

Harvard Fall Tournament XIII

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Round 7

Tossups

1. In 1876, the town of Marpingen became a popular destination for members of this group. Preserving this organization's authority was the goal of the Soest ["zost"] program, whose supporters adopted a flag depicting two horizontal stripes of white and yellow. Rudolf Virchow popularized the name of a government initiative targeting this organization. This group's supporters formed the (*) Zentrum Party to gain political strength. Adalbert Falk passed laws that attempted to limit the influence of this organization as part of a "culture war." For 10 points, name this religious organization that was targeted by Otto von Bismarck's *Kulturkampf*.

ANSWER: Roman Catholic Church <Suh>

2. A youngster from this nation impressed then Juventus ["yoo-VEN-toos"] manager Fabio Capello so much that Capello tried to sign him during a match. An athlete from this nation was expelled from the 1994 World Cup after failing drug tests; eight years earlier, that man dribbled past five English (*) defenders to score the "Goal of the Century," minutes after scoring a goal with his hand. This country lost the 2014 World Cup Final in extra minutes against Germany. This country's current captain as of 2018 plays for Barcelona. For 10 points, name this country with diminutive soccer superstars such as Diego Maradona and Lionel Messi.

ANSWER: Argentina <Suh>

3. In a work titled for this place, a king decries "companionship of men with evil heart" as a spy announces the arrival of a group of enemies led by his brother. That play's ending was revised to maintain continuity with another play set in this place, in which a funeral ritual in a dust storm is performed by (*) Haemon's lover. In a play set in this place, Ismene refuses to defy King Creon's edict and help the title character bury Polynices. An Aeschylus play describes *Seven Against [this city]*, and a king of this city murders his father and marries his mother in a namesake Sophocles trilogy. For 10 points, name this setting of *Antigone* and *Oedipus Rex*.

ANSWER: Thebes <R. Li>

4. This device is used in synthetic chemistry to selectively heat polar solvents to accelerate the rate and increase the yield without affecting the integrity of the reactants. This device often contains a cavity magnetron which generates radiation from the interaction of electrons with a magnetic field. This device releases oscillating centimeter wavelength radiation that causes (*) dielectric heating. The large dipole moment of water makes it particularly affected by this device, which was invented when a scientist noted that the namesake short wavelength phenomena had caused chocolate in his pocket to melt. For 10 points, name this kitchen appliance.

ANSWER: microwave oven <K. Li>

5. One can engage in a “duel” form of this practice during the *mubahala*. *Jumu’ah* is a form of this practice that occurs on Fridays which replaces the *zuhr* [“zoor”] form of this practice done on the other days of the week. The *qasr* [“KAH-ser”] is a shortened form of this practice done while traveling. Adherents of this practice must follow a set of (*) movements called the *rakat*. *Wudu* is usually carried out before engaging in this practice. The *adhan*, or the call to the daily form of this practice is usually recited by muezzins. For 10 points, identify this component of the Five Pillars that Muslims face Mecca to do five times per day.

ANSWER: Islamic prayer (accept word forms; accept prayer duel; or salat; or namaz) <Suh>

6. According to a biography by Sue Prideaux, the artist of this painting commented, “I gave up hope ever of being able to love again.” This painting is the best known example of the artist’s “soul painting,” and a 2004 theft snatched both this painting and the artist’s other work *Madonna*. The eruption at (*) Krakatoa has been theorized as the cause of a “blood red” sky that inspired the artist of this painting while walking in Oslo. Two figures stroll along a bridge in this painting as the primary figure clutches their face. For 10 points, name this painting by Edvard Munch [“moonk”] showing an ambiguous figure making the title cry of anguish.

ANSWER: *The Scream* (or *Skrik*; or *Der Schrei der Natur*; or *The Scream of Nature*) <Kuang>

7. A set of possible values represented by this letter appear in the diagonal of the Jordan matrix, and Lagrange multipliers are often denoted by it. Einstein referred to a value denoted by this letter as “his biggest blunder,” and this letter names a helium superfluid transition temperature around 2 kelvin. Two twelve-base pair sticky ends appear in a Esther-Lederberg-discovered (*) phage [“fayj”] termed with this Greek letter also used to denote eigenvalues. This Greek letter denotes a quantity equal to the velocity over the frequency of a wave; that quantity with this symbol is the wavelength. For 10 points, give this Greek letter transliterated as “L.”

ANSWER: lambda <Magee>

8. This man wrote that the German economy had “sunk to the lowest level in a hundred years” in a report requested by Harry Truman. This man is credited with helping to avert a famine in the Soviet Union during his time as head of the American Relief Administration. This man’s presidential campaign promised “a (*) chicken in every pot.” This man ordered General Douglas MacArthur to break up the Bonus Army. He unwisely implemented the Smoot–Hawley Tariff, which did not improve the economy following the 1929 Black Tuesday stock crash. For 10 points, name this president who was in office at the beginning of the Great Depression.

ANSWER: Herbert Hoover <Suh>

9. A poem by this man says that “whatever is done / by only me is your doing,” and he wrote “a leaf falls” in a poem that is otherwise just the word “loneliness.” In another poem, he wrote that “only the snow can begin to explain how / children are apt to forget to remember,” and in another, concluded that “it’s always (*) ourselves that we find in the sea.” One of this poet’s characters’ “warmest heart recoiled at war,” and another “used to / ride a watersmooth-silver / stallion.” This poet asked, “how do you like your blue-eyed boy / Mister Death,” and sang “of Olaf glad and big.” For 10 points, name this poet of “Buffalo Bill’s” and “anyone lived in a pretty how town.”

ANSWER: edward estlin cummings <Yue>

10. In an aria from this opera, a character tells some women to “see if I have [love] in my heart.” A lawyer in this opera plans to force a character to marry his client in the aria “La vendetta,” but finds out in a sextet that he and his client Marcellina are the title character’s parents. Two characters in this opera measure the dimensions of a bed, and another hides in a closet before breaking (*) flowerpots owned by Antonio. That character, Cherubino, is the cousin of the soon-to-be-married Susanna. For 10 points, name this Mozart opera about Count Almaviva’s advances toward the fiancé of the title Sevillian barber before their wedding.

ANSWER: *The Marriage of Figaro* (or *Le Nozze di Figaro*; accept Nozze) <Minton>

11. In a paper titled for the “quietism” of this thinker, John McDowell describes “a way of doing philosophy without putting forward philosophical theses.” A book titled after this thinker’s name claims that past uses of language do not ground future uses through the example of the “quus” function. This thinker described the rule following paradox, and his (*) “beetle in a box” thought experiment is meant to illustrate private languages. A list of numbered propositions by this man begins, “The world is everything that is the case.” For 10 points, name this Austrian-British philosopher known for *Philosophical Investigations* and the *Tractatus Logico-Philosophicus*.

ANSWER: Ludwig Wittgenstein <Jin>

12. This leader’s walks in Hyde Park later inspired him to donate land to build two public parks in his capital. He used the alias “Badinguet” to escape imprisonment in Fort Ham. This leader’s relationship with the Countess of Castiglione may have influenced him to sign the Plombieres Agreement with Count Cavour. This man employed (*) Baron Haussmann to redesign his capital. The Ems Dispatch incited this man to enter a conflict during which he was captured at the Battle of Sedan. For 10 points, name this last French monarch who lost the Franco-Prussian War, the nephew of an earlier emperor who lost at the Battle of Waterloo.

ANSWER: Napoléon III (or Louis-Napoléon Bonaparte; prompt on Napoléon or Bonaparte; do NOT accept or prompt on “Napoléon I” or “Napoléon Bonaparte”) <Suh>

13. Administration of these substances can lead to ocular injuries due to the suppression of Bell’s phenomenon. Hans Horst Meyer and Charles Ernest Overton independently discovered the correlation between the potency and lipid solubility of these substances. A mixture of tetracaine [“TEH-tra-CANE”], adrenaline, and cocaine known as TAC is used as a (*) “local” form of this substance. Modern examples of these substances such as halothane have largely supplanted the use of diethyl ether and chloroform in the operating room. For 10 points, name this class of drugs that induce a temporary loss of sensation and are commonly administered during surgeries.

ANSWER: anaesthetics (do NOT accept or prompt on “analgesics”) <Park>

14. A widely accepted site of a battle that ushered in this period displays red and blue rock engravings that are at least a thousand years old. During this period, a general supposedly sailed unmanned boats down a river to draw enemy arrow fire, then equipped his troops with the captured arrows. In the lead up to this period, one side lost the Battle of (*) Red Cliffs. The adviser Zhuge [“zooj”] Liang fought troops loyal to Cao Cao during this period, which followed the fall of the Han dynasty and was documented in a historical novel by Luo Guanzhong. For 10 points, name this period of Chinese history named for the states of Wei, Shu, and Wu.

ANSWER: Three Kingdoms (or Sanguo; accept *Romance of the Three Kingdoms*; prompt on answers about the end of the Han dynasty before mention) <Chu>

15. In a poem, this author calls the title creatures “country comets” and says the nightingale studies all night by their side. In one work this poet describes being separated at opposite poles of the Earth from his love and declares, “My love is of a birth as rare / As ’tis for object strange and high.” This author of “The Definition of Love” and “The (*) Mower to the Glow-Worms” wrote a poem in which the speaker speaks of “quaint honor” turning to “dust” as his “vegetable love” in turn grows, and of waiting “Till the conversion of the Jews.” For 10 points, name this author who wrote of “Time’s wingèd chariot hurrying near” in “To His Coy Mistress.”

ANSWER: Andrew Marvell <Cohen>

16. **This man discovered the body of a boy under a pine tree after that boy and his mother jumped into the sea to escape the crazed Athamas. Some accounts say Medea gave the kingdom of Ephyra to this man. Tyro killed her own sons to protect her father from this brother of Salmoneus. This man exposed (*) Autolykus as a cattle thief and may have been the father of Odysseus through Anticleia. This man caused no one to die by chaining up Thanatos, and he later tricked Persephone into allowing him to briefly return from Hades. For 10 points, name this king of Corinth who was punished to endlessly roll a boulder up a hill.**

ANSWER: Sisyphus <Suh>

17. **One work in this genre by Samuel Barber written for the League of Composers concludes with a fugue beginning E-flat-G-flat-B-flat-D, and a low F-G-flat trill is featured in the last of these works by Schubert. Another of these works contains a *Precipitato* 7/8 finale and is the second of Prokofiev's three (*) "War" pieces in this genre. A one-movement B-minor work by Liszt is in this genre, as is a Chopin work with a B-flat-minor funeral march. Mozart wrote one of them with a "rondo alla turca," while a C-sharp-minor one opens with slow triplets and is subtitled "quasi una Fantasia." For 10 points, name the genre of Beethoven's "Moonlight."**

ANSWER: piano sonata (prompt on sonata) <Yue>

18. **Monolayers named for this scientist are adsorbed on an interface, and all Markov systems obey his namesake property generalizing the canonical ensemble. This scientist names a chemical potential equation with Pierre Duhem as well as a quantity that is surface tension times surface area. This man relates degrees of freedom and phases in a namesake (*) phase rule. A quantity named for him is proportional to negated cell potential and is R times T times natural log of K. That quantity is defined as delta H minus T times delta S and is negative for spontaneous reactions. For 10 points, name this scientist, the namesake of a free energy denoted "G."**

ANSWER: Josiah Willard Gibbs <Yue>

19. **The protagonist of this novel witnesses the death of a worker alongside "a little fat man" in "pink pyjamas," and a critic argued that this novel refuses to grant "human expression" to a group of people. This novel's protagonist fantasizes about exploring blank spaces on maps as a child, and lies to "the (*) Intended" about a certain character's last words. Chinua Achebe criticized this novel as being "bloody racist," and its frame story occurs on the *Nellie* in the Thames. After Marlow finds the ivory trader Kurtz in this book, the dying Kurtz only utters the words, "The horror! The horror!" For 10 points, name this Joseph Conrad novel set in the Congo.**

ANSWER: Heart of Darkness <R. Li>

20. **A "strictly protected" reserve in this region saw the reintroduction of the previously extinct Przewalski horse. A legendary creature said to live in this region is described as "shaped like a sausage about two feet long" in *On the Trail of Ancient Man*. The author of that book, explorer Roy Chapman Andrews, claimed to have been the first to discover (*) dinosaur eggs on an expedition into this region. A "death worm" is alleged to reside in this region. This region is bounded to the north by the Altai Mountains and the Tibetan Plateau to the southwest. For 10 points, name this desert that covers a large swath of northern China and southern Mongolia.**

ANSWER: Gobi Desert <R. Li>

21. **In a play by this author, the tension between a father and his oldest son builds until the play's third act, when the son unsuccessfully attempts to assault the father. A maid in that play attempts to seduce the father, who becomes the president of the Fraternal Order of Mammals. In another play by this man, the "troubles" of an alcoholic (*) choir director go unnoticed until he hangs himself in his attic. Simon Stimson is a resident of this author's fictional town of Grover's Corners in a play that asks, "Do any human beings ever realize life while they live it?" For 10 points, name this American playwright of *The Skin of Our Teeth* and *Our Town*.**

ANSWER: Thornton Wilder <Suh>

Bonuses

1. The scientist that names this quantity showed that osmotic pressure was proportional to molarity of solute. For 10 points each:

[10] Name this quantity, symbolized i , which is 1 for most non-electrolytes and is ideally equal to the number of ions in a formula unit for ionic compounds.

ANSWER: **van't Hoff** factor

[10] Van't Hoff also names an equation relating temperature, equilibrium constant, and this quantity for a reaction. The temperature derivative of this quantity gives the constant-pressure heat capacity.

ANSWER: **enthalpy** (prompt on H)

[10] This type of reaction occurs when the reaction enthalpy is negative. A positive slope on a van't Hoff plot indicates that the reaction is this type of reaction which releases energy rather than absorbing it.

ANSWER: **exothermic** <Yue>

2. The title character in one of this author's poems "has no pulse nor will" despite the ship being "anchor'd safe and sound." For 10 points each:

[10] Name this poet of *Leaves of Grass*, who eulogized Abraham Lincoln in his poem "O Captain! My Captain!"

ANSWER: Walt **Whitman**

[10] In this other Whitman poem about Lincoln's death, a "gray-brown bird...sang the carol of death" and the narrator gives a sprig of the title flower to a passing coffin when "the great star early droop'd in the western sky."

ANSWER: "**When Lilacs Last in the Dooryard Bloom'd**"

[10] In a non-Whitman poem, this general is told to "proceed...with virtue on thy side, / thy ev'ry action let the Goddess guide." That poem begins by invoking a "Celestial choir" and describes the battles for "Columbia."

ANSWER: George **Washington** [*Writer's note*: That poem is Phillis Wheatley's "His Excellency General Washington."] <Yue>

3. A ruler of this city was pelted with orange-like fruits called citrons because he refused to properly perform a water libation ceremony. For 10 points each:

[10] Name this capital of the Hasmonean dynasty whose Second Temple was destroyed by Titus in AD 70.

ANSWER: **Jerusalem**

[10] This Roman general intervened in the Hasmonean Civil War and conquered Judea in 63 BC. This member of the First Triumvirate was later defeated by Julius Caesar at the Battle of Pharsalus.

ANSWER: **Pompey** (or Gnaeus **Pompeius** Magnus)

[10] This group who met in the Hall of Hewn Stones was the legislature of the Hasmonean dynasty.

ANSWER: **Sanhedrin** <Suh>

4. The odd-numbered paintings in one series by this artist are held by the Phillips Collection, while the even-numbered ones are kept at MoMA. For 10 points each:

[10] Name this artist whose *Migration* series shows people moving north following World War I.

ANSWER: Jacob **Lawrence**

[10] Lawrence's *Migration* series focuses on this ethnic group, of which Lawrence was a member. Richmond Barthé was a sculptor of this ethnicity who worked as part of the Harlem Renaissance movement.

ANSWER: **African-Americans** (or **Blacks**)

[10] Contemporary African-American artist Kara Walker is best-known for room-sized works using this technique. This technique is named for a French finance minister whose austerity regimes led people to make profile portraits by cutting out black cards.

ANSWER: **silhouette** <Chu>

5. During this war, the Representation of the People Act gave the right to vote to all British women over 30. For 10 points each:

[10] Name this war that suffragettes Emmeline and Christabel Pankhurst supported in order to defeat the “German Peril.” The war began with the assassination of Archduke Franz Ferdinand in 1914.

ANSWER: **World War I** (or **Great War**; accept **WWI**)

[10] A group of 101 British suffragettes wrote and signed a 1914 open letter of this name to call for the end of World War I. During the war, a truce by this name led to many unofficial ceasefires along the trenches of the Western Front.

ANSWER: **Christmas** (accept Open **Christmas** Letter; accept **Christmas** Truce)

[10] While advocating for the women’s right to vote at the Epsom Derby, the suffragette Emily Davison was killed in this rather bizarre manner.

ANSWER: she was **hit** by a **horse** (accept reasonable equivalents) <Suh>

6. Answer some questions related to the Copenhagen interpretation of quantum mechanics, for 10 points each:

[10] Werner Heisenberg, who formulated the Copenhagen interpretation with Niels Bohr, names a principle known by this term. This principle states that both position and momentum can not be known precisely.

ANSWER: **uncertainty** principle (accept word forms)

[10] This other principle states that multiple quantum states of an object can be added together to form another valid state. In the Copenhagen interpretation, upon measurement, the linear combination of states collapses and only one state is observed.

ANSWER: the principle of **superposition**

[10] A photon can be described as having a superposition of two types of this property. Those two types of this property are the *R* and *L* states which correspond to being right or left handed with respect to this property.

ANSWER: **polarization** (accept circular **polarization**) <K. Li/Yue>

7. One 2018 work in this medium referenced several Gordon Parks photos and was directed by Dave Meyers. For 10 points each:

[10] Name this artistic medium of a 2018 work featuring a hooded figure on a white horse and a suicidal leap from a railing in the background while a central Jim Crow figure dances with children in the foreground.

ANSWER: **music video** (accept equivalents)

[10] Dancing zombies feature in the music video to this Michael Jackson song. In that 14-minute music video, Jackson wears a red jacket and turns into a zombie while walking home from the movies with his girlfriend.

ANSWER: “**Thriller**”

[10] This music video features extensive rotoscoping to create comic-book-like pencil-drawing animations. A pencil-drawn motorcyclist reaches out into the real world and grabs a woman’s hand in this 1984 music video.

ANSWER: “**Take On Me**” <Yue>

8. An author from this country wrote the trilogy *Kristin Lavransdatter*, a series of books about a woman living here in the Middle Ages. For 10 points each:

[10] Give this country. Another novelist from this country wrote a novel in which the protagonist gets paid for writing an article for the paper, but is unable to stomach the title *Hunger*.

ANSWER: **Norway**

[10] This German author wrote a similar story called “A Hunger Artist” about a professional faster. He also wrote about Gregor Samsa waking up as a “monstrous vermin” in *The Metamorphosis*.

ANSWER: Franz **Kafka**

[10] In this other Kafka story, a man sets up The Machine to inscribe the words “Be Just” on him, but is instead brutally executed when The Machine malfunctions.

ANSWER: “**In the Penal Colony**” (or “**In der Strafkolonie**”) <Yue>

9. Let's talk about the enemies of the Israelites in the Old Testament, for 10 points each:

[10] Name these persistent enemies of Israel who worshiped Dagon. Goliath and Delilah were a part of these people, and these people killed Saul and Jonathan in battle at Mount Gilboa.

ANSWER: **Philistines**

[10] Israel achieved its greatest territorial extent under this king, the son and successor of David. This man was known for his wisdom and his reign included a visit from Queen Sheba.

ANSWER: **Solomon**

[10] During a battle against Israel and Judah, the king of this nation sacrificed his own son in a desperate attempt to save his country from destruction. Miraculously, it worked as Israel and Judah withdrew in disgust.

ANSWER: **Moab** (accept **Moabites**) <Suh>

10. In August 2018, this man's tweet that "funding" was "secured" to take a certain company "private at \$420" per share launched a SEC investigation that culminated in a \$40 million fine. For 10 points each:

[10] Name this embattled CEO of SpaceX and Tesla. His recent plea for Twitter users to send him their "dankest memes" garnered widespread ridicule.

ANSWER: Elon **Musk**

[10] Elon Musk's attempted buyback was largely funded by the Saudi Royal Family, including funds controlled by this crown prince and defense minister. This man was criticized for his handling of Jamal Khashoggi's murder.

ANSWER: **Muhammad bin Salman** (accept **MBS**; prompt on **Muhammad**)

[10] Elon Musk was born in this country. Its other prominent businessmen include the Gupta family, who were often criticized for their ties to this country's former president Jacob Zuma.

ANSWER: **South Africa** <R. Li/Myers>

11. For 10 points each, answer some questions related to carbohydrates.

[10] Type 1 diabetes is caused by the failure to produce this hormone, and type 2 diabetes arises when cells become resistant to it. This peptide hormone is required for glucose to enter the cell.

ANSWER: **insulin**

[10] This number describes the effect that a food has on blood glucose concentration. Foods with a high value for this measure cause a rapid spike in glucose and insulin concentrations, thus increasing the risk of developing type 2 diabetes.

ANSWER: **glycemic index** (accept **glycemic load**)

[10] Unlike glucose, this ketose has a low glycemic index. Table sugar, also known as sucrose, consists of this carbohydrate bonded to glucose.

ANSWER: **fructose** <K. Li>

12. After publishing a photograph showing one of these creatures, the *Times* published an editorial reading, "It is not known whether she reached the center." For 10 points each:

[10] Name this animal that appears in a 1993 photo taken by Kevin Carter while working for the UN. Several months after taking that photo with this animal, Carter committed suicide.

ANSWER: a **vulture** (prompt on **bird**; if someone says **human**, begrudgingly prompt by asking "What other animal is in the picture?") [*Ed's note: the photo is Struggling Girl.*]

[10] International responses arose after pictures emerged of a boy sitting in an ambulance covered in dust and blood after being rescued from an airstrike in Aleppo during this Middle Eastern nation's recent civil war.

ANSWER: **Syria** (or the **Syrian Arab Republic**)

[10] Perhaps the original photo of children in crisis is this one taken by Dorothea Lange showing two children turning to their mother for comfort in a California pea pickers' camp during the Great Depression.

ANSWER: **Migrant Mother** <Yue/Kuang>

13. Mortals who challenged deities often lost the challenge, and sometimes, even their lives. For 10 points each:
[10] Depending on the account, Arachne may have been a better weaver than Athena, but nonetheless, Athena turned her into this web-producing, eight-legged arthropod.

ANSWER: **spider** (prompt on arachnid, I guess)

[10] Heracles once lost a drinking contest against this god, and therefore had to temporarily join the *thiasus*, this god's retinue of ecstatic followers.

ANSWER: **Dionysus** (or **Bacchus**)

[10] This satyr was flayed alive for his hubris ["**HEW-bris**"] after challenging Apollo to a music contest and losing.

ANSWER: **Marsyas** <Suh>

14. A character with this profession uses butter as lotion, noting that "we have ceremonies of our own, private ones." For 10 points each:

[10] Name these people who attend "the ceremony" with Commanders and are trained by "Aunts" at the Red Center. They are contrasted with Marthas and Econowives.

ANSWER: **handmaids**

[10] The handmaid Offred narrates her life in Gilead in *The Handmaid's Tale*, a dystopian novel by this Canadian author of *Alias Grace* and *Oryx and Crake*.

ANSWER: Margaret **Atwood**

[10] On a walk back from church, Offred observes several men hanged at this place. The victims wear white doctor coats, indicating they're being punished for practicing abortion.

ANSWER: the **Wall** <Yue>

15. For 10 points each, answer the following about relatively unknown events of the Civil War.

[10] This president of the Confederacy was the target of an assassination attempt in the Dahlgren Raid. He once emptied out his pockets in order to pacify angry women demanding bread.

ANSWER: Jefferson **Davis**

[10] The Bahia incident occurred when a Union warship captured a Confederate warship in the namesake harbor of this South American country. Around twenty years later, the Golden Law abolished slavery in this country.

ANSWER: **Brazil**

[10] The *USS Kearsarge* sank the *CSS Alabama* in this naval skirmish off the coast of France. Edouard Manet produced two paintings of this battle.

ANSWER: Battle of **Cherbourg** <Suh>

16. In an opera by this composer, a leitmotif composed of minor-major seventh chord is sung as the titular character shaves the Captain. For 10 points each:

[10] Name this twelve-tone composer of the operas *Wozzeck* ["**VOTS-eck**"] and *Lulu*, which was left unfinished at his death. He was taught by Arnold Schoenberg and was a contemporary of Anton Webern ["**VEY-burn**"].

ANSWER: Alban **Berg**

[10] Berg's sole piece in this genre begins with arpeggiated open fifths and uses the BACH motif. It also quotes the Bach chorale "Es ist genug" in its second movement.

ANSWER: **violin concerto** (prompt on concerto)

[10] Berg, Anton Webern, and Arnold Schoenberg were members of a "Second School" named for this city, where composers like Mozart and Beethoven lived. Johann Strauss, Jr. popularized the waltz in this Austrian city.

ANSWER: **Vienna** <Yue>

17. If I roll two dice, the probability that one die lands on 6 does not depend on the probability that the other die lands on 6. For 10 points each:

[10] This is because each die roll has this property relative to the other rolls. Events with this characteristic have a joint probability equal to the product of the individual probabilities, in contrast to dependent events.

ANSWER: **independent**

[10] If events are not independent, this theorem may be used. It states that the probability of A given B is equal to the probability of B given A times the probability of A over the probability of B.

ANSWER: **Bayes'** rule

[10] Bayes' rule can be used to solve this problem, which comes from a game show. In it, there are three doors and one prize, and the host opens a door with no prize, after which the player must decide whether to switch their choice.

ANSWER: **Monty Hall** problem <Huang>

18. For 10 points, answer these rather depressing questions about historical genocides.

[10] Identify this genocide committed by Nazi Germany which killed around six million Jews, along with millions of Russians, Poles, the Roma, homosexuals, and the "incurably sick."

ANSWER: the **Holocaust** (or the **Shoah**)

[10] Pol Pot was the leader of this Cambodian regime that killed millions of people at sites appropriately known as the "killing fields."

ANSWER: **Khmer Rouge** (or **Democratic Kampuchea** or **Communist Party of Cambodia**; do NOT accept "Khmer Empire")

[10] Raphael Lemkin, the coiner of the term "genocide," claimed that this event was one of the most conclusive cases of religious genocides. The target group of this event participated in the *consolamentum* to become "perfects."

ANSWER: **Albigensian** Crusade (or **Cathar** Crusade) <Suh>

19. In the Dialectic of "this movement," Theodor Adorno and Max Horkheimer discussed how fascism arose from this progressive ideology. For 10 points each:

[10] Name this eighteenth century European movement that emphasized the use of reason. Its members included Voltaire and Rousseau.

ANSWER: Age of **Enlightenment**

[10] This Frenchman who lived during the Enlightenment period wrote about laws in his treatise *The Spirit of the Laws*. He is known for advocating for the separation of powers.

ANSWER: Baron de **Montesquieu** ["MON-tes-kew"]

[10] Montesquieu satirized the customs of Europe in this work, which is told from the point of view of two foreigners. It includes the myth of the troglodytes.

ANSWER: **Persian Letters** <Huang>

20. The poem in which this character appears notes that "there is a pleasure in the pathless woods" and that "I love not Man the less, but Nature more." For 10 points each:

[10] Name this character who remarks, "look on this spot - a nation's sepulchre! / Abode of gods, whose shrines no longer burn" when he travels to Greece from Spain in the second of four cantos of Spenserian stanzas.

ANSWER: Childe **Harold** (accept "Childe **Harold**'s Pilgrimage")

[10] This poem describes "the smiles that win, the tints that glow, / but tell of days in goodness spent" of the title character. This poem notes that "all that's best of dark and bright / Meet in her aspect and her eyes."

ANSWER: "**She Walks in Beauty**"

[10] This poet wrote "She Walks in Beauty" and longer poems like "Childe Harold's Pilgrimage" and "Don Juan" whose main characters are examples of his namesake jaded romantic "heroes."

ANSWER: Lord **Byron** (accept George **Gordon**) <Yue>

21. For 10 points each, answer some questions about protein aggregates:

[10] Prion based diseases, when inherited, are transmitted in this simple genetic manner. Unlike recessive inheritance, this type of inheritance results in the phenotype even when only one allele is present.

ANSWER: **dominant**

[10] Some neurodegenerative disorders have been attributed to aggregates with this name. The beta type of this protein has been linked to Alzheimer's disease.

ANSWER: **amyloid** (prompt on plaque)

[10] Amyloid aggregates often form due to the hydrophobic effect which maximizes this thermodynamic quantity. By decreasing surface area, the ordered water molecules are free to move, thus increasing this quantity.

ANSWER: **entropy** <K. Li>