

2022 SHOW-ME

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Packet 6

1. For a non-crystalline substance, the amount of this quantity when molecular motion is absent is called its “residual” form. In a phase transition, the change in this quantity equals the latent heat divided by temperature. Values of zero for this quantity are defined by the third law of thermodynamics. Ludwig (*) Boltzmann [BOLTS-mahn] equated this quantity to k -sub-B times the natural log of the number of microstates. Enthalpy [EN-thul-pee] minus the product of temperature and this quantity is equal to Gibbs free energy. The second law of thermodynamics predicts a universal increase in, for 10 points, what measure of a system’s disorder?

ANSWER: **entropy**

<Chemistry — June Yin> [Ed.]

1. Answer the following about protesting the Vietnam War, for 10 points each:

[H] Many anti-war activists were at this event, where Abraham Ribicoff criticized the police response as “Gestapo tactics.” Crowds chanted “the whole world is watching” during the “Battle of Michigan Avenue” at this event.

ANSWER: **1968 Democratic National Convention** [or the **1968 DNC**; prompt on Democratic National Convention or DNC alone with “In what year?”; prompt on the Chicago DNC with “In what year?”]

[M] At this university in 1970, students protesting the Vietnam War were fired upon after a declaration of martial law. John Filo photographed a woman over the dead body of Jeffrey Miller on the grounds of this university.

ANSWER: **Kent State** University

[E] To protest the war, some chanted “hey hey, [this president], how many kids did you kill today?” This successor of John F. Kennedy declined to run for reelection in 1968.

ANSWER: **Lyndon Baines Johnson** [both parts required; accept **LBJ**; prompt on Johnson alone; do NOT accept or prompt on “Andrew Johnson”]

<American History — Andrew Gao> [Ed. Louis Li]

2. Slanted cylinders of this color make up the *Olympic Iliad* sculpture in Seattle Center. A work made of three curved metal sheets of this color was destroyed in the aftermath of 9/11 and was titled *Bent Propeller*. An arching statue of this color stands in the Federal Plaza in Chicago. Robert Indiana is best known for works featuring letters of this color. It’s not pink, but works such as (*) *Flamingo* were created in a bright shade of this color by Alexander Calder. A distinctly slanted O appears in sculptures of this color that spell out the word LOVE. For 10 points, shades of what primary color include vermilion and scarlet?

ANSWER: **red** [accept Calder **red**; reject “pink”]

<Visual Fine Arts — Joy An> [Ed. Gabe Forrest]

2. In a poem by Elisa Gabbert, this action is “A torturous / luxury. Velvet upholstery” and “happiness, after forty minutes of desolate shuffling.” For 10 points each:

[H] The poem “Musée des Beaux Arts” opens by noting, “About [what action] they were never wrong, / The Old Masters”?

ANSWER: **suffering**

[M] “Musée des Beaux Arts” is an ekphrasis by this author, who wrote “Mismanagement and grief: / We must suffer them all again” in a poem whose speaker asserts “We must love one another or die.”

ANSWER: W.H. **Auden** [or Wystan Hughes **Auden**] (The other poem is "September 1, 1939.")

[E] Auden wrote about the time after a loved one’s death in a poem titled for one of these events’ “Blues.” In a poem named for one of these events “in my Brain,” Emily Dickinson wrote about "Mourners [treading] to and fro."

ANSWER: a **funeral** [accept "**Funeral** Blues" or "I felt a **Funeral**, in my Brain"]

<Mixed Literature — Rachel Ezrielev> [Ed. Joel Miles]

3. **One of these objects designed in 1915 by Louis Adrian [loo-ee ay-dree-un] had a distinct ridge at the top and was adopted by the French Army. Another of them designed by John Leopold Brodie was nicknamed the “doughboy” by American soldiers. Frederick William IV designed one of these objects made of boiled leather, called the *Pickelhaube* [pickle-how-buh], which had a (*) distinctive upward spike. In 1916 Germany introduced a steel type of these objects whose “coal scuttle” shape was widely used in propaganda. This worn piece of equipment protected soldiers from falling shrapnel during World War I. For 10 points, name this piece of armor worn on the head.**

ANSWER: World War I **helmets** [accept Adrian **helmets** or Brodie **helmets** or *Stahlhelme*]

<European History — June Yin> [Ed.]

3. A regular one of these shapes can be drawn by using Carlyle circles to construct the solutions to the equation $x^2 - x - 1 = 0$. For 10 points each:

[E] Name this shape, whose regular variety has five angles each measuring 108 degrees.

ANSWER: regular **pentagon**

[M] The ratio of a regular pentagon’s diagonal length to its side length is this number.. This number, sometimes denoted by the letter phi [fai], is the positive solution to the quadratic $x^2 - x - 1 = 0$.

ANSWER: **golden ratio** [or $(1 + \sqrt{5}) / 2$]

[H] As 108 does not evenly divide 360, regular pentagons cannot be used to achieve this task. Regular octagons alone cannot accomplish this task, but they can when supplemented with squares.

ANSWER: **tiling** the plane [or **tessellate** the plane; accept word forms; prompt on descriptions of **filling** a plane]

<Math — Joy An> [Ed.]

4. **A poem in this language asks “how can a soldier dare to complain?” and opens by describing the rumble of wagon wheels. Another poem in this language describes traveling on the title roads as “harder than scaling the blue sky.” In a poem in this language, the narrator “must make merry before [his] spring is spent,” and asks his shadow and the (*) moon to “meet [him] on the Cloudy River of the sky.” That poem in this language describes a “cup of wine under the flowering trees,” and is titled “Drinking Alone by Moonlight.” For 10 points, name this language used by the Tang dynasty poets Du Fu and Li Bai.**

ANSWER: Classical **Chinese** [or **Zhōngwén**; reject “Mandarin”]

<Poetry — Joy An> [Ed. Joel Miles]

4. Wallace Saunders wrote a ballad about Casey Jones who died preventing a crash between two of these vehicles. For 10 points each:

[E] Name these vehicles, one of which stops clocks as it recreates its travel to Springfield, Illinois with Abraham Lincoln's body. Phantom conductors and weird tunnel lights appear in ghost sightings of these vehicles.

ANSWER: **trains** [accept **locomotives**; accept **railroad cars**]

[M] During a contest to mine a train tunnel, this freed slave proclaims "I'll die with the hammer in my hand" while competing against a mechanical drill. This "steel-driving man" is often depicted with a sledgehammer.

ANSWER: John **Henry**

[H] John Henry's contest took place at the Big Bend Tunnel near this state's city of Talcott. The collapse of this state's Silver Bridge near Point Pleasant is believed to have been caused by the Mothman.

ANSWER: **West Virginia** [or **WV**]

<Mythology — Ganon Evans> [Ed.]

5. **This composer created an aria in which the singer hits high C twice while accompanied by two flutes; that aria is the "Caro Nome" performed by Gilda. During a party in an opera by this composer, the aria "Questa donna conoscete" [quest-AH don-AH con-oh-schet-AH] precedes a gambler throwing his winnings at the feet of a woman. The aria "La Donna è Mobile" [la don-AY moe-bee-LAY] is performed by the Duke of (*) Mantua in an opera by this composer about a hunchbacked jester. The drinking song "Libiamo ne' lieti calici" [leeb-ee-AH-mo nay lee-eh-ti cah-lee-chee] appears in an opera by this composer that ends when Violetta Valéry dies of tuberculosis. For 10 points, name this Italian composer of *Rigoletto* and *La Traviata*.**

ANSWER: Giuseppe **Verdi** [or Giuseppe Fortunino Francesco **Verdi**]

<Other Fine Arts — Ganon Evans> [Ed.]

5. You want to see the Aurora Borealis. Name some places you might visit, for 10 points each:

[M] You may fly up to this country's city of Tromsø, where a cable car takes tourists up a peak translating as "the big rock." The aurora is also visible from a seed vault in this country's archipelago of Svalbard.

ANSWER: **Norway** [or Kingdom of **Norway** or Kongeriket **Norge**]

[H] Transparent living spaces that let you sleep under the Northern Lights are found in this northernmost province of Finland, where a line denotes the Arctic Circle in Santa Claus Village. This region is home to the Sami people.

ANSWER: **Lapland** [or **Lappi**; or **Lapponia**]

[E] If you haven't seen the Northern Lights enough, you could also go to this capital of Iceland.

ANSWER: **Reykjavik** [RAKE-yuh-vik]

<Geography — Andrew Gao> [Ed. Ganon Evans]

6. **This future president negotiated the release of Thomas Paine from French prison and traveled with Robert Livingston to negotiate the Louisiana Purchase. This president's defeat of Rufus King led to the end of the First Party System due to the collapse of a rival party. During this president's tenure, the Adams-Onís treaty acquired Florida and the (*) Missouri Compromise was signed. The Roosevelt Corollary expanded a policy named for this president. The Era of Good Feelings occurred during the tenure of, for 10 points, what fifth president who opposed European intervention in the Americas via a namesake "Doctrine?"**

ANSWER: James **Monroe** [accept **Monroe** Doctrine]

<American History — Ganon Evans> [Ed. Louis Li]

6. A character in this novel says that a picture of a nude beach and a picture of a Russian invasion are “the same,” confusing a photographer. For 10 points each:

[M] Name this novel by Milan Kundera whose characters include Tomas, a womanizing surgeon who becomes a window washer, and Sabina, an artist who despises kitsch.

ANSWER: *The **Unbearable Lightness of Being***

[H] When Sabina first visits Tomas in Zurich, she wears nothing but her underwear and this specific article of clothing. This object is used by Sabina as a prop for a series of nude photos taken by Tomas’ wife, Tereza.

ANSWER: a **bowler hat** [prompt on “hat” alone]

[E] In several of these scenes, Tereza is scratched by cats, paraded around a pool, and buried in a hearse filled with dead women. These scenes are usually followed by Tereza waking up.

ANSWER: **dreams** [or **nightmares**]

<Long Fiction — Joy An> [Ed. Joel Miles]

7. **Removing these entities from certain objects can leave behind a phenomenon called “remanence.” In the Zeeman [ZAY-mun] effect, these entities split apart spectral lines. Applying these entities perpendicular to a conductor results in the Hall effect. These entities are constant within an ideal (*) solenoid [SAHL-uh-noyd] far from the edges. The Biot-Savart [bee-oh suh-var] law describes the strength of these entities when they are induced by an electric current. The magnitudes of these entities can be calculated using Ampère’s [am-peer’s] law. For 10 points, name these vector fields symbolized **B**, which are measured in teslas.**

ANSWER: **magnetic fields** [accept **magnetic** after “fields”; accept **B-fields** before “B”; accept **H-fields** before “(These entities are) constant”; prompt on vector **fields** before “fields”]

<Physics — Vincent Wang> [Ed. June Yin]

7. This question was followed by a woman flexing her arm and saying “I have plowed, and planted, and gathered into barns, and no man could head me!” For 10 points each:

[H] Give this four-word question asked after describing how “nobody ever helps me into carriages or over mud-puddles” in a Sojourner Truth speech.

ANSWER: “**Ain’t I A Woman?**”

[M] Truth gave her speech in Akron, Ohio, where Black workers moved during the Great Migration for jobs in this industry. Harvey Firestone founded plantations in Liberia for the raw inputs of this industry.

ANSWER: **rubber** industry [accept **tires**]

[E] After the Civil War, Truth lobbied for land grants for Blacks, which were advertised as “forty acres” and one of these animals. These horse-donkey hybrids are known for their stubbornness,

ANSWER: **mules** [accept Forty Acres and a **Mule**]

<American History — Ganon Evans> [Ed. Louis Li]

8. **This city’s Bardstown Road is located in the heart of its Highlands district. In February 2022, a candidate for this city’s mayorship, Craig Greenberg, survived an assassination attempt. The UPS Worldport is located in this city, whose Baxter Avenue titles a song by its native son, Jack Harlow. This city’s “Museum Row” is home to the Muhammad Ali Center and a factory tour dedicated to its namesake type of (*) baseball bat. The Ohio River separates this seat of Jefferson County from southern Indiana. Churchill Downs is home to the Kentucky Derby in, for 10 points, what most populous Kentucky city, named after a French monarch?**

ANSWER: **Louisville**, Kentucky

<Geography — Neal Joshi> [Ed. Ganon Evans]

8. A Peter Millican paper argues that the “one fatal flaw” in this type of argument is a failure to adequately establish the nature of its subject. For 10 points each:

[H] Name this type of argument. One form of it relies upon a being “of which nothing greater can be conceived” that must exist in reality because any other possible being would be inferior.

ANSWER: **ontological** argument [prompt on, but do NOT otherwise reveal, anything describing arguments for the **existence** of **God**] (The question refers to Saint Anselm’s version of the argument.)

[E] The ontological argument supports the existence of this supernatural being. Christians like Saint Anselm believe that this being exists.

ANSWER: **God**

[M] This philosopher’s ontological argument claims that if God is an infinitely perfect being and existence is a perfection, then God exists. In one work, this philosopher used the example of melting wax to argue for rationalism.

ANSWER: René **Descartes** [ruh-NAY day-CART] [or Renatus **Cartesius**] (The work mentioned is *Meditations on First Philosophy*.)

<Philosophy — Vik Wei> [Ed. Joel Miles]

9. **Church bells in this country broke a 900-year curse that turned children into swans. A hero disguised as a giant baby scared off the giant Benandonner from this country. Shapeshifters called púca [pooka] appear in this country’s myth, as does a triple-death goddess who tricks a hero into eating dog meat. Funerary wailing called keening evolved into this country’s legend of (*) banshees. A hero from this country wielded a spear called Gae Bulg [guy bul-GAH]. Snakes were banished from this country by a prophet who explained the trinity with a shamrock. Cúchulainn [coo-cah-LANE] is a hero from, for 10 points, what island Christianized by St. Patrick and home to leprechauns?**

ANSWER: **Ireland** [or **Éire**; or **Airlann**]

<Mythology — Ganon Evans> [Ed.]

9. Teams ten tossups to test trivia together. Sorry. For 10 points each, answer the following about tongue twisters:

[E] One tongue twister concerns these animals and their ability to throw a certain material from trees. These animals are also known as groundhogs.

ANSWER: **woodchucks**

[H] In this film, the tongue twister “Moses supposes his toeses are roses” is turned into a song during a diction lesson. The musical *The Dancing Cavalier* opens in this movie with a dubbed voice.

ANSWER: **Singin’ in the Rain**

[M] Tongue twisters in this language like “good blood, bad blood” are called “finger fumlbers.” Languages similar to this one on Martha’s Vineyard inspired its structure as it developed at a Thomas Gallaudet-founded school.

ANSWER: **American Sign Language** [accept **ASL**; prompt on just **sign language**]

<Other — Vik Wei> [Ed. Ganon Evans]

10. **It’s not China, but a character from this country who drives a Honda City writes letters to Wen Jiabao in *The White Tiger*. A collection from this country describes a place “Where the mind is without fear” and mentions “this frail vessel thou emptiest again and again.” In a story set in this country, Bobby is attacked by monkeys as the title translator lusts after Mrs. Das. A collection focusing on immigrants *from* this country includes the stories (*) “Sexy” and “A Temporary Matter.” For 10 points, *Interpreter of Maladies* is a Jhumpa Lahiri book about immigrants from what country, whose national anthem was written by Rabindranath Tagore?**

ANSWER: **India** [or Republic of **India** or **Bharatiya** Ganarajya] (*The White Tiger* is by Aravind Adiga.)

<Mixed Literature — Rachel Ezrielev> [Ed. Joel Miles]

10. For 10 points each, identify these rocks, given the patterns representing them on geologic maps:

[E] A scattered dot pattern represents this sedimentary rock that forms when grains coarser than silt are cemented together. This rock is common in deserts.

ANSWER: **sandstone** [prompt on sand by itself]

[H] This other sedimentary rock is symbolized by jagged polygons, as it is composed of sharp, angled rock fragments in contrast to the rounded fragments found in conglomerate.

ANSWER: **breccia** [BREH-chee-uh]

[M] Randomly scattered lines and dots represent this igneous rock, which forms when felsic [FEL-sik] magma cools slowly underground. This rock's main components are quartz and potassium feldspar.

ANSWER: **granite**

<Earth Science — June Yin> [Ed.]

11. **A mathematician from this country wrote a 20,000-word set of “Notes” containing an algorithm to calculate Bernoulli numbers that is considered the first computer program. A scientist from this country partially built a mechanical device to solve polynomials known as the Difference Engine. A theoretical machine that uses (*) algorithms to manipulate symbols on an infinite tape is named for a scientist from this country who proposed a “test” to distinguish computers from humans. Computer pioneers Ada Lovelace and Charles Babbage were from, for 10 points, what country where Alan Turing cracked the Enigma code?**

ANSWER: **United Kingdom** of Great **Britain** and Ireland [or **U.K.**; accept **England**; accept any underlined part]

<June Yin — Computer Science> [Ed. Jason Xu]

11. Invasions from the Ayutthaya [ah-yoo-tah-YAH] Kingdom caused this empire's decline, which was followed by a dark age called the Longvek period. For 10 points each:

[M] Name this Southeast Asian empire once led by Jayavarman the Great. Organizers of the “killing fields” and a cultural reset to “Year Zero” took their name from this empire.

ANSWER: **Khmer** Empire [accept the **Khmer** Rouge; accept Red **Khmer**; accept the **Angkorian** Empire; prompt on the **Cambodian** Empire before “Cambodia” is read]

[H] The Khmer built the world's largest religious complex at Angkor Wat under this ruler, who is depicted in massive stone heads around the building. This ruler befriended the Chola Dynasty.

ANSWER: **Suryavarman II** [prompt on **Suryavarman**]

[E] The Khmer relied on reservoirs called *baray* for this purpose. Sri Lankan kingdoms used underground canals for this activity of delivering controlled amounts of water to agriculture.

ANSWER: **irrigation** [accept word forms like irrigating plants]

<World History — Ganon Evans> [Ed.]

12. **It's not Rimsky-Korsakov, but this composer wrote his *Scheherazade Overture* during his time at the Paris Conservatoire. A six-movement suite by this composer uses an antique Baroque structure and has sections named for dances like the Forlane and Rigaudon. This composer wanted to exceed the difficulty of Balakirev's *Islamey with the final movement*, (*) Scarbo, of a three-part solo piano suite. This composer commemorated seven friends who died in World War I with his *Le Tombeau de Couperin*. Another orchestral composition by this composer includes 169 repetitions of a snare drum ostinato. For 10 points, name this French Impressionist composer of *Boléro*.**

ANSWER: (Joseph) Maurice **Ravel**

<Auditory Fine Arts — Joanne La> [Ed. Ganon Evans]

12. In this play, a beggar-woman who does not appear on the playbill remarks that a man would be “handsomer still if he were sleeping,” and offers to guide him down a hillside. For 10 points each:

[H] Name this play in which Death guides one character to duel Leonardo. Three woodcutters discuss the events of this play in its third act.

ANSWER: **Blood Wedding**

[M] *Blood Wedding* is a play by this Spanish playwright, who included *Yerma* in his Rural Trilogy.

ANSWER: Federico García **Lorca** [or Federico del Sagrado Corazón de Jesús **García Lorca**]

[E] In the third act of *Blood Wedding*, this celestial object appears as a woodcutter with a white face and claims to “make the horse gleam with a fever of diamond.” Death calls for this celestial object to illuminate the night.

ANSWER: the **Moon**

<Drama — Joy An> [Ed. Joel Miles]

13. **Sean Hannity was blamed for Kathy Barnette’s loss in this state, in which David McCormick lost a primary by 951 votes. A candidate in this state mispronounced a store as “Wegners” in a video of him shopping for crudité [KROO-duh-tay]. A press conference at Four Seasons Total Landscaping in this state was held while challenging its (*) 2020 election results.** In this state, Tom Wolf’s lieutenant governor, John Fetterman, mocked his Senate opponent for owning houses in New Jersey. For 10 points, name this state where Pat Toomey’s retirement led to Dr. Mehmet Oz’s failed Senate campaign in cities like Philadelphia.

ANSWER: **Pennsylvania** [or **PA**]

<Current Events — Andrew Gao> [Ed. Connor Lee]

13. Answer some things about sea animals named after land animals, for 10 points each:

[M] Seahorses are the only animals with this unusual reproductive trait, which greatly increases the parental investment of a certain sex. A description is acceptable.

ANSWER: **male pregnancy** [accept descriptions such as **males** become **pregnant**; or **males** carry **fertilized eggs**]

[H] Populations of sea cows or manatees are dwindling due to these human-caused events, the largest known cause of manatee deaths. No-wake zones reduce these events.

ANSWER: **boat collisions** [accept answers indicating manatee **impacts** with **boats** or **watercraft**]

[E] The name of these ball-shaped echinoderms [ih-KAI-noh-derms] comes from an antiquated word meaning “hedgehog” due to these animals’ protective spines.

ANSWER: sea **urchins** [or **Echinoidea**]

<Biology — June Yin> [Ed.]

14. **In this novel, a character who constantly says “certainly” is accused of being a “flit” while at the Wicker Bar. While at Radio City, the protagonist of this novel suggests running away into the wilderness, ruining his date with Sally Hayes. The brother of this novel’s protagonist wrote “The Secret Goldfish” before becoming a Hollywood (*) screenwriter, and is named D.B. The protagonist of this novel asks a taxi driver if he knows where the ducks at Central Park go during the winter. The main character of this novel leaves for New York after getting expelled from Pencey Prep.** For 10 points, name this J.D. Salinger novel about Holden Caulfield.

ANSWER: **Catcher in the Rye** (The character referenced in the first line is Carl Luce.)

<Long Fiction — Danny Peelen> [Ed. Joel Miles]

14. Answer the following about running a restaurant in accordance with Islamic jurisprudence. For 10 points each:
[M] Pork and alcohol aren't on the menu since they are classified by this term. Instead, the restaurant's food is certified *halal*, in contrast to this five-letter Arabic term meaning "forbidden."

ANSWER: **haram**

[H] For meat to be *halal*, the animal must have been slaughtered after the saying of "Allahu Akbar" or this other phrase. Muslims say this phrase before performing a good deed like praying or reading a surah.

ANSWER: **Bismillah** [or **Basmala**; or **Tasmiyyah**]

[E] The restaurant is likely closed for daytime hours during this ninth month in the Islamic calendar. Sugary foods are often eaten on Eid al-Fitr to celebrate the end of this month of fasting.

ANSWER: **Ramadan** [or **Ramazán**; or **Ramzan**; or **Ramathan**]

<Religion — Ganon Evans> [Ed.]

15. **A species of this animal derives its name from Roman soldiers stationed by Trajan in Palmyra. Khabirs were responsible for the well-being of these animals on the "Forty Days Road." During Timur's sack of Delhi, these animals were covered in straw and lit on fire to spook Mahmud Khan's elephants. The dogs of Haw'ab barking at one of these animals may have preceded a battle near Basra in which Ali's troops circled (*) Aisha.** Domesticated examples of these animals like the Dromedary and Bactrian species were valued on the Silk Road as "ships of the desert." Caravans across the Sahara traveled on, for 10 points, what humped animals?

ANSWER: **camels** [accept Bactrian **camels**; accept Dromedary **camels**; accept the Battle of the **Camel**]

<World History — Ganon Evans> [Ed. Louis Li]

15. The Huzita-Hatori axioms govern operations that can be done when creating this art form. For 10 points each:

[E] Name this Japanese art form made by folding paper.

ANSWER: **origami** [or **kirigami**]

[M] In the technique of *renzuru*, a sheet of paper is folded and cut into a group of these animals. The Hiroshima victim Sadako Sasaki partook in a tradition of folding one thousand of these animals to grant a wish from the gods.

ANSWER: paper **crane** [or red-crowned **crane**; or **orizuru**]

[H] This most famous origami artist contributed the technique of wet-folding. Along with Randlett, he also names a system of diagramming folding steps.

ANSWER: Akira **Yoshizawa**

<Other Fine Arts — Aatreya Bhattacharyya> [Ed. Ganon Evans]

16. **A sign in this short story describes one character as "THE FAT BOY WITH THE HAPPY LAUGH." Two characters discuss Jesus' power to resurrect in this story, which ends with a man saying there is "no real pleasure in life." Mr. Edgar Atkins Teagarden buys a character in this story a watermelon carved with his initials, E.A.T. In this short story, (*) Red Sammy runs a barbecue restaurant called "The Tower." The cat Pitty Sing causes a car accident in this story that leads a family driving to Florida to be shot by an escaped criminal, the Misfit. For 10 points, the grandmother dies at the end of what short story by Flannery O'Connor?**

ANSWER: "A **Good Man is Hard to Find**"

<Mixed Literature — Andrew Gao> [Ed. Joel Miles]

16. Strings accompany spoken phrases like “from Chicago to New York” and “1940” in this work. For 10 points each:

[H] Name this work by Steve Reich that is divided into the sections “America, Before the War,” “Europe, During the War,” and “After the War,” highlighting alternate experiences with the title vehicles in each.

ANSWER: ***Different Trains***

[E] Reich composed a piece where two performers create different rhythms solely by doing this action. An encore may follow an audience standing and performing this action after a performance.

ANSWER: **clapping** [accept word forms; accept a round of **applause**]

[M] A Reich piece titled for these instruments’ *Counterpoint* was first recorded by Pat Metheny. Sister Rosetta Tharpe pioneered “growling” on this instrument, a performer of which wrote “Purple Haze.”

ANSWER: **electric guitar** [prompt on **guitar**; prompt on **bass guitar**; prompt on *Electric Counterpoint*]

<Auditory Fine Arts — Joy An> [Ed. Ganon Evans]

17. **The effects of this phenomenon caused some people to come down with “zero stroke.” The Mundell-Tobin effect states that the relationship between this phenomenon and interest rates is less than one-to-one.**

Meat-free sausages were recently added to a basket of products used to calculate an (*) index that measures this quantity. Demand-pull and cost-push are types of this quantity that are caused by consumer demand and supply costs, respectively. The Phillips curve represents an inverse relationship between this phenomenon and unemployment. For 10 points, name this quantity, the rate of increase of the prices of goods in an economy.

ANSWER: **inflation** rate [accept hyper**inflation**; prompt on answers mentioning **price** before “prices”]

<Social Science — Vik Wei> [Ed. Ganon Evans]

17. This country was embarrassed during the Scramble for Africa after Britain rejected the colonial claims proposed in the “Pink Map.” For 10 points each:

[M] Name this country that received the *eastern* portion of land outlined in the Treaty of Tordesillas [tor-deh-SEE-yahs].

ANSWER: **Portugal** [or Kingdom of **Portugal** or **Portuguese** Empire]

[E] Portugal’s focus on colonial resource economies in Africa meant it was late to embrace this 19th-century period in which inventions like steam power, manufacturing tools, and factories led to greatly increased economic output.

ANSWER: **Industrial Revolution**

[H] The “Seven Magnificents” were Portuguese companies that dominated its corporatist economy and colonies during this regime led by Antonio Salazar. This regime was overthrown by the 1974 Carnation Revolution.

ANSWER: **Estado Novo**

<European History — Ganon Evans> [Ed.]

18. **This substance contains Christmas factor and von Willebrand factor to support adhesion between cell fragments. A “pernicious” disorder affecting this substance is caused by an inability to absorb vitamin B₁₂.**

The vaccine RhoGAM [ROH-gam] was developed for a chemical in this substance that was first isolated from rhesus monkeys. A (*) sphygmomanometer [SFIG-moh-muh-NOM-it-ur] measures a quantity in this substance that has systolic [siss-TALL-ick] and diastolic forms. In this substance, thrombin signals the aggregation of platelets [PLATE-lets] during coagulation. For 10 points, name this fluid that carries oxygen throughout the body.

ANSWER: **blood** [accept **blood** pressure; or **blood** coagulation or clotting; or **blood** types]

<Biology — Braden Booth> [Ed. June Yin]

18. For 10 points each, answer the following about sermons in literature:

[M] In a story from this collection, Reverend Curtis Hartman is inspired to work harder on his sermons after spying on Kate Swift from his church's bell tower. This Sherwood Anderson collection details the life of George Willard.

ANSWER: Winesburg, Ohio

[H] In Moby Dick, before setting off with Captain Ahab, Ishmael and Queequeg attend a sermon by this man about Jonah.

ANSWER: Father Mapple

[E] The Grangerford and Shepherdson families in this novel attend a sermon about "brotherly love" with guns. The title character of this Mark Twain novel is friends with Tom Sawyer.

ANSWER: *The Adventures of Huckleberry Finn*

<Long Fiction — Andrew Gao> [Ed. Joel Miles]

19. In *13 Reasons Why*, Justin sees Jessica with Diego after he shows up late to one of these events. Pedro's cousins drive Napoleon Dynamite to one of these events. Devi gets hit by a Jeep while driving to one of these events at the end of season two of *Never Have I Ever*. Mike kisses Eleven during one of these events in *Stranger Things*. Marty (*) McFly performs "Johnny B. Goode" for his parents at one of these events set "Under the Sea" in *Back to the Future*. The Steven King character Carrie murders the attendees of one of these events in a gymnasium after being soaked in pig's blood and being crowned "queen." For 10 points, name these school events exemplified by homecoming and prom.

ANSWER: school dances [accept proms or homecoming before "homecoming"]

<Pop Culture — Yash Mandavia> [Ed. Ganon Evans]

19. This compound's Lewis structure supposedly came to August Kekulé in a dream about a snake biting its own tail. For 10 points each:

[M] Name this aromatic compound with the formula C₆H₆.

ANSWER: benzene [accept benzol]

[H] This derivative of benzene also known as methylbenzene is made by adding a CH₃ group. This compound is used as a solvent in permanent markers and paint thinners.

ANSWER: toluene [TALL-you-eeen] [accept toluol]

[E] This common explosive is made from toluene by adding three NO₂ groups. Other explosives are measured relative to this compound known by a three-letter abbreviation.

ANSWER: TNT [or (2,4,6-) trinitrotoluene; or 2-methyl-1,3,5-trinitrobenzene]

<Chemistry — June Yin> [Ed.]

20. In what is now this country, Nestor Makhno's anarchist Black Army often used horse-drawn machine guns known as *tachanka*. Hetmanate states were centered in this modern-day country where a famine was triggered by *kolkhoz* farms during the First Five-Year Plan. Stepan Bandera collaborated with the Nazis while fighting for the independence of this country, where Joseph Stalin starved millions to death in a man-made famine called the (*) Holodomor. A 30-kilometer Exclusion Zone was created after a 1986 disaster in this modern-day country spread radioactive waste. For 10 points, Chernobyl occurred in what country now led by Volodymyr Zelenskyy?

ANSWER: Ukraine

<European History — June Yin> [Ed. Louis Li]

20. Answer the following about the illusion of movement in Ancient Greek art, for 10 points each:

[M] Archaic period *kouroi* statues of youths resemble previous Egyptian statues in appearing to be performing this action. Thin figures perform this action in a series of sculptures by Alberto Giacometti.

ANSWER: **walking** [accept equivalents like **stepping**; or **marche**; or L'homme qui **marche**; or **Walking Man**; prompt on **movement** or **motion**]

[H] Though its art is now broken, a sculpture by this artist once depicted Hermes dangling a bunch of grapes in front of a baby Dionysus. Phyrne modeled for this artist's sculpture of Aphrodite of Knidos.

ANSWER: **Praxiteles**

[E] The sculptor Myron depicted a bronze athlete bending over as he prepares to throw one of these Frisbee-like objects for a Greek Pentathlon event.

ANSWER: **discus** [accept **disc**; accept **Discobolus**]

<Visual Fine Arts — Ganon Evans> [Ed.]