassin" who will be subject to a policy "from which gentlemen are not excluded." In another story by this author, a watchman shoots his father off a cliff to conceal his unit's location. In a story by this author, a deaf-mute child is thrown to the ground while trying to ride a wounded soldier's back. This author of "The Horseman in the Sky" and (\*) "Chickamauga" created a disguised scout who tells a character about large amounts of flammable driftwood near a pier. In that story, Peyton Farquhar ("FAR-kwar") imagines that he has escaped before he is hung by Union soldiers. For 10 points, name this author of "An Occurrence at Owl Creek Bridge."

ANSWER: Ambrose Bierce

<Short Fiction — Louis Li> [Ed. Condron]

2. James Marcia believed that individuals undergo a "moratorium" named after this thing, during which they seek to find a structure of this thing after losing the "foreclosure" status. For 10 points:

[H] Name this thing which one psychologist believed develops alongside the virtue of fidelity.

ANSWER: ego identity

[M] This psychologist coined the term "identity crisis" to describe when someone fails to develop a personal identity during adolescence. This psychologist proposed that humans undergo eight stages of psychosocial development.

ANSWER: Erik Homburger **Erikson** [or Erik **Salomonsen**]

[E] Erikson's first five stages of development line up closely with this other psychologist's five psychosexual stages of development. This psychologist also theorized that the human psyche is made up of the id, ego, and superego.

ANSWER: Sigmund Freud [or Sigismund Schlomo Freud]

<Psychology — Ashbrook> [Edited]

3. The CLAW ("claw") hypothesis posits that these structures will form more frequently as warmer temperatures induce phytoplankton growth, causing a negative climate feedback loop. A technique named for the "brightening" of these structures would increase their albedo ("al-BEE-doh") using aerosols produced from seawater. An iridescent type of these structures that only forms during polar winters is termed (\*) "nacreous." Friction between ice particles can create large static discharges within these structures. These structures may be morphologically classified as cirrus, stratus, or cumulus. For 10 points, name these large, floating masses of

ANSWER: **cloud**s [accept marine **cloud** brightening or nacreous **cloud**s or cumulonimbus **cloud**s] <Earth, Atmospheric, and Ocean Science — Yin> [Edited]

3. This ruler was given the Iron Crown and the title of King of Italy after marching on Pavia. For 10 points each: [M] Name this ruler who was declared Holy Roman Emperor by Pope Adrian IV ("the fourth") in 1155 after suppressing the Commune of Rome. This ruler called the Diet of Roncaglia ("deet of rohn-CAH-l'yah") and was nicknamed for his red beard.

ANSWER: Frederick **Barbarossa** [or **Frederick I** or **Friedrich I** or **Federico I**; prompt on <u>Frederick</u> or <u>Friedrich</u> or <u>Federico</u>]

[H] Frederick Barbarossa lost the battle of Legnano ("lehn-YAH-noh") to this alliance which attempted to limit the influence of the Holy Roman Emperor over Italy. It was disbanded in 1250 after Frederick II's ("the second's") death.

ANSWER: <u>Lombard</u> League [or *Lega <u>Lombarda</u>* or *Liga <u>Lombarda</u>*]

[E] Frederick Barbarossa died while on the way to fight in the third one of these conflicts. The first of these conflicts was called by Pope Urban II ("the second") in order to retake the Holy Land and Jerusalem.

ANSWER: <u>crusade</u>s [accept Third <u>Crusade</u> or First <u>Crusade</u>]

<European History — Modali> [Ed. Iyer]

water, the sources of rain and snow.

4. This musician quoted a motif from *The Rite of Spring* while soloing on Neal Hefti's "Repetition." After drunkenly recording "Lover Man" in a session with Dial Records, this musician set fire to his mattress, leading to his arrest and transfer to Camarillo State Hospital. This musician's (\*) "Moose the Mooche" is named after his heroin dealer. This musician borrowed the harmonies of "I Got Rhythm" and "Cherokee" for his standards "Anthropology" and "Koko," which exemplify a rapid, complex style he pioneered with Dizzy Gillespie. For 10 points, name this virtuoso bebop saxophonist nicknamed "Bird."

ANSWER: Charlie <u>Parker</u> <Jazz — French> [Edited]

4. This scientist observed how the path of dye in water changes when the flow velocity is increased in a classic experiment on the transition to turbulent flow. For 10 points each:

[M] Name this scientist. To explain the results of that experiment, this scientist defined a namesake dimensionless parameter that takes high values for turbulent flow.

ANSWER: Osborne **Reynolds** [accept **Reynolds** experiment or **Reynolds** number]

[E] Reynolds computed that parameter, the Reynolds number, by nondimensionalizing this quantity. This quantity describes a fluid's resistance to flow.

ANSWER: <u>viscosity</u> [accept kinematic <u>viscosity</u> or dynamic <u>viscosity</u>]

[H] After it was injected at a point near the head of a pipe, the dye in Reynolds' experiment flowed along one of these paths. Unlike pathlines, points along one of these paths continue to flow with the fluid as time increases.

ANSWER: **streakline** [do NOT accept or prompt on "streamline"]

<Physics — French> [Edited]

5. A criminal in this city asked for one of its leaders to give his hand in good faith, then chided that leader for shaking hands with his brother's killer. A leader of this city organized the "hill dwellers" into a bloc after this city's victory over Megara. This city underwent a coup by the Council of Four Hundred that overthrew a leader of this city who led the (\*) Sicilian Expedition. Pisistratus and Alcibiades ("al-suh-BIE-uh-deez") both led this city, which created a large fleet of triremes that, under the leadership of Themistocles, won the battle of Salamis. For 10 points, name this city led by Pericles during the Peloponnesian war that created the world's first democracy.

ANSWER: **Athens** [or **Athina** or **Athênai**]

<European History — Felix Wang> [Ed. Iyer]

5. The Nine Tripod Cauldrons supposedly forged by Yǔ the Great symbolize this doctrine. For 10 points each: [M] Name this doctrine used to justify the rule of Chinese kings and emperors. King Zhuāng of Chǔ's inquiry about the weight of the Nine Tripod Cauldrons was an indirect way of threatening the Zhōu Dynasty's hold on this doctrine.

ANSWER: **Mandate of Heaven** [or **Tiānmìng**; accept Shàng**tiān** de shǐ**mìng**]

[E] The Nine Tripod Cauldrons were ritual vessels made of this material. The Shāng and Zhōu Dynasty both existed during the age named for this material, which succeeded the Stone Age.

ANSWER: **bronze** [or **tóng**; accept qīng**tóng**qì or ritual **bronze**s; accept **Bronze** Age]

[H] Much of the extant information about the Nine Tripod Cauldrons, including their supposed loss in the Sì ("sih") River, is recorded in this text written by Sīmă Qiān ("CHEE-en") during the Hàn Dynasty.

ANSWER: **Records of the Grand Historian** [or **Shǐjì**]

<World History — Jeffrey Ma> [Edited]

6. J.R.R. Tolkien based the life of Túrin Turambar off of a character in this text who speaks to his sword before stabbing himself with it. In this text, a witch sends forth nine diseases and steals the sun and the moon. According to this text, the world is created from the egg of the duck, with the yolk becoming the sun. A shepherdess in this text becomes (\*) pregnant with a future king after eating a berry. A character in this text uses the bones of a pike to create a harp called the kantele ("KON-teh-leh"). At the end of this text, that character travels to Pohjola ("POH-h'yoh-lah") to steal the Sampo and return it to Ilmarinen ("EEL-mah-ree-nun"). For 10 points, name this national epic of Finland.

ANSWER: Kalevala (The character in the first line is Kullervo.)

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

- 6. When the difference in electronegativity between two atoms is less than 2.1, they can form this type of bond. For 10 points each:
- [E] Name this type of bond. In this type of bond, electrons are shared between atoms, unlike ionic bonds, which completely transfer the electrons.

ANSWER: **covalent** bond

[M] Covalent bonding can contribute to the structure of coordination complexes, which consist of a metal ion bonded to one or more of these species. These species are called "polydentate" when they have multiple donor atoms.

ANSWER: <u>ligand</u>s [prompt on <u>Lewis bases</u> or <u>nucleophiles</u>]

[H] This theory for describing coordination complexes disregards the covalent characteristics of metal-ligand bonds. This theory explains the color and magnetic properties of coordination complexes.

ANSWER: **crystal field** theory [or **CFT**; do NOT accept or prompt on "ligand field theory" or "LFT"] <Chemistry — Daniel Ma> [Ed. Bowman]

7. Two different versions of the word hoi ("hoh-ee") distinguished by tone were initially believed to be these words in one language. The Kobon ("khohm-bohn") language derives most of these words from names for parts of the body. Along with colors, Daniel Everett claims that the Pirahã ("PEE-dah-hah") language has none of these types of words. In the (\*) Mayan script, these words are represented with bar, dot, and shell glyphs. Mayan, like Basque, uses a vigesimal ("VEYE-jeh-sim-uhll") system for these types of words. The book *Liber Abaci* ("LEE-bear AH-bah-chee") introduced the Arabic symbols for these kinds of words to Europe. For 10 points, name these types of words that in English include "two" and "three".

ANSWER: **numeral**s [accept **number** words or **number**s]

<Other — McAvoy-Bickford> [Ed. Ashbrook/McAvoy-Bickford]

- 7. In August, the US State Department suspended this practice and tax exemptions for Hong Kong, after Hong Kong had earlier lost its special trading status. For 10 points each:
- [M] Name this action, which a bill for in the summer of 2019 started many Hong Kong protests. That bill for this action would have applied to doing this action from Hong Kong to both Taiwan and mainland China.

## ANSWER: extradition

[E] This country also suspended its extradition agreement with Hong Kong, but this country led by Boris Johnson offered residents of Hong Kong, its former colony, a path to citizenship after a Hong Kong national security law was passed.

ANSWER: The **<u>United Kingdom</u>** [accept the **<u>UK</u>** or Great **<u>Britain</u>**]

[H] This Hong Kong entrepreneur and Apple Daily owner was arrested under a recent Hong Kong national security law, and the headquarters of a company he founded, Next Digital, were ransacked.

ANSWER: Jimmy <u>Lai</u> [accept <u>Lai</u> Chee-Ying] <Current Events — McAvoy-Bickford> [Edited]

8. Followers of this ideology formed the Bresci ("BRESH-shee") circle in East Harlem. A London-based "International Congress" for followers of this ideology advocated planned assassinations to be used as "propaganda of the deed." Followers of this ideology allegedly exploded a horse-drawn wagon laden with dynamite and sash weights during a 1920 bombing attack on (\*) Wall Street. Two followers of this ideology were denied appeals by Judge Webster Thayer for committing a robbery in Braintree, Massachusetts. Luigi Galleani and Emma Goldman advocated for this ideology, which was held by Sacco and Vanzetti. For 10 points, name this ideology which advocates for the abolition of the state.

ANSWER: <u>anarchism</u> [accept word forms like <u>anarchist</u> or <u>anarchy</u>; accept <u>Galleanism</u> or <u>Galleanist</u>s before "Luigi Galleani" is mentioned]

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

8. For 10 points each, answer the following about the joint piano piece *Hexameron*:

[E] The project was led by this virtuoso pianist best known for his piano transcription of Niccolo Paganini's *La campanella* and his own composition *Hungarian Dance No. 2*.

ANSWER: Franz Liszt

[H] Liszt musical contribution to the *Hexameron* project included the second variation and the *thema*, which is a transcription of the "March of the Pilgrims" from this composer's opera *I Puritani*.

ANSWER: Vincenzo Bellini

[M] The *Largo* sixth variation of *Hexameron* was written by this composer and friend of Liszt's. His other piano compositions include his Ballade No. 1 in G-minor, the first in a set of four.

ANSWER: Frederic Chopin

<Classical Music — Bowman> [Edited]

9. In a play by this author, patrons at a cafe force a housewife to have a drink after her cat was trampled to death. In another play by this author, a maid reveals that two children have different red and white eyes; that maid later reads a poem titled "The Fire." This author wrote a play in which the Old Man and the Old Woman (\*) jump out of a window after the arrival of a group of invisible guests. The Fire Chief tells stories during a dinner party with the Smiths and Martins in a play by this author of *The Chairs*. For 10 points, name this Romanian playwright of *Rhinoceros* and *The Bald Soprano*.

ANSWER: Eugène **Ionesco** [or Eugen **Ionescu**]

<Drama — Orr> [Edited]

9. Members of a Christian denomination named after this holiday believe that adherents must be baptized not only by water but also by the Holy Spirit. For 10 points each:

[M] Name this holiday commemorating the descent of the Holy Spirit upon Jesus's disciples, which allowed them to speak in tongues.

ANSWER: **Pentecost** [accept **Pentecostalism**]

[H] Pentecostalists base their belief in the requirement for the baptism of the Holy Spirit in this passage, where Jesus tells his disciples to "go therefore, and teach all nations, baptizing them in the name of the Father, and of the Son, and of the Holy Spirit."

ANSWER: <u>Great Commission</u> [or <u>Matthew 28</u>:16–20 or <u>Mark 16</u>:14–18 or <u>Luke 24</u>:44–49 or <u>John 20</u>:19-23 or <u>Acts 1</u>:4–8]

[E] Oneness Pentecostals reword the Great Commission due to their disapproval of this doctrine that the Father, the Son, and the Holy Spirit are three persons in one godhead.

ANSWER: the Holy **Trinity** [or **trinitarianism**]

<Religion — Dai> [Edited]

10. Replacing two variables in the definition of this quantity with RT ("R-T") demonstrates that this quantity is a function of temperature for an ideal gas. The standard change in this quantity is divided by RT<sup>2</sup> ("R T-squared") in the van 't Hoff ("vant hoff") equation. The initial and final values of this quantity are equal in a (\*) throttling process. The change in Gibbs free energy for a reaction equals the change in this quantity minus TΔS ("T delta-S"). The change in this quantity for an overall reaction equals the sum of its change for each individual step, according to Hess's law. This quantity equals internal energy plus the product of pressure and volume. For 10 points, name this thermodynamic potential symbolized H.

ANSWER: enthalpy [prompt on H before "H"]

<Chemistry — Condron> [Ed. French]

10. A Belgian priest collects African masks to preserve the so-called "true Africa" in this novel. For 10 points each: [H] Name this novel narrated by the Muslim merchant Salim. Salim's friend Mahesh opens a BigBurger franchise in this novel, which is set in an unnamed African country ruled by the "Big Man."

ANSWER: A Bend in the River

[M] A Bend in the River is a novel by this author. In this author's novel A House for Mr. Biswas, a man who is born with an extra finger inadvertently marries into the Tulsi family.

ANSWER: V. S. Naipaul [or Vidiadhar Surajprasad Naipaul]

[E] Naipaul's novel *A House for Mr. Biswas* centers around Trinidadians descended from immigrants from this country. Modern authors originally from this country include Vikram Seth, Arundhati Roy, and Salman Rushdie.

ANSWER: **India** [or Republic of **India** or **Bhārat** Gaṇarājya]

<Long Fiction — Athreya> [Ed. Mayers]

11. The most widely-spoken creole in this country is characterized by th-stopping and falling intonation when asking questions. A common dialect in this country has unique tenses such as past recent and future immediate and often features copula dropping. William Labov ("luh-BOHV") studied the connection between social status and pronunciation of the "r" sound in three (\*) department stores in this country. One region of this country has a unique pronoun that is a corrupted form of "you ones" pronounced "yinz." A non-rhotic accent in this country is often demonstrated with the phrase "park the car." For 10 points, name this country that contains dialects like AAVE ("A-A-V-E") and Pennsylvania Dutch.

ANSWER: <u>United States</u> of America [or <u>U.S.</u>A.] (The creole mentioned is the confusingly-named Hawaiian Pidgin.)

<Other Social Science — Ashbrook> [Edited]

- 11. In a musical role originated by this singer, she declares that she's "through with playing by the rules of someone else's game" and that "It's time to try defying gravity." For 10 points each:
- [M] Name this singer who played Elphaba in the musical *Wicked*. She also voiced a character that sings "Let the storm rage on / the cold never bothered me anyways."

ANSWER: Idina Menzel [do NOT accept or prompt on "Adele Dazeem"]

[E] Menzel won both an Oscar and a Grammy for singing "Let It Go" as Elsa in this Disney movie.

ANSWER: Frozen

[H] Menzel rose to fame playing this character in the musical *Rent*, who breaks up with Mark to begin a relationship with Joanne. Mark and Joanne sing and dance a tango named for this character.

ANSWER: Maureen [accept "Tango: Maureen"]

<Misc. Art — Ye> [Ed. Jeffrey Ma]

- 12. The first row and column of the Faraday tensor each contain components of this quantity divided by the speed of light. In ohmic ("OH-mick") materials, current density equals conductivity times this quantity. The closed path integral of this quantity is equal to the negative time derivative of magnetic flux by one form of (\*) Faraday's law. The flux of this quantity through a closed surface is proportional to the enclosed charge, according to Gauss's law. This quantity is zero inside a conductor, and it is uniform inside a parallel-plate capacitor. For 10 points, name this vector field measured in Newtons per Coulomb that describes the force between charges. ANSWER: electric field [accept electric after "field"; prompt on E or E-field]

  <Physics Ye> [Ed. French]
- 12. This future country's island of Gorée ("goh-RAY") was named a French *commune* in 1872 and elected Blaise Diagne ("blez dee-ANN") as its first mayor. For 10 points each:
- [M] Name this country whose first president was Léopold Senghor ("sahng-GORE"). This West African country moved its capital city from Saint-Louis ("san LOO-ee") to a city on the Cap Vert ("cap vare") peninsula in 1960. ANSWER: **Senegal** [or *Alsinighal*] or *République du Sénégal* or *Réewum Senegaal* or *Jumhuriat Alsinighal*]
- [E] The island of Gorée was home to the so-called "House of [these people]," many of whom were sent across the Atlantic to work on sugar farms in the Caribbean.

ANSWER: **slaves** [or chattel **slaves**]

[H] Before the founding of Senegal, Leopold Senghor served as president of a Federation with this country led by Modibo Keïta ("moh-dee-BOH kay-TAH"). In 2012, this country experienced a Tuareg ("TWAH-reg") uprising that declared the northern Azawad ("AZ-uh-wahd") region independent.

ANSWER: <u>Mali</u> [or *République du <u>Mali</u>* or <u>Mali</u> ka Fasojamana; accept <u>Mali</u> Federation] <World History — Iyer> [Edited]

13. James Cantlie helped free a future leader of this party after that leader was held hostage in a London embassy. One of this party's leaders came to power while serving as superintendent of the Whampoa Military Academy. After this party perpetrated the 228 massacre, it enacted a period of repression known as the White Terror. A leader of this party advocated for livelihood of the people among his (\*) Three Principles of the People. After a leader of this party was captured at Xi'an ("SHEE-ahn"), this party was forced to ally with the Communists against Japan. For 10 points, name this party led by Chiang Kai-Shek and Sun Yat-Sen that fled to Taiwan after losing the Chinese Civil War.

ANSWER: <u>Kuomintang</u> [accept <u>Guómíndăng</u> or <u>KMT</u> or Chinese <u>Nationalist</u> Party] <World History — Louis Li> [Ed. Laurence Li, Iyer]

- 13. At the beginning of this work, the central speaker asks Cosimo Rucellai ("roo-cheh-LYE") why he has imitated the ancients in the "soft and delicate" things and not the "strong and rugged." For 10 points each:
- [H] Name this dialogue in which the mercenary captain Fabrizio Colonna argues the merits of a Roman-style citizen army.

ANSWER: The Art of War [or Dell'arte della Guerra]

[E] This Florentine Renaissance thinker authored the *Art of War*. He also advocated for a citizen army in *The Prince*, which includes the maxim that it is "better to be feared than loved."

ANSWER: Niccolò Machiavelli

[M] Machiavelli discussed the importance of using virtù, or power, to tame this destructive force. Machiavelli likened this unpredictable force to a dangerous river that can be held off with "dykes or embankments" created using virtù.

ANSWER: **fortuna** [or **fortune**; prompt on <u>luck</u>] <Philosophy — Rollin> [Ed. Ashbrook]

14. Poems in this form written about a cross-country road trip by Jack Kerouac and two other Beat Generation authors are collected in *Trip Trap.* R. H. Blyth inspired the composition of four thousand of these poems by Richard Wright. This genre *inspired* a poem that states, "The (\*) apparition of these faces in the crowd; petals on a wet black bough." English poems in this genre sometimes use an ellipsis to replace hard-to-translate "cutting words." Poems in this genre use a seasonal reference, or *kigo*. For 10 points, name this Japanese poetic genre that consists of two lines of five morae split by a line of seven morae.

ANSWER: haiku

<Poetry — McAvoy-Bickford> [Ed. Condron]

- 14. Every file written in this language must begin with a package statement. For 10 points each:
- [H] Name this language created by Google developers. It is similar to C, but it has much simpler syntax and includes garbage collection and concurrency as core features.

ANSWER: **Go** [or **Golang**]

[M] Go's type system is described by this word, because variables in Go are permanently assigned a type. In object-oriented programming, properties described by this word belong not to individual objects but to the entire class.

ANSWER: **static** [accept **static** types or **static** typing or **static** typed or **static** variables or **static** properties] [E] In Go, both the "for" and "while" types of these constructs can be created using the for keyword. These constructs run a set of instructions multiple times and can be infinite if their termination condition is invalid.

ANSWER: **loops** [or for **loops** or while **loops** or infinite **loops**]

<Computer Science — Gurazada> [Edited]

15. The Sec61 ("sek sixty-one") complex comprises the pores of this structure's translocons. This structure contains protein disulfide isomerase, which oxidizes cysteine ("SIST-eh-een") residues to form disulfide bonds. Signal recognition particles guide newly-synthesized polypeptide chains to this structure. Phospholipid and steroid synthesis occurs inside a type of this structure that also (\*) detoxifies drugs such as ethanol. Vesicles coated with COPII ("cop two") transport folded proteins from this structure to the Golgi apparatus. This component of the endomembrane system is often studded with bound ribosomes. For 10 points, name this organelle which comes in "smooth" and "rough" varieties.

ANSWER: <u>endoplasmic reticulum</u> [or ER; accept rough <u>endoplasmic reticulum</u> or smooth <u>endoplasmic reticulum</u> or rough ER or smooth ER]

<Biology — Yin> [Edited]

- 15. A scene in which the poet Riukhin addresses a statue of this author parodies Vladimir Mayakovsky's poem "Jubilee." For 10 points each:
- [H] Name this author of "The Blizzard." In a novel by a different author, Riukhin angrily claims that this author became famous due to "sheer luck," in spite of the boring opening lines of "The Blizzard."

ANSWER: Alexander **Pushkin** 

[M] Riukhin is one of the several writers who works for Massolit in this novel. The Devil visits Moscow in the guise of Professor Woland in this novel by Mikhail Bulgakov.

ANSWER: The <u>Master and Margarita</u> [or <u>Master i Margarita</u>]

[E] Mikhail Bulgakov satirized Mayakovsky and other writers from this country in *The Master and Margarita*. Fear of repression by this country's government caused Bulgakov to burn a draft of the novel in 1930.

ANSWER: the <u>USSR</u> [or the <u>Soviet Union</u> or the <u>Union of Soviet Socialist Republics</u> or <u>Soyuz Sovetskikh</u> <u>Sotsialisticheskikh Respublik</u> or <u>CCCP</u>; accept <u>Russia</u>]

<Long Fiction — Faeder> [Edited]

16. After noticing that arms and ammunition were the only goods being sent to one of this country's colonies, shipping clerk Edmund Morel began advocating against this country's colonial policy. A king of this country wrote the letter "The Sacred Mission of Civilization." A report documenting the atrocities committed in a colony of this country was written by Irish nationalist (\*) Roger Casement. Adam Hochschild wrote a book about the "ghost" of one of this country's kings. This country's Force Publique cut off workers' hands if they did not produce enough rubber. For 10 points, name this country whose King Leopold II ("the second") colonized the Congo.

ANSWER: **Belgium** [or Kingdom of **Belgium**; accept **Belgian** Congo; do NOT accept or prompt on "Congo Free State"]

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

16. For 10 points each, answer the following about the physical geography of the India-Pakistan border:

[M] The Indus River and four of its tributaries name this region of fertile floodplain straddling the border near its northern end. Both Pakistan and India have administrative units named for this region.

ANSWER: Punjab Plain

[E] The Thar one of these regions also spans the border, south of the Punjab. Like the Sahara, another subtropical example of these regions, it is characteristically dry and hot.

ANSWER: desert

[H] The Thar desert contains the Rann of Kutch, which bridges the Sindh province of Pakistan and the Indian state of Gujarat, and is one of these wet environments regularly flooded by tides.

ANSWER: **salt marsh** [prompt on <u>marsh</u>] <Geography — Daniel Ma> [Edited]

17. When applied to a meromorphic ("MARE-oh-MORPH-ick") function, this operation can be computed by summing residues at the function's singularities. Applying one type this operation over a surface is equivalent to applying another type over its boundary, according to a formulation of Stokes' theorem. A factor equal to the determinant of the Jacobian appears when applying a (\*) change of variables to multiple instances of this operation. Partial fraction decomposition is often performed before applying this operation to a rational function. This operation can be defined as the limit of a Riemann ("REE-mawn") sum. For 10 points, name this operation from calculus that finds the area under a curve.

ANSWER: <u>integration</u> [accept word forms like <u>integral</u>; accept definite <u>integration</u> or indefinite <u>integration</u> or complex <u>integration</u> or contour <u>integration</u> or double <u>integration</u> or multiple <u>integration</u> or surface <u>integration</u> or line <u>integration</u> or Riemann <u>integration</u>; prompt on <u>anti-differentiation</u>]

<Math — Ye> [Ed. French]

17. A 1946 painting depicts these objects in a V-formation surrounded by snow. For 10 points each:

[H] Name these objects. Another painting of one of these objects at the D.H. Lawrence Ranch views it from below against a night sky filled with stars.

ANSWER: <u>tree</u>s [or tree <u>trunk</u>s; accept ponderosa <u>pine</u> or *The <u>Lawrence Tree</u>*]

[M] *The Lawrence Tree* was painted in this U.S. state. Other paintings created in this U.S state include *Cow's Skull: Red, White, and Blue* and *Cow's Skull with Calico Roses*.

ANSWER: New Mexico

[E] Both *The Lawrence Tree* and those cow skull paintings were created by this American artist, who moved to New Mexico after the death of her husband, Alfred Stieglitz.

ANSWER: Georgia O'Keeffe

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

18. Early in his career, this player failed to break a tie with the Utah Jazz when he made four airballs in five minutes. In one video, this player is shown not flinching when Matt Barnes pretends to throw the ball at his face. This player scored (\*) 81 points in a game against the Raptors, the second highest in NBA history. This player took a record 50 shots and scored 60 points in his final game. Both of this man's jersey numbers, 8 and 24, are retired in the Staples Center. The nickname "Black Mamba" was given to, for 10 points, what former star shooting guard for the Los Angeles Lakers who died in a helicopter crash?

ANSWER: Kobe <u>Bryant</u> [or <u>Kobe</u>] <Venkateswaran> [Ed. Maharjan]

- 18. The speaker of "Asphodel, That Greeny Flower" says that "All women are not [this woman]... / but have [this woman] in their hearts." For 10 points each:
- [H] Name this woman whose "public fault" the speaker of "Asphodel" is reminded of when he thinks of dancing and reading by the sea with his wife. A book-length poem by H.D. is titled [This Woman] in Egypt.

ANSWER: **Helen** of Troy [or **Helena** or **Helen** of Sparta]

[E] "Asphodel, That Greeny Flower" was written by this poet of "This Is Just To Say" and "The Red Wheelbarrow." ANSWER: William Carlos **Williams** 

[M] Williams and H.D. were members of this poetic movement, which is exemplified by Williams' "The Red Wheelbarrow." Ezra Pound was a founding member of this movement, which shunned Romanticism and emphasized concise wording and clear description.

ANSWER: imagism

<Poetry — Faeder> [Edited]

19. In a symphony by this composer, the oboes crescendo and trumpets decrescendo over timpani beat and snare drum roll while resolving from A major to the symphony's home key of A minor. Part II of a symphony by this composer contains arias for Pater Ecstaticus and Pater Profundis and has a finale titled "Chorus Mysticus." This composer set (\*) Goethe's ("GUR-tuh's") Faust to music in his eighth symphony, which begins with an E-flat major organ chord played under a chorus singing the hymn "Veni creator spiritus." This composer wrote his "Tragic" sixth symphony shortly after his marriage to Alma Schindler. For 10 points, name this late Romantic composer of the "Symphony of a Thousand."

ANSWER: Gustav Mahler

<Classical Music — Bowman> [Edited]

- 19. These ecosystems' namesake animals may expel their symbiotic zooxanthellae ("zoo-ZAN-thel-ay") during heat stress in a process known as bleaching. For 10 points each:
- [E] Name these diverse marine ecosystems. The "Great Barrier" one of these is located northeast of Australia. ANSWER: **coral reef**s [prompt on <u>reef</u>s]
- [H] These herbivorous fish feed by scraping algae off of coral reefs using specialized beaks, contributing heavily to bioerosion. White coral sand largely originates from the feces of these fish, which is rich in calcium carbonate.

ANSWER: <u>parrotfish</u> [or <u>Scaridae</u> or <u>Scarinae</u>]

[M] The coral-eating "crown-of-thorns" species of these echinoderms ("eh-KYE-noh-derms") threatens coral reefs in the Indo-Pacific region. These slow-moving, benthic predators typically feed by extruding their stomachs.

ANSWER: **star** fish [or sea **star**s or **Asteroidea**; accept crown-of-thorns **star fish**; do NOT accept or prompt on "brittle star"]

<Biology — Yin> [Edited]

20. In this novel, a character is called a "Christian Antigone" by her future lover as she studies a reclining statue of Ariadne. The uncle of this novel's protagonist quotes a sexist line from Virgil before Mrs.

Cadwallader fails to set that protagonist up with James Chettam. In this novel, Mr. Featherstone introduces the founder of New Fever Hospital, (\*) Dr. Lydgate, to Rosamond Vincy. The protagonist of this novel is reluctant to tell her sister Celia that she has become engaged to the unattractive Edward Casaubon (CAZ-uh-bahn"). For 10 points, name this novel by George Eliot in which Will Ladislaw marries Dorothea Brooke in the title town.

ANSWER: Middlemarch, A Study of Provincial Life

<Long Fiction — Tagtmeier> [Ed. Condron]

20. In the prologue of this play, a chorus laments that the title character's "waxen wings did mount above his reach." For 10 points each:

[M] Name this Christopher Marlowe play whose title scholar turns to "necromancy" and the demon Mephistophiles for power and riches.

ANSWER: <u>Doctor Faustus</u> [or *The Tragical History of the Life and Death of <u>Doctor Faustus</u>; do NOT accept or prompt on "Faust" or "Doctor Faust"]* 

[H] Mephistophiles summons these hellish figures in *Doctor Faustus*. One of these figures, who claims to be "begotten of a chimney sweeper and an oyster-wife," is called a "wretch" after calling for a worldwide famine.

ANSWER: the **seven deadly sins** [or the **cardinal sins**; prompt on sins; prompt on envy by asking "what group of

[E] *Doctor Faustus* is a play in this theatrical genre. Shakespeare's plays are traditionally categorized as histories, comedies, and plays in this genre, such as *Coriolanus* and *Othello*.

ANSWER: tragedy

<Drama — Orr> [Edted]

vices is envy a part of?"]