

Bulldog High School Academic Tournament 2021 (XXX): “I feel like ACF Regionals 2021 is a confusing subtitle for a set that’s not ACF Regionals 2021.”

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Packet 4 Tossups

1. **An artist who emigrated from this country began his *Homage to the Square* series while teaching at Yale’s design department. Another artist from this country painted a pair of prostitutes in fur-collared coats surrounded by men in black coats walking the streets of its capital city. Fire rains down on a blue deer and other contorted animals in a painting of their (*) *Fate* by an artist from this country, who co-founded an artistic movement with the Russian author of “Concerning the Spiritual in Art.” Josef Albers taught at Walter Gropius’ Bauhaus School in this country. For 10 points, name this country, where the Blue Rider and Die Brücke movements were labelled “degenerate” by Nazis.**

ANSWER: **Germany** [or **Deutschland** or **Weimar Republic**] (Die Brücke artist Ernst Kirchner painted *Street, Berlin*.) (AY)

2. **In a story by this author, a mother requests a birthday gift be sent as a lump sum rather than annually so her son can attend Eton. The setting of that story is haunted by the phrase “There must be more money!” Mrs. Bates’ husband is not drinking at the Prince of Wales pub, as she expects, but dead from a coal mining accident in one story by this author. A boy wins (*) 80,000 pounds on the racehorse Malabar in another story by this man, but dies soon after, having ridden the title rocking-horse too hard. This author wrote a novel about Paul Morel’s complicated relationship with his mother Gertrude. For 10 points, name this author of *Sons and Lovers* as well as *Lady Chatterley’s Lover*.**

ANSWER: D. H. **Lawrence** [or David Herbert **Lawrence**] (The referenced stories are “The Rocking-Horse Winner” and “Odour of Chrysanthemums.”) (DS)

3. **Studies of “ripples” during this phenomenon showed the first evidence for hippocampal replay. Process S, a homeostatic driver of this process, is associated with adenosine buildup in the ventrolateral preoptic nucleus, which secretes GABA to initiate it. This process is inhibited in a fatal (*) familial prion disease that causes thalamic atrophy, leading to hallucinations and dementia. Procedural and emotional memory may be consolidated during the REM part of this melatonin-induced process. For 10 points, college students and other insomniacs often incur a “debt” of what state of unconsciousness?**

ANSWER: **sleep** [accept more specific answers like REM **sleep** or non-REM **sleep** or nREM **sleep**; prompt on circadian rhythms; prompt on dreaming] (HK)

4. **An account of this event by Francisco López de Gómara was banned for its excessive and falsified praise of its main instigator. In this conflict, elites and priests were murdered during a temple ceremony by soldiers in a massacre perpetrated by Pedro de Alvarado; those soldiers then suffered large casualties when forced to escape the city during *La* (*) *Noche Triste*, or the “Night of Sorrows.”** The last book of the Florentine Codex is about this conflict, which ended when a joint Tlaxcalan–Spanish siege of Tenochtitlan succeeded in 1521. For 10 points, name this conflict enacted by *conquistador* Hernán Cortés that led to the death of emperor Moctezuma II.
ANSWER: Spanish **conquest** of the **Aztec** Empire [or Spanish **conquest** of **Mexico**; accept **fall** of **Tenochtitlan** or **conquest** of **Tenochtitlan** before “Tenochtitlan” is read; accept equivalents for “conquest” like **overthrow**; prompt on Spanish **conquest** of the **Americas** or the **New World**] (MGS)

5. **Gunshots and clips of Tamika Mallory and Malcom X interrupted this rapper’s debut SNL performance to condemn Daniel Cameron. “I’m Afraid the Masquerade Is Over,” which the Notorious B.I.G. sampled on “Who Shot Ya?,” was also sampled for this rapper’s “Shots Fired.”** The lines “Carole Baskin (*) killed her husband, whacked him,” appear in a TikTok parody of a song in which this rapper laughs about how “Haters kept my name in they mouth, now they gagging.” In that song, this rapper also describes herself as “sassy, moody, nasty.” For 10 points, name this rapper of “Body” and “Savage” also known for her feature on Cardi B’s WAP.
ANSWER: **Megan Thee Stallion** [or Megan Jovon Ruth **Pete**; prompt on any partial answer; prompt on **Meg**] (HK)

6. **Kèsī are Chinese works of this type featuring unblended areas of color. A series of works of this type contains a mysterious AE cipher. One of these works features a white creature tethered to a pomegranate tree and resting within a circular fence. The *millefleurs* style of these works features densely flowered backgrounds, which appear behind a lady accompanied by a (*) mythical creature in one series of these works.** Another series of these works depicts *The Hunt of the Unicorn*. An embroidered depiction of Halley’s comet passing over a battle is popularly known as a work of this type. For 10 points, a piece found at Bayeux is popularly known as what woven artwork?
ANSWER: **tapestry** [accept word forms; prompt on **textiles**] (NM)

7. **In Nepal, celebrations of Swanti and Tihar by Buddhists and Hindus coincide with celebrations of this holiday, as does the Sikh holiday Bandi Chhor Divas. In commemoration of Yamuna and Yama or Krishna and Subhadra, brothers go to meet their sisters on the last day of this holiday, (*) Bhai Duj.** People clean their homes on the third day of this festival, which occurs on a new moon in autumn. This holiday commemorates Rama and Sita’s return to Ayodhya and a goddess of prosperity visits households during it. Swirling *rangoli* art decorates doorsteps for this holiday, as do *diya* lamps. For 10 points, name this Hindu festival that honors Lakshmi and light.
ANSWER: **Diwali** [or **Divali**; or **Deepavali**] (HK)

8. **“Strahl” electrons make up this phenomenon’s highest speed component. Eugene Parker postulated that this phenomenon has a subsonic-supersonic transition, and realized that the shape of comet tails results from radiation pressure and this phenomenon. Joan Feynman found that the presence of helium in this phenomenon was highly correlated with the emergence of (*) coronal mass ejections.** This phenomenon causes the interplanetary magnetic field to form when it drags the solar magnetic field away from the corona. For 10 points, identify this stream of plasma ejected from the Sun that interacts with the Earth’s magnetosphere to cause auroras.
ANSWER: **solar wind** [prompt on **wind** until “solar” is read and accept after; prompt on **stellar wind**] (DR)

9. In this modern-day state, a small-scale civil war occurred when the governor refused to hand over power to Edward Hyde. In this state, a showy mansion was built in New Bern by the governor, William Tryon, helping to spark an uprising. A group was instructed to carve a Maltese Cross on a tree if they encountered distress while colonizing this modern-day state. In this state, the Battle of Alamance ended the War of the (*) Regulation. Virginia Dare was born in what is now this state, where John White saw the word “CROATOAN” carved into a tree on his return from England. For 10 points, name this state on whose “Outer Banks” the colony of Roanoke was located.

ANSWER: North Carolina (MK)

10. An antagonist in this work grew up as a street urchin before impressing a prince with his talent for ball games. An illustrated translation of this work spurred the 19th century “Suikoden” craze. One character in this novel, Pan Jinlian, is elaborated into one of three central women in the late Ming novel *Jin Ping Mei*. In this work, she is killed by her brother-in-law (*) Wu Song, who also slays a tiger with his bare hands. Two-thirds of this novel’s main group die subduing Fang La’s rebellion. That group, divided into “Heavenly Spirits” and “Earthly Demons,” gathers at Mount Liang in this work. For 10 points, name this Chinese classic about Song Jiang’s band of 108 “Stars of Destiny.”

ANSWER: Water Margin [accept Outlaws of the Marsh, All Men Are Brothers, Tale of the Marshes, or Shuihǔ Zhuàn; accept The Marshes of Mount Liang before “Mount Liang” is read](AP)

11. When these kinds of people are depressed, they may fail to consistently use a singsongy linguistic register often called [these people]-ese. Mary Ainsworth developed a sensitivity scale for these people. Her Strange Situation experiments observed the effect of one of these people (*) leaving a room. Rhesus monkeys were deprived of contact with these figures and then given wire and cloth surrogates of them in a Harry Harlow study. Konrad Lorenz found that greylag goslings could imprint on his wading boots in the absence of one of these figures. These figures are widely assumed to be the primary attachment figure for infants. For 10 points, name these female parents.

ANSWER: mothers [accept equivalents; accept parents, caretakers, or caregivers before “Ainsworth” is read, and prompt thereafter; prompt on women] (HK)

12. One symbol of this modern-day country is the poet Abai Qunanbaiuly holding a *dombra*, this country’s national instrument. Nuclear tests were conducted in Semipalatinsk in this country before it surrendered its nuclear arsenal. This country contains a half-saline half-freshwater lake in its southeast, and a once-existent (*) sea in the south of this country was decimated by canals built for cotton cultivation since the 1960s. In 2019, Kassym-Jomart Tokayev succeeded Nursultan Nazarbayev as president of this second-largest country resulting from the dissolution of the Soviet Union. For 10 points, name this country with capital at Nur-Sultan, formerly known as Astana.

ANSWER: Kazakhstan [or Republic of Kazakhstan; or Qazaqstan Respwblıkası] (HK)

13. Sinuous solos on this instrument feature in “The Eel,” recorded with Eddie Condon’s band by Bud Freeman. Coleman Hawkins recorded a popular version of “Body and Soul” on this instrument. A plastic one of these instruments appears in “Lonely Woman” and other songs from *The Shape of Jazz to Come*. Other than (*) Ornette Coleman, this instrument was also played by a man who used Ray Noble’s “Cherokee” as the basis for his song “Ko-Ko.” Dense arpeggios feature in the improvisational “sheets of sound” developed by a performer of this instrument. For 10 points, name this instrument played by jazz musicians Charlie Parker and John Coltrane.

ANSWER: saxophone [accept alto saxophone or tenor saxophone] (AY)

14. **This deity forces his daughter's suitor to undergo trials like sleeping in a room full of centipedes and wasps, though that suitor eventually ties this god's hair to rafters and leaves with his daughter, bows, and blade. This deity uses eight vats of liquor to subdue and slay an (*) eight-headed serpent, in whose tail this deity discovers one of the Three Sacred Treasures. This deity presents that blade, Kusanagi, to his sister to atone for throwing a flayed horse into her weaving hall. Unlike his siblings, who are born from their father's eyes, this deity is born after Izanagi cleanses his nose. For 10 points, name this Shinto god of the seas and storms, the brother of Tsukuyomi and Amaterasu.**

ANSWER: **Susano'o** [or **Susanoo**; or **Susanowo**; or **Susanowa**; or Takehaya **Susanoo**-no-Mikoto; or **His Swift Impetuous Male Augustness**] (HK)

15. **The preface of one work says of this man: "To his spirit and character you cannot refuse your ... love: to his fate you will not deny your tears." This character meets a mad peasant picking flowers for an imaginary rich lover, and defends a servant who murders his replacement out of passion for his widowed employer. In preparation for a "journey," this (*) Ossian-loving character borrows a pair of pistols and writes a letter dreaming of a blissful afterlife. The novel titled for this man consists of a series of letters to Wilhelm, and he despairs after his beloved Lotte ends up with Albert. For 10 points, name this young artist who commits suicide in a novel by Goethe.**

ANSWER: Young **Werther** [accept *The Sorrows of Young Werther*] (MGS)

16. **A ruler of this house built the Château Gaillard in just two years, only to lose it six years later. This house included Geoffrey II, Duke of Brittany, and his brother, who was imprisoned by Leopold V while traveling through Austria. The two primary names for this house derive from the common broom flower and the county of western (*) France from which they originated. Philip Augustus ended this house's empire at the Battle of Bouvines. Eleanor of Aquitaine's second marriage was to a king from this house. This house's cadet branches of York and Lancaster fought the Wars of the Roses. For 10 points, name this English royal dynasty that included Henry II and Richard the Lionheart.**

ANSWER: House of **Plantagenet** [accept House of **Anjou** or **Angevin** Dynasty or **Angevin** Empire] (DM)

17. **When these phenomena involve a broken symmetry, they are accompanied by an order parameter becoming nonzero. Before his work on superconductivity, Lev Landau proposed a mean-field theory of these phenomena. The temperature at which one kind of these phenomena occurs is minimized at the (*) eutectic composition. "Continuous" examples of these phenomena are second-order, while first-order ones absorb or release latent heat. Examples of these processes, which occur when a system crosses a coexistence curve, include deposition and sublimation. For 10 points, name these events in which one state of matter changes into another.**

ANSWER: **phase transitions** [accept **phase changes** or **phase transformations**; prompt on **melting** or **freezing** after "eutectic" and before "deposition"] (HK)

18. **A girl in this play complains that her mother dresses her like a "sick turkey" and says over breakfast, "Do you know what I love most in the world? ... Money." One of this play's characters asks another, who brags about her speech on the Louisiana Purchase, if she'll give algebra hints through the window. Those two characters in this play agree to (*) marry over ice-cream sodas prepared by the same actor who officiates their wedding, at which the recurring hymn "Blessed Be the Tie That Binds" is sung. After dying in childbirth, Emily Webb relives her twelfth birthday in this play's final act. The Stage Manager presents life in Grover's Corners in, for 10 points, what play by Thornton Wilder?**

ANSWER: **Our Town** (DS)

19. **This kingdom's military used six ranks of troops, firing three at a time between countermarches, in a campaign that began to protect Stralsund, Pomerania. This kingdom seized an advantage in a 1700 battle by charging into a snowstorm while outnumbered 4-to-1. A monarch of this kingdom nicknamed "Minerva" abdicated at 28 to become a (*) Catholic nun.** Under the successor to its Queen Christina, this kingdom invaded a southeastern neighbor in the Deluge. This kingdom declined after Charles XII lost the Great Northern War to Peter the Great. For 10 points, name this kingdom ruled by "the Lion of the North," Gustavus Adolphus, from Stockholm.
ANSWER: Kingdom of Sweden (DM)

20. **When it arises due to the expansion of the universe, a quantity denoted by this letter equals one over the scale factor, all minus one. This letter is used to denote redshift, and it is marked with a superscript zero in the name of the neutral vector boson that mediates the weak force. While mass number is usually denoted A , this letter denotes (*) atomic number, a usage that derives from the German word for "number."** This letter denotes the axis of symmetry in cylindrical coordinates, as well as the out-of-plane axis in three-dimensional Cartesian coordinates. For 10 points, name this letter that might be used for a third coordinate once you've already used X and Y .

ANSWER: Z [accept z-axis] (SE)

Tiebreaker

In a play by this author, a man pretends to have a job offer that will take him from Berlin to Vladivostok. That character created by this author calls his landlady "succulent" and is asked questions like "Why did you kill your wife?" and "Why did the chicken cross the road?" by a (*) Jew and an Irishman who break his glasses during blind man's bluff. In a play by this author, Petey yells, "don't let them tell you what to do!" as McCann and Goldberg abduct Stanley from Meg's boarding house. In another of his "comedies of menace," the hitmen Ben and Gus send up chips through the title device. For 10 points, name this author of *The Birthday Party* and *The Dumbwaiter*.

ANSWER: Harold Pinter (DS)

Packet 4 Bonuses

1. This lieutenant governor of Jamaica was arrested in 1672 for violating the Treaty of Madrid, but he was freed upon showing that he'd had no way of knowing it had been signed when he left Port Royal. For 10 points each:
[10] Name this privateer who sacked Panama City in 1671. He earlier looted two ports on Lake Maracaibo and escaped the Spanish fleet blocking the strait by pretending he would attack it by land.

ANSWER: Henry **Morgan**

[10] Morgan's activities occurred in this period of English history following the Interregnum. It is generally said to have lasted until the 1680s.

ANSWER: **Restoration**

[10] Morgan was greeted in London by Charles II, who restored the monarchy two years after this commander's death. This commander led the parliamentary faction's New Model Army during the English Civil War.

ANSWER: Oliver **Cromwell** (DM)

2. This figure asks, "Are you the one who gives the horse its strength, or puts a flowing mane on its neck?" For 10 points each:

[10] Name this figure who appears in a whirlwind to interrogate a man whose children had earlier died when their house collapsed in a storm.

ANSWER: **God** [or the **Lord**; or **Elohim**; or **Adonai**; or **Jehovah**; or **Yahweh**]

[10] God addresses this man from Uz. This man, who names a book of the Old Testament, demands a chance to "present [his] case" to God after losing his livestock, children, and health due to a bet between God and Satan.

ANSWER: **Job** [or **Iyyob**]

[10] God mocks Job by asking if he can capture this creature with a fishhook. Earlier, Job asks those who are "ready to rouse up" this sea monster to curse the day of Job's birth.

ANSWER: **Leviathan** (DS)

3. These aquatic creatures acquire their striking pink color from repeated abrasions to the skin. For 10 points each:

[10] Name these creatures. In indigenous myths, these creatures can become beautiful people who seduce and impregnate unsuspecting humans but have to wear a hat to hide the evidence of their true forms.

ANSWER: **Amazon river dolphins** [or **botos**; or **bufeos**; or **encantados**; or **Inia geoffrensis**; prompt on pink river dolphins or river dolphins by asking "native to what river?"]

[10] As apex predators, botos feed even on the red-bellied species of these fish with razor-sharp teeth. Though they are formidable predators, legends about these fishes' vicious attacks tearing apart humans might be overblown.

ANSWER: red-bellied **piranhas** [or **pirañas**; or **Pygocentrus nattereri**]

[10] While named for the Amazon river, botos can be found in a number of other South American rivers, including this one which flows from the Guianan highlands through Venezuela, emptying into the Gulf of Paría.

ANSWER: **Orinoco** River [or Río **Orinoco**] (HK)

4. The Houses of Parliament rise in the background as a train crosses the Thames through the fog in a series of paintings depicting this structure. For 10 points each:

[10] Give this London structure, which also appears against green and blue buildings and a pink sky in a colorful André Derain painting.

ANSWER: **Charing Cross Bridge**

[10] This Impressionist created multiple depictions of Charing Cross Bridge, though he may be better known for painted series depicting haystacks and the Rouen Cathedral at different times of day.

ANSWER: Claude **Monet** [or Oscar-Clade **Monet**]

[10] Monet painted his series of water lilies, often paired with a Japanese footbridge, from his garden at this French village.

ANSWER: **Giverny** (SL)

5. Suetonius attests that this man wrote a book “on the art of dice,” and in one work he is punished by having to forever shake dice in a box with no bottom. For 10 points each:

[10] Name this Roman emperor who is “gourdifed,” rather than deified, after death in a satire attributed to Seneca the Younger.

ANSWER: **Claudius** [or Tiberius **Claudius** Caesar Augustus Germanicus]

[10] More famous examples of Roman satire were written by this poet. He asked “who watches the watchmen?” in his sixth *Satire*, which is largely a misogynistic tirade against women.

ANSWER: **Juvenal** [or Decimus Junius **Juvenalis**]

[10] Juvenal’s tenth *Satire* gives a list of things that one should ask for in life, including that one should desire a “sound [this thing] in a sound body.”

ANSWER: “sound **mind** in a sound body” [or “**mens** sana in corpore sano”] (DS)

6. Alan Hodgkin and Andrew Huxley first modelled these events using circuit components. For 10 points each:

[10] Name these all-or-nothing events that begin with the depolarization of the cell membrane and are followed by an absolute refractory period.

ANSWER: **action potentials**

[10] Hodgkin and Huxley used namesake giant axons from these animals to develop their model. While humans use myelin to increase signal propagation speed, these animals rely on a massive axonal cross-sectional area instead.

ANSWER: longfin inshore **squid** [or *Loligo forbesii*; or *Doryteuthis pealeii*; or *Loligo pealeii*; accept **squid giant axon**]

[10] While action potentials are most often studied in neurons, specialized pacemaker potentials also play an important role in the rhythmic muscle contraction and relaxation that allows this organ to pump blood.

ANSWER: **heart** (HK)

7. This author wrote that “Those of us who have been forged in the crucibles of difference...know that survival is not an academic skill.” For 10 points each:

[10] Name this womanist author of “The Master’s Tools Will Never Dismantle the Master’s House,” which is included in her collection *Sister Outsider*. This Black lesbian poet also wrote *The Cancer Journals*.

ANSWER: Audre **Lorde** [or Audrey Geraldine **Lorde**]

[10] This other author is credited with coining the term “womanism” in her short story “Coming Apart.” She also wrote a novel in which Celie writes letters to God and falls in love with Shug Avery.

ANSWER: Alice **Walker** [or Alice Malsenior Tallulah-Kate **Walker**]

[10] The aforementioned novel by Alice Walker is titled for this color. In a different essay, Walker says that “Womanism is to feminism as [this color] is to lavender.”

ANSWER: **purple** [accept *The Color Purple*] (HK)

8. A witch running a bathhouse enslaves a dragon and steals names in one film by this director. For 10 points each:
[10] Name this director whose other works include one inspired by his opposition to the U.S.' invasion of Iraq. That one of his works features Sophie, who is cursed by a witch and meets a fire demon bound to a magical palace.

ANSWER: Hayao **Miyazaki** [accept names in either order]

[10] Miyazaki is one of the co-founders of this film studio, under whose label his works *Spirited Away* and *Howl's Moving Castle* were released.

ANSWER: Studio **Ghibli** [or *Kabushiki-gaisha Sutajio Jiburi*]

[10] Another Ghibli film directed by Miyazaki is titled for Satsuki and Mei's neighbor, this adorably furry grey-and-white creature who may actually be a *kami*.

ANSWER: **Totoro** [accept *My Neighbor Totoro* or *Tonari no Totoro*] (HK)

9. Malus's law predicts that the intensity of light passing through one of these devices is reduced by a factor of "cosine-squared of theta." For 10 points each:

[10] Name these devices that filter out all light waves *not* oscillating in a certain direction. Sunglasses that act as these devices can decrease glare from roads, but may make it difficult to see LCD screens.

ANSWER: **polarizers** [or **polarizing** sunglasses; prompt on **polarization**]

[10] A quarter-wave plate converts linear polarization into this other type of polarization, whose two components are separated by a 90-degree phase shift. Its electromagnetic field has fixed magnitude and rotates at a constant rate.

ANSWER: **circular** polarization [prompt on, but do **NOT** otherwise reveal, **elliptical** polarization]

[10] In the most general case, the field of polarized light traces out one of these shapes in the plane of polarization. For any point on this oval-like shape, the sum of distances to its two focal points is fixed.

ANSWER: **ellipse** [accept **elliptical** polarization] (DM)

10. All's fair in love and war—according to these operas, at least. For 10 points each:

[10] Count Almaviva pretends to be a drunken soldier to enter his love Rosina's home in this opera. The title character of this opera by Gioachino Rossini jubilantly repeats his own name, Figaro, in "Largo al Factotum."

ANSWER: *The Barber of Seville* [or *Il barbiere di Siviglia*]

[10] The peasant Nemorino rashly signs an army contract to buy more of the title potion in Donizetti's *The Elixir of Love*, and sings this act II aria upon seeing a tear in his love Adina's eyes: apparent proof the elixir has worked.

ANSWER: "**Una furtiva lagrima**"

[10] The maid Despina sings the aria "In uomini, in soldati" advising her mistresses to cheat on their soldier fiances in this Mozart opera. They refuse, but are eventually seduced by the officers in disguise.

ANSWER: *Così fan tutte*, *ossia La scuola degli amanti* [or **Thus Do They All**; or *The School for Lovers*; or similar translations] (DS)

11. After leading a rebellion in his home country, this nobleman left for the American colonies, where he participated in the revolution. For 10 points each:

[10] Name this commander who was mortally wounded during a charge at the Battle of Savannah. He led a series of important military reforms alongside Michael Kovats.

ANSWER: Casimir **Pulaski** [or Kazimierz Michał Władysław Wiktor **Pulaski**]

[10] This Prussian general, another of the foreigners who aided the colonists during the war, authored the "Blue Book" to teach his soldiers military drills at their winter camp of Valley Forge.

ANSWER: Baron von **Steuben** [or Friedrich Wilhelm August Heinrich Ferdinand von **Steuben**]

[10] This French general fought at the Battle of the Brandywine, where he was wounded. This *marquis*, called the "hero of two worlds," helped corner Cornwallis at Yorktown.

ANSWER: Marquis de **Lafayette** [or Marie-Joseph Paul Yves Roch Gilbert du **Motier**] (VS)

12. Bedivere returned this weapon to the Lady of the Lake after its owner fell at the Battle of Camlann. For 10 points each:

[10] Name this weapon, whose scabbard can prevent blood loss when the wielder is wounded. This weapon is *not* the same as the Sword in the Stone, though both swords are wielded by King Arthur.

ANSWER: **Excalibur** [accept **Caliburnus**]

[10] The magic sword Durendal was owned by this other hero, who attempted to destroy it rather than surrender it to the invading Saracens in his namesake song.

ANSWER: **Roland** [or **Orlando**]

[10] While Durendal proved indestructible, this sword was broken by Odin to cause Siegmund's death. Sigurd reforges the pieces of this sword, which Odin had earlier thrust into the tree Barnstokkr.

ANSWER: **Gramr** [accept **Balmung**] (MGS)

13. Martin Heidegger analyzed a fragment by a philosopher from this city that claims that things “must pass away...[to] pay penalty and be judged for their injustice.” For 10 points each:

[10] Name this Ionian Greek city. This city's namesake school of philosophy included Anaximander, who believed that the universe's first principle was *apeiron*, and another thinker who claimed that everything came from water.

ANSWER: **Miletus** [accept **Milesian** school]

[10] Water is the origin of all substances according to this Milesian school philosopher, who is credited with being the first to predict a solar eclipse and with being the first Greek philosopher.

ANSWER: **Thales** of Miletus

[10] Thales is also credited with discovering a namesake theorem in this mathematical field. Euclid's *Elements* introduced many core axioms of this field, which is concerned with the properties of spaces.

ANSWER: **geometry** (DM)

14. Tommy Orange, Edwidge Danticat, and David Mitchell contributed to a 2020 collaborative writing project named for this work, subtitled “29 New Stories from the Pandemic.” For 10 points each:

[10] Name this collection of one hundred tales told by ten Florentine friends taking shelter from the Black Death, written by Giovanni Boccaccio.

ANSWER: *The **Decameron**, or Prince Galehaut* [or *Il **Decamerone**: Prencipe Galeotto*]

[10] The *Decameron*'s prologue announces Boccaccio's intent to “repair the omissions of Fortune” by entertaining these people. He later wrote a book *On Famous* examples of these people.

ANSWER: **women** [or **ladies**; accept equivalents; accept *De Claris **Mulieribus***]

[10] This author's *Book of the City of Ladies* replies to misogynistic depictions of women and is mostly sourced from *On Famous Women*. She also adapts the stories of Ghismonda and Lisabetta from the *Decameron*.

ANSWER: Christine de **Pizan** [or Cristina da **Pizzano**] (DS)

15. This composer dedicated a “Lent et grave” *Légende* for trumpet and piano to Merri Franquin. For 10 points each:

[10] Name this composer, who quoted folk songs like “I have a coin and I want a drink” and “Wow the wolf is eating me” and incorporated traditional dances like the *hora* in his *Romanian Rhapsodies*.

ANSWER: George **Enescu**

[10] This man imitated fluttering birds in the first of *Deux Légendes* inspired by St. Francis of Assisi and St. Francis of Paola. This man's “Dance in the Village Inn” was the first of four pieces inspired by Nikolaus Lenau's *Faust*.

ANSWER: Franz **Liszt** [or **Liszt** Ferenc]

[10] This country's Henryk Wieniawski [“vyeh-NYAV-skee”] composed his *Légende* as a violin showpiece. Krzysztof [“KSHISH-toff”] Penderecki [“pen-duh-RETS-kee”] composed a requiem for this country commissioned by Solidarity.

ANSWER: **Poland** [or Republic of **Poland**; or Rzeczpospolita **Polska**] (AY)

16. These devices often have a built-in magnetic stir bar. For 10 points each:

[10] Name these devices used in many chemistry labs to heat up reaction flasks. They are safer than Bunsen burners, since they do not feature an open flame.

ANSWER: **hot plates**

[10] A hot plate might be used to boil a liquid mixture in this lab procedure that separates the mixture's components by boiling point. This procedure is carried out cyclically in its "fractional" form.

ANSWER: **distillation** [accept fractional **distillation**]

[10] These porous solid objects, often made of silicon carbide, are added to a heated flask to provide nucleation sites and reduce the formation of large gas bubbles, which may lead to violent "bumping."

ANSWER: boiling **chips** [or boiling **stones**] (MP)

17. The Biedermeier Period was an era where simple, elegant styles promoted by the middle class pervaded Central Europe, aided by Metternich's stabilizing influence. For 10 points each:

[10] The Biedermeier style was centered around this empire, which Chancellor Metternich governed from its capital at Vienna.

ANSWER: **Austrian** Empire [do **NOT** accept or prompt on "Austria-Hungary"]

[10] The Biedermeier period was also characterized by the rise of anti-liberal censorship, which Metternich began in Austria with this legislation. Its pretext was the murder of conservative August von Kotzebue ["COT-seh-boo"] by a liberal student.

ANSWER: **Carlsbad Decrees**

[10] The Biedermeier Period ended in this year, during which Metternich fled to England after the March Revolutions. Lajos ["LAI-ohsh"] Kossuth ["KOSH-oot"] led the Hungarian Revolution in this year to try to gain independence from Austria.

ANSWER: **1848** [prompt on '48] (DM)

18. Super-Kamiokande's observation of this phenomenon provided strong evidence for the nonzero mass of neutrinos. For 10 points each:

[10] Name this phenomenon that occurs when charged particles move faster than the speed of light in a given medium. This phenomenon named for a Soviet physicist produces the blue glow of the water of a nuclear reactor.

ANSWER: **Cherenkov** radiation [or **Cherenkov** effect]

[10] The Cherenkov effect is also used by observatories to detect emissions in this region of the spectrum. This type of radiation has the highest energy level in the electromagnetic spectrum, above x-rays.

ANSWER: **gamma** rays [or **gamma-ray** bursts]

[10] In 2018, an active galactic nucleus of this type was located using Cherenkov radiation for the first time. These objects are defined as quasars whose relativistic jets point directly at Earth.

ANSWER: **blazars** [prompt on **quasars**] (MGS)

19. This poem describes “Bright-fire-like barberries / Figs to fill your mouth / and Citrons from the South.” For 10 points each:

[10] Name this poem which includes the refrain “Come buy, come buy.” In this poem, a girl is warned about the fate of Jeanie and drinks juices off of her sister.

ANSWER: “**Goblin Market**”

[10] This poet of “Goblin Market” scorned a would-be suitor in another poem, telling him “Here's friendship for you if you like; but love,— / No, thank you, John.”

ANSWER: Christina (Georgina) **Rossetti** [prompt on Rossetti]

[10] Christina Rossetti was photographed with her artist brother Dante by this photographer. This author incorporated his love of logic into *Alice's Adventures in Wonderland*.

ANSWER: Lewis **Carroll** [or Charles Lutwidge **Dodgson**] (HK)

20. Answer the following about the global climatic impacts of volcanic events. For 10 points each:

[10] The Okmok II eruption of 43 BCE disrupted the Indian Ocean ITCZ and therefore the flood cycle of this river. The ensuing upheaval helped destabilize the Ptolemaic Dynasty, which was based on this river.

ANSWER: **Nile** River [accept Blue **Nile**; do **NOT** accept or prompt on “White Nile”]

[10] The climate events of 1816, often known as the Year Without a Summer, have been tied to the 1815 eruption of this Indonesian stratovolcano, the largest eruption of the Holocene.

ANSWER: Mount **Tambora** [or **Tomboro**]

[10] The Laki eruptions in Iceland, occurring over eight months between 1783 and 1784, led to widespread failed harvests throughout Europe for years and hence possibly contributed to this event in 1789 that overthrew Louis XVI.

ANSWER: **French Revolution** (JS)

Tiebreaker

Answer the following about dipoles [“DY-poles”], for 10 points each.

[10] The simplest type of these objects consists of a dipole of a north and south pole. Their “permanent” variety is often made of iron and can be used to pick up lost keys.

ANSWER: **magnets**

[10] André-Marie Ampère [“AM-peer”] modeled a magnetic dipole as a tiny loop carrying this physical quantity. Ampère’s law describes how the magnetic field depends on the amount of this quantity enclosed by a different kind of loop.

ANSWER: electric **current** [prompt on *I*]

[10] An electric dipole consists of two closely separated equal and opposite charges. At large distances, the electric field that a dipole produces is proportional to what power of the distance r from the dipole?

ANSWER: **-3** [“negative three”] [accept **r to the negative third** or **one over r -cubed**; accept **distance** for “ r ”; accept **inverse cube** or **inverse cubic**; do **NOT** accept or prompt on “3” or “cubic”] (DM)