

Spring Novice (April 17th, 2021)

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## Packet 10

1. **During this process, shugoshin protects Rec8 and Rad21 from being degraded by separase. In the leptotene and zygotene stages of one part of this process, the synaptonemal (“sin-ap-toh-NEE-mull”) complex forms. Randomness in this process leads to the principle of independent assortment. Down syndrome and Turner syndrome result from (\*) nondisjunction errors in this process. In this process, chiasmata (“kye-AZ-muh-tuh”) between homologous (“huh-MAH-luh-guss”) chromosomes are the sites of crossing over. This process results in four haploid gametes. For 10 points, name this cell division process that is contrasted with mitosis.**

ANSWER: **meiosis** [accept **meiosis I**; accept **prophase I** or **metaphase I** or **anaphase I**; accept **meiotic recombination**; prompt on **prophase** or **metaphase** or **anaphase**; prompt on genetic **recombination** by asking “in which larger process?”; do not accept or prompt on “mitosis”]

<AZ, Science - Biology>

2. *General answer acceptable.* **In one poem, a character refuses to take these things in a scene preceded by the line “one may lead a horse to water / twenty cannot make him drink.” A girl “suck’d” these things “until her lips were sore” after paying for these things “with golden curl” despite not knowing how they feed “their hungry thirsty roots.” Laura is tempted to (\*) eat these things after hearing cries of “Come buy, come buy” from the title “Goblin Market.” In William Carlos Williams’s poem “This is Just to Say,” one man asks forgiveness for eating these things “that were in / the icebox” which were “so sweet / and so cold.” For 10 points, name these things that include currants and plums.**

ANSWER: **fruits** [accept any specific fruit; accept **berries**; prompt on **foods**]

<PS, Literature - Poetry>

3. **The Altuna runestone depicts a myth from the Prose Edda involving one of these creatures, the child of Angrboda (“anger-bode-uh”) and Loki. One of these creatures is disguised as a cat but is revealed when even a god could only lift a single paw. Thor encounters one of these creatures twice before he (\*) slays it at Ragnarok. That one of these creatures encircles the Earth in Norse mythology and is sometimes named for Midgard. The ouroboros motif depicts one of these creatures biting its own tail. For 10 points, name these creatures that were legendarily driven out of Ireland by St. Patrick.**

ANSWER: **snakes** [or **serpents**; accept Midgard **Serpent**; do not accept or prompt on “dragons”]

<JH, Beliefs - Mythology>

4. **An experiment by this psychologist originally intended to measure a certain tendency in Germans, but after surprising results from the American control group, German subjects were never used. This psychologist placed envelopes addressed to “Friends of the Nazi Party” around Boston and measured if they got returned in the (\*) “lost letter” experiment. In another experiment by this psychologist, an actor was instructed to shout that he had a heart condition after being punished. For 10 points, name this psychologist who ordered subjects to administer increasingly high voltage electric shocks in his “obedience to authority” experiment.**

ANSWER: Stanley **Milgram** (The experiment in the first sentence is the obedience to authority experiment.)

<CB, Social Science - Psychology>

5. **This architect drew on the design of the sebil fountain at the Ibn Tulum mosque for one building. The design of the post-war redevelopment plan for downtown Oklahoma City was named after and led by this architect. This architect came out of retirement in order to design the Museum of Islamic Art in Doha. This architect commissioned uniquely clear iron-free glass lozenges (“LOZZ-un-jizz”) for one project, and created a glass (\*) “tent” façade for a museum he designed on the shore of Lake Erie. For 10 points, name this architect of the Rock & Roll Hall of Fame in Cleveland, who was commissioned by François Mitterrand to design the Louvre Pyramid.**

ANSWER: Ieoh Ming Pei [or I. M. Pei]

<CB, Arts - Other Arts - Architecture>

6. **Both North Korea and this country have calendar systems in which the year 1 corresponds to the Gregorian year 1912. A type of pineapple shortcake is popular in this country because “pineapple” sounds similar to “prosperity” in the Hokkien (“HOCK-yen”) dialect spoken by most of its citizens. The southern tip of this country is thought to be the origin of the Austronesian expansion. The milk (\*) tea drink boba is originally from this country, whose capital contains a skyscraper named for its 101 floors. For 10 points, Taipei is the capital of what country that is separated by the Formosa Strait from mainland China?**

ANSWER: Taiwan [accept Republic of China; do not accept or prompt on “China” or “People’s Republic of China”]

<CL, The World - Geography>

7. **During the initial stages of this battle, much of the defense was conducted by the 1077th Anti-Aircraft Regiment, primarily consisting of young female soldiers. An apartment building outfitted with anti-tank rifles was a key defensive point in this battle, and is named after Yakov Pavlov. Operation Uranus was devised by Alexander Vasilevsky and Georgy (\*) Zhukov during this battle, which involved the encirclement of the invading forces. This battle caused nearly two million casualties and signaled the end of Operation Barbarossa. This battle was fought over a city on the Volga named for the defender’s leader at the time. For 10 points, name this key Soviet victory of World War II.**

ANSWER: Battle of Stalingrad

<AJai, History - European History>

8. **This work’s introduction features an A major horn arpeggio over soft violin tremolos. The D, F-sharp, A, A of this piece’s first theme is answered by two high, short A’s, followed by two F-sharps. This staple of New Year’s concerts in (\*) Vienna is actually a collection of five waltz themes strung together. This piece plays during the docking scene, and again during the credits, of *2001: A Space Odyssey*. For 10 points, identify this most popular waltz by Johann Strauss Jr., named for the second-longest river in Europe.**

ANSWER: *On the Beautiful Blue Danube* Waltz, Op. 314 [or “The Blue Danube”; or *An der schönen, blauen Donau*]

<JC, Arts - Music>

9. **A “gentlewoman” observes this character write on a paper from a closet and seal it, all while this character is sleeping. In a monologue, this character calls for spirits to “fill [her] from the crown to the toe top-full / Of the direst cruelty.” Later, this character tells her husband to (\*) “screw [his] courage to the sticking place.” After this character’s death, the title character of a play laments, “Out, out, brief candle!” This character exclaims, “Out, damned spot,” and attempts to wash her hands while sleepwalking. For 10 points, name this woman who convinces her husband to kill King Duncan and becomes the Queen of Scotland in a William Shakespeare play.**

ANSWER: Lady Macbeth [accept Macbeth’s wife; do not accept or prompt on “Macbeth”]

<WO, Literature - Drama>

10. **These events are more likely to form when vertical shear is strong. Wide instances of these events have a “wedge” appearance and these events take on a “rope” appearance as they weaken. Rear flank downdrafts often lead to these events and create hook echo patterns on Doppler radar. In the United States, these events most often occur between 5 and 6 p.m. when the** (\*) supercell thunderstorms that spawn them are at their strongest. These events are categorized based on the damage they inflict on the Enhanced Fujita scale. For 10 points, name these rotating columns of air that often develop from funnel clouds in a namesake “alley.”

ANSWER: tornadoes [accept twisters or waterspouts; prompt on supercell or thunderstorm before mention, prompt on whirlwind or cyclone]

<AZ, Science - Other Science - Earth Science>

11. **An album with this title was completed and released by Jon Brion (“brian”) after the death of its original artist. In a song with this title that samples Jazmine Sullivan’s “Holding you Down,” Megan thee Stallion raps “we ain’t goin’ back and forth with the little boys.” This word titles the companion album to *Swimming*, which features “Blue World” and** (\*) “Good News,” and was posthumously released by Mac Miller in 2020. A song with this title laments that “we couldn’t turn around ’til we were upside-down,” and later quips that “the seasons changed and our love went cold.” For 10 points, a Post Malone single describes how lovers “run away, but we’re running in” what title shapes?

ANSWER: circles

<SB, Pop Culture - Pop Music>

12. **This man convinced Omar Bongo to convert to Islam while on a visit. Two American GIs were killed after this leader ordered the bombing of a West Berlin discotheque. In a 2003 deal to lift sanctions, this leader accepted responsibility for sponsoring the Lockerbie bombing. This leader attacked both American and Soviet imperialism and advocated** (\*) pan-Arab unity in his *Green Book*. This leader was deposed when rebels took his hometown of Sirte (“surt”). For 10 points, name this longtime dictator who was killed in 2011 by rebel militia in his home country of Libya.

ANSWER: Muammar Gaddafi [or Muammar Qadhafi]

<JD, History - World History>

13. **A Guatemalan cameraman in this movie reveals that he was formerly a doctor before waking a young boy in a coma with a stick of celery. Another character in this movie creates a carnivorous rat-parrot hybrid and a monkey thought translator. Brent McHale repeatedly kicks over a wagon full of fish in this movie, as the mascot of Baby Brent Sardines. The protagonist of this movie gets laughed at by his class after inventing** (\*) spray-on shoes. This movie’s setting of Swallow Falls is devastated by a spaghetti twister, an event reported on by Sam Sparks. For 10 points, name this movie in which one of Flint Lockwood’s inventions catastrophically rains food.

ANSWER: *Cloudy with a Chance of Meatballs*

<AJJ, Pop Culture - Movies/TV>

14. **At a camp named for this president, Americans and the Tohono O’odham (“tuh-HO-no AW-tum”) massacred Arizona Apaches who had surrendered to the US Army. This president appointed the first Native American Commissioner of Indian Affairs, Ely S. Parker. For his actions during the so-called Indian Ring, this president’s secretary of war William** (\*) Belknap was impeached as a private citizen. The Battle of Little Bighorn occurred during this man’s presidency, which was plagued by corruption scandals such as the Cr dit Mobilier scandal and the Whiskey Ring. For 10 points, name this president who, while serving as a general, accepted the Confederate surrender at Appomattox Court House.

ANSWER: Ulysses S. Grant

<NH, History - American History>

15. In egs units, “e-squared” over “[this quantity] times h-bar” is the fine-structure constant. Minkowski space contains an imaginary cone with this value as its slope. Using Maxwell’s equations, this value is equal to “one over the square root of vacuum permittivity times vacuum permeability.” Underwater nuclear reactors emit blue light due to particles (\*) exceeding this value, creating Cherenkov radiation. The ratio of this value in a vacuum to this value in a medium is the refractive index. Approaching this value causes objects to undergo length contraction and time dilation. For 10 points, name this “universal speed limit” that is roughly equal to 300 million meters per second.

ANSWER: speed of light [or phase speed of light (in a vacuum); or phase velocity of light in a vacuum; accept c; prompt on velocity or speed]

<SB, Science - Physics>

16. This event is the setting of the stories “Phosphorus” and “Tin,” which comprise a memoir themed on the periodic table. In another book about this event, the author states, “I still believe, in spite of everything, that people are truly good at heart.” A character who lives during this event concludes that (\*) God is “hanging here on this gallows” and is mentored by Moshe the Beadle. That book’s sequels are *Dawn* and *Day*. For 10 points, name this event recounted in Elie Wiesel’s *Night*, which takes place in the Buchenwald and Auschwitz concentration camps.

ANSWER: the Holocaust [or Shoah; accept Auschwitz-Birkenau until mention; prompt on World War II] (The unnamed works are Primo Levi’s *The Periodic Table* and Anne Frank’s *The Diary Of a Young Girl*.)

<RC, Literature - Long Fiction>

17. Eight-year-old Maria Sautuola found a collection of these things showing human hands while walking around her father’s farm. The Chamber of Felines contains many examples of these things and is located near another set of these things that uses “twisted perspective” and (\*) ochre. A site in Altamira contains many examples of these things. Henri Breuil (“on-REE BRUH-ee”) hypothesized that these artworks were intended to bring success in hunting, as in the depiction of aurochs (“OW-rox”) in the Great Hall of the Bulls. For 10 points, Lascaux (“lass-KO”) contains many examples of what prehistoric artworks found in underground locations?

ANSWER: cave paintings [or cave drawings or cave art; prompt on paintings by asking “what type of place are the paintings in?”; prompt on caves by asking “what is in the caves?”]

<DM, Arts - Painting>

18. In June 2020, the United States Supreme Court ruled that Harris Funeral Homes had violated Title VII of the Civil Rights Act by firing Aimee Stephens for being one of these people. In 2016, the passage of Charlotte Ordinance 7056 led the North Carolina General Assembly to pass HB2, which included a provision targeting these people’s use of certain public (\*) facilities. In January 2021, the Biden administration revoked a Trump administration policy that prohibited these people from openly serving in the United States military. For 10 points, give this term that describes people whose gender is not the same as their sex assigned at birth.

ANSWER: transgender [accept trans people; prompt on LGBTQ; prompt on transsexual]

<RR, The World - Current Events>

19. This researcher described a war that broke out after the Kahama community splintered out from Kasakela. This researcher discovered cannibalistic infanticide and the hunting of colobus monkeys amongst a group of subjects called “innocent killers.” Along with Biruté Galdikas and Dian Fossey, this researcher was mentored by Louis (\*) Leakey as part of a trio of pioneering female scientists. While working in Gombe National Park, this researcher observed her subjects using stalks of grass to “fish” for termites, proving that non-human animals could use tools. For 10 points, name this British anthropologist whose work with chimpanzees in Tanzania revolutionized primatology.

ANSWER: Jane Goodall

<CA, Social Science - Other Social Science>

20. A midrash (“MID-rosh”) about this man tells that the Leviathan fled from him upon realizing that this man was circumcised. A king puts on sackcloth and covers himself in dust upon hearing from this man that his city would be destroyed in forty days. This son of Ammitai yearns for death after God withers away the leaves of a gourd that was shielding him from the scorching heat. This man’s decision to travel by ship to Tarshish rather than (\*) Nineveh led the ship’s sailors to throw him overboard at his request during a storm sent by the Lord. For 10 points, name this biblical prophet who spent three days and three nights in the belly of a giant fish.

ANSWER: Jonah [or Jonas or Yonah]

<KT, Beliefs - Religion>

21. A 30% solution of this compound is employed in the Briggs–Rauscher reaction, which is commonly used to demonstrate oscillating reactions. A “high-test” propellant for rockets is created from a solution of this compound and water. Ferrous sulfate disproportionates this compound into free radicals in Fenton’s reagent, which is used to (\*) oxidize wastewater. The enzyme catalase breaks down this compound to prevent the formation of other reactive oxygen species. Despite being a strong oxidizing agent, this compound is a safe disinfectant because it decomposes into water and oxygen. For 10 points, name this antiseptic whose chemical formula is H<sub>2</sub>O<sub>2</sub>.

ANSWER: hydrogen peroxide [accept H<sub>2</sub>O<sub>2</sub> before mentioned; prompt on peroxide]

<SF, Science - Chemistry>

22. A thinker from this country coined a word for doing difficult tasks nonchalantly, which he considered a mark of an ideal courtier. An author from this country described closing his book and opening himself up to the natural world in a letter written after he climbed Mount Ventoux. Another thinker from this country espoused the political ideals of the (\*) Roman Republic in *Discourses on Livy*. That author also claimed it is better to be feared than loved in his tract *The Prince*. For 10 points, name this modern-day country, the birthplace of Renaissance thinkers like Petrarch and Niccolo Machiavelli.

ANSWER: Italy [or Italia] (The thinker in the first line is Baldassare Castiglione, and the word is *sprezzatura*.)

<CA, Beliefs - Philosophy>

23. When prompted, King Porus told this leader to “Treat me as a king would treat another king” after losing to him at the Battle of the Hydaspes (“high-DASS-pee”) River. After this leader’s death, almost all of his officers divorced their foreign wives that they had been forced to marry during the mass weddings at Susa. This leader besieged (\*) Tyre and constructed a causeway to take the city. This husband of Roxana named a city after his beloved horse, Bucephalus. This ruler won the battles of Issus and Gaugamela during his conquest of Persia, and he legendarily sliced the Gordian Knot in half. For 10 points, name this son of Philip II and ruler of Macedon.

ANSWER: Alexander the Great [accept Alexander III of Macedon]

<KT, History - Ancient History>

24. A character of this ethnicity is widowed after a bomb attack and also gains nicknames like “Jane” and “Jazzy.” A story written by an author of this ethnicity ends with a couple weeping “for the things they now knew” after several nights of power outages. That author of this ethnicity also wrote about a woman who accidentally attracts a group of monkeys and reveals her adultery to her (\*) tour driver in the title story of the collection *Interpreter of Maladies*. A couple of this ethnicity moves to Massachusetts and names their son after the Russian author Nikolai Gogol in *The Namesake*. For 10 points, name this ethnicity of Bharati Mukherjee and Jhumpa Lahiri.

ANSWER: Indian Americans [or Bengali Americans; prompt on Asian Americans or South Asian] (The first novel is *Jasmine* by Bharati Mukherjee.)

<WO, Literature - Short Fiction>

## Bonuses

1. The Note 7 entry in this brand had the unfortunate side effect of sometimes exploding. For 10 points each:

[10e] Name this smartphone and tablet brand, Samsung's flagship mobile brand.

ANSWER: Samsung **Galaxy** [accept Samsung **Galaxy** Note 7]

[10m] Samsung Galaxy Z phones can now perform due this action due to their flexible OLED displays. Phones named for performing this action were mostly superseded by touch-screen phones.

ANSWER: **flip** [or **fold**, accept word forms, prompt on descriptions like opening up, changing shape, etc.]

[10h] This company revived the old Razr design for their new foldable smartphone. This Lenovo-owned company created the first mobile phone ever, the DynaTAC, and the first flip phone before being sold to Google.

ANSWER: **Motorola**

<AZ, Pop Culture - Other Pop Culture>

2. A Flemish woman of this name was crowned Queen of England alongside her husband William the Conqueror.

For 10 points each:

[10h] Give this name. Another woman of this name was an Empress of the Holy Roman Empire who was the mother of King Henry II and clashed with Stephen of Blois during the Anarchy.

ANSWER: **Matilda** [accept **Matilda** of Flanders]

[10m] The Anarchy began after the heir apparent William Adelin died in an incident involving a white one of these objects. An Anglo-Saxon burial using one of these objects was found at Sutton Hoo.

ANSWER: **ships** [or **boats**]

[10e] The Anarchy engulfed both England and this region in modern-day France. William the Conqueror was the duke of this region before becoming King of England. This region was also the site of the D-Day landings.

ANSWER: **Normandy**

<NH, History - European History>

3. This poet penned the lines "Tell me not, in mournful numbers, / Life is but an empty dream!" after Fanny Appleton rejected his marriage proposal. For 10 points each:

[10h] Name this Fireside poet of "A Psalm of Life" and "Evangeline." He later married Fanny and wrote "The Children's Hour" about their daughters.

ANSWER: Henry Wadsworth **Longfellow**

[10e] When Fanny tragically perished in a fire, Longfellow recounted his loss in "The Cross of Snow," a poem in this form. Poems in this form are written in iambic pentameter and contain fourteen lines.

ANSWER: **sonnet**

[10m] This other Longfellow poem is written from the perspective of the landlord at the Wayside Inn and tells of the namesake person looking for one or two lanterns in the window of the Old North Church.

ANSWER: "**Paul Revere's Ride**"

<AL, Literature - Poetry>

4. Answer some questions about the industries of India, for 10 points each.

[10m] The film *Dangal*, which grossed over 300 million dollars worldwide, was the highest-grossing film ever produced by Bollywood, an Indian film industry based in this capital of Maharashtra state.

ANSWER: **Mumbai** [or **Bombay**]

[10e] A namesake kind of this product of the *Camellia sinensis* plant is the chief export of the state of Assam (“uh-SOM”) and is also produced in Darjeeling. It may be mixed with milk and spices to create masala chai.

ANSWER: **tea** leaves [accept specific kinds of **tea**]

[10h] The Electronic City industrial park in this southern Indian city is home to the headquarters of Infosys and Wipro, two of India’s largest information technology companies. It is nicknamed the “Silicon Valley of India.”

ANSWER: **Bangalore** [or **Bengaluru**]

<CL, The World - Geography>

5. The order of a finite one of these algebraic structures must be equal to an integer power of a prime number. For 10 points each:

[10h] Name these structures that are less general than rings because they are closed over addition, subtraction, multiplication, and division.

ANSWER: **fields**

[10m] All algebraic number fields are extensions of the field containing these numbers. Assuming that the square root of two is one of these numbers leads to a contradiction.

ANSWER: **rational** numbers [or **fraction**s; accept **field of rational**(s) numbers; prompt on Q]

[10e] Fields and rings must contain these values for both addition and multiplication. This value for addition is zero and this value for multiplication is one.

ANSWER: **identity** [or **identities**; accept additive **identity** or multiplicative **identity**]

<DB, Science - Other Science - Math>

6. The phrase “*tat tvam asi*,” meaning “thou art that,” is one of the Four Great Sayings of these texts. For 10 points each:

[10h] Name this collection of 108 texts that are subdivisions of a larger work. These texts focus on the relation between people and Brahman.

ANSWER: **Upanishads**

[10m] The Upanishads are subsections of this set of four foundational Hindu scriptures. These books were composed in a namesake form of Sanskrit during a centuries-long period beginning around 1500 BCE.

ANSWER: **Vedas**

[10e] Hinduism and its Vedic predecessors originated in the northern part of the subcontinent named for this large South Asian country.

ANSWER: **India**

<WY, Beliefs - Religion>

7. These particles come in 8 linearly-independent colors described by the Gell-Mann matrices. For 10 points each:

[10h] Name these gauge (“gay”) bosons that interact with quarks in quantum chromodynamics. These particles interact with each other, allowing the possibility of a hypothetical “ball” of them.

ANSWER: **gluons**

[10m] Gluons mediate this fundamental force, which holds subatomic particles together. At high energies, Grand Unified Theories speculate that this force merges with the electromagnetic and weak forces.

ANSWER: **strong** nuclear force [or **strong** interaction]

[10e] Acceleration due to another fundamental force, gravity, was shown to be independent of mass by this physicist, who was tried by the Catholic Church because of his support for heliocentrism.

ANSWER: **Galileo** Galilei [or Galileo **Galilei**]

<SB, Science - Physics>

8. Two different types of this object were raised because the first one was too small. For 10 points each:

[10e] Identify this object that Marines raised on Iwo Jima after a victory in World War II, which was captured in a Pulitzer Prize-winning photograph taken by Joe Rosenthal.

ANSWER: American **flag**

[10h] This artist made many paintings of the American flag, including one that uses scraps of newspaper and heated wax. This artist wrote the caption for Robert Rauschenberg's *Erased de Kooning Drawing*.

ANSWER: Jasper **Johns**

[10m] This artist's painting *The Flag* expressed her anxiety for her brother during World War I. She also painted closeups of desert flowers and cow's skulls in her depictions of the American Southwest.

ANSWER: Georgia **O'Keeffe**

<DM, Arts - Painting>

9. In one play, a fictionalized version of Roy Cohn insists that he has liver cancer rather than this disease. For 10 points each:

[10e] Name this disease. Larry Kramer's play *The Normal Heart* documents the spread of this disease through the gay community in the early 1980s.

ANSWER: **AIDS** [or **Acquired Immunodeficiency Syndrome**; accept **HIV/AIDS** or **Human Immunodeficiency Virus**]

[10m] Characters like the homophobic Roy Cohn and the Mormon Joe Pitt appear in this play by Tony Kushner.

ANSWER: **Angels in America** [accept **Millennium Approaches** or **Perestroika**]

[10h] When Joe's wife Harper first encounters Prior Walter, she thinks he is one of these people. Another of these people, Mr. Lies, is a travel agent who accompanies Harper to Antarctica.

ANSWER: Harper's **imaginary friends** [accept **hallucinations**; accept anything indicating she **makes them up**]

<RC, Literature - Drama>

10. This concept is defined as a "blind striving" in a work that blames it for all human suffering. For 10 points each:

[10h] Name this concept that is paired with *Representation* in the title of an Arthur Schopenhauer work.

ANSWER: **will** [or **Wille**]

[10e] Schopenhauer identifies will with the "thing-in-itself," a concept developed by this philosopher. This philosopher's "categorical imperative" states that people should act as if their actions would be made a universal law.

ANSWER: Immanuel **Kant**

[10m] Hannah Arendt wrote that this Nazi's avowal that he lived his life by Kant's categorical imperative was blatantly false, in her report on his trial "in Jerusalem."

ANSWER: Adolf **Eichmann**

<CA, Arts - Philosophy>



11. In one segment on the *Free to Choose* TV series, this economist described the different production factors of a pencil. For 10 points each:

[10e] Name this author of *Capitalism and Freedom*. He was the founder of monetarism and a leading Chicago School economist, and he promoted free market policies as an advisor to Ronald Reagan and Margaret Thatcher.

ANSWER: Milton **Friedman**

[10m] Criticism of Friedman's Nobel Prize cited his mentorship of the Chicago Boys, who advised Chile after one of these events. Economic liberalization followed these events in Chile, Bolivia, and Argentina in the 1970s.

ANSWER: military **coups** [prompt on change in government or regime change]

[10h] The 1953 coup in Iran followed this economic action by the Iranian government in 1951. The government of Lázaro Cárdenas took this action in 1938 in Mexico.

ANSWER: **nationalization** of the **oil** industry [or **petroleum nationalization**; prompt on nationalization by asking "of which industry?"]

<DM, Social Science - Economics>

12. This battle took place after citizens fled an invading army during the Runaway Scrape. For 10 points each:

[10m] Name this battle that only lasted 18 minutes after Santa Anna's forces were surprised and literally caught napping. This battle led to the Treaties of Velasco and independence for the Republic of Texas.

ANSWER: Battle of **San Jacinto**

[10e] This general led the Texan forces at the Battle of San Jacinto. He became the first president of the Republic of Texas, and he names the state's largest city.

ANSWER: Sam **Houston**

[10h] In a later incident between Texas and Mexico during the Mier expedition, Texan militiamen were executed if they drew a black one of these things. An alternate name for the Aroostook War refers to pork and these things.

ANSWER: **beans**

<NH, History - American History>

13. In 2016, Maine became the first US state to enact this type of voting system for federal elections. For 10 points each:

[10m] Name this voting system that requires a candidate to win an outright majority to win on the first ballot; otherwise, the lowest candidate is eliminated and their voters are distributed to other candidates by preference.

ANSWER: **ranked choice** voting [or **RCV**; accept **instant-runoff** voting or **IRV**]

[10e] This is the name given to a voting system in which the candidate with the most votes wins, regardless of majority status. It is sometimes referred to as "winner takes all," and is used in the majority of American elections.

ANSWER: **plurality** voting [or **first-past-the-post**; or **FPTP**]

[10h] In this country, a presidential candidate must receive at least 25% support from two-thirds of states to win in the first round, in a power-sharing provision between this country's Christian-majority south and Muslim-majority north.

ANSWER: **Nigeria**

<CA, Social Science - Other Social Science>

14. This country's leader blamed mulled wine stalls and waffle bakeries in its *Christkindlmarkts* ("chriht-kindle-markets") for a wave of COVID-19 infections in December 2020. For 10 points each:  
[10m] Name this country where, in January 2020, researchers developed one of the first diagnostic tests for COVID-19 at the Charité hospital in its capital.

ANSWER: **Germany** [or **Deutschland**]

[10e] This former leader of the Christian Democratic Union party and four-term Chancellor of Germany drew on her background as a research chemist in explaining how COVID-19 spread to the German public.

ANSWER: Angela **Merkel**

[10h] Scientists from this German company developed a COVID-19 vaccine in partnership with the American corporation Pfizer.

ANSWER: **BioNTech**

<EM, The World - Current Events>

15. Yeast performing this biological process produce the ethanol in alcoholic drinks. For 10 points each:

[10m] Name this process by which organisms metabolize carbohydrates without oxygen. It is often conflated with anaerobic respiration, but this process does not involve the electron transport chain.

ANSWER: **fermentation**

[10e] Instead of ethanol, human muscle cells produce this acid through fermentation. This acid makes pickled food taste sour.

ANSWER: **lactic acid** [accept **lactate**]

[10h] One of the inputs to fermentation is this molecule. Along with a similar flavin-containing molecule, it is produced in the Krebs cycle and enters the electron transport chain.

ANSWER: **NADH** [accept **nicotinamide adenine dinucleotide**; do not accept answers containing "plus," like "NAD-plus"]

<AZ, Science - Biology>

16. A preacher in this novel is killed while trying to organize a labor union. For 10 points each:

[10h] Name this novel. In this novel, the preacher's notion of each person's soul being part of one large soul inspires another's speech about how he'll be there "wherever there's a cop beating up a guy" or where "children are hungry".

ANSWER: *The **Grapes of Wrath***

[10m] The Great Depression forces this fictional family of tenant farmers to travel from Oklahoma to California. One member of this family, Rose of Sharon, breastfeeds a starving man to save his life.

ANSWER: **Joad** family

[10e] The struggles of the Joad family are recounted in this author's novel *The Grapes of Wrath*.

ANSWER: John **Steinbeck**

<AL, Literature - Long Fiction>

17. Answer the following about the British Commonwealth of Nations, for 10 points each.

[10m] The intent of the Commonwealth was first laid out in a 1926 document named for this man. He is better known for another namesake declaration in 1917 that proclaimed British support for a Zionist homeland in Palestine.

ANSWER: Arthur **Balfour** [accept **Balfour Declaration** of 1926 or **Balfour Declaration** of 1917]

[10e] This country was the first to join the Commonwealth, and also became the first independent nation in the British Empire in 1867. Queen Elizabeth II is this country's monarch, although the Prime Minister is Justin Trudeau.

ANSWER: Dominion of **Canada**

[10h] This country is one of only two Commonwealth members to not have any historical ties to the British Empire. This country cut ties with France following a 1990s genocide committed by the Interahamwe.

ANSWER: **Rwanda**

<JD, History - Other History>

18. In a sequence from this ballet, Odile (“oh-DEEL”) performs 32 *fouettés* (“fwet-TAYS”) in a row, a move which originated in an 1893 production of *Cinderella*. For 10 points each:

[10e] Name this Tchaikovsky ballet in which Princess Odette has been cursed by Baron Von Rothbart to take the form of the title animal each day at sunrise.

ANSWER: **Swan Lake**

[10h] *Swan Lake* was premiered by this Russian ballet company, whose name translates as “Great Ballet.” This company performs in a namesake theatre in Moscow, and has a historic rivalry with the Mariinsky (“ma-RIN-skee”) company.

ANSWER: **Bolshoi** Ballet

[10m] The 32 *fouettés* in *Swan Lake* are performed using this technique. *Relevé*, *sauté*, and *piqué* are the three methods of entering this technique.

ANSWER: **en pointe** [or **on point** or **pointe** technique]

<CB, Arts - Other Arts - Dance>

19. In some stories, this giant serpent hides in the Tenth Region of the Night. For 10 points each:

[10h] Name this embodiment of chaos in Egyptian mythology who fought Ra and his entourage every night.

ANSWER: **Apep** [or **Apophis**]

[10e] Every night, Ra traveled through the underworld on one of these vehicles called the Mesektet. After they died, pharaohs would travel down the Nile in one of these vehicles before being buried.

ANSWER: **boat** [or **barge** or **barque**]

[10m] In the Egyptian underworld, the hearts of the dead were weighed against one of these objects belonging to Ma’at, and those that were heavier than this object were devoured by the demoness Ammit.

ANSWER: **feather** of Ma’at

<RR, Beliefs - Mythology>

20. Answer the following about the number six in music, for 10 points each.

[10e] The sixth scale degree is the basis of the Aeolian mode, which is better known by this term. It is often contrasted with the major scale.

ANSWER: natural **minor** mode/scale

[10m] This major key signature is opposite C in the circle of fifths and contains six sharps. It is equivalent to a key signature with six flats, forming the only pair of enharmonic key signatures with the same number of accidentals.

ANSWER: **F-sharp** major [accept **G-flat** major]

[10h] Because it occurs most often in first inversion, a chord with this name is frequently called a “sixth” chord. This name comes from the city in which Alessandro Scarlatti and other composers built on the Venetian operatic style.

ANSWER: **Neapolitan** sixth chord [prompt on **Naples**]

<JC, Arts - Music>

21. The Clausius–Clapeyron equation gives the slope of coexistence curves as equal to the derivative of pressure with respect to this quantity. For 10 points each:

[10e] Name this quantity that is plotted on the x-axis of phase diagrams and the y-axis of heating curves. Increasing this quantity for a substance can lead to phase changes such as melting or boiling.

ANSWER: **temperature** [prompt on T]

[10m] Under standard conditions, a substance's boiling point is the temperature at which this quantity exceeds one atmosphere. According to Raoult's law, this quantity is equal to partial pressure divided by mole fraction for a component of an ideal solution.

ANSWER: **vapor pressure**

[10h] By raising the temperature and pressure of a sample beyond a certain point, one can create this type of substance in which distinct liquid and gas phases no longer exist.

ANSWER: **supercritical** fluid [do not accept or prompt on "critical" or "critical point"]

<SF, Science - Chemistry>

22. This country declared independence when its first ruler shouted "Independence or death!" in the Cry of Ipiranga. For 10 points each:

[10e] Name this large South American country that was elevated from colony to kingdom after the Portuguese court escaped to Rio de Janeiro fleeing the forces of Napoleon.

ANSWER: **Brazil** [or **Brasil**]

[10m] Brazil's second and last emperor was this man. His regent Princess Isabella signed the Golden Law abolishing slavery in Brazil.

ANSWER: Dom **Pedro II** [prompt on Pedro]

[10h] Pedro II led Brazil during this war, in which an army of young boys was slaughtered at the Battle of Acosta Ñu ("nyoo") and the losing side's president, Francisco Solano López, was killed at the Battle of Cerro Cora.

ANSWER: War of the **Triple Alliance** [or the **Paraguayan** War]

<MP, History - World History>

23. The last team from these leagues, the Indianapolis Clowns, continued barnstorming until 1989. For 10 points each:

[10e] Name these baseball leagues which arose due to racist segregation in the United States. In 2020, MLB retroactively designated the top seven of these leagues as major leagues.

ANSWER: the **Negro** Major Leagues [accept **Negro** Leagues or **Negro** League baseball]

[10m] This player first played professional baseball with the Indianapolis Clowns before signing with the Braves. This player set the all-time home run record with 755 home runs.

ANSWER: Hank **Aaron**

[10h] Another notable Clown was Goose Tatum, who was more famous for playing with this other team. Like the Clowns, this team mostly played comical exhibition games under their founder and coach, Abe Saperstein.

ANSWER: Harlem **Globetrotters** [prompt on Harlem]

<SB, Pop Culture - Sports>

24. The luck of the title character of this novel is called “salao” (“suh-lao”), which means the worst luck in the world. For 10 points each:

[10m] Name this novel about the fisherman Santiago, who talks baseball with Manolin and spends days trying to haul in a massive marlin.

ANSWER: *The **Old Man and the Sea***

[10e] This author of *The Old Man and the Sea* wrote about Harry’s death from gangrene in the short story “The Snows of Kilimanjaro.”

ANSWER: Ernest **Hemingway**

[10h] This recurring Hemingway character camps near the title location in the short story “Big Two-Hearted River.” In the short story “The Killers,” this character warns the boxer Ole Anderson about the hitmen Max and Al.

ANSWER: **Nick** Adams [or Nick **Adams**]

<WO, Literature - Short Fiction>