# Bulldog High School Academic Tournament 2019 (XXVIII): Description acceptable.

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### Packet 10 Tossups

1. This character asserts that "never for one moment since has there been any light that's stronger than this kitchen candle" after recounting a night at the Moon Lake Casino, where she danced the Varsouviana polka. This character, who requests that a Chinese paper lantern be put over a naked lightbulb, remarks that she was "disgusted" after discovering a homosexual (\*) affair involving her husband, Allan Grey. This former resident of Belle Reve goes insane and admits that she has "always depended on the kindness of strangers" after being raped by Stanley Kowalski. Stella is the sister of—for 10 points—what protagonist of A Streetcar Named Desire?

ANSWER: **Blanche** DuBois [accept **Blanche** Grey; prompt on <u>DuBois</u>; prompt on <u>Grey</u> before "Grey"] <WJ>

- 2. A 2016 news report contradicted this leader's earlier claim that he has a 56-inch chest circumference. A 2015 agreement by this man's administration completed the transfer of 162 former enclaves along the border with a neighboring country. Daily limits on ATM withdrawals accompanied his country's 2016 demonetization of its (\*) 500- and 1000-unit banknotes. In 2012, his country's Supreme Court acquitted him on charges of encouraging the anti-Muslim riots that occurred in 2002 during his tenure as Chief Minister of Gujarat. The leader of the Hindu nationalist BJP is—for 10 points—what current prime minister of India? ANSWER: Narendra Modi <HK>
- 3. This figure's last meal is said to have consisted either of pork or of food enjoyed by pigs. This figure redeems a finger necklace-owning killer by preventing the killer from performing matricide. Depictions of this figure often contain the "32 signs of a great man." This figure is depicted in a pose representing the earth witnessing his triumph over (\*) Mara after 49 days under a fig tree. This figure delivered his first sermon in Deer Park. This figure abandoned his kshatriya life after seeing the "four sights" of an old man, sick man, dead man, and an ascetic. For 10 points, name this former prince who discovered the Noble Eightfold Path as a middle way to achieve Nirvana.

ANSWER: Siddhartha Gautama [accept Gautama Buddha; accept Shakyamuni] <AH>

4. In one book about this man, the narrator wryly comments "God has his mysteries which none can fathom. You, perhaps, will be a king." This man's birth is foretold when his father meets a hunter/soothsayer while sitting under a silk-cotton tree. A "Hymn to the Bow" is composed when this character accidentally makes a bow by bending the massive iron rod that he uses to walk for the first time at the age of 7. This son of a (\*) "Buffalo Woman" is called a "lion child." At the Battle of Krina, this man defeats the sorcerer-king Soumaoro Kanté and takes the royal title of "mansa." Storytellers called griots tell the "Epic" of—for 10 points—what founder of the Mali Empire?

ANSWER: **Sundiata** Keita [or **Sunjata**; or **Sonjara**] <JR>

- 5. Pierre-Simon Laplace developed a set of three coupled differential equations to compute the response to these forces in the presence of the Coriolis effect. Frictional heating due to these forces is greatest at the periapsis. These forces overcome gravitational self-attraction to destroy objects that fall inside the Roche limit. A body's rotational and orbital periods are synchronized in a (\*) "locking" named for these forces. They create two locations of maximum deflection, one at the point closest to the orbiting body and one exactly opposite. The gravitational pull of the Moon creates—for 10 points—what periodic rises and falls of the ocean? ANSWER: tides [accept tidal forces] <SE>
- 6. It's not Twitter, but heavy users of this company's services can be invited to its opaque "Vine Voices" program. Shares of this company fell in February 2019 in response to a law in India that prevents this company and its local rival, Flipkart, from doing business through subsidiaries. This company's properties include Goodreads, twitch.tv ["twitch dot TV"], and Zappos. The wife of this company's (\*) CEO will become the world's richest woman if assets are evenly split in their upcoming divorce. This company initially announced that Crystal City, Virginia and Long Island City in Queens would be the sites of its new HQ2 headquarters, then pulled out of the latter. For 10 points, name this online retailer led by Jeff Bezos.

ANSWER: Amazon [or Amazon.com, Inc.] <AF>

7. During one of these events, Patrick Prendergast shot Mayor Carter Harrison, and Frederick Jackson Turner first presented his Frontier Thesis. During one of these events, H.H. Holmes ran a "murder castle" described in Erik Larson's *The Devil in the White City*. The Louisiana Purchase was celebrated with a 1904 event of this kind in St. Louis, which has been cited for the nationwide spread of (\*) foods like the hamburger and the waffle cone. Two of these events held in Chicago were called "Century of Progress" and the "Columbian Exposition." For 10 points, name these international exhibitions.

ANSWER: <u>World</u>'s <u>Fair</u> [before they're mentioned, accept <u>world</u>'s <u>exposition</u>, <u>international expo</u>sition, <u>universal expo</u>sition, <u>international exhibition</u>, <u>Great Exhibition</u>; prompt on partial answer] < SPQR>

8. On Mars, this structure is hypothesized to be the source of chassignite meteorites. A characteristic structure of this region on Earth is divided into "African" and "Pacific" provinces and is known as the LLSVP. The "transition zone," bounded by two seismic-wave velocity discontinuities occurs in this region. The upper portion of this region is primarily composed of peridotite, which contains (\*) olivine. The lithosphere-asthenosphere transition occurs in this region. Hotspots form above "plumes" in this layer. Sinking into this layer is called "subduction." Convection in this layer of the Earth drives plate tectonics. For 10 points, name this layer of the Earth between the crust and the core.

ANSWER: mantle <AF/BY>

9. This figure was often depicted lying on the ground and emanating rays of light thanks to the writings of Bridget of Sweden. This figure is likely depicted with a donkey's head in the Alexamenos graffito. This figure holds a crystal sphere in a heavily-restored painting in which he wears a blue robe. In Byzantine art, this figure is often depicted in the pose (\*) *Pantocrator*. In a Raphael painting, a boy wearing a goat-skin holds a goldfinch that *this* figure touches. This man holds up his right hand in a Leonardo da Vinci painting that was rediscovered in 2011. This man's body is held by Mary in paintings of the *Pietà*. For 10 points, name this boy often depicted being cradled by the Madonna.

ANSWER: <u>Jesus Christ</u> [accept either; accept <u>Salvator Mundi</u>] <JR>

10. This phenomenon and the "stickiness" of wages at equilibrium are explained by Shapiro–Stiglitz theory. Search and matching theory is most commonly used to model a form of this phenomenon that was formulated in the paper "Information in the Labor Market." (\*) Okun's law states that a one percent increase in this phenomenon causes a two percent drop in GDP. A "non-accelerating" measure of this phenomenon, known as NAIRU, has superseded the "natural" measure of this phenomenon. A transitional form of this phenomenon is its "frictional" type. Workers' lack of skills causes its "structural" type. For 10 points, name this measure of how many people are out of work.

ANSWER: unemployment rate <AF/BY>

11. One scene in this film was made by burning part of a set from the original King Kong. Its opening crawl notoriously refers to a vanished world of "knights and their ladies fair." The term "production designer" was coined for William Cameron Menzies' work on this film. Hattie McDaniel became the first black Oscar winner for this film, for which producer David (\*) O. Selznick held a two-year casting search. Victor Fleming became director of this film in the middle of shooting The Wizard of Oz. Clark Gable's Rhett Butler says "Frankly, my dear, I don't give a damn" to Scarlett O'Hara at the end of—for 10 points—what 4-hour-long film about the South during the Civil War?

ANSWER: Gone With the Wind <JR>

12. A priest from this country describes hiring a woman who "trots between convents" in the poetic *Book of Good Love*. In the 17th century, two poets from this country used contrasting Baroque styles named for "culture" and "concepts." In a play from this country, a man is given a chance to claim his title as prince, but then turns violent, causing him to be (\*) sedated and told it was just a dream. An author from this country wrote about a tight-knit town called "sheep well" in one of his over 500 plays. A man from this country created the Polish prince Segismundo in the play *Life is a Dream*. For 10 points, name this home of Lope de Vega and Pedro Calderón de la Barca.

ANSWER: Kingdom of **Spain** [or Reino de **España**] <HK>

13. A ruler of this city built the largest known altar from antiquity. In this city, the underprivileged *killyrioi* natives worked land owned by the foreign *gamoroi* elite. Similarly to Athens, inhabitants of this city banished citizens via *petalismos*, writing the names of those they wished to exile on leaves. In this city, a flattering courtier was made to sit on its throne below a (\*) sword hanging by a thread. An inhabitant of this city supposedly burned enemy ships with a parabolic bronze mirror and discovered the principle of buoyancy. This city's tyrants included Dionysius and Hieron. For 10 points, name this Sicilian city that was home to Damocles and Archimedes.

ANSWER: <u>Syracuse</u> [or <u>Siracusa</u>] <SPQR>

14. Phases of *this* material lend their names to the two phases involved in the shape effect. Treatments done to this material include spheroidizing and martempering. A process done primarily on this material comes in "thermal diffusion" and "hot-dip" types. This material's pearlite phase is formed from its austenite phase below a (\*) eutectic point of 727 degrees Celsius. This material is formed from decarburization of pig iron and is coated with zinc in galvanization. The industrial Bessemer process produces this material, which has 10.5% chromium by mass added to create its "stainless" type. For 10 points, name this alloy of iron and carbon. ANSWER: steel <AF>

- 15. When the city of Absoros was infested with snakes, this figure confined them in her brother's tomb. This figure consummated her marriage in the cave of Macris to obtain protection from King Alcinous. On Crete, this figure removed the nail from the vein of the (\*) bronze giant Talos, causing him to bleed to death. This figure's gift of a poisoned robe caused Creusa to burst into flames. After sending that gift, this woman murdered her children and flew away in a dragon-pulled chariot provided by her grandfather Helios. This princess of Colchis assists a man in obtaining the Golden Fleece. For 10 points, name this enchantress, the wife of Jason.

  ANSWER: Medea <SPQR>
- 16. Johannes Brahms spent his late teens as the touring accompanist for a violinist from this country. Countess Marie d'Agoult had a daughter named Cosima with a composer from this country. A dance from this country speeds up from a slow *lassan* section into a fast *friska*. A composer from this country wrote a set of 19 virtuoso piano pieces inspired by the Rakoczy March and a dance from this country called the (\*) csárdás [CHAR-dash]. That composer from this country invented the symphonic poem and wrote 12 *Transcendental Études*. For 10 points—what Eastern European country names a set of *Dances* by Johannes Brahms and a set of *Rhapsodies* by Franz Liszt?

ANSWER: <u>Hungary</u> [or <u>Magyarorszag</u>; accept <u>Hungarian Dances</u>, <u>Ungarische Tänze</u>, <u>Hungarian Rhapsodies</u>, <u>Rhapsodies hongroises</u>, or <u>Ungarische Rhapsodien</u>] <JR>

- 17. This disease has a similar etiology and set of symptoms to hemiballism. Sydenham's syndrome can cause a condition similar to the main symptom of this disease. This condition's early-onset form is its "Westphal" variant. No effective treatment exists for this disease, which manifests earlier with each successive generation. This condition causes damage to the (\*) striatum in the basal ganglia and is caused by repeats of the trinucleotide sequence CAG. This autosomal dominant disease manifests as a namesake "chorea." For 10 points, name this disease that causes uncontrolled, jerky movements, which is often contrasted with Parkinson's syndrome. ANSWER: Huntington's disease [prompt on chorea until mentioned] <HK>
- 18. This artist states that such things as love and drugs "won't get you high as this" on a track that repeats the word "levitate." This artist repeated "loving you is complicated" ten times to begin a song just titled "u." On one track, this man calls himself a "savage" and a "king" before repeating "Shimmy ya, shimmy ya, shimmy ya, shimmy ya." This man claimed "I was born like this, since one like this, immaculate conception" on an album that features (\*) Rihanna [ree-YAH-nuh] on the track "Loyalty." This man rapped "I remember syrup sandwiches and crime allowances" at the beginning of the song "HUMBLE." For 10 points, name this rapper behind the albums *To Pimp a Butterfly* and *DAMN*.

ANSWER: **Kendrick Lamar** [accept either underlined part] <JW>

19. Two of this author's characters meet when one vomits into the other's bedroom window. One of this author's characters stands on a balcony and declaims T.S. Eliot's *The Waste Land* through a megaphone. The protagonist is held captive in the Brazilian jungle and forced to read Dickens to Mr. Todd in a novel by this author titled for a line from *The* (\*) *Waste Land*. One of his narrators takes another character's Catholicism as "a foible, like his Teddy-bear." This satirist wrote a novel in which Lord Sebastian Flyte befriends the painter Charles Ryder. For 10 points, name this English author of *A Handful of Dust* and *Brideshead Revisited*.

ANSWER: Evelyn <u>Waugh</u> [or Arthur Evelyn St. John <u>Waugh</u>] <SPQR>

20. Part of this system was first accurately described in the book *Christianismi Restitutio* by the heretic Michael Servetus, and was rediscovered by Andreas Vesalius. The link between two halves of this system was first seen by Marcello Malpighi. In the Middle Ages, this system's associated humor was thought to cause a cheerful and social personality. The book *De Motu Cordis* by William (\*) Harvey disproved several of Galen's theories about this system. Thanks to the theories of Hippocrates, a humoral imbalance favoring this system was often "fixed" using leeches. For 10 points, name this system, from which an "excess" was "relieved" via bloodletting.

ANSWER: <a href="mailto:circulatory">circulatory</a> system [or cardio</a>vascular system] <JR>

#### Tiebreaker

21. A speech by this leader compares its subject to Passover and to a "ring-bolt in the chain of your yet undeveloped destiny." One of this leader's publications bore a slogan ending "God is the Father of us all, and we are all brethren." This leader fought "the snake" Edward Covey to a draw after learning how to read from Sophia Auld. This man declared that the title (\*) holiday is "yours, not mine" in his Fourth of July Speech. This leader, who gave a decisive speech in favor of the women's suffrage resolution at Seneca Falls, published the newspaper North Star. For 10 points, name this author of narratives like My Bondage and My Freedom describing his life as a slave.

ANSWER: Frederick **Douglass** [or Frederick Augustus Washington **Bailey**] <JR>

### **Bonuses**

- 1. After escaping from prison, this man took the name "Chevalier de Seingalt" and conned the Marquise d'Urfé into thinking that he could turn her into a young man. For 10 points each:
- [10] Name this legendarily womanizing Italian author of the 1798 memoir *Histoire de ma vie*.

ANSWER: Giacomo (Girolamo) Casanova

[10] Casanova is often described using *this* term, which was used in the 17th and 18th centuries to refer to debauched "rakes" like John Wilmot, the Earl of Rochester.

**ANSWER: libertines** 

[10] Casanova was born and imprisoned in *this* northern Italian city, whose "Most Serene Republic" was ruled by leaders called *doges* [DOH-jayz].

ANSWER: **Venice** [or **Venezia**] <JR>

- 2. Before making a career as a working playwright, this author possibly worked as a spy in the 1660s. For 10 points each:
- [10] Name this Restoration playwright who depicted captain Willmore's romantic adventures in Naples in the play *The Rover*. She has been called the first professional woman writer.

ANSWER: Aphra Behn

[10] In a scene from *The Rover*, Willmore admires pictures of Angellica at one of *these* locations. In an earlier play, a scene at one of these locations includes lines like "a rose / By any other name would smell as sweet."

ANSWER: **balcony** 

- [10] That line is spoken by this Shakespearean protagonist, who also asks her lover "Wherefore art thou Romeo?" ANSWER: **Juliet** Capulet [accept **Romeo and Juliet**] <JR>
- 3. These objects make two passes in a "double under." For 10 points each:
- [10] Name these objects that are often used alongside rhymes like "I see London, I see France."

ANSWER: **jump rope** [or **skipping rope**]

[10] Two jump ropes are used at once in *this* variant of skipping rope, which teams like the Bouncing Bulldogs compete in.

ANSWER: **Double Dutch** 

[10] Double Dutch originated in *this* culture of 80s New York. Breakdancing is performed in this kind of dance, and this word is often used synonymously with "rap."

ANSWER: hip-hop <JR>

- 4. This technique is often performed following Southern blotting. For 10 points each:
- [10] Name this lab technique in which DNA samples are pipetted into an agarose matrix, to which an electric field is then applied. Polyacrylamide is used in a form of this technique called SDS-PAGE.

ANSWER: **gel** electrophoresis

[10] Nucleic acid gel electrophoresis uses the fact that nucleic acid molecules carry negative charge due to the presence of sugars as well as *these* groups on their backbones. Three of these groups are attached to adenosine in ATP.

ANSWER: **phosphate** group [prompt on "PO4 3-minus"]

[10] A variant of nucleic acid gel electrophoresis known as TGGE uses the difference in *this* property between AT and GC base pairs to differentially denature, or linearize, the nucleic acid over the course of the gel.

ANSWER: melting point [begrudgingly accept freezing point] <HK/AF>

- 5. For 10 points each—answer the following about dissonance in music:
- [10] This dissonant interval, which can be either a diminished fifth or an augmented fourth, has been called the "devil in music."

ANSWER: tritone

- [10] This composer claimed to have "emancipated" the dissonance, and later used techniques like "hexachordal combinatoriality. This composer included the Passacaglia "Nacht" in a piece for soprano and chamber ensemble. ANSWER: Arnold **Schoenberg** (The piece is *Pierrot Lunaire*.)
- [10] Dissonant intervals produce an acoustical phenomenon called "beating" in which *this* parameter changes periodically. This musical parameter is marked with "dynamics" like *forte* [FOR-tay] and *piano*; a description is fine. ANSWER: **volume** [accept any answer indicating "**loud**ness" or similar] <JW>
- 6. For 10 points each—answer the following about warrior women in mythology:
- [10] This dark-skinned Hindu warrior goddess drank the demon Raktabija's ["RAK-tha-bee-juhz"] blood to stop him from regenerating. She's often depicted with a lolling red tongue, a skirt of human arms, a garland of human heads, and many weapons.

ANSWER: Kali

[10] These "choosers of the slain" guide the valiant dead to Valhalla in preparation for Ragnarok. Their armor is said to cause the aurora borealis.

ANSWER: valkyries

[10] The hero Cuchulain was given the spear Gae Bulg and trained in martial arts by *this* "Warrior Maid" who feuded with her sister Aoife ["EE-fa"]. This daughter of Ard-Greimne ["ard-GREEM-nuh"] resides in a Fortress of Shadows on the Isle of Skye.

ANSWER: Scathach <HK>

- 7. Cisplatin contains this many ligands bonded to its central platinum atom. For 10 points each:
- [10] Give the number of *atoms* bonded to the center in square planar and see-saw complexes. Molecules with *sp3* hybridization form this many bonds.

ANSWER: four

[10] *sp*3-hybridized carbon bonds to four hydrogen atoms to form *this* tetrahedral molecule, which is the simplest alkane.

ANSWER: methane

[10] Tetrahedral molecules can undergo a form of this process that converts one enantiomer into another and is named for Walden. Another type of this process occurs in a fluxional fashion in ammonia.

ANSWER: inversion [accept word forms] <AF/HK>

8. John Milton described this man as having "sunk eyes" and a "voice harsh and loud." For 10 points each, [10] Name this Englishman who fabricated a 1678 conspiracy to kill Charles II and place a Catholic on the British throne.

ANSWER: Titus Oates

[10] The conspiracy was supposedly to be carried out by *this* religious order founded by Ignatius of Loyola. Pope Francis is a member of this order, whose aggressive evangelizing is considered part of the "Church Militant."

ANSWER: **Jesuits** [or **Society of Jesus**]

[10] One of the people Oates accused was *this* man, whose diary used a multilingual code to describe sexually assaulting most of the women in his life. He's a major historical source for the Great Fire of London.

ANSWER: Samuel Pepvs ["peeps"] <SPQR>

- 9. At the end of this novel, the main character takes a copy of the New Testament out from under his pillow in a Siberian prison. For 10 points each,
- [10] Name this novel by Fyodor Dostoevsky, in which the student Rodion Raskolnikov murders a pawnbroker.

ANSWER: *Crime and Punishment* [or *Prestupleniye i nakazaniye*]

[10] After murdering the pawnbroker, Raskolnikov dreams of a group of peasants torturing and eventually killing one of *these* animals.

ANSWER: horses

[10] Just like Raskolnikov was directly modelled on stories about Pierre François Lacenaire, *this* literary character was likely inspired by Sally Horner. This title character's mother Charlotte is married by the unreliable narrator.

ANSWER: Lolita [or Dolores Haves (accept either)] <HK>

- 10. A seventh-century one of these objects that was above 80 square feet incorporated silk and jewels, and was called the "Spring of Khosrow." For 10 points each:
- [10] Name these objects that were woven throughout Central Asia and the Islamic world. Unlike a tapestry, these objects typically have knots woven in to create a raised "pile."

ANSWER: **carpet**s [or **rug**s]

[10] Several of the most elaborate Islamicate rugs came from *this* modern-day country. This modern country's language can be written with *nasta'liq* calligraphy.

ANSWER: <u>Iran</u> [accept <u>Persia</u>]

[10] Several Iranian manuscripts used borders "sprinkled" with *this* material, which was used to make the "ground" of many medieval European panel paintings.

ANSWER: **gold leaf** [prompt on partial answer] <JR>

- 11. For 10 points each—answer the following about the somatic marker hypothesis:
- [10] The somatic marker hypothesis states that emotions strongly influence *these* characteristic actions of an organism. A psychological school named for studying these actions was founded by John Watson and B.F. Skinner.

ANSWER: **behavior**s [accept **behavior**ism]

[10] Somatic markers are primarily processed in the ventromedial prefrontal cortex and *this* part of the brain's limbic system, which plays a major role in negative emotions like fear and anxiety.

ANSWER: amvgdalae

[10] *This* experimental paradigm was originally formulated by Anthony Damasio et al. to test the somatic marker hypothesis. This paradigm involves choosing from different decks of cards with different proportions of rewards.

ANSWER: **Iowa gambling** task [or **IGT**; prompt on <u>Gambling</u> Task or OGT] <AF/HK>

- 12. Later painters from this movement gave rise to the style of "luminism." For 10 points each:
- [10] Name this movement exemplified by Frederic Edwin Church's *Heart of the Andes* and Asher Brown Durand's *Kindred Spirits*

ANSWER: **Hudson River** School

[10] This immigrant painter of the Hudson River School depicted Yosemite and the Rocky Mountains in many dramatic landscapes.

ANSWER: Albert Bierstadt

[10] Bierstadt was from what is now *this* country, which was also home to the painter of *Washington Crossing the Delaware*, Emanuel Leutze.

ANSWER: **Germany** [or **Deutschland**] <JW>

- 13. Ellipses and parabolas are two examples of these mathematical constructions. For 10 points each:
- [10] Name this general class of mathematical objects, formed by intersecting a plane with their namesake shape.

ANSWER: conic sections

[10] Conic sections can be defined as the set of points whose distances to a point, known as the focus, and a line, known as the directrix, are in a fixed ratio. *This* is the term for that ratio.

ANSWER: **eccentricity** [prompt on **e**]

[10] *These* shapes have an eccentricity of zero, and consist of all points that are equidistant from a center. They have an area of "pi *r*-squared."

ANSWER: circles <JW>

- 14. A Supreme Court case springing from this state introduced the phrase "affected with a public interest" into U.S. law. For 10 points each:
- [10] Name this state that prosecuted the firm of Munn and Scott for overcharging for grain storage, in a case that eventually made it to the Supreme Court. That precedent was later overturned when this state lost the *Wabash* case.

ANSWER: <u>Illinois</u> [accept <u>Munn v. Illinois</u> or <u>Wabash v. Illinois</u>]

[10] *Munn v. Illinois* came out of a series of laws promoted by *this* organization that advocated for the interests of Midwestern farmers. This organization also spearheaded the push for Rural Free Mail Delivery.

ANSWER: The National **Grange** of the Order of Patrons of Husbandry [accept **Granger** Laws]

[10] The Grange also pushed for direct election for *this* Federal legislative body, which took effect with the Seventeenth Amendment.

ANSWER: United States Senate <JR>

- 15. Answer the following about the 2018–19 U.S. government shutdown over funding for Donald Trump's proposed border wall. For 10 points each:
- [10] Trump initially announced that he would be "proud to shut down the government" in a December 11 meeting with Chuck Schumer and this woman, who returned to the Speakership of the House in January.

ANSWER: Nancy (Patricia) Pelosi

[10] The shutdown ended on the same day that staffing shortages forced the Federal Aviation Administration to impose a ground stop at this airport in northern Queens.

ANSWER: <u>LaGuardia</u> Airport [accept <u>LGA</u> or <u>KLGA</u>]

[10] The day before the end of the shutdown, this Secretary of Commerce was criticized for suggesting in a CNBC interview that furloughed workers cover their cash shortages by taking out loans.

ANSWER: Wilbur (Louis) Ross Jr. <SCW>

- 16. The fundamental unit of electrical resistance, the von Klitzing constant, is based on the quantum version of this effect. For 10 points each:
- [10] Identify this effect, in which applying a magnetic field perpendicular to an electric current in a wire causes the charge carriers in the current to move to one side of the wire.

ANSWER: Hall effect

[10] The buildup of charge due to the Hall effect creates a transverse electric field, so there is a difference in *this* quantity between the sides of the wire. In simple systems, this quantity is provided by a battery.

ANSWER: **voltage** [or electric **potential**; or **potential** difference]

[10] By noting the *direction* of the Hall voltage, you can deduce this property of the charge carriers in the material. ANSWER: the <u>sign of their charge</u> [or whether they are <u>positive or negative</u>; or <u>whether they are electrons or holes</u>; accept similar wordings of all three answers] <SE>

- 17. This insult is first used by a little girl to mock Amusa for following the orders of the white man Simon Pilkings. For 10 points each:
- [10] Give this insulting name that Olunde calls his father Elesin Oba after the latter fails to commit ritual suicide.

ANSWER: "eater of white left-overs"

[10] Simon Pilking's intervention in Elesin Oba's ritual suicide is at the center of this 1975 play by Wole Soyinka.

ANSWER: **Death and the King's Horseman** 

[10] Wole Soyinka is an author from *this* West African country, which was also home to Chinua Achebe, the author of *Things Fall Apart*.

ANSWER: Nigeria < JR>

- 18. The core of a Bar or Bat Mitzvah ceremony involves being called up to read from this text for the first time. For 10 points each:
- [10] Give this Hebrew name for the first five books of the Bible. This name also refers to the large scrolls on which those books are written.

ANSWER: Torah

[10] Traditional chanting (or "cantillation") of the Torah uses *these* melodic formulas, which are notated with accent-like marks called *te'amim*. Some of these formulas, such as *etnachta*, serve a kind of punctuation.

ANSWER: **trop**es [accept **niggun** or **neginot**]

[10] Before reading from the Torah, a blessing is recited which, like most Jewish blessings, begins with *this* Hebrew word. Shockingly, this word means "Blessed."

ANSWER: **Baruch** [accept **Barechu**] <JR>

- 19. This group of eleven ships departed from Portsmouth, England in 1787. For 10 points each:
- [10] Name this group of ships, which was under the command Arthur Phillip. They probably brought smallpox to the local population after landing in Botany Bay.

ANSWER: First Fleet

[10] Two decades after its founding by the First Fleet, New South Wales's governor William Bligh was overthrown in an 1808 rebellion named for *this* alcoholic beverage. This molasses-based drink was often consumed by sailors.

ANSWER: Rum rebellion

[10] Nearly 20 years earlier, Bligh faced a famous mutiny as *the* captain of this ship. Originally, this ship set sail to transfer breadfruit from Tahiti to the West Indies, but ended up sailing to Pitcairn Island.

ANSWER: HMS Bounty <VS>

- 20. This object is drilled full of holes overnight by Vardaman. For 10 points each:
- [10] Name this object that's built by Cash in plain sight, despite Jewel's objections.

ANSWER: Addie Bundren's coffin

[10] Addie Bundren's coffin is taken to Jefferson in *this* novel, in which Vardaman declares "my mother is a fish." This 1930 novel uses over a dozen different narrators.

ANSWER: As I Lay Dying

[10] As I Lay Dying is set in the fictional county of "Yok·na·pa·taw·pha" in this Southern state, which was home to the novel's author, William Faulkner

ANSWER: Mississippi < JR>

# Tiebreaker

- 21. During this process, the G1 and G2 phases of interphase are basically skipped, in favor of nearly continuous S and M phases. For 10 points each:
- [10] Name this process of rapid cell division without a increase in cytoplasmic volume. It happens more quickly at the animal pole than the vegetal pole.

ANSWER: cleavage

[10] After cleavage, the blastula reorganizes itself to form *this* developmental phase, which includes a tube that will later become the digestive tract.

ANSWER: gastrula [accept gastrulation]

[10] After gastrulation, chordates then form the neural tube, which becomes both the brain and *this* other part of the central nervous system. This structure is protected by the vertebral column.

ANSWER: spinal cord <JR>