## 2022 ACF Fall

## Packet J by Editors

Edited by Steven Liu, Arjun Nageswaran, Dean Ah Now, Raymond Chen, Jim Fan, Sean Farrell, Evan Knox, Daniel Ma, Ned Tagtmeier, Eric Yin, and Walter Zhang.

## Tossups

1. On a show, this city's zoo retires a tuatara, prompting a character to also consider retirement. A building in this city illicitly receives rugs from NFL stadium workers on a show about residents of this city like Barbara Howard. Ingrid Nelson was bullied in this city alongside a character whose use of a back brace led to their nickname, "the Aluminum Monster." Sheryl Lee Ralph's character teaches at a school in this city alongside second-grade teacher Janine Teagues. A character's name is revealed as Ronald McDonald at a reunion in this city, where Frank Reynolds finances a group of friends who own Paddy's Pub. For 10 points, name this city that is the setting of *Abbott Elementary* and a TV show that claims it is "Always Sunny."

ANSWER: **Philadelphia** [or **Philly**; accept South **Philadelphia**; accept *It's Always Sunny in Philadelphia*] <Pop Culture>

- 2. Lantier works with these objects in his first profession in Émile Zola's *La Bête humaine*. Prince Myshkin first meets with Rogozhin at one of these objects in the opening of *The Idiot*. One of these objects causes the death of a drunken guard, which is taken as an "omen of evil" when a character meets a handsome count. That character is later killed by one of these objects, during which she imagines a light "flare up" and then be "quenched forever." A character is killed by these objects after abandoning her husband and becoming increasingly alienated from her lover Vronsky. For 10 points, Anna Karenina kills herself by throwing herself under what type of object?

  ANSWER: trains [accept locomotives; accept railcars; accept specific types of train cars such as caboose or passenger train; prompt on engines]

  <European Literature>
- 3. A constant that governs this process is measured in the steady state by Searle's bar method and has units of watts per meter kelvin. The flux of this process is given by that constant times the gradient of temperature. In one dimension, the rate of this process is proportional to the temperature difference divided by slab thickness according to Fourier's ("for-yay's") law. This process occurs slowly in materials with high R-values, such as glass wool and polystyrene. This process transfers energy through random collisions between particles when two objects are touching. For 10 points, name this mode of heat transfer contrasted with convection and radiation.

  ANSWER: thermal **conduction** [or heat being **conduct**ed or equivalents; prompt on <u>heat</u> transfer or <u>heating</u> or <u>warming</u> or <u>cooling</u> or <u>chilling</u> by asking "through what specific process?"; reject "electrical conduction"]

  <Physics>
- 4. A dance troupe in this country performs a "Thousand Hand" dance with deaf dancers to represent a native deity. A traditional dance from this country uses costumes with long sleeves that are thrown into the air to mimic flowing water. Legendarily, a ruler of this country was saved from assassination by the fabric of a hero's sleeve, giving rise to this country's ribbon dance. A dancer causes a piece of lettuce, symbolizing wealth, to be eaten by the mouth of a prop head in a Lion Dance often performed to celebrate this country's Lunar New Year. For 10 points, name this country whose dancers are often trained in disciplines like tai chi and kung fu.

ANSWER: <u>China</u> [or <u>Zhōngguó</u>; or People's Republic of <u>China</u> or <u>PRC</u>; or <u>Zhōnghuá</u> Rénmín Gònghéguó] <Other Fine Arts>

5. The most genetically intact skeleton of one of these people, dubbed "Naia," was found in an underwater cave. Potential evidence for a theory of these people's origin comes from Edward Vajda's claim that the Yeniseian and Na-Dené languages are related. These people are thought to have migrated using boats along "kelp highways" down the Pacific Coast. The outmoded Clovis-first theory stated that these people were initially big-game hunters who subsisted on and destroyed local megafauna. Some of these people may have migrated over the exposed Bering Land Bridge during the last Ice Age. For 10 points, name these people who settled the Americas before Europeans. ANSWER: Paleoindians [accept Native Americans or First Nations or any description of Indigenous people of the Americas; accept first settlers of the Americas; accept specific Native American peoples; prompt on Indigenous or Native people; prompt on Paleolithic people or prehistoric people; prompt on hunter-gatherers until "hunters" is read]

<Other History>

6. An "encyclopedia" of centers in shapes with this many sides is compiled by Clark Kimberling. This number is the only number in the Schläfli ("SHLAH-flee") symbols for simplexes, which generalizes shapes with this number of sides to higher dimensions. This many faces meet at each vertex of a regular dodecahedron. This is the number of sides of each face of an icosahedron. A formula for finding the area of shapes with this many sides is named for a man from Alexandria and involves taking the square root of the semiperimeter. This many non-collinear points determine a plane. For 10 points, Heron's formula can be used on polygons with what number of sides, which may be scalene or isosceles ("ai-SAH-suh-leez")?

ANSWER: <u>3</u> [or <u>three</u>] (The first sentence refers to the Encyclopedia of Triangle Centers.) <Other Science>

7. A mocking passage in this book describes a bargain made under the principles of "Freedom, Equality, Property, and Bentham." This book highlights inclosure and the expropriation of farmland as examples of primitive accumulation. This book contrasts a group that spends money in a CMC cycle with one that spends it in an MCM cycle. This book decries the separation of objects from relations of production as commodity fetishism. This book states that its title entity cannot generate value and must extract surplus value from workers. For 10 points, name this book that criticizes a system built around the title economic quantity, written by Karl Marx.

ANSWER: <u>Capital</u> [or Das <u>Kapital</u>] <Philosophy>

8. One of these rituals was the reason for the creation of the website "motawif." A non-prayer practice called ziyara is a type of this ritual. One of the largest of these rituals in the world celebrates Arba'een, a festival that occurs 40 days after Ashura in Karbala. During one of these rituals, participants stay at Muzdalifa in preparation for throwing seven stones at walls. One of these rituals includes sa'iy, in which participants travel between the small hills Ṣafā and Marwah near the Masjid al-Ḥarām. During one of these rituals, tawaf is performed by repeatedly circling the Kaaba. For 10 points, the fifth pillar of Sunni Islam requires what sort of religious observation exemplified by the Haji?

ANSWER: <u>pilgrimage</u> [accept <u>Haji</u> until read; accept <u>umrah</u>; accept descriptions of <u>travel</u>ing or <u>go</u>ing to specific places like Mecca, Mina, Karbala, Saudi Arabia, Iraq, tombs, or holy sites; accept specific modes of travel like <u>walking</u>] (motawif.com.sa is Saudi Arabia's hajj booking website.)

<Religion>

9. While resting under a "dark sycamore," the speaker of a poem by this author reflects on the "beauteous forms" of the landscape and imagines "some Hermit's cave, where by his fire / The Hermit sits alone." When "in vacant or in pensive mood," the speaker of a poem by this author recalls seeing objects that were "continuous as the stars that shine" and "tossing their heads in a sprightly dance." In a poem addressed to his "dear, dear Friend" and sister Dorothy, this author reminisces that "Five years have past" since he has been to the title location. For 10 points, name this English author of "Tintern Abbey," who wrote about seeing "a crowd, a host, of golden daffodils" in "I Wandered Lonely as a Cloud."

ANSWER: William Wordsworth

<British Literature>

<Painting/Sculpture>

10. This kingdom's noble class enjoyed unusually significant liberties during the reign of Louis the Hungarian. A 1505 meeting at a royal castle in Radom ("RAH-doam") cemented the privileges of this kingdom's nobility through the Act of *Nihil novi* ("NEE-heel NOH-vai"). The Constitution of 3rd May abolished a practice by which any member of this kingdom's legislature could prevent the passage of a law, known as the *liberum veto*. Casimir the Great was the last ruler of this kingdom's founding Piast dynasty. The last session of this kingdom's parliament, the Sejm ("same"), allowed Austria, Prussia, and Russia to annex its territory during the second of the three partitions it faced. For 10 points, Lithuania formed a commonwealth with what kingdom governed from Warsaw?

ANSWER: Poland [or Rzeczpospolita Polska or Lenkija; or Kingdom of Poland or Królestwo Polskie or Regnum Poloniae; accept Poland—Lithuania or Polish—Lithuanian Commonwealth or Kingdom of Poland and the Grand Duchy of Lithuania or Królestwo Polskie i Wielkie Księstwo Litewskie or Lenkijos Karalystė ir Lietuvos Didžioji Kunigaikštystė; accept Partitions of Poland]

<a href="mailto:kongdom/spall/energy/">karalystė ir Lietuvos Didžioji Kunigaikštystė;</a> accept Partitions of Poland

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<a href="mailto:kongdom/spall/energy/">karalystė ir Lietuvos D

- 11. Before releasing a creature, a character from this text supplies grain for seven years of famine and threatens to raise the dead. An alewife from this text questions the appearance of a traveler who wept for seven nights before entering the Tunnel of the Sun. In this text, the ferryman Urshanabi follows a character who straps rocks to his feet to reach an herb at the bottom of the ocean. Shamash uses seven winds to help two heroes from this text defeat a forest demon sent by Enlil. After this text's title character kills the Bull of Heaven, Ishtar convinces the gods to kill the wild man Enkidu. For 10 points, name this ancient Sumerian epic about a king of Uruk.

  ANSWER: The Epic of Gilgamesh [accept Shūtur eli sharrī or He who Saw the Deep or He who Saw the Abyss; or He who Sees the Unknown; accept Sha naqba īmuru or Surpassing All Other Kings]

  <Mythology>
- 12. This artist applied divisionist principles in a painting of blue-tinted bathers titled *Luxury*, *Calm*, *and Pleasure*. Sergei Shchukin commissioned this artist's painting *Music* and a companion piece to decorate his Moscow mansion. This artist arranged paper squares in the shape of a snail in the collage book *Jazz*. This painter's wife Amélie is depicted in *The Green Stripe* and *Woman with a Hat*. In response to criticism at the Salon d'Automne, this artist painted a golden-age landscape in *The Joy of Life*. This artist painted five primitive red nudes holding hands in a circle. For 10 points, André Derain co-founded Fauvism with what French painter of *The Dance*? ANSWER: Henri Matisse [or Henri Émile Benoît Matisse]

13. A freedom fighter who died fighting for this country at the Battle of Dos Ríos drafted the Manifesto of Montecristi, which he signed with Máximo Gómez. In the 1870s, the term "concentration camp" was first used to describe policies implemented in this country by a general nicknamed "Butcher Weyler." The independence hero Guillermo Moncada names a set of barracks in this country that was later attacked at the start of its 1950s revolution. A future leader of this country overthrew dictator Fulgencio ("full-HEN-see-oh") Batista with the help of Che Guevara and his brother Raul. For 10 points, name this country whose 19th-century independence struggle inspired the later actions of Fidel Castro.

ANSWER: <u>Cuba</u> [or Republic of <u>Cuba</u> or República de <u>Cuba</u>; accept Captaincy-General of <u>Cuba</u> or Capitanía General de <u>Cuba</u>]

<World History>

14. This author describes the "eye of a little god, four-cornered" in a poem that begins "I am silver and exact. I have no preconceptions." This author of "Mirror" depicted "God's lioness" moving "into the red / Eye, the cauldron of morning" in a poem about a horse. The title character of another poem by this author proclaims "Dying / Is an art, like everything else" and "I rise with my red hair / And I eat men like air." This author wrote "there's a stake in your fat black heart" in a poem that says "you bastard, I'm through" to the title "man in black with a Meinkampf look." For 10 points, name this American Confessional poet of "Daddy," whose collection *Ariel* was released after her 1965 suicide.

ANSWER: Sylvia <u>Plath</u> <American Literature>

15. In 2013, Massachusetts put records of these events on an online database, leading to certain types of people being blacklisted. That database fails to accurately notate which of these events is of its "no cause" type. Matthew Desmond won a 2017 Pulitzer Prize for a book about these events in Milwaukee. A "notice to quit" must be served a set duration before these events can be filed in court. When a writ of possession is executed during these events, it is the responsibility of the sheriff to remove belongings and change locks. For 10 points, name these events in which a landlord kicks a tenant out of a property.

ANSWER: <u>eviction</u> [accept <u>forcible detainer</u> or <u>forcible</u> entry and <u>detainer</u>; accept <u>Evicted</u>: Poverty and Profit in the American City]

<Current Events>

16. Upon reaching a valley, a leader of this group supposedly said "this is the place" to Wilford Woodruff. Members of this group who dressed up as Native Americans massacred the Baker–Fancher party. One of this group's leaders destroyed the *Expositor* newspaper and was killed by a mob while imprisoned with his brother Hyrum. This group migrated westward after being targeted by Missouri governor Lilburn Boggs in Executive Order 44 and being kicked out of Nauvoo, Illinois. This group used a word meaning "honeybee" as the name of their proposed state of Deseret. For 10 points, the Great Salt Lake Valley of Utah was settled by what church led by Brigham Young? ANSWER: **Mormon**s [or The Church of Jesus Christ of **Latter-day Saints** or **LDS**; or the **Mormon** Church; or **Mormon**ism; prompt on <u>followers</u> of Joseph <u>Smith</u> or <u>followers</u> of Brigham Young]

<American History>

17. Aristide Cavaillé-Coll ("arr-iss-TEED cah-vah-yay-COAL") first implemented the Barker lever in one of these instruments played by César Franck ("say-zar FRONK"), who wrote his *Grande Pièce Symphonique* for it. Olivier Messiaen ("oh-leev-YAY mess-YAWN"), who also played this instrument, wrote *L'Ascension* for it. Charles-Marie Widor's ("sharl mah-REE vee-DORE's") fifth symphony for this instrument includes a G major Toccata often played as recessional music. This instrument enters with a majestic C major chord in a Camille Saint-Saëns ("kah-meel san-SONCE") symphony named for it. "Stops" control the flow of air from a bellows through this instrument played with manuals and pedals. For 10 points, name this largest instrument in Western music, a keyboard instrument that uses pipes to produce sound and is often found in churches.

ANSWER: pipe <u>organ</u> [accept <u>Organ</u> Symphony or Symphonie No. 3 "avec <u>orgue</u>"] <Classical Music>

18. A form of this technique using silver nitrate was once widely used to measure salinity in seawater. Another form of this technique uses manganese ions to measure oxygen concentration and is named for Lajos Winkler. A point in this technique at which half the analyte has reacted is, according to the Henderson–Hasselbalch equation, where the solution's pH equals its pKa ("P-K-A"). The colorimetric form of this technique uses a substance like phenolphthalein ("FEE-nul-THAY-leen") or bromothymol blue to indicate when the equivalence point is reached. For 10 points, name this technique in which a fluid is added drop-by-drop to find the unknown concentration of a solution.

ANSWER: <u>titration</u> [accept Winkler <u>titration</u> or colorimetric <u>titration</u>; prompt on <u>Winkler</u> test until read] <Chemistry>

19. This language is called a "cultural bomb" in an essay collection that bids "farewell to [this language]." "Break any of these rules sooner than say anything outright barbarous" is the last of six writing rules proposed by an essay about this language's political writing. The decision to stop using this language was described by Ngũgĩ wa Thiong'o ("eng-GO-gay wah thee-AWN-go") in *Decolonizing the Mind*. In a novel, a dictionary for a version of this language is created by Syme, who disappears from a Chess Committee member list. One of three superstates in that novel institutes a fictional version of this language called Newspeak that uses compound words like "doublethink." For 10 points, name this language used by George Orwell to write *1984*.

ANSWER: <u>English</u> [accept <u>Newspeak</u> until read; accept <u>Oldspeak</u>] (The second line refers to "Politics and the English Language" by George Orwell.)

<World/Other Literature>

20. It's not starvation, but a condition in which this process occurs too frequently is caused by low levels of the neuropeptide orexin ("or-EX-in"). The suprachiasmatic ("SOO-pruh-kee-uhz-MAT-ick") nucleus regulates the secretion of a hormone that promotes this process from the pineal gland. A "paradoxical" form of this process is interrupted by the tightening of chest muscles in a condition that is treated by a CPAP ("SEE-pap") machine. "Spindles" named for this process appear in EEG readings that measure its progression and also feature theta waves. The hormone melatonin promotes this process, whose forms includeNREM and REM. For 10 points, name this temporary state of unconsciousness that is inhibited in insomnia.

ANSWER: **sleep** [or **sleeping** or being **asleep**; accept REM **sleep** or paradoxical **sleep**; accept NREM **sleep** or non-REM **sleep**; accept **sleep** spindles] <Biology>

## Bonuses

1. This element, aluminum, and hydrogen form a powerful reducing agent used to convert carbonyl ("car-buh-NEEL") groups into alcohols. For 10 points each:

[10m] Name this metal whose cations ("CAT-ai-ons") become intercalated ("in-TUR-kuh-lay-ted") in a graphite matrix in certain devices.

ANSWER: lithium [or Li]

[10e] Lithium ions are commonly used in rechargeable types of these devices that store electrical power.

ANSWER: **batteries** [or **battery**]

[10h] This radioactive isotope used in nuclear fusion is produced by bombarding lithium with neutrons. This isotope is also used for glow-in-the-dark watch dials and gun sights.

ANSWER: <u>tritium</u> [or <u>hydrogen-3</u> or <u>T</u> or <sup>3</sup>H; reject "hydrogen" or "H"]

<Chemistry>

2. After causing Heracles to go mad and slay his children with Megara, Hera controlled a priestess at one of these locations to tell him to serve King Eurystheus. For 10 points each:

[10e] Name these religious sites at places like Dodona, where the gods' attendants gave out prophecies. Apollo took control of one of these places at Delphi after slaying the Python that Hera sent to attack his mother.

ANSWER: oracles [accept Delphic Oracle or Oracle of Delphi]

[10m] By fulfilling a prophecy given to King Pelias, Hera caused this hero to be sent on a deadly quest to Colchis. On that quest, the seer Phineas advised this hero to follow a dove when sailing through the Clashing Rocks.

ANSWER: **Jason** [or **Iasion** or **Iásōn**]

[10h] This city's oracle was punished by Hera for seven years as a result of hitting two mating snakes with a stick. This city was founded on an oracle's advice to follow a cow with a half-moon on its flank until it sat down.

ANSWER: Thebes [or Thêbai or Thíva]

<Mythology>

3. At the first International Bach Competition, Tatiana Nikolayeva was so proficient that this composer, who was serving as a judge, was inspired to write his "24 Preludes and Fugues" in every major and minor key for her. For 10 points each:

[10h] Name this Soviet composer who also wrote a jazzy "Waltz No. 2" in C minor.

ANSWer: Dmitri Shostakovich [or Dmitri Dmitriyevich Shostakovich]

[10m] Nikolayeva had been able to play any selection from this Bach collection of preludes and fugues in every major and minor key, despite not being required to. Shostakovich quoted from it frequently in his collection.

ANSWER: The Well-Tempered Clavier [or Das wohltemperierte Klavier or Das Wohltemperirte Clavier]

[10e] In his A major fugue, Shostakovich uses musical harmony that lacks this quality for the entire piece. This quality is the opposite of consonance.

ANSWER: dissonance [or word forms like dissonant]

<Classical Music>

4. This theorem is named for the economist who introduced it in the paper "The Problem of Social Cost." For 10 points each:

[10m] Name this theorem that states that negotiating over property rights will produce an efficient outcome regardless of which party obtains the rights.

ANSWER: **Coase** theorem

[10e] The Coase theorem holds when transaction costs are zero, meaning that this process of price negotiation is free. Unions engage in the "collective" type of this process in order to determine the wages of their workers.

ANSWER: **bargain**ing [accept collective **bargain**ing]

[10h] The Coase theorem is central to capitalist perspectives on this field of economics. Regulations debated in this field include command and control and cap-and-trade systems.

ANSWER: <u>environmental</u> economics [prompt on answers about <u>climate</u> change] <Social Science>

5. A character annoys his boss by taking both Friday and the following Monday off work to attend one of these events, during which Thomas Perez faints from heat. For 10 points each:

[10h] Name this type of event where a character's detached and emotionless behavior is later used at his trial as proof that he is "a criminal at heart."

ANSWER: a **funeral** [or **burial** or equivalents; accept the **funeral** of Meursault's mother]

[10e] This novella begins with Meursault attending his mother's funeral. A priest fails to convince Meursault to turn to God after he is convicted for shooting an Arab in this Albert Camus novel.

ANSWER: *The Stranger* [or *L'Etranger* or *The Outsider*]

[10m] In this other Camus novel, the Jesuit priest Father Paneloux claims that a lack of devotion to God causes the title epidemic to afflict the city of Oran.

ANSWER: *The Plague* [or *La peste*]

<European Literature>

6. This leader used the phrase "women hold up half the sky" to explain his government's attitude towards the equality of the sexes. For 10 points each:

[10m] Name this world leader whose other famous aphorisms include "politics is war without bloodshed."

ANSWER: Máo Zédōng [or Chairman Máo; or Mao Tse-Tung]

[10e] The aforementioned aphorism was included in a "little" book named after this color, which also appears on the background of the Chinese flag.

ANSWER: **red** [accept *Little Red Book* or *Hóng bǎo shū*]

[10h] Though Máo dismissed the atomic bomb as a "paper tiger," China began its own nuclear program after a "crisis" in this body of water. China bombed the Quemoy ("kuh-MOI") and Matsu ("mot-SOO") islands in a later crisis in this location.

ANSWER: <u>Taiwan Strait</u> [or <u>Táiwān Hǎixiá</u> or <u>Tâi-ôan Hái-kiap</u>; accept <u>Taiwan Sea</u> or <u>Táihǎi</u>; accept First <u>Taiwan Strait</u> Crisis or 1954–1955 <u>Taiwan Strait</u> Crisis; accept Second <u>Taiwan Strait</u> Crisis or 1958 <u>Taiwan Strait</u> Crisis; prompt on <u>South China Sea</u> or <u>Nánhǎi</u> or <u>Nán</u> Zhōngguó <u>Hǎi</u>; prompt on <u>Pacific</u> Ocean]

<World History>

7. In a play by this author, a doctor interrupts a poker game to take away a character who admits that she "[has] always depended on the kindness of strangers." For 10 points each:

[10e] Name this playwright who depicted Blanche Dubois in A Streetcar Named Desire.

ANSWER: Tennessee Williams [or Thomas Lanier Williams III]

[10h] Blanche partakes in this activity while listening to a polka when Mitch arrives to break up with her. In a different Williams play, Brick engages in this behavior until he hears a "click."

ANSWER: **drink**ing alcohol [or descriptions of the consumption of **alcohol**]

[10m] Brick and Maggie's deteriorating marriage is central to this Tennessee Williams play, in which the Pollitt family lies to Big Daddy about his cancer diagnosis.

ANSWER: Cat on a Hot Tin Roof

<American Literature>

8. County-appointed officials in the American South held power over local government in a system named for these locations's "clique." For 10 points each:

[10m] Identify these locations that name a 1781 battle in Guilford County where Charles Cornwallis lost a quarter of his forces.

ANSWER: courthouses [accept Battle of Guilford Courthouse; accept courthouse clique]

[10e] The Battle of Guilford Courthouse was fought in this state, where Walter Raleigh established the lost Roanoke colony.

ANSWER: **North Carolina** [or **NC**]

[10h] This North Carolina rebellion protested the power of court officials and high taxes. This movement was suppressed by colonial governor William Tryon.

ANSWER: <u>Regulator</u> Movement [or <u>Regulator</u> War or War of the <u>Regulation</u> or the <u>Regulator</u>s] <American History>

9. To earn a portrait commission in this city, an artist proved his skill by painting his enslaved assistant Juan de Pareja. For 10 points each:

[10h] Name this city where that portrait's patron exclaimed "it's too true!" upon seeing a parchment signed with the artist's name. An artist from this city inspired the styles of Francisco de Zurbarán and a namesake Utrecht-based group.

ANSWER: **Rome** [or **Roma**] (The second artist was Caravaggio.)

[10e] That aforementioned portrait depicts Pope Innocent X and was painted by this Spanish artist. This painter tended towards darker uses of tenebrism in later works such as *Las Meninas*.

ANSWER: Diego <u>Velázquez</u> [or Diego Rodríguez de Silva y <u>Velázquez</u>]

[10m] Velazquez's signature likely influenced a signed version of this person's "calling" by Juan de Pareja. Saint Peter points toward this man and four others seated at a table in Caravaggio's version of that scene.

ANSWER: Saint <u>Matthew</u> [or <u>Matthew</u> the Apostle or <u>Matthew</u> the Evangelist; or <u>Mattheos</u> or <u>Mattheos</u> or <u>Mattheos</u>; accept *The Calling of Saint <u>Matthew</u>* or *Vocazione di San <u>Matteo</u>*; prompt on <u>Levi</u>] <Painting/Sculpture>

10. A mass extinction at the end of this period coincided with the sudden onset of glaciation. For 10 points each:

[10h] Name this second geologic period of the Paleozoic Era, during which animal life continued to diversify after the Cambrian ("CAM-bree-un") Explosion.

ANSWER: Ordovician ("OR-duh-VISH-un") period

[10m] While most modern phyla emerged during the Cambrian Explosion, most of these taxonomic subdivisions that lie a level below a phylum emerged during the Ordovician.

ANSWER: classes

[10e] Organisms in this kingdom began to colonize land during the Ordovician, which caused a rapid increase in atmospheric oxygen levels.

ANSWER: **plant**s [or **Plantae**]

<Biology>

11. Note to moderator: Be sure to pronounce "Moriori" with four syllables, "moh-ree-oh-ree."

These people perpetuated a genocide against the Moriori ("moh-ree-oh-ree") of the Chatham Islands with a relative lack of resistance due to Nunuku's Law, the Moriori code of pacifism. For 10 points each:

[10m] Name these Polynesian people, the Indigenous people of a region now called Aotearoa. The Moriori are descendants of these people who settled the Chatham Islands in the 1500s, completing the Polynesian expansion.

ANSWER: Māori ("maow-ree")

[10e] The Māori inhabit this modern-day island country east of Australia, whose two main islands are the North Island and the South Island.

ANSWER: New Zealand

[10h] The enslavement of the Moriori was part of a broader Māori conflict named for these weapons, which the Māori obtained from British trade but the Moriori did not.

ANSWER: <u>musket</u>s [accept <u>Musket</u> Wars; prompt on <u>guns</u> or <u>firearms</u> or equivalents] <0ther History>

12. A 1961 eruption of this island's Queen Mary's Peak forced the evacuation of its capital, Edinburgh of the Seven Seas. For 10 points each:

[10h] Name this South Atlantic island named for a Portuguese explorer, which is considered part of the most remote inhabited archipelago. This island forms an overseas territory with Saint Helena and Ascension.

ANSWER: Tristan da Cunha ("KOON-yuh") [accept Saint Helena, Ascension and Tristan da Cunha]

[10m] Plymouth, the capital of this sea's island of Montserrat ("mawnt-sir-AHT"), became a ghost town after a 1995 volcanic eruption. The 1902 eruption of Mount Pelée devastated Martinique ("MAR-tin-eek"), another island in this sea.

ANSWER: Caribbean Sea [or Mer des Caraïbes]

[10e] This country's Mount Etna erupted many times in the 20th century. Other active volcanoes in this European country include Mount Stromboli and Vulcano, the origin of the word "volcano."

ANSWER: <u>Italy</u> [or <u>Italia</u> or <u>Italian</u> Republic or Republica <u>Italiana</u>]

<Geography>

13. The barycenter of this object and its largest moon Charon lies outside either body; thus, the two are considered a binary system. For 10 points each:

[10e] Name this dwarf planet, the largest known Kuiper Belt object.

ANSWER: **Pluto** [or 134340 **Pluto**]

[10m] The 2005 discovery of this dwarf planet, which is more massive than Pluto and over three times farther from the Sun, prompted the IAU to reconsider Pluto's status as a planet.

ANSWER: **Eris** [or 136199 **Eris**]

[10h] Pluto was discovered in 1930 by this American astronomer, who names a heart-shaped "Regio" structure on Pluto's surface.

ANSWER: Clyde <u>Tombaugh</u> [or Clyde Wiliam <u>Tombaugh</u>; accept <u>Tombaugh</u> Regio]

<Other Science>

14. In Gujarat, the Navaratri festival is traditionally celebrated by performing the Garba dance around one of these objects or an image of the feminine Shakti. For 10 points each:

[10m] Name these objects that include clay diya, which are placed beside rangoli art as part of an autumn festival's Lakshmi Pūjā.

ANSWER: lamps [or lanterns; accept candles; prompt on flames or lights]

[10h] During Diwali, many pūjās to Lakshmi include lamps and modak dumplings for this wise deity. Clay murti are made to celebrate this deity's birth from turmeric during the Chaturthī festival.

ANSWER: <u>Ganesh</u> [or <u>Vināyak</u>a; or <u>Ganapat</u>i; accept <u>Ganesh</u> Chaturthī or <u>Vināyak</u>a Chaturthī or <u>Vināyak</u>a Chavitī or <u>Ganesh</u>ōtsav]

[10e] Another offering for Lakshmi Puja is sindoor, which is this type of substance that women apply to their foreheads as bindi dots. People play with this kind of substance to celebrate the Hindu "festival of colors," Holi.

ANSWER: colored **powder** [accept **pigment** or **dye**; accept **gulal** or **abir**; accept **kumkum**a] <Religion>

15. The GilBartolome Architects firm received mixed criticism for a hillside one of these buildings whose curling zinc exterior is often likened to a dragon. For 10 points each:

[10h] Name this type of building that includes a Pere Mila-commissioned structure nicknamed the "stone quarry." Josep Batlló ("bull-YOH") names another one of these buildings by Antoni Gaudí that was thought to evoke Saint George and the dragon.

ANSWER: casas [or houses; accept Casa Mila; accept Casa Batlló; accept Casa del Acantilado]

[10e] Casa Batlló and Casa Mila are modernist buildings in this home city of Antoni Gaudí. Studies of the Alhambra's Islamic architecture influenced Gaudí's Sagrada Família cathedral in this Catalan city.

ANSWER: **Barcelona** 

[10m] Citing Islamic influence, the Sagrada Família's spires are sometimes likened to these tall, slender towers found in mosques. Structures resembling these towers also feature in Gaudí's Casa Vicens and El Capricho.

ANSWER: minarets [or manāra or mi'dana]

<Other Fine Arts>

16. A philosopher from this country decried the hollowing out of experience caused by capitalist consumer culture in his book *One-Dimensional Man*. For 10 points each:

[10e] Name this country whose Frankfurt School of Marxist criticism originated in the Institute of Social Research founded by Carl Grünberg.

ANSWER: <u>Germany</u> [or Federal Republic of <u>Germany</u> or Bundesrepublik <u>Deutschland</u>; accept West <u>Germany</u> or <u>FRG</u> or <u>BRD</u>; accept <u>Weimar</u> Republic]

[10m] The Frankfurt School thinkers Theodor W. Adorno and Max Horkheimer criticized this movement in a book titled for its "dialectic." Kant defined this movement as "man's emergence from his self-incurred immaturity."

ANSWER: <u>Enlightenment</u> [accept *Dialectic of <u>Enlightenment</u>* or *Dialektik der <u>Aufklärung</u>*; accept "What Is <u>Enlightenment?</u>" or *Beantwortung der Frage: Was ist <u>Aufklärung</u>?*]

[10h] Adorno's work in this field holds that certain objects have the potential to change society through truth-content. The first part of Kant's *Critique of Judgment* centers on this field of philosophy.

ANSWER: <u>aesthetics</u> [prompt on <u>art</u> or <u>Kunst</u> by asking "what is the term for the philosophical study of art?"] <Philosophy>

17. This disease, one of the deadliest in human history, was the first to be declared globally eradicated by the World Health Organization. For 10 points each:

[10m] Identify this disease that plagued Europeans, which was similar to a disease found in cows. A method of inoculating people against this disease was popularized in England by Lady Mary Wortley Montagu.

ANSWER: **smallpox** [accept **<u>Variola</u>** major or **<u>Variola</u>** minor]

[10e] Lady Montagu first learned of smallpox inoculation while traveling through this empire, where her husband served as an ambassador to Sultan Ahmed III in Constantinople.

ANSWER: <u>Ottoman</u> Empire [or Sublime <u>Ottoman</u> State or Devlet-i 'Alīye-i '<u>Osmānīye</u> or <u>Osmanlı</u> İmparatorluğu or <u>Osmanlı</u> Devleti; accept <u>Turkish</u> Empire]

[10h] Smallpox inoculation became obsolete when this physician discovered that exposure to the milder cowpox could prevent future infections with smallpox, developing what is today credited as the world's first vaccine.

ANSWER: Edward Jenner

<European History>

18. This author addressed the question of how a "man coming from the Third World" managed to "find the peace of mind to write stories" in his Nobel Prize acceptance speech. For 10 points each:

[10m] Name this author who wrote an allegory of the Abrahamic religions in *Children of Gebelawi* and created a character who frightens his family by befriending occupying soldiers as part of his *Cairo Trilogy*.

ANSWER: Naguib Mahfouz [or Najeeb Mahfouz Abdelaziz Ibrahim Ahmed Al-Basha]

[10e] Mahfouz is currently the only writer from this country, the setting of the *Cairo Trilogy*, to win the Nobel Prize in Literature.

ANSWER: **Egypt** [or **Misr**; or Arab Republic of **Egypt** or Jumhūrīyat **Misr** al-'Arabīyah or Gomhoreyyet **Masr** el-'Arabeyya]

[10h] Mahfouz wrote about Amina, who breaks her collarbone after being hit by a car, and the rest of the al-Jawad family, in this first novel of the *Cairo Trilogy*.

ANSWER: *Palace Walk* [or *Bayn al-gasrayn* or *Between the Two Palaces*]

<World/Other Literature>

19. This physicist lends his name to isolated "brains" that could theoretically form through random fluctuations in a universe at equilibrium. For 10 points each:

[10h] Name this Austrian physicist who defined entropy in terms of particle distribution in his *H*-theorem.

ANSWER: Ludwig Boltzmann ("BOLTS-mahn") [or Ludwig Eduard Boltzmann; accept Boltzmann brains]

[10m] The formation of a Boltzmann brain would violate this law, which was first stated by Rudolf Clausius. This law is thought to be responsible for the "arrow of time."

ANSWER: second law of thermodynamics

[10e] Boltzmann also defined entropy as being proportional to this function of the number of microstates. It is the inverse of the exponential function.

ANSWER: natural **logarithm** [or **ln**; or natural **log**; or **log** base e] <Physics>

20. Alison MacLeod's *Tenderness* chronicles the writing of this novel and the efforts to overcome its banning. For 10 points each:

[10m] Name this novel that was the subject of a landmark 1960 obscenity trial. This novel ends with a pregnant woman leaving Wragby to live with her sister Hilda after having an affair with the gamekeeper Oliver Mellors.

ANSWER: Lady Chatterley's Lover

[10e] The author of *Lady Chatterley's Lover*, D.H. Lawrence, wrote a story in which the child Paul bets on races of these animals. One of these animals is the subject of Anna Sewell's novel *Black Beauty*.

ANSWER: <u>horse</u>s [or <u>equines</u>; accept specific types of horses such as <u>mare</u>s or <u>stallion</u>s; accept "The Rocking-<u>Horse</u> Winner"]

[10h] Lady Chatterley claims that her illegitimate child's father is Duncan Forbes, who holds this profession.

Charles Strickland pursues this profession in Paris in W. Somerset Maugham's novel *The Moon and Sixpence*.

ANSWER: painter [or artist] (Charles Strickland was inspired by Paul Gauguin.)

<British Literature>