Bulldog High School Academic Tournament 2014 (XXIII): Tonight I Can Write The Hardest Lines Written by Yale Student Academic Competitions Edited by Matt Jackson, with Ashvin Srivatsa and Jacob Wasserman

Packet 6 Tossups

1. Precedent for this case's decision came from the earlier *Strader v. Graham*, and its decision also applied to Harriet Robinson. Justices Curtis and McLean dissented from this case, whose 7-2 ruling spurred the formulation of the Freeport Doctrine. Grounds for this suit came from John Emerson's move to Wisconsin with the plaintiff. This Supreme Court case, the second to strike down a federal statute, was won by John Sanford, and Chief Justice Taney's ("TAH-nee") in this case stripped Congress of the power to ban slavery in the territories. For 10 points, name this 1857 case which ruled African-Americans lacked citizenship rights.

ANSWER: *Dred Scott v. John F. A. Sandford* [or "the *Dred Scott* case"; accept *John F. A. Sandford* v. *Dred Scott* before "Sanford" is read] <JW>

- 2. In a work titled for *Money and [this]*, Ludwig von Mises noted that this phenomenon didn't drastically affect the thirteen colonies since they were mostly agricultural. According to the triangle model of this phenomenon, it depends on expectations, excess demand, and shocks. Edmund Phelps plotted all possible values for it as a vertical line in a correction of the long-run Phillips curve relating this quantity to unemployment. Milton Friedman said that this "is always and everywhere a monetary phenomenon," and the CPI and PCE are indices used to measure it. For 10 points, name this general increase in prices, whose "hyper" form occurred in Zimbabwe and Weimar Germany. ANSWER: **inflation** rate <NW>
- 3. When writing a chemical equation, this symbol is appended to the products of homolytic cleavage of a diatomic compound. In physics, this symbol on top of a variable denotes a time derivative. Free radicals are identified by placing this symbol next to their chemical symbol. When writing the chemical formula of a hydrated compound, one places this symbol between the compound and the water. A triangular formation of three of these symbols is used as shorthand for "therefore" in mathematical proofs. This symbol denotes unbonded valence electrons in a Lewis diagram. For 10 points, name this symbol which, in America, is used to denote a decimal point.

 ANSWER: dots [or periods; or synonyms] <AS>
- 4. [Note to moderator: Please read the sequence of numbers in the second sentence slowly]
 An example of the "crab" kind of these pieces was inspired by a theme by Frederick the Great and included in *The Musical Offering*. One of these works is written over a ground bass with 28 repetitions of the chord progression "1 5 6 3 4 1 4 5". Every third variation of the *Goldberg Variations* is this type of piece. Despite its name, Bach's *Art of Fugue* includes four of this other type of contrapuntal composition. A simple type of these pieces in which the voices all enter on the same note is called a round. For 10 points, name this type of musical composition whose most famous example is a D major work by Johann Pachelbel.

ANSWER: canons <JR>

5. In one play by this author, a Jewish brigand named Mendoza prevents Jack from escaping the Life Force of Ann Whitefield. Praedy and George Crofts appear in another of his plays, whose title character confronts her daughter Vivie about a fortune obtained from running brothels. This author, who included the "Don Juan in Hell" segment in *Man and Superman*, wrote *Mrs. Warren's Profession*, included the Hungarian royal Nepomuk and Freddy Eynsford-Hill in a play where Colonel Pickering bets against a flower girl. For 10 points, name this Irish playwright who wrote of Henry Higgins' accent coaching of Eliza Doolittle in *Pygmalion*.

ANSWER: George Bernard Shaw <GL>

- 6. The matrix representation of this number is an antidiagonal 2-by-2 matrix with entries negative one and positive one. The argument of this number is pi over 2. This is the only number on the upper unit half-circle which is equal to the negative of its conjugate. This number multiplies the sine function in de Moivre's formula. This constant appears in the exponent in Euler's formula. The cube of this nonzero number equals negative one times itself. *e* to the power of "*pi* times this" equals negative one. Adding a nonzero multiple of this unit number to a real number yields a strictly complex number. For 10 points, name the imaginary unit, defined as the square root of negative one. ANSWER: *i* [or *j*; or negative *i*; or negative *j*; accept the <u>imaginary unit</u> until mentioned; accept the <u>unit imaginary</u> number until "imaginary unit"; accept the <u>square root of negative one</u> until mentioned; accept mathematically-equivalent answers] <AS>
- 7. In a movie that ends with a contest involving this activity, the male lead adopts "Excelsior" as a motto. That contest coincides with an Eagles game, and Pat Sr. places a parlay involving the two events. This activity titles a song that asks "Are you ready for a brand new beat?" by Martha and the Vandellas; that song, covered by David Bowie and Mick Jagger, is titled for this activity "in the Street." Jennifer Lawrence and Bradley Cooper's characters train to do this in *Silver Linings Playbook*. Scott Moir and Tessa Virtue do the "ice" form of this activity, which differs from pairs figure skating in forbidding throws. For 10 points, name this central activity of the *Step Up* films. ANSWER: dancing [or dance; or "Dancing in the Street"; or ice dancing] < KK>
- 8. Next to the central character in this painting, a man with a shaved head and green pants clutches his hands. This painting inspired a 1951 Cubist painting set in Korea. This painting with a black sky is lit entirely by a box lamp on the ground. This painting is the companion of a piece in which a soldier is pulled off his white horse and stabbed in the chest, which precedes the events it depicts. The white-shirted central character in this painting stands with his arms spread in front of a firing squad. For 10 points, name this painting by Francisco Goya, depicting the execution of the defenders of Madrid on the title date.

ANSWER: The <u>Third of May, 1808</u>: Execution of the Defenders of Madrid [or El <u>Tres de Mayo de 1808</u> en Madrid; or <u>Los Fusilamientos de la Montaña del Principe Pio</u>; or Los Fusilamientos del <u>Tres de Mayo</u>; do NOT accept or prompt on "Third of May" alone] <NW>

- 9. A December action of this official was praised by the Becket Fund, whose client benefited. Promoted in a book tour last year, *My Beloved World* is the autobiography of this figure, who granted the Little Sisters of the Poor a temporary legal exemption. In Times Square, this official triggered the 2014 New Year's ball dropping. This official referred a decision on Utah's gay marriages to the full court. This justice granted a group of Colorado nuns a stay of Obamacare's contraception mandate. Last year, with Breyer and Kagan, she joined the dissent in *Shelby County v. Holder* written by fellow liberal Ruth Bader Ginsburg. For 10 points, name this Latina Supreme Court justice. ANSWER: Sonia Maria **Sotomayor** <JW>
- 10. With Gaspar Gorricio, this man wrote an apocalyptic *Book of Prophecies*, and he published a self-extolling letter to his backer, Luis de Santangel. He often feuded with the Pinzón brothers, and wrote that he needed only fifty men. Guacanagari was the only one of five Taino chiefs to aid this man, who saved himself from an Arawak attack by predicting an eclipse. This man was arrested and replaced by Francisco de Bobadilla as governor of the Indies, after which he made the last of his four voyages. This Genoa-born man arranged for Isabella and Ferdinand to pay for his ships. For 10 points, name this guy who took the *Pinta*, *Niña*, and *Santa María* to the Americas in 1492. ANSWER: Christopher <u>Columbus</u> [or Cristóbal <u>Colón</u>; or Cristoforo <u>Colombo</u>] <JW>

- 11. This author wrote "the expression of the face balks account" in a poem recalling a farmer with five sons and a slave auction. He included "In Paths Untrodden" in his Calamus poems, and equated a list starting with "Upper arm, arm-pit, elbow-socket" to the Soul after "engirth[ing]" other people in "I Sing the Body Electric." This man sounds a "barbaric yawp" over the world's rooftops in a 52-section poem ending "I stop somewhere waiting for you," and wrote of a man "fallen cold and dead" on a boat in "O Captain! My Captain!", his lament for President Lincoln's death. For 10 points, name this non-straight American poet who included "Song of Myself" in *Leaves of Grass*. ANSWER: Walter Whitman <MJ>
- 12. This domain is governed by the Haitian *loa* Erzulie. An Indian god of this phenomenon, the consort of Rati, became bodiless after Shiva's third eye incinerated him, but rode a large parrot and wielded a bow made of sugarcane and bees before that. Another deity of this kind was injured in the wrist by Diomedes in the *Iliad*; that goddess of this domain bestowed favor upon the Trojan prince Anchises. Psyche was visited by a younger god of this realm, whose mother was caught in a magic chain years after she emerged out of the seafoam. For 10 points, name this aspect of human affairs governed by Kama and Aphrodite.

ANSWER: <u>love</u> gods/goddesses [accept "<u>desire</u>," "<u>romance</u>," "<u>sex</u>uality," or close synonyms in place of "<u>love</u>"; accept "goddesses" or "deities" in place of "gods"; do NOT accept or prompt on "marriage" or "childbirth"] <MJ>

13. This dynasty, the last to use the "equal field" system of farming, was crippled by the peasant uprising of Huang Chao. One enemy of this dynasty was a half-Sogdian who declared himself an adoptive son of imperial consort Yang Guifei. This dynasty fought against an alliance of Gokturks and the Tibetan Empire. During it, the monk Xuanzang ("shwan-zahng") traveled to India. This dynasty was interrupted by Empress Wu and attacked by An Lushan's rebellion. The last dynasty to use Chang'an as a capital, it supported artists such as the poets Li Po and Du Fu. For 10 points, name this Chinese dynasty lasting from 618 to 907, which stood between the Sui and Song dynasties.

ANSWER: <u>Tang</u> Dynasty [or <u>Tang</u> Chao] <MJ>

- 14. In one step of this process, antral granulosa cells secrete a compound which suppresses gnRH release at high concentration and also promotes angiogenesis in the endometrium. One step of this cycle sees the development of a yellow body which may be preserved by human chorionic gonadotropin. That body, which is generated in response to FSH and LH, is called the corpus luteum, and secretes progesterone. During this cycle, the follicle bursts, releasing an ovule which may implant in the uterus. For 10 points, name this 28-day cycle which occurs in premenopausal non-pregnant women and which can end in the discharge of excess uterine lining via bleeding.

 ANSWER: the menstrual cycle [or menstruation; or menses; accept follicular phase before "this cycle" is read; accept ovarian cycle before "yellow body" is read and prompt afterwards; prompt on "period" or other euphemisms; do not prompt on or accept "ovulation"; do not prompt on or accept "uterine cycle"] <GL>
- 15. Falun Gong founder Li Hongzhi has stated that these objects have corrupted humans during the last century. Dorothy Martin, also called Marion Keach, led a cult whose failed prophecy regarding these objects was studied by Leon Festinger. The Nation of Islam posits that the book of Ezekiel describes one of these objects termed the "Mother Plane." Claude Vorilhon learned about the Elohim from a messenger from one of these objects, leading him to found the Raëlians. Some of these objects which look like DC-8s took thetans to Earth during the reign of Xenu. For 10 points, name these craft, which the Heaven's Gate cult tried to reach one of behind Comet Hale-Bopp. ANSWER: alien spaceships [or spacecraft; or UFOs; or unidentified flying objects] < MW/MJ>

16. This person's regents included John Hamilton and Mary of Guise. This person's private secretary, David Rizzio, was murdered by a group led by Patrick Ruthven. This person was abducted and taken to Dunbar Castle by the Earl of Bothwell, and the Rising of the North supported her. The War of the Rough Wooing resulted from an attempt to secure a marriage for this woman, the attributed author of the Casket Letters from her prison in Loch Leven castle, to Edward VI. The Babington plot schemed to install this Catholic as ruler of England. For 10 points, name this Stuart queen who was executed in 1587 by her cousin Queen Elizabeth I.

ANSWER: <u>Mary, Queen of Scots</u> [or <u>Mary Stuart</u>; or <u>Mary I of Scotland</u>; prompt on "Mary"; prompt on "Mary I"; do NOT accept or prompt on "Bloody Mary"] <LL>

- 17. In a novel set in this country, a refugee camp is left by Kainene to get supplies for her sister Olanna. In a play set here, the servant Joseph hates to look at the costumes at a costume ball. In this home of *Half of a Yellow Sun* author Chimamanda Adichie, a "praise-singer" talks to a local leader whose son commits ritual suicide despite colonial officer Simon Pilkings' efforts. The play *Death and the King's Horseman* is set in this country, as is a novel featuring the evangelist Mr. Brown, a failed yam harvest, and two boys killed in Umuofia by Okonkwo. For 10 points, name this home of Wole Soyinka, the African country where Chinua Achebe wrote *Things Fall Apart*. ANSWER: Federal Republic of Nigeria <MJ>
- 18. A 2010 building of this type sits in the Pearl River like a "double pebble" and has an unusual asymmetric interior with lights in the curved walls; that building in Guangzhou was the brainchild of Zaha Hadid. An earlier building with this function introduces a "mystic gulf" with a double arch proscenium and a covered pit, and holds an annual festival in Bayreuth ("BYE-royt"). Another building of this type was inspired either by a peeled orange or by sailing ships in Port Jackson; Jorn Utzon designed that one, which features curved white shells above its performance spaces. For 10 points, identify this kind of performance hall found in the harbor of Sydney, Australia.

 ANSWER: opera house [or opera theatres; or opera halls; or ballet theatres; accept any answer that includes "opera" or "ballet" and implies a performance space; prompt on "theatre" and equivalents; prompt on "performing arts center" or equivalents; accept "concert hall" or "symphony hall" after "orange peel"] <GL>
- 19. Materials are prepared for use in this medium by "baking them out" to remove volatiles. The technique of sputtering is used to deposit coatings and films in the presence of this medium. A medium that is similar to this one is said to be "rarefied". This medium has zero electromagnetic susceptibility, and hence a refractive index of precisely 1, not accounting for its polarization by virtual pair production. The beam lines of particle accelerators are filled with this medium, as are cathode ray tubes. This medium is ideally characterized by having zero pressure. For 10 points, name this medium that is characterized by the absence of matter, found in outer space.

 ANSWER: vacuum [or free space; accept partial vacuum] <AS>
- 20. One author from this country wrote a Roman-inspired play in which Oreste goes insane after Hermione kills herself after the murder of Pyrrhus, whom the title character agrees to marry. In another play from this nation, Don Gormas hits Don Diègue, who is avenged by his son Don Rodrigue, who becomes betrothed to Chimène. In another play from this nation, Mariane is promised to the title character despite already being engaged to Valère. In that play from this nation, Elmire tries to reduce the influence of a pious "impostor" in Orgon's house. For 10 points, name this country home to the authors of *Andromaque*, *Le Cid*, and *Tartuffe*: Racine, Corneille ("cor-NEY"), and Molière. ANSWER: Kingdom of **France** [or Royaume de **France**] <JR>

21. The narrator of this poem calls to a spirit which made the vast abyss "pregnant" where it "dove-like, sat'st brooding." A mountain-hurling stalemate between two armies in this work is broken by the discovery of gunpowder. A strategy of waiting is advocated by the lazy Belial in this work during a council at the ornate palace of Pandaemonium. This poem includes a long retelling of creation by Raphael, and focuses on a character who finds it "better to reign in hell than serve in heaven" after revolting against God. For 10 points, name this epic poem featuring Satan's temptation of Adam and Eve, by John Milton.

ANSWER: *Paradise Lost* <MJ>

1. The European literary tradition frowns upon bankers. For 10 points each:

[10] In this Alexandre Dumas novel, Baron Danglars becomes a financial kingpin in Paris, accuses the title character Edmond Dantes of being a Bonapartist, and condemns him to prison on the Chateau d'If.

ANSWER: The <u>Count of Monte Cristo</u> [or Le <u>Comte de Monte-Cristo</u>]

[10] The crooked financier Baron de Nucingen appears in this Balzac novel sequence, especially in "Scenes of Parisian Life." Rastignac becomes Nucingen's wife's lover in this sequence's novel *Le Pere Goriot*.

ANSWER: The <u>Human Comedy</u> [or La <u>Comedie Humaine</u>]

[10] This Kafka chraracter, a banker, is dragged off by two agents for an unknown crime. The painter Titorelli assures this man that no one has ever been acquitted by the court.

ANSWER: Josef $\underline{\mathbf{K}}$. [prompt on "Josef," since there are other Josefs in the book] $\langle GL \rangle$

2. Identify some features of woody stems, for 10 points each.

[10] Stripping away the bark of a woody stem may kill plants if this outer vascular tissue is also removed.

Composed of sieve elements and companion cells, this tissue carries sucrose up from the roots, unlike xylem.

ANSWER: phloem

[10] This region of meristematic tissue is the site of new vascular tissue generation and lies between the phloem and the xylem. The visible dark line between "bark" and "wood" is made of this tissue.

ANSWER: vascular **cambium** [or vascular **cambia**; do not accefpt "cork cambium"]

[10] The center of a woody stem is the pith, which is made of this kind of spongy storage ground tissue. In leaves, this tissue forms the mesophyll.

ANSWER: parenchyma <GL>

3. This rap duo from Hollis, Queens was DJd by Jam Master Jay, and its name is a compound of the rap names of its two members. For 10 points each:

[10] Name this classic 80s hip-hop duo behind "Mary, Mary," "Rock Box," and a reworking of "Walk This Way."

ANSWER: Run-DMC

[10] "Walk This Way" was originally by this rock band whose frontman is Steven Tyler. This band from Boston recorded "I Don't Wanna Miss A Thing" for the film *Armageddon* years after "Dream On."

ANSWER: Aerosmith

[10] Run-DMC recorded a song praising this shoe brand symbolized by three slanted parallel lines, which they described as "funky fresh and yes cold on my feet." This German company purchased Reebok in 2006.

ANSWER: Adidas [or "My Adidas"] <LL>

4. Answer the following about the geography of Adam's Bridge, for 10 points each.

[10] This country is connected to the island of Sri Lanka to its south by a series of shallow shoals called Adam's Bridge. A train line runs from the north end of Adam's Bridge to this country's city of Chennai.

ANSWER: Republic of **India** [or **Bharat** Ganrajya]

[10] This ethnic group partially names an Indian state next to Adam's Bridge. Velupillai Prabhakaran led a breakaway movement of these people until his 2009 death.

ANSWER: <u>Tamil</u> people [or the <u>Tamil</u>s; or <u>Tamilar</u>kal]

[10] This body of water is separated from the Gulf of Mannar by Adam's Bridge. Abutting the Bay of Bengal and the port of Jaffna, this channel divides northern Sri Lanka from India.

ANSWER: Palk Strait [or Palk Bay; or Paka Jalaaamarumadhya; or Pakku Nirinai] <JW>

- 5. Answer these questions about American rural life during the Reconstruction era, for 10 points each.
- [10] This farming practice reached its zenith in the postwar South. In this practice, a landowner gets farmers to work their land by paying them a portion of the farmer's yield.

ANSWER: **sharecrop**ping [or being a **sharecropper**]

[10] Oliver Kelley organized this farmer's organization in 1867. It lobbied for greater public support for farmers, including Rural Free Delivery of mail and the regulation of grain warehouses in *Munn v. Illinois*.

ANSWER: National **Grange** of the Order of Patrons of Husbandry

[10] These large movements of livestock to market greatly increased during postwar Texas. Often ending in Kansas, they made use of specific trails such as the Chisholm, Goodnight-Loving, and Shawnee.

ANSWER: cattle drives <MW>

- 6. This religious observance, which literally means "fit" or "suitable," has a Muslim analogue called *halal*. For 10 points each:
- [10] Name these Biblically-ordained restrictions on the foods that Jews may eat.

ANSWER: **kosher** laws [or **kashrut**]

[10] Orthodox Jews may not eat this class of foods at the same meal as meat, or even serve them on the same plates. Foods with no ingredients of this type and no meat are known as *parve*.

ANSWER: <u>dairy</u> products [or <u>milk</u> products; or <u>milchik</u>; or <u>chalav</u> Yisrael; accept specific examples of dairy products such as <u>cheese</u> or <u>butter</u>]

[10] These two physical features must be present in a sea-dwelling creature for it to be kosher. Name both.

ANSWER: it has fins AND scales <MJ>

- 7. The ideology behind this man's namesake reforms is also known as the Six Arrows. For 10 points each:
- [10] Name this reformer, who adopted the use of the Latin alphabet over Arabic script for his country's language, and had the fez replaced with Western European hats. This man ended the occupation of Smyrna in 1922.

ANSWER: Mustafa **Kemal Atatürk** [accept either underlined part]

[10] This empire collapsed and got reformatted as the Republic of Turkey as Ataturk made his reforms. Its sultans included Suleiman the Magnificant.

ANSWER: Ottoman Empire [or Ottoman state; or Osmanlı İmparatorluğu; or Develet-y Osmaniyyeh]

[10] A few years prior, this reformist faction effectively supplanted the sultans by rising against Abdul Hamid II in 1909. It merged with the Committee of Union and Progress.

ANSWER: the **Young Turks** [or **Jön Türkler**; or Les **Jeunes Turc**s; or **Genç Türkler**] <JR>

- 8. This vehicle was the second and more successful designed by Jiro Horikoshi, whose desire to make it extremely light led him to neglect armor around the pilot or self-sealing fuel tanks. For 10 points each:
- [10] Name this long-range fighter plane with rounded wings, the primary fighter used by the Japanese in World War II.

ANSWER: Mitsubushi A6M "Zero" [or Mitsubishi A6M]

[10] Before it denoted Zero fighters, the number zero was used in this Mesoamerican civilization's Long Count calendar. They built Tikal and Chichen Itza.

ANSWER: Mayans

[10] When using these data structures with constant-time lookup, zero-based indexing can cause "off by one errors." Entries in these data structures are stored sequentially in memory, and can be accessed using square brackets in Java. ANSWER: arrays [or vectors] < MJ>

- 9. These schematics are more detailed than reaction schemes. For 10 points each:
- [10] Name these schematics that indicate each elementary step a reaction goes through from start to finish. They often feature arrows to indicate exactly how electrons move.

ANSWER: reaction mechanisms

[10] An elementary step is generally considered to consist of at most this number of reactants interacting. According to collision theory, collisions involving more than this number of molecules are vanishingly unlikely.

ANSWER: two

[10] In this class of reactions, two ionic compounds exchange members, often resulting in the formation of a solid. Schematically, these reactions are of the form "AB plus CD yields AD plus BC".

ANSWER: <u>double replacement</u> [or <u>double displacement</u>; or salt <u>metathesis</u>; prompt on "replacement"; prompt on "displacement"] <AS>

- 10. This man discovers that old pagan poets and unbaptised babies both end up in the same place; a few dozen cantos later, he meets St. Thomas Aquinas on the Sun. For 10 points each:
- [10] Identify this pre-Renaissance Italian poet who moons over Beatrice in both his *La Vita Nuova* and in the garden of Earthly Paradise.

ANSWER: **Dante Alighieri** [accept either underlined part]

[10] In this first segment of Dante's *Divine Comedy*, Dante sees Satan trapped in ice after he journeys through the nine circles of Hell with Virgil's guidance.

ANSWER: Inferno

[10] According to Dante, Hell lies below this city, which marks the location where Satan fell to Earth. This city was *Delivered* by Rinaldo and Tancred in a 16th century epic by Torquato Tasso.

ANSWER: Jerusalem <GL>

- 11. Answer these questions about dangerous baths in Greek mythology, for 10 points each:
- [10] This goddess turned Actaeon into a stag and had him ripped apart by dogs for watching her bathe. This goddess of the hunt and the moon was Apollo's twin sister.

ANSWER: **Artemis** [or **Diana**]

[10] This ruler was boiled to death in an overheated bath during his chase after Daedalus. This husband of Pasiphae ordered the construction of the Labyrinth.

ANSWER: King Minos of Crete

[10] Minos's fatal bath occurred on this island, where the six-headed Scylla also looks out over some cliffs towards the mainland.

ANSWER: Sicily [or Sicilia] <MJ>

- 12. Vincenzo Bellini composed an opera based on this play that changes the final scene so that the two protagonists see each other and sing a duet together before dying. For 10 points each:
- [10] Name this play that also served as the basis for a "Fantasy-Overture" by Tchaikovsky, a choral symphony by Berlioz, and an opera by Gounod. Nino Rota wrote the song "What Is a Youth" for Franco Zeffirelli's film version of it.

ANSWER: Romeo and Juliet

[10] This Russian composer included the "Dance of the Knights" in his ballet *Romeo and Juliet*. He also wrote the "Classical" symphony, the *Lieutenant Kijé* suite, and *Peter and the Wolf*.

ANSWER: Sergei Sergeyevich Prokofiev

[10] This jazz musician used tenor and alto saxophones to represent Romeo and Juliet in his track "The Star-Crossed Lovers." His collaborator Billy Strayhorn wrote one of his signature tunes, "Take the 'A' Train."

ANSWER: Edward Kennedy "Duke" Ellington <KK>

- 13. Consider a block on a ramp, for 10 points each.
- [10] If the static variety of this force is strong enough, the block may be held stationary. The strength of this force turns out to be independent of the velocity of the block relative to the ramp.

ANSWER: friction

[10] Suppose that the ramp is tilted at an angle of 45 degrees. What is the minimum coefficient of static friction necessary for the block to remain stationary?

ANSWER: one [accept tangent of 45 degrees]

[10] If we take the block off the ramp and put it into a viscous, non-turbulent fluid instead, we find that the viscous drag force *is* velocity-dependent. If the block has velocity v, what function of v is the drag force proportional to? ANSWER: \underline{v} [or \underline{v} to the first power; or $\underline{\text{just } v}$, or $\underline{\text{linear}}$ ly related to v; or $\underline{\text{directly}}$ proportional to v; or $\underline{\text{directly}}$ related to v] <AS>

- 14. Answer some questions about funny people and their short fiction, for 10 points each.
- [10] This valet and the utterly useless young gentleman Bertie Wooster were chronicled by P.G. Wodehouse. This valet rescues Bertie from entanglements with ladies and makes magical hangover cures.

ANSWER: Reginald Jeeves [or Reggie Jeeves; accept any underlined part]

[10] This children's author also penned adult short stories such as "The Landlady." He depicted Mary killing her husband with a haunch of meat, which she then feeds to detectives in "Lamb to the Slaughter."

ANSWER: Roald **Dahl**

[10] Like Saki, who described a girl whose specialty is "romance at short notice" in "The Open Window," P.G. Wodehouse and Roald Dahl hail from this country.

ANSWER: the <u>United <u>Kingdom</u> [or Great <u>Britain</u>; or <u>England</u>] <GL></u>

- 15. This ruler's lovers included Grigory Potemkin. For 10 points each:
- [10] Name this Enlightenment-era empress of Russia, who became tsarina after her lover Grigory Orlov murdered her husband, Peter III.

ANSWER: <u>Catherine the Great</u> [or <u>Catherine II</u>; or <u>Yekaterina</u> Alexeevna; or <u>Sophia</u> Friederike Auguste von Anhalt-Zerbst-Dornburg; prompt on "Catherine"]

[10] Catherine suppressed a Cossack rebellion led by this man. Though this man's forces won at the Battle of Kazan, he was defeated at Tsaritsyn.

ANSWER: Yemelyan Ivanovich Pugachev

[10] This Pole led a namesake uprising against Catherine's Russia between the second and third partitions of Poland. He had previously been a colonel in the American Revolution.

ANSWER: Andrzej Tadeusz Bonawentura Kosciuszko ("kuh-SHOO-sko") <JR>

- 16. These four bodies all have ring systems, some of which are more splendorous than others. For 10 points each:
- [10] Name these solar system bodies that have very thick atmospheres consisting mostly of hydrogen and helium. They are found beyond the asteroid belt.

ANSWER: **gas giant**s [or **Jovian planet**s; or **giant planet**s; or **outer planet**s; accept **Jupiter, Saturn, Uranus, Neptune** in any order]

[10] Extrasolar gas giants that are found very close to their stars are given this name because of their temperature and their similarity to one of our own gas giants.

ANSWER: Hot Jupiters [or roaster planets; or epistellar Jovians; or pegasids; or pegasean planets]

[10] If Jupiter were about 50 percent more massive, it could have become one of these ultra-cool stars that fuse deuterium but not hydrogen-1.

ANSWER: **brown dwarf**s [prompt on "dwarf (star)"] <AS>

- 17. This man depicted a seated figure in a yellow dress facing left in *Young Girl Reading*, and a dramatic scene of a woman swooning onto a man who awkwardly reaches for the door in *The Bolt*. For 10 points each:
- [10] Name this French painter who showed a blindfolded woman at play in Blindman's Bluff.

ANSWER: Jean-Honoré Fragonard

[10] Fragonard showed statues of these beings in the background of his celebrated painting *The Swing*. Two of them look bored in Raphael's *Sistine Madonna*, and they circle a ship's mast in Watteau's *Embarkation for Cythera*.

ANSWER: **cherub**s [or **putti**; or **putto**es; or "**cupid**s;" prompt on "angels"]

[10] Fragonard and Watteau belonged to this 18th-century art style, which expanded on the frills and frivolousness of late Baroque painting.

ANSWER: rococo <MJ>

- 18. St. Jerome wrote that this man was driven mad by a love potion. For 10 points each:
- [10] Name this Roman thinker who wrote on *clinamen*, or "the swerve," in his poetic philosophy text *De Rerum Natura*, which was rediscovered by Italian Renaissance humanists.

ANSWER: Titus Lucretius Carus

[10] Lucretius adhered to this ancient philosophical school, which believed in pleasure as the only good and the absence of pain as the highest pleasure. This rival of Stoicism was often mistaken for hedonism.

ANSWER: Epicureanism [or the school of Epicurus]

[10] Epicurus believed that these tiny, indivisible particles made up the universe, a belief upheld by Leucippus and later by Lucretius.

ANSWER: atoms [or atomoi; or atomos] <FM>

- 19. This garment, whose female analogue was called the *stola*, was generally worn over a linen tunic. For 10 points each:
- [10] Name this garment created by wrapping a 20-foot-long woolen sheet over the left arm and shoulder. It was worn by Roman male citizens.

ANSWER: togas [or togae]

[10] A stripe of this color lined one edge of the *toga praetexta* worn by high-ranking magistrates. An expensive ancient dye of this color was made from the murex sea slug on Tyre.

ANSWER: purple [or violet]

[10] This symbol of Roman *imperium*, a bundle of sticks that sometimes surrounded an axehead, was carried by bodyguards called lictors who walked with high-ranking magistrates.

ANSWER: <u>fasces</u> ("FAHS-kase") <MJ>

- 20. This author included "There Will Come Soft Rains" in his *The Martian Chronicles*. For 10 points each:
- [10] Name this author who roamed a public library for seven years instead of going to college. He wrote about a book-burning dystopia in *Fahrenheit 451*.

ANSWER: Ray Douglas **Bradbury**

[10] This protagonist of Fahrenheit 451 is a "fireman" who burns his boss Beatty to death and escapes from a Mechanical Hound.

ANSWER: **Guy Montag** [accept either underlined part]

[10] In this Bradbury short story, George and his wife Lydia are eaten by lions after they try to get their children Peter and Wendy to give up a virtual reality generator called the "nursery."

ANSWER: "The Veldt" <NW>

- 21. Simone de Beauvoir wrote that "one is not born, but rather becomes," this type of person at the start of *The Second Sex*. For 10 points each:
- [10] Name this adult gender identity whose *Subjection* was written about by Harriet Taylor and her husband, John Stuart Mill. Mary Wollstonecraft's second *Vindication* was about these people, such as herself.

ANSWER: women [or woman]

[10] This American Smith College graduate wrote about suburban women who felt "the problem that has no name" in *The Feminine Mystique*.

ANSWER: Betty Friedan [or Bettye Naomi Goldstein]

[10] This noun denotes three time periods of Anglo-American feminisms. The second of these groupings, which lasted until the late 80s, includes Catherine McKinnon and Andrea Dworkin.

ANSWER: waves [or first wave feminism; or second wave feminism; or third wave feminism] <MJ>