Stevenson Memorial Tournament 2018

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Packet 7

Tossups:

1. In one speech, this man declared, "I take higher ground" before describing the "present state of civilization" in order to defend his position on one issue. This politician mentioned his wish to expand the trade relating to that issue in an infamous letter to British ambassador Richard Pakenham while negotiating the annexation of Texas. This man became Secretary of State after a gun explosion on the *Princeton* killed Abel Upshur. While he served in his highest post, this politician's (*) wife Floride refused to associate with Peggy Eaton, starting the Petticoat Affair. He later resigned that post after composing an "Exposition and Protest" against the Tariff of Abominations. For 10 points, the Immortal Trio of Senators included Daniel Webster, Henry Clay, and what South Carolinian VP of Andrew Jackson?

ANSWER: John Caldwell Calhoun

<AN American History>

2. A massive work with this name was called an "eternal spiral" by its composer; that seven-part work's last section involves two separate auditoriums. At a concert in Vienna, an elderly composer was brought in on a stretcher and the audience broke into applause after the chorus sang this *noun*. In that piece, a momentous C major fortissimo chord represents the arrival of this thing. This word titles an opera cycle based around the days of the week that includes a (*) "Helicopter String Quartet." This phenomenon provides the common nickname for a piece in C-sharp minor with an *adagio sostenuto* first movement. That piece, subtitled "Quasi una Fantasia," was nicknamed for this phenomenon on Lake Lucerne. For 10 points, name this phenomenon which is announced with "And then there was" in Haydn's *The Creation*.

ANSWER: <u>light</u> [or moon<u>light</u>; or <u>Clair</u> de Lune; or <u>licht</u>] (*Licht* is by Karlheinz Stockhausen.) <JK Music and Opera>

3. Cells normally found in this organ make up the organ of Zuckerkandl, and Waterhouse–Friderichsen syndrome causes this organ to fail. High levels of dehydroepiandrosterone sulfate indicate congenital hyperplasia of this organ. A type of tumor in this organ originates from chromaffin cells and is called a (*) pheochromocytoma. Angiotensin II stimulates secretion of aldosterone in this structure. One portion of this organ contains the zona reticularis and the zona glomerulosa, the former of which produces androgens. The medulla is a region found in this organ. For 10 points, name these glands located on top of the kidneys that secrete catecholamines such as norepinephrine and epinephrine to regulate a "fight or flight" response.

ANSWER: adrenal glands [accept suprarenal glands]

<MW Biology>

4. A book from this country laments how rational debate has become an illusion through "refeudalization." A thinker from this country discussed "how to use the social wealth for shaping man's world in accordance with his Life Instincts" in a book that identifies society's demand for desublimation with the Freudian superego. A thinker from this country analyzed the effect of coffee houses on public discourse in the book *The* (*) Structural Transformation of the Public Sphere. A philosopher from this country wrote about social repression in Eros and Civilization. Two philosophers from this country used the term "culture industry" to describe how mass culture homogenizes society in Dialectic of Enlightenment. For 10 points, name this country home to Theodor Adorno, Herbert Marcuse, and Jurgen Habermas, theorists from the Frankfurt School.

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

<YFL Philosophy>

5. A novel from this country ends with two characters exclaiming "We still got him!" while chasing a cable car. An author from this country wrote a novel in which a priest impregnates his landlady's daughter. This country is the setting of a novel in which a thief is wounded by a stiletto heel while trying to rape a woman with dark glasses. A author from this country wrote a "factless autobiography" narrated by one of the (*) voices he called heteronyms. An author from this country wrote *The Year of the Death of Ricardo Reis* and a book in which this country separates from the main continent. This country's prose includes *The Maias*, *The Book of Disquiet*, and *Blindness*. For 10 points, name this home country of José Saramago ["zhoo-ZEH sara-MAH-goo"] and Fernando Pessoa, who wrote "Lisbon Revisited."

ANSWER: <u>Portugal</u> [or <u>Portuguese</u> Republic; or República <u>Portuguesa</u>] (The first two clues describe *The Maias* and *The Crime of Father Amaro* by José Maria de Eça de Queiroz.)
<OL European Literature>

- 6. This character is considered a liar by a man he formerly mentored after he gives his former sidekick his father's watch, which has the quote "every second is a gift" inscribed on the back of it. In a recent storyline, this character is given "Negative" powers, and he confronts the Black Hole terrorist group after figuring out that they are stealing the research of his former girlfriend, Meena Dhawan. This character's partner, (*) August Heart, turns into the vigilante Godspeed after being struck by an energy storm. In an event partially named for him, this hero created the universe of D.C.'s New 52 after saving his mother Nora from being murdered by Eobard Thawne. For 10 points, name this superhero, whose alter ego is Barry Allen.

 ANSWER: The Flash [accept Barry Allen or Barry Allen until "Barry Allen" is read]
- 7. A minority of this ethnic group is represented by the Movement for Rights and Freedoms party. In 1984, a country announced that its citizens of this ethnicity were not actually members of it and forced them to change their last names as part of the "Process of Rebirth"; that policy prompted 300,000 people of this ethnicity to leave Todor Zhivkov's country. A 1923 population exchange in which members of this ethnic group moved east was negotiated in the city of (*) Lausanne, where a treaty granting recognition to this national group's new state was signed later that year. Members of this ethnic group live northeast of the Green Line on a island where they opposed the idea of *enosis*. For 10 points, Greece contested Cyprus with the country home to what national group, formerly the Ottoman Empire?

ANSWER: <u>Turk</u>s <JB European History>

8. Head groups containing this element and oxygen are commonly used to form self-assembled monolayers on the surfaces of dielectrics. An atom of this element stabilizes an alpha-carbanion that then reacts with a carbonyl in the first step of the Peterson olefination. A series of protecting groups for alcohols that contain this element can be removed with tetrabutylammonium (*) fluoride. NMR spectroscopy of this element's 29 isotope is often used in probing the composition of zeolites. This element forms a very hard binary compound with carbon called carborundum. This element is often n-doped with phosphorus or nitrogen in transistor manufacture. It lies directly above germanium in the periodic table. For 10 points, name this semiconducting element with symbol Si.

ANSWER: silicon [accept Si until read]

<EM Chemistry>

9. In a novel by this author, a woman daydreams about wandering through a Kentucky field one Sunday morning. While her husband is out buying shrimp, a character in a story by this author has sex with an old flame, whose encounter with her in the town of Assumption is alluded to in the story's prequel. The motif of a "lady in black" following two young lovers reoccurs in a novel by this author. This author of "The Storm" and its prequel, "At the (*) 'Cadian Ball," wrote a short story in which Armand burns a willow cradle and sends his wife away because their child is not white. A novel by this author of "Desiree's Baby" sees Alcee Arobin's lover eventually fall for Robert Lebrun. For 10 points, name this American author who chronicled Edna Pontellier's romantic self discovery in *The Awakening*.

ANSWER: Kate **Chopin** [or Katherine **O'Flaherty**]

<OL American Literature>

10. In this ballet, a man usually dressed in all black wearing a round hat is followed by four women who dance in circles around him and leap towards him in a line. Artur Rodzinski commissioned the composer of this ballet to arrange an orchestral suite from its original 13-instrument score. The set design for the most famous production of this ballet included a slightly angled tree stump for a preacher to stand on to address his (*) congregation. Strings play sudden A major arpeggios near the beginning of this ballet whose original set design was created by Isamu Noguchi. A Pennsylvania couple build a farmhouse in this ballet originally choreographed by Martha Graham. This ballet uses many variations on the Shaker tune "Simple Gifts." For 10 points, name this ballet by Aaron Copland.

ANSWER: <u>Appalachian Spring</u> <YFL Other Arts (Ballet)>

11. If a typed lambda calculus is strongly normalizing, then its programs will always have this property. A computer program possesses total correctness if it has this property in addition to partial correctness. Chaitin's ["CHY-tin's"] constant roughly gives the probability that a randomly generated program will have this property. The busy beaver function is only defined over 2-symbol (*) Turing machines that have this property. Compared to Las Vegas algorithms, Monte Carlo algorithms may not return the correct answer but are guaranteed to have this property. Alan Turing proved that it is impossible to always determine whether a program will perform this action, showing that this action's namesake "problem" is undecidable. For 10 points, name this property that is *not* possessed by a program that contains an infinite loop.

ANSWER: <u>halt</u>ing [accept synonyms like it <u>stop</u>s or <u>finish</u>es or <u>terminate</u>s; accept descriptions like "it <u>doesn't run forever</u>"; accept <u>halting problem</u>]

<DM Computer Science>

12. Description acceptable. This event led to the founding of an independent colony in Magdeburg and the growth of Spitalfields in London into a center of the silk industry. Days after it occurred, targets of this event were offered a ten-year tax holiday in a proclamation issued from Potsdam. In the years prior to this action, its victims often had their homes plundered by the dragoons whom they were forced to lodge and feed. This action built on the (*) forced relinquishing of fortresses that the Peace of Alais had mandated after the Siege of La Rochelle. This policy change, which wrought disaster on the economy by driving tens of thousands of skilled workers into exile, was announced in 1686 by the Edict of Fontainebleau. For 10 points, Louis XIV performed what action of nullifying a 1598 edict granting religious tolerance to Huguenots?

ANSWER: **revocation** of the Edict of **Nantes** [or the **Edict** of **Fontainebleau** until "Edict" is read; accept answers that use synonyms of "revocation"; prompt on answers mentioning any sort of <u>persecution</u> of, <u>expulsion</u> of, or <u>end</u> of <u>toleration</u> for <u>Huguenots</u> or <u>French Protestants</u>]

<JB European History>

13. A play by this non-Thornton Wilder author ends with Lilith giving a monologue that declares "It is enough that there is a beyond." The first and last parts of that "metabiological pentateuch" by this author are set in 4004 BC and 31920 AD. Frank disgusts the protagonist by comparing them to "babes in the woods" after learning that they're half-siblings through their father Reverend Samuel Gardner in one of this author's "Plays (*) Unpleasant." This author of *Back to Methuselah* wrote a play in which the arms manufacturer Andrew Undershaft tries to donate to the Salvation Army, and a play in which Colonel Pickering bets against Henry Higgins. For 10 points, name this writer of *Major Barbara* and a play about the Cockney flower girl Eliza Doolittle, *Pygmalion*.

ANSWER: George Bernard Shaw

<OL British Literature>

14. At a Democratic Caucus meeting, a congresswoman from this non-Texas state controversially claimed that the clothing of her female colleagues was an "invitation" for harassment, while calling for a stricter dress code. One leading Senate contender from this state dropped out due to his wife's health problems, leading to gubernatorial candidate Jim Renacci to jump into the Senate race. In the Democratic primaries for this state's 2018 gubernatorial election, former Consumer Financial Protection Bureau Chief (*) Richard Cordray is facing competition from former Congressman Dennis Kucinich; Kucinich has been endorsed by Our Revolution, whose president, Nina Turner, is also from this state. Josh Mandel dropped out of a Senate race to challenge Sherrod Brown in, for 10 points, which Midwestern state governed by John Kasich from Columbus?

ANSWER: Ohio <AN Current Events>

15. In a letter, an author explained his version of this poem by stating "Better a live sparrow than a stuffed eagle." Dante Gabriel Rossetti gave Robert Browning a copy of this poem, prompting him to extol "heaven's consummate cup" and claim "the best is yet to be" in "Rabbi Ben Ezra." This poem describes "the wine of life... oozing drop by drop" and "the leaves of life... dropping one by one." A line of this poem asks "Who is the (*) Potter, pray, and who the Pot?" Eugene O'Neill's play Ah, Wilderness! takes its title from this poem, as does Agatha Christie's novel The Moving Finger. In Edward Fitzgerald's translation, this poem describes "a book of verses underneath the bough," along with "a jug of wine, a loaf of bread, and thou." For 10 points, name this collection of quatrains by Omar Khayyam.

ANSWER: the **Rubaiyat** of Omar Khayyam

<OL World Literature>

16. After winning a siege that supposedly took seven years, seven months, and seven days, a king of this empire began to build a 120-mile canal in order to attack a trade center. This empire used the caïlcédrat ["cal-si-DRAH"] tree for the canoes of its fleet, which was led by an official called the *hi-koi*. The Arma people descend from forces who attacked this empire at a battle where a gunpowder explosion caused a cattle stampede. A ruler of this empire was buried in a (*) pyramidal tomb made from timber and mud. This empire's Ishaq II was deposed after Ahmad al-Mansur's forces under Judar Pasha defeated it at the Battle of Tondibi and destroyed its salt mines at Taghaza. This empire's capital was established at Gao by its founder, Sonni Ali. For 10 points, Askia Muhammad ruled what post-Mali African empire?

ANSWER: **Songhai** Empire <GP World History>

17. A six-volume book on the "wisdom" of this work was authored by Daisaku Ikeda, the current president of a group whose phrase "Namu Myōhō Renge Kyō" is an homage to it. Zhiyi ["jurr-YEE"] penned massive commentaries on this text and founded a sect that reveres it called the Tiantai ["t'YEN-tie"] school. This text contains a story in which a rich man rescues his children from a house fire by telling them that toy carts are waiting for them outside, an illustration of (*) upaya, or "skillful means." The Soka Gakkai movement is based on the monk Nichiren's devotion to this text. This text's contention that all people can become Buddhas influenced many East Asian sects. For 10 points, name this text of Mahayana Buddhism, a sutra titled for a type of flower. ANSWER: Lotus Sutra [accept Lotus Sutra after "sutra" is read; or Sutra on the White Lotus of the Sublime Dharma; or Saddharma Pundarika Sutra]

SUB Religion>

18. Description acceptable. This event, which began at the Ur-Nes, was threatened by a figure that was born from its accomplisher's umbilical cord. Part of this event took place in a snake-guarded realm described in the fourth of twelve chapters of the "Book of the Hidden Chamber." A book for "overthrowing" the enemy of this task describes how to make wax models that are to be spat on or burnt in order to help accomplish this process. This event is carried out on the (*) Mesektet, and its central figure is accompanied by protectors like the snake-god Mehen, and by Set, who fights the demon Apophis. At the end of this journey, its ram-headed accomplisher is reborn through the sky goddess Nut. For 10 points, name this nightly journey through the Duat made by a god of the Sun.

ANSWER: <u>Ra</u>'s <u>journey</u> through the <u>underworld</u> [or <u>Ra</u>'s journey through the <u>Duat</u> until "Duat" is read; or obvious equivalents of <u>Ra</u>'s <u>night</u>ly journey; accept the <u>solar barque</u> or the <u>Sun</u> in place of "Ra" until "Sun" is read; accept <u>Re</u>, <u>Amon-Ra</u>, or <u>Amon-Re</u> in place of Ra; accept reasonable synonyms for "journey"; prompt on incomplete answers]

<JK Mythology>

19. Soft errors associated with the emission of these particles in dynamic random access memory lead to more holes in the die, eventually corrupting data. High-speed gold ions were collided by the STAR collaboration to discover these particles' antiparticle, the heaviest anti-nucleus ever observed. An isotope's decay constant is inversely related to the square root of the kinetic energy of these particles in a law named for (*) Geiger and Nuttall. A fusion process in stars by which carbon is made uses three of these particles. These particles were fired at a gold foil in Rutherford's experiment which discovered the atomic nucleus. For 10 points, name this particle equivalent to a helium nucleus, consisting of two protons and two neutrons.

ANSWER: <u>alpha</u> particles [accept <u>he</u>lium <u>nucleus</u> until read] <DM Physics>

[NOTE: Read the answerline before reading the tossup]

20. An artist from this country painted a statue of a man with a coat next to a blueprint drawing whose blue color matches the sky behind it. Another artist from this country painted the numbers (+) 6, 9, 4, and 3 next to billowy white smoke in the center of *The Farewells*, the first of the *States of Mind* series. A painter from this country used empty train stations and plazas in paintings such as *The Song of Love* and (*) *The Disquieting Muse*. An artistic movement from this country declared that "a roaring racecar" is "more beautiful than The Victory of Samothrace" and produced the paintings *The City Rises* and *The Dynamism of a Dog on a Leash*. For 10 points, name this country, the origin of Giorgio de Chirico's "Metaphysical Art" and the Futurist painters Giacomo Balla and Umberto Boccioni.

ANSWER: <u>Italy</u> [prompt on <u>Greece</u> <u>BEFORE (+)</u> by asking "Where did he work for most of his life?", <u>AFTER (+) DO NOT ACCEPT OR PROMPT</u>]

<YFL Painting and Sculpture>

21. Each "episode" of one of this man's novels begins with advertisements like "He treated her rough, and she liked it!" A novel by this author originally written in English is made up almost entirely of dialogue between the historian Larry and his paralyzed employer Mr. Ramirez. A student in one of this man's books writes about The Great Waltz in an essay titled "The (*) Movie I Liked Best." This writer of Heartbreak Tango and Eternal Curse on the Reader of these Pages also wrote a novel in which a Marxist is told about the movies Cat People and I Walked With the Zombie. That novel by this author takes place in the prison cell of Molina and Valentin. For 10 points, name this author of Betrayed by Rita Hayworth and Kiss of the Spider Woman.

ANSWER: Juan Manuel **Puig** Delledonne

<OL World Literature>

Bonuses:

- 1. One member of this dynasty's "Illustrious Generation" was King Edward, the author of the treatise *The Loyal Counsellor*. For 10 points each:
- [10] Name this dynasty that took power in its country after its first king, John I, won the Battle of Aljubarrota against the Castilians. Henry the Navigator was from this dynasty.

ANSWER: House of **Aviz**

[10] The House of Aviz lost control of Portugal when this Spanish monarch took the Portuguese throne, creating the Iberian Union. This one-time husband of Queen Mary sent the Spanish Armada against her successor.

ANSWER: <u>Philip II</u> [or <u>Philip I of Portugal</u>; or <u>Philip the Prudent</u>; accept <u>Felipe</u> or <u>Filipe</u> in place of "Philip"; prompt on <u>Philip</u>]

[10] While part of the Iberian Union, Portugal fought a war with this country after it seized the *Santa Catarina*. This country took the Malabar Coast from Portugal, but lost power in the region after being defeated by the Kingdom of Travancore in 1741.

ANSWER: Netherlands [or Dutch Republic and Holland]

<GP European History>

- 2. Answer some questions about music from the 1970s sampled in the songs of Kanye West. For 10 points each:
- [10] Kanye sings "Have you lost your mind / Tell me when you think we've crossed the line" in "Hell of a Life," sampling "Iron Man," a song by this metal group fronted by Ozzy Osbourne.

ANSWER: Black Sabbath

[10] Donald Fagen, lead singer of this band, sings "Did you realize that you were a champion in their eyes?" to open the Kanye song "Champion." This band released songs like "Peg," "Reelin' in the Years," and "Do It Again."

ANSWER: Steely Dan

[10] Kanye West's song "Drunk and Hot Girls" samples "Sing Swan Song" from the album *Ege Bamyasi*, recorded by this pioneering German krautrock band. They are most famous for the song "Vitamin C."

ANSWER: <u>Can</u> <AS Trash>

- 3. Olav struggles with his guilt over the slaying of Teit, an Icelander who impregnated his wife, in this author's novel *The Snake Pit*. For 10 points each:
- [10] Name this author of a trilogy of novels comprised of *The Wreath*, *The Wife*, and *The Cross*.

ANSWER: Sigrid **Undset**

[10] This event kills the protagonist of that Undset trilogy, Kristin Lavransdatter. A collection set during this event includes a story of the trials that Griselda's husband puts her through as the tenth story of its last day.

ANSWER: the Black Death [or the Bubonic Plague; or Black Plague; prompt on the plague]

[10] That collection is this work by Boccaccio, which is set in a villa outside of Florence. Shakespeare's *All's Well That Ends Well* is based on a story from this collection.

ANSWER: *The Decameron* [or *Il Decameron*]

<OL European Literature>

- 4. This property is notably exhibited by quartz, and it is exploited in nanoscale actuators. For 10 points each:
- [10] Name this property in which deformation of a material leads to accumulated charge.

ANSWER: piezoelectricity

[10] One of the first demonstrations of piezoelectricity was done with this salt, known formally as potassium sodium tartrate tetrahydrate.

ANSWER: Rochelle salt

[10] Rochelle salt is an important ingredient in this solution's B portion, which is used with its A portion to differentiate between aldehydes and ketones by turning blue in the presence of an aldehyde.

ANSWER: **Fehling**'s solution

<DM Chemistry>

- 5. The back panel of a painting of this figure "in the wilderness" depicts a blazing star that may represent a historical comet. For 10 points each:
- [10] Name this figure who sits at his study desk behind a sleeping dog and lion in a work grouped with its artist's *Melancolia I* and *Knight, Death and the Devil*.

ANSWER: Saint Jerome

[10] Those depictions of St. Jerome were done by this German artist who used a monogram depicting a D under an A to sign his paintings.

ANSWER: Albrecht **Durer**

[10] The background of Durer's *St. Jerome in the Wilderness* is often compared to his early works in this medium. *Great Piece of Turf* and *Young Hare* are among Durer's incredibly-detailed nature studies in this medium.

ANSWER: watercolor

<JB Painting and Sculpture>

- 6. This writer included "Blackness" in a collection focused on mother-daughter relationships. For 10 points each:
- [10] Name this author of *At the Bottom of the River*, which includes a prose poem in which a mother asks if her daughter is going to be the "kind of woman who the baker won't let near the bread" and warns her against being "the slut you are so bent on becoming."

ANSWER: Jamaica Kincaid [or Elaine Cynthia Potter Richardson] (That prose poem is "Girl.")

[10] This other Caribbean-born author described searchlights illuminating a barge of refugees on a river in his novel about Salim's life in a country run by the "Big Man," titled *A Bend in the River*.

ANSWER: Vidiadhar Surajprasad Naipaul

[10] In "Holidays" from *At the Bottom of the River*, the narrator works in this country as an *au pair*. Julia Alvarez's *How the Garcia Girls Lost Their Accents* follows immigrants to this country where Chicano literature originated.

ANSWER: <u>United States</u> of America [accept <u>US</u>A or United States of <u>America</u>]

<OL World Literature>

- 7. This character throws a party where the guests sing the drinking song "Libiamo ne' lieti calici." For 10 points each:
- [10] Name this operatic character. When she lies to another character by telling him she's in love with a baron, she has gambling winnings thrown at her feet.

ANSWER: Violetta [prompt on La Traviata]

[10] Violetta falls in love with Alfredo and dies of tuberculosis in *La Traviata*, an opera by this composer who also wrote *Rigoletto* and *Aida*.

ANSWER: Giuseppe Verdi

[10] After Violetta coughs violently at the party and the guests leave to let her rest, Alfredo comes to her and gives her one of these objects.

ANSWER: flower

<YFL Music and Opera>

- 8. A Christian anarchist tract by Leo Tolstoy takes its title from Jesus's statement that this concept "is within you." For 10 points each:
- [10] Name this metaphorical domain from the New Testament. Jesus states that "it is easier for a camel to go through the eye of a needle than for a rich man to enter" this place.

ANSWER: **kingdom** of God [or **kingdom** of heaven; prompt on <u>heaven</u>]

[10] This gospel named for this apostle is the only one to use the term "kingdom of heaven" instead of "kingdom of God." The gospel of this name is followed by Mark and Luke, the other two synoptic gospels.

ANSWER: Matthew

[10] A bizarre passage of this text states "For every woman who will make herself male will enter the kingdom of heaven." The introduction to this Gnostic text found at Nag Hammadi states "These are the hidden words that the living Jesus spoke."

ANSWER: <u>Gospel of Thomas</u> [or <u>Gospel According to Thomas</u>; prompt on <u>Thomas</u>; do not accept or prompt on "The Infancy Gospel of Thomas"]

<JB Religion>

- 9. Coins minted by Commodus reversed this initialism in order to put the people before the Senate. For 10 points each:
- [10] Name this four-letter abbreviation that appeared atop Roman standards under the golden eagle.

ANSWER: **SPQR** [accept **S**enātus **P**opulus**q**ue **R**ōmānus]

[10] This British classicist wrote a history of Rome entitled *SPQR*. In 2017, this author of *The Roman Triumph* engaged in a Twitter war with Nassim Taleb over a BBC video depicting a black legionnaire in Britain.

ANSWER: Mary Beard

[10] The Roman legionnaire who carried the eagle standard, the aquilifer, ranked immediately below this rank in the Roman army, whose holders commanded units of around one hundred soldiers.

ANSWER: centurion

<JB Euro/British History>

- 10. When rotation free, these operations are known as boosts. For 10 points each:
- [10] Name these operations named for a Dutch physicist in special relativity that converts between two coordinate inertial reference frames.

ANSWER: Lorentz transformations

[10] This construct is a combination of three dimensional space with the fourth, time. In it, the time at which events occur is independent of reference frame.

ANSWER: Minkowski space

[10] The matrix for representing Lorentz transformations can use this hyperbolic parameter denoted rho, the hyperbolic tangent of which yields beta.

ANSWER: <u>rapidity</u> <DM Physics>

- 11. Name some things about the work of Sarah Orne Jewett, for 10 points each.
- [10] In Jewett's *The Country of the Pointed Firs*, a character with this title, Littlepage, tells stories about a town of ghosts. The speaker of William Ernest Henley's "Invictus" calls himself the "master of his fate" and the "[this role] of his soul."

ANSWER: captain [or Captain]

[10] Jewett set much of her work in this New England state home to Stephen King. Elizabeth Strout set her novel *Olive Kitteridge* here, and David Foster Wallace wrote about a festival in this state in "Consider the Lobster."

ANSWER: Maine

[10] In a Jewett story, Abbey Martin considers herself to be Queen Victoria's relation of this type. Luigi has this relation to Angelo in Mark Twain's *Pudd'nhead Wilson*, which was originally conceived as a novel about those "extraordinary" characters.

ANSWER: **twin**s [prompt on <u>sisters</u> or <u>brothers</u> or <u>siblings</u>]

<OL American Literature>

- 12. Examples of these mechanisms include hybrid inviability or sterility. For 10 points each:
- [10] Name these barriers that lead to reproductive isolation by preventing a fertilized egg into fully developing. The mule is a result of them.

ANSWER: **postzygotic** barriers

[10] Another postzygotic barrier is if a zygote is unable to divide and subsequently undergo this process which generates separate germ layers from a blastula. This process is often studied in the frog *Xenopus laevis*.

ANSWER: gastrulation

[10] In this phenomenon, natural selection contributes to reproductive isolation of species by causing barriers for hybridization. It is named for the natural historian who jointly published the theory of evolution by natural selection with Charles Darwin.

ANSWER: **Wallace** effect [or **reinforcement**]

<DM Bio>

- 13. Charles Moore's postmodern design for the Piazza d'Italia makes use of a made-up type of these things called the "delicatessen order." For 10 points each:
- [10] Name these architectural elements whose Greek orders, including the Ionic and Doric, are often quoted in postmodern architecture.

ANSWER: columns

[10] A giant Ionic column sticks out of the roof of this city's M2 building. This city home to the neofuturistic Skytree tower was the site of a Maya Revival hotel designed by Frank Lloyd Wright.

ANSWER: Tokyo

[10] Philip Johnson used absurdly-long white columns in his design for the Town Hall of a community founded by this man. A building named for this man created hotspots on nearby sidewalks until the concave walls of its Founder's Room were resurfaced.

ANSWER: Walt **Disney**

<JB Other Arts (Architecture)>

- 14. This group included Maia, the mother of Hermes, and Electra, the mother of Dardanus. For 10 points each:
- [10] Name these group of sisters from Greek myth. One story says they committed suicide after the death of their father Atlas, while another claims that they were turned into doves to escape Orion.

ANSWER: the **Pleiades**

[10] In the creation myth of these people, the Pleiades were the first constellation placed into the sky by Black God. Complaining that the process was taking too long, Coyote used a blanket to throw the rest of the stars into the sky.

ANSWER: **Navajo** [or **Diné** bizaad]

[10] In a myth of the Nez Perce, one of the Pleiades pulls the sky over her face after her sisters mock her for falling in love with a man with this trait. Myths on the "Origin-of-death" theme explain why humans have this trait.

ANSWER: being **mortal** [or being able to **die**]

<JK Mythology>

- 15. Cryptozoology aficionados believe this river is home to a half-man, half-fish creature first spotted during the French and Indian War. For 10 points each:
- [10] Identify this river on the Allegheny Plateau, the site of the Braddock Expedition.

ANSWER: Monongahela River

[10] The Monongahela River flows through northern West Virginia and the south of this state. The Susquehanna and Schuylkill Rivers also flow through this state.

ANSWER: Pennsylvania

[10] The Susquehanna River ultimately flows out into this bay, the largest estuary in North America. Its drainage basin covers six states, including Maryland and Virginia.

ANSWER: Chesapeake Bay

<JK Geo>

- 16. These two people leave their home "hand in hand with wandering steps and slow" at the end of a poem. For 10 points each:
- [10] Name these two characters. One of these characters explains to the other that she initially turned away at their first meeting because he was "less fair / Less winning soft" than her own beautiful reflection.

ANSWER: Adam AND Eve

[10] Eve's vanity and desire regarding her own reflection may presage a later scene in which this character sits "squat like a toad" by her ear. This father of Sin and Death rules Pandemonium in Milton's *Paradise Lost*.

ANSWER: **Satan** [or **Lucifer**; prompt on the **Devil**]

[10] One of these being teaches Adam, but not Eve, about the creation of the world. Another of these beings expels Adam and Eve from the Garden in the last book, while another is tricked into letting Satan enter Earth.

ANSWER: <u>archangels</u> [prompt on <u>angel</u>s]

<OL British Literature>

- 17. Some of this state's rulers were appointed by the warlord Kaidu. For 10 points each:
- [10] Name this successor state to the Mongol Empire that consisted of Moghulistan and Transoxiana and was located northeast of the Ilkhanate.

ANSWER: Chagatai Khanate

[10] Much of the Western Chagatai Khanate fell to this warlord from the Barlas tribe by 1370. This Turkic conqueror defeated Bayezid I at the Battle of Ankara and got his nickname from a leg wound.

ANSWER: <u>Timur</u> the Lame [or <u>Tamerlane</u>; or <u>Timur-e-Leng</u>]

[10] Timur seized this city from the Chagatai Khanate, which he made his capital. His tomb, the Gur-e-Amir, is located in this city in modern-day Uzbekistan, a major center on the Silk Road.

ANSWER: Samarkand

<GP World/Other History>

- 18. In 2016, Maryna Viazovska proved that the E8 lattice gives the most efficient packing of these objects in eight dimensions. For 10 points each:
- [10] Name these shapes whose densest possible packing in three dimensions is about 74 percent. A 3D coordinate system named for this shape specifies points with a radius, polar angle, and azimuthal angle.

ANSWER: **sphere**s [or *n*-**sphere**s]

[10] The Leech lattice gives an optimal sphere packing in this many dimensions. This is also the number of square faces on a four-dimensional hypercube.

ANSWER: 24

[10] This term is defined as the number of spheres that can all touch a central sphere without overlapping. For example, in two dimensions this number is six, as six circles can be arranged around a central circle.

ANSWER: kissing number

<OL Math>

- 19. This thinker supposedly got rich by cornering the olive press market after predicting a good olive season. For 10 points each:
- [10] Name this pre-Socratic philosopher who believed that the origin of all matter, or the *arche*, was water.

ANSWER: Thales of Miletus

[10] The story of Thales buying olive presses appears in *Lives of Eminent Philosophers*, a book by an author surnamed Laërtius with this given name. Another Greek thinker of this name is credited with introducing cosmopolitanism by claiming to be a citizen of the world.

ANSWER: Diogenes

[10] Another pre-Socratic philosopher from Asia Minor, Heraclitus, held that the first substance was not water but this other classical element. Galen associated this element with a choleric, or bad-tempered, temperament.

ANSWER: <u>fire</u> <YFL Philosophy>

- 20. The Marais du Cygne massacre took place during this conflict. For 10 points each:
- [10] Name this conflict between pro-slavery Border Ruffians and anti-slavery Free-Staters in a namesake US territory from 1854 to 1861.

ANSWER: Bleeding Kansas

[10] This editor of the New York Tribune coined the term "Bleeding Kansas." He helped post bail for Jefferson Davis, and also popularised the phrase "Go west, young man."

ANSWER: Horace Greeley

[10] The Free State Hotel was destroyed with a cannon during this action of Bleeding Kansas, which targeted a community founded by the New England Emigrant Aid Company. John Brown committed the Pottawatomie Massacre in revenge for this event.

ANSWER: Sacking of <u>Lawrence</u> [accept equivalents of "sacking of," such as <u>siege</u> of, <u>looting</u> of, <u>attack</u> on, etc.] <GP American History>

- 21. This work includes five proofs for the existence of God, referred to as the "Five Ways" or quinque viae ["KWEEN-kway WEE-eye"]. For 10 points each:
- [10] Name this philosophical work. Each section of this work includes a series of objections, a counter-statement that begins with the phrase "sed contra," and an argument that addresses earlier objections.

ANSWER: **Summa Theologica** [or **Summa Theologiae**]

[10] This philosopher included his quinque viae in his text *Summa Theologica*. This scholastic philosopher called Averroes ["ah-VAIR-oh-ees"] "the Commentator" in his works and is known as Doctor Angelicus.

ANSWER: Saint Thomas Aquinas

[10] This other scholastic philosopher refuted Aquinas's assertion that all finite beings had an essence distinct from its existence, instead arguing for the univocity of being. This philosopher is known as Doctor Subtilis and introduced the concept of haecceity ["heck-SEE-it-ee"], or "thisness," to philosophy.

ANSWER: John Duns <u>Scotus</u> [or John <u>Duns</u>; or Johannes <u>Duns</u>]

<YFL Philosophy>