

Eisenhower Memorial Tournament 2017: Dunning-Kruger? I Hardly Know ‘Er!
Questions by Vasa Clarke, Ryan Humphrey, Alex Damisch, Jacob O’Rourke, Gabe Guedes, Charles Hang,
and Alex Dzurick
Packet 6: Tossups

1. **A critique of this thinker by Bertrand Russell disparaged this man for beginning his arguments from dogmatic belief. At the University of Paris, this thinker engaged in a dispute with Siger de Brabant over this thinker’s distrust of Averroës [“uh-VAIR-oh-ees”]. The encyclical *Aeterni Patris* was delivered in support of this thinker, whose later followers included Gaetano (*) Sanseverino. This thinker distinguished between the supernatural and preternatural by asserting that the supernatural was the exclusive work of the primary cause. Because all objects have properties, and some entity has properties to the maximum degree, this thinker concluded that God must therefore exist. For 10 points, name this pioneer of scholasticism and Doctor of the Church who wrote the *Summa Theologica*.**

ANSWER: St. Thomas Aquinas <VC, Philosophy>

2. **This law can be proved using Kronecker’s lemma and a theorem that states that the variance of a sequence of independent random variables divided by the sum of n^2 [“n squared”] is finite; that theorem is Kolmogorov’s three-series theorem. One form of this law sometimes named for Markov relaxes its requirement for (*) independently and identically distributed samples. It’s not the central limit theorem, but one form of this statement says that its desired result will converge almost surely, while its contrasting “weak” form converges in probability and can be proved by Chebyshev’s inequality. For 10 points, state this probabilistic theorem that says that as n grows, the mean of a group of samples converges to its hypothetical true mean.**

ANSWER: law of large numbers [prompt on “law of averages,” accept strong or weak law of large numbers, accept LLN, accept Bernoulli’s Theorem] <AWD, Other Science>

3. **This man was engaged to be married to Princess Amelia of Great Britain until this man’s father impulsively cancelled that arrangement. A younger brother of this ruler nearly became king of the newly independent American colonies. This monarch united his neighbors in the “League of Princes,” or (*) Fürstenbund. In his first military command, this ruler panicked and fled the field but his men still managed to win the Battle of Mollwitz. The sudden accession of Tsar Peter III was called a “miracle” by this ruler, whose country survived the Seven Years War and also kept Silesia, which this ruler had conquered from Maria Theresa. For 10 points, name this enlightened despot of the Hohenzollern dynasty who ruled as King of Prussia.**

ANSWER: Frederick the Great [or Frederick II of Prussia; or Friedrich der Grosse; or Friedrich II; prompt on “Frederick” or “Friedrich”] <VC, European History>

4. **A border of this city was marked with some altars where, according to the ancient historian Valerius Maximus, the Philaeni brothers were buried alive. This city was legendarily built around the Byrsa citadel, which was encircled with cut-out strips of oxhide by a queen to claim as her territory. According to Pliny the Elder’s “Natural History,” Cato the Elder ended all of his senate speeches by declaring that this city “must be (*) destroyed.” After this city’s forces won the battle of Lake Trasimene, Fabius Maximus began the implementation of a delaying strategy. This city’s forces lost the battle of Zama while it was led by Hannibal Barca. For 10 points, name this city that fought Rome in the Punic Wars.**

ANSWER: Carthage [or Kart-hadasht; or Carthago] <JO, Misc/Other History>

5. **In the majority opinion in *Riley v. California*, John Roberts wrote that these objects “hold for many Americans ‘the privacies of life’” and declared their search and seizure unconstitutional without a warrant. One of these objects owned by Andrew Breitbart was captured on a video camera during a 2011 radio show interview, contributing to the later resignation of congressman (*) Anthony Weiner. The FBI attempted to gain access to one of these objects recovered from Syed Farook in San Bernardino, although Apple refused to unlock it for them. Alec Baldwin was reportedly kicked off an American Airlines flight in 2011 for playing Words With Friends on one of these devices. For 10 points, name these devices such as the Blackberry held by Hillary Clinton wearing sunglasses in a viral photo.**

ANSWER: cell phone [accept mobile phone, telephone, smartphone] <ADZ, Other>

6. **In one film, a strongman goes to one of *these places* and cries after learning that the woman who he abandoned after killing a clown has passed away. In another scene set at one of these places, a girl who the**

protagonist had met in a restaurant tries to communicate in pantomime with him from a distance before ending the film by looking into the camera. In addition to the final scenes of *La Strada* and (*) *La Dolce Vita*, the most famous scene in *From Here to Eternity* shows Deborah Kerr and Burt Lancaster embracing at one of these places. Another scene at one of these places features a dolly zoom on the face of Police Chief Martin Brody as he sees a boy being attacked by a shark. For 10 points, name these places that include those of Amity Island where vacationers are terrorized in *Jaws*.

ANSWER: beaches [prompt on “seashore” and other equivalents] <GG, Other Art>

7. This organ may develop a so-called “feline” appearance in one inflammatory condition in which an excessively large amount of eosinophils accumulate in this organ. Treatment of a condition in which this organ’s sub-mucosal veins are excessively dilated frequently involves the use of a Minnesota tube, as well as a balloon tamponade procedure. The abnormal presence of Goblet cells in this organ is characteristic of another disorder of it named for (*) Barrett. Patients with either a Schatzki ring or extreme swelling in this organ will often experience dysphagia. H₂-receptor antagonists and proton-pump inhibitors are two classes of drugs commonly prescribed to relieve stress in this organ from the upward movement of stomach acid. For 10 points, name this organ that passes food from the pharynx into the stomach.

ANSWER: esophagus <RH, Biology>

8. One character in this work muses that “Space may produce new Worlds” after arguing that “Who overcomes By force, hath overcome but half his foe.” A “Heav’nly Muse...on the secret top Of Oreb, or of Sinai” inspired this work whose end sees a pair of figures walk “hand in hand, with wandering steps and slow.” In this work, its author describes how “these (*) eyes...roll in vain / To find thy piercing ray, and find no dawn.” This poem’s author was described as “of the Devil’s party without knowing it” due to lines such as “Better to reign in Hell than serve in Heaven.” For 10 points, name this epic poem intended to “to justify the ways of God to man” written by John Milton.

ANSWER: Paradise Lost <CH, British Lit>

9. In one scene, this novel’s protagonist drinks pomegranate juice while watching a band which includes a guitarist who winks and makes lewd gestures; that night, this novel’s protagonist has a dream about a Dionysiac orgy. This novel’s protagonist agrees to dye his hair and put on makeup to make himself look younger despite earlier expressing contempt for another figure whom he saw had done that. A series of encounters with provocative (*) red-haired foreigners occurs in this novel whose protagonist is fascinated by the smell of disinfectant. This novel’s protagonist eats some overly ripe strawberries after ignoring a warning of cholera in order to stay close to the Polish boy Tadzio. For 10 points, name this novel about Gustav von Aschenbach written by Thomas Mann.

ANSWER: Death in Venice [or Der Tod in Venedig] <CH, European Lit>

10. One participant in this conflict produced a woodcut that inaccurately depicted a certain cause of this conflict; that woodcut depicting this conflict drew heavily from Henry Pelham’s *The Fruits of Arbitrary Power*. Alonzo Chappel painted a man with his arm in a sling walking away from combat in a painting that depicts this war’s Battle of Bennington. Another painting of this war shows a man extending his arms outward to (*) Daniel Morgan and a lieutenant in red on his left. That work depicting this conflict was painted 49 years after the fact by John Trumbull, and is the *Surrender of General Burgoyne*. For 10 points, name this war depicted in Emanuel Leutze’s [“LOITS-uhs”] painting of *Washington Crossing the Delaware*.

ANSWER: American Revolutionary War [accept the (American) War of Independence; if outside the U.S., prompt with “where?” if location not specified] <AWD, Painting>

11. According to Callimachus, this mythical figure gave Cyrene two hunting dogs as a gift. In the *Iliad*, this mythical figure was the only one brave enough to personally fight against Hera. The giants Otus and Ephialtes ["eff-ee-AHL-tees"] accidentally killed each other while pursuing this mythical figure. A companion of this goddess named Arethusa was pursued by (*) Alpheus, so this goddess turned Arethusa into a fountain. The wrath of this goddess was manifested in the appearance of the Calydonian Boar. After accidentally seeing this goddess naked, Actaeon got turned into a stag and ripped apart. This goddess killed the seven daughters of Niobe while her brother killed Niobe's seven sons. For 10 points, name this goddess, the daughter of Leto and sister of Apollo.

ANSWER: Artemis [or Diana] <VC, Myth>

12. This event was condemned in the *New York Times* by the diplomat Wu Tingfang, who suggested that this event's perpetrator be executed by slow torture. Dr. Roswell Park was unable to provide medical assistance after this event, which was nearly prevented by a waiter named James Parker. This event resulted in the social ostracism of Emma (*) Goldman, who refused to condemn it. The assumption of full-time protection duties by the United States Secret Service officially began after this event, in which a handkerchief was used to conceal a revolver held by a radical anarchist. For 10 points, name this act of violence which was carried out at the 1901 Pan-American Exposition by Leon Czolgosz and which resulted in Theodore Roosevelt becoming President.

ANSWER: assassination of William McKinley <VC, American History>

MODERATOR NOTE: The "ch" in *Chullin* and "shechita" should be guttural; if you can't do that, a hard "h" is fine.

13. Detailed rules for conducting this practice are outlined in the *Chullin*, which literally means "profane items." Isaac Abarbanel rejected the idea that this practice was mandated for health reasons, saying that "the Law of God did not come to heal bodies." A *sakin* knife, which cannot be cannot have any dents or nicks, may be used to adhere to this practice, whose (*) shechita ["she-chi-TAH"] rules are about killing animals. Although it does not mention birds, Deuteronomy lists some animals, such as cattle, sheep, and goats, that are permissible to eat under this religious custom; however, a cloven-hoofed animal which does not regurgitate its cud, like a pig, is forbidden in the Torah. Eating a cheeseburger would not be keeping, for 10 points, what Jewish set of dietary rules, which forbid mixing meat and dairy?

ANSWER: keeping kosher [prompt on "shechita" before mention, prompt on anything about "killing animals" in a certain way before "eat" in line 5, accept kashrut or kashrus; accept kosher food, meat, etc.] <AWD, Religion>

14. Samples are placed inside a glass tube with this property in an Evans balance, and materials exhibiting this phenomenon appear to decrease in weight when placed on a Gouy balance. Landau names a type of this phenomenon present in free electron gases, and atoms with closed shells are described by the Langevin theory of this phenomenon. Stationary materials exhibiting this phenomenon are not subject to Earnshaw's theorem, and materials with this property possess (*) negative magnetic susceptibility. Pyrolytic carbon, bismuth, and diamonds all strongly exhibit this phenomenon, the "perfect" form of which is produced by a superconductor in the Meissner effect. For 10 points, name this phenomenon in which materials exposed to an applied magnetic field produce an opposing magnetic field.

ANSWER: diamagnetism <RH, Physics>

15. A prostitute in one of this man's novels takes on the nickname Titi; when her fiancé discovers her with British troops and throws a beer glass at her, he is beaten to death. In addition to writing about Hamida and the barber Abbas in one novel, this author wrote a work about Arafat's attempts to overthrow the Chief Strongman, the latest in a series of such rulers. The title figures of that work by this author represent the three (*) Abrahamic religions. The conservative wife Amina is hit by a car in one of this author's novels, which centers on the marriage of Aisha, the daughter of the adulterous Al-Sayyid Ahmad. For 10 points, name this author of *Midaq Alley*, *Children of Gebelawi*, and *Palace Walk*, the last of which is part of his *Cairo Trilogy*.

ANSWER: Naguib Mahfouz <CH, World Lit>

16. The second part of one of this author's novels consists of an autobiography written by one of its characters as therapy. That character created by this author rebelled against her family by getting a basketball scholarship to the University of Minnesota and later had an affair with the songwriter of the album *Nameless Lake*, Richard Katz. This author was criticized for elitism after saying that his goal of (*) "actually reaching a male audience" made him uncomfortable about one of his novels' selection for Oprah's Book Club. That novel by this author centers on Enid's plans to have her family, including her dementia-suffering husband Alfred, return to St. Jude for Christmas together. For 10 points, name this American author of *Freedom* and *The Corrections*.

ANSWER: Jonathan Franzen <CH, American Lit>

17. Composer and type of piece required. One of these works is marked "Presto, half note = 112" and is nicknamed "The Bees." This composer's chronologically last three works of this type were written for a method book by Ignaz Moscheles. In one of these pieces, dissonant minor sevenths that quickly resolve to major sixths in a fast sixteenth-dotted-eighth pattern give the work its nickname "Wrong Note." One of these works for piano is titled for A-flat major but uses E-flat as tonic; that work is named (*) "Aeolian Harp," which is in the same collection as "Butterfly" and "Winter Wind." The left hand plays constant descending sixteenth notes while the right hand sustains a six-five chords begin one of these works that is called "Revolutionary." For 10 points, name these studies by a certain Polish composer.

ANSWER: piano études by Frédéric Chopin [prompt on partial answer] <AWD, Music>

18. This politician's office bought 60 Viagra pills and 304 of the generic equivalent that were allegedly to be taken to treat altitude sickness. A chief of staff for this politician who used to work for the KCIA was arrested along with the Culture Minister after the publication of an artist blacklist with over 9000 names. The daughter of a person close to this politician was arrested in Denmark after it was revealed that her acceptance to (*) Ewha Womans University was facilitated by this person. This politician was impeached after it was discovered that she was being influenced by the daughter of a religious leader who claimed that she could contact this politician's dead mother. For 10 points, name this confidant of Choi Soon-sil, the recently-ousted president of South Korea and daughter of a former dictator.

ANSWER: Park Geun-hye <GG, Geography/Current Events>

19. As part of an anti-bandit campaign, this leader established the *original* paramilitary police force called the *rurales*. Although James Buchanan supported this leader, he was unable to get the McLane-Ocampo Treaty ratified in the U.S. Senate. This politician's position as President of the Supreme Court of Justice allowed him to assume power after the resignation of Ignacio (*) Comonfort. This leader's administration suspended all foreign debts, triggering an invasion from Britain, Spain, and France. The holiday of Cinco de Mayo celebrates the victory of this leader's forces after this man's government survived the Battle of Puebla. For 10 points, name this Mexican president of Zapotec descent whose supporters opposed the French-backed Emperor Maximilian.

ANSWER: Benito Juárez [or Benito Pablo Juárez García] <VC, World History>

20. Molecular weight, number of atoms, and this quantity are the only parameters in the Klinecicz ["klin-SEV-itch"] method for determining critical temperature. This quantity equals 198 plus the sum of group contributions in the Joback method for calculating this quantity. The Antoine equation typically increases its number of parameters to describe conditions beyond this quantity. Dividing the change in enthalpy by this quantity almost always yields a change in (*) entropy between 85 and 88 Joules per Kelvin per mole, according to Trouton's rule. The Guldberg rule states that the ratio of this quantity to the critical temperature is equal to two-thirds. This is the point where a liquid's vapor pressure equals the pressure exerted by its surroundings. For 10 points, name this temperature at which substances transition from the liquid phase to the gas phase.

ANSWER: boiling point <RH, Chemistry>

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Packet 6: Bonuses

1. Robert Abercromby's rather unsuccessful night raid during this battle spiked six cannons, which were all repaired by morning. For 10 points each:

[10] Name this final battle of the Revolutionary War, which was decided after the Americans and French captured redoubts nine and ten.

ANSWER: Battle of **Yorktown** [or Siege of **Yorktown**]

[10] Charles O'Hara surrendered the sword of this losing commander at Yorktown. He was the Commander-in-chief during the United Irishmen Rebellion.

ANSWER: Charles **Cornwallis** [or Lord Charles Cornwallis, 1st Marquess **Cornwallis**]

[10] During the surrender, a British band allegedly played this English ballad after George Washington refused them the honours of war.

ANSWER: "The **World Turned Upside Down**" <JO, American History>

2. Robert Schumann declared that this piece was the most difficult piece ever written for piano. For 10 points each:

[10] Name this piece, whose title is Italian for "touched" and refers to a type of piece more common in the Baroque era. It requires uncomfortable hand stretches, and its development includes long sections of sixteenth-note octaves.

ANSWER: **Toccata** in C Major, Opus 7

[10] Much of this composer's music is so rhythmically complex that much of it is unplayable by humans, so he used an Ampico Player Piano for the 50 rhythmic studies that he wrote. Many of the studies are influenced by jazz.

ANSWER: Conlon **Nancarrow**

[10] This French composer wrote extremely fast repeated notes in *Gaspard de la Nuit* ["noo-EET"], which attempted to one-up Mily Balakirev's difficult *Islamey*. This composer also wrote *Pavane for a Dead Princess* and *Bolero*.

ANSWER: Maurice **Ravel** <AWD, Music>

3. This character's inability to read German means that his life's work will never be a success. For 10 points each:

[10] Name this reverend and author of the incomplete *The Key to All Mythologies* whose will forbids his wife Dorothea Brooke from marrying Will Ladislaw if she wants her inheritance.

ANSWER: **Edward Casaubon** [accept either]

[10] Casaubon's will ironically causes the marriage it was meant to prevent in this novel by George Eliot.

ANSWER: **Middlemarch**, *A Study of Provincial Life*

[10] In its epilogue, Dorothea Brooke is described as incapable of becoming a "heroic woman" like this figure. This woman's death leads to Haemon's suicide in a Jean Anouilh play.

ANSWER: **Antigone** <CH, British Lit>

4. There are so many of these paintings that you can even find one in the Museum of Art in Indianapolis. For 10 points each:

[10] Name both the subject and the artist of as many as 80 works painted over the course of over 43 years. These Dutch works include ones "as a young man," "as the apostle Paul," and "with beret and turned-up collar."

ANSWER: **self**-portrait by **Rembrandt** [accept obvious equivalents like **himself** or **Rembrandt**]

[10] Rembrandt is more well-known for his depiction of this scene, also called *Company of The Captain Frans Banning Cocq*, in which that figure brandishes a striped flag. This misleading common title is a vestige of the varnish which darkened this painting until its removal in the 1940s.

ANSWER: *The* **Night Watch** [which does not actually take place at night]

[10] Another work by Rembrandt is commonly titled for a "Jewish" one of these women, who is wearing a necklace in the painting. The title woman is intended to be Rebecca; the man, Isaac.

ANSWER: *The Jewish* **Bride** <AWD, Painting>

5. This theory was only conclusively disproven in 1858 upon the publication of a certain physician's theory of cellular pathology. For 10 points each:

[10] Name this theory of disease first proposed by Hippocrates and later popularized by the physician Galen. Prior to this theory being disproven, treatments such as emetics, purges, and bloodletting were all quite common.

ANSWER: humoral theory [or obvious equivalents such as "theory of the four humors"; prompt on "Galenic theory"]

[10] One of the leading figures in opposition to Galenic humoral theory was this prominent Renaissance anatomist. This University of Padua physician is best-known for his work *De humani corporis fabrica*.

ANSWER: Andreas Vesalius

[10] This early German physician earned a reputation as the "father of modern pathology" for his work disproving the humoral theory. This physician is also credited with coining the term "zoonoses" to describe the link between infectious diseases, humans, and animals.

ANSWER: Rudolf Virchow <RH, Other Science>

6. Bob is attacked in this play by Teach after giving the wrong name of a hospital where Fletcher has been admitted. For 10 points each:

[10] Name this play in which Don and Bob conspire to steal back the title coin after they think that they have sold it for too little money.

ANSWER: American Buffalo

[10] *American Buffalo* is by the same playwright as this play about the theft of premium sales leads from a real estate agency

ANSWER: Glengarry Glen Ross

[10] Both *American Buffalo* and *Glengarry Glen Ross* were written by this American playwright.

ANSWER: David Alan Mamet <CH, American Lit>

7. The founder of this dynasty ended the great floods in a more successful manner than his father, Gun, by digging canals which diverted the water. For 10 points each:

[10] Name this legendary first dynasty of China which was founded by Yu the Great.

ANSWER: Xia dynasty

[10] Yu the Great is venerated as one of this many Taoist water gods. This is also the number of emperors who reigned between the Three Sovereigns and the Xia Dynasty, and the number of Suns created in Aztec myth.

ANSWER: five

[10] The Chinese creator god Pangu emerged from one of these objects. One of these things in the Pelasgian creation myth was guarded by the serpent Ophion and was created by Eurynome while she was in the form of a dove.

ANSWER: egg <VC, Myth>

8. When the KGB attempted to blackmail this world leader by producing a film depicting this man having sex, this man responded by asking for copies of the film to distribute in his country. For 10 points each:

[10] Name this leader who unified nationalism, religion, and communism in the doctrine of Nasakom during his tenure as first president of Indonesia.

ANSWER: Sukarno

[10] During World War II, Sukarno worked with the Japanese in order to gain support for the independence of Indonesia from this country, which also founded the Cape Colony.

ANSWER: Netherlands

[10] People of this national origin had founded the Lanfang Republic in what is now Indonesia until the Dutch took it over. These people in Indonesia were targeted by massive riots in 1998.

ANSWER: Chinese people [or obvious equivalents; or more specific answers like Hakka] <VC, World History>

9. Isotropic materials will have a value between negative one and positive one-half for this quantity. For 10 points each:

[10] Name this quantity. Named for a French scientist, it is the negative ratio of an object's transverse strain to its axial strain.

ANSWER: **Poisson's ratio**

[10] Materials that possess a negative value for Poisson's ratio are described by this term. Examples of such materials include graphene, paper, and several types of polymer foams.

ANSWER: **auxetic** materials

[10] Poisson's ratio is most commonly written in terms of the shear modulus, the bulk modulus, and this other modulus. Its namesake is also known for performing a notable double-slit experiment.

ANSWER: **Young's** modulus <RH, Physics>

10. This work begins with a discussion of the primal "fear of being touched", and it later describes how a small group known as a "crystal" facilitates the actions of its first title entity. For 10 points each:

[10] Name this work by Elias Canetti describing the dynamics of the first of its two title entities.

ANSWER: **Crowds and Power**

[10] Within *Crowds and Power*, Canetti describes crowds with various symbols like fire, the sea, rivers, and one of these natural entities. One of these natural entities, "of symbols" also titles the best-known work by Victor Turner.

ANSWER: **forest**

[10] For individuals in a crowd, this social "effect" describes the decreased likelihood that individuals will help a person in need as the number of individuals in the crowd increases. The murder of Kitty Genovese is the classic example of this effect.

ANSWER: **Bystander** effect <RH, Social Science>

11. This ruler was well-known for his powerful magic, which he demonstrated in one incident where he successfully transported a rival's golden throne to his court and then converted that rival to Islam. For 10 points each:

[10] Name this king, whose powers also let him speak with birds and whose death was not discovered until a worm ate through his staff.

ANSWER: **Solomon** [or **Sulayman**]

[10] In the Quran, God grants Solomon control over these non-angelic supernatural beings. They include the powerful ifrit, and Iblis may have been one of these until he was cast out.

ANSWER: **djinni** [or **genies**]

[10] Iblis fell from divine grace after refusing to bow before this person. Muslim tradition holds that the angel of death helped gather the materials to create this person.

ANSWER: **Adam** <VC, Religion>

12. One character in this work is told by Pastor Moser that patricide and fratricide are the greatest sins. For 10 points each:

[10] Name this play about Karl Moor, who joins the title group after having been disinherited in favor of his brother Franz.

ANSWER: **The Robbers**

[10] *The Robbers* is a play by this German author of *William Tell*.

ANSWER: Johann Christoph Friedrich von **Schiller**

[10] The title protagonist of *William Tell* is an archer who is forced by the tyrannical official Gessler to shoot one of these fruits from the top of his son's head.

ANSWER: **apple** <CH, Euro Lit>

13. Scott Joplin was considered the “King” of this pre-jazz genre. For 10 points each:

[10] Name this early 20th century genre that originated from African-American band music. Pieces in this genre involved a lot of left-hand syncopation in duple meter and were usually written for piano.

ANSWER: **ragtime**

[10] Along with “The Entertainer,” this was Joplin’s most famous rag, possibly named after a black club in Sedalia, Missouri. Sydney Brown later wrote lyrics for this song that imitated the African-American vernacular at the time.

ANSWER: “**Maple Leaf Rag**”

[10] Ernest Hogan, an early ragtime innovator, unfortunately gave rise to a sub-genre of ragtime called “coon songs,” which were used in these horrifyingly racist musical shows that featured white people in black face.

ANSWER: **minstrel** shows <AWD, Other Art>

14. One derivation of this equation relies on a resolution of the Gibbs paradox. For 10 points each:

[10] Name this equation, developed as a solution of Boltzmann’s equations, which includes a “plus five-halves” term in one formulation and approaches negative infinity as temperature approaches absolute zero.

ANSWER: **Sackur-Tetrode** equation

[10] The Sackur-Tetrode equation is unique because it allows for the energy of an ideal gas to be expressed in terms of only volume and this other quantity, which is always increasing according to the second law of thermodynamics.

ANSWER: **entropy**

[10] One reformulation of the Sackur-Tetrode equation includes a cubed term for the “thermal” variety of this quantity. The observance of another form of this quantity in the Davisson-Germer experiment confirmed its namesake’s “hypothesis”.

ANSWER: **wavelength** [accept **thermal wavelength** or **De Broglie wavelength**] <RH, Chemistry>

15. W. H. Auden's poem “August 1968” was written in response to the invasion of this country, which occurred in August, 1968. For 10 points each:

[10] Name this Warsaw Pact country which underwent political reform during the Prague Spring.

ANSWER: **Czechoslovakia**

[10] After the Warsaw Pact reestablished control in Czechoslovakia, this Czech student committed suicide in protest by burning himself to death in Wenceslas Square.

ANSWER: Jan **Palach**

[10] This Soviet leader’s many hobbies included awarding himself lots of medals, kissing Erich Honecker, and authorizing the invasion of countries like Czechoslovakia on the justification of this leader’s namesake doctrine.

ANSWER: Leonid Ilyich **Brezhnev** <VC, European History>

16. Proteins with Kringle domains help mediate the protein-protein interactions in this process. For 10 points each:

[10] Name this process whose namesake “cascade” includes proteins like kallikrein, Protein Z, and von Willebrand factor.

ANSWER: blood **coagulation** [or blood **clotting**; prompt on, but otherwise DO NOT MENTION “platelet activation/adhesion”]

[10] The basic process of coagulation centers on the aggregation of these cell fragments by a meshwork of fibrin.

ANSWER: **platelets** [or **thrombocytes**]

[10] These specialized secretory entities are vital to platelet function since they contain assorted growth factors and clotting proteins. These entities are differentiated from their “dense” variety by the presence of CD63 and P-selectin, and their deficiency leads to Gray Platelet syndrome.

ANSWER: **alpha granules** [or **alpha bodies**; prompt on “granules”] <RH, Biology>

17. This athlete was said to have played like a “seasoned vet” in a snowy 2015 game against the New England Patriots. For 10 points each:

[10] Name this quarterback who signed a \$72 million dollar deal with the Houston Texans in free agency, only to be traded to the Browns in March 2017 for a 4th round pick in an NBA-esque salary dump.

ANSWER: Brock **Oswelier**

[10] Brock Oswelier emerged as a potential star in 2015 while serving as the back-up for this injured Denver Broncos quarterback. This quarterback won Super Bowl 41 with the Indianapolis Colts, and Super Bowl 50 with the Denver Broncos.

ANSWER: Peyton **Manning**

[10] Many commentators project that Houston made the Brock Oswelier trade in hopes of pursuing Tony Romo, who was replaced as the starting quarterback for the Dallas Cowboys by this former Mississippi State quarterback.

ANSWER: Dak **Prescott** <RH, Trash/Other>

18. A song by the folk songwriter Pete St. John describes an unemployed ferryman on this Irish river, and the “Angelus Bell” is heard over this river in “The Foggy Dew.” For 10 points each:

[10] Name this important river in Irish culture which is crossed by the Mellows Bridge and flows from Kippure to the Irish Sea.

ANSWER: River **Liffey** [or “**Anna Liffey**”]

[10] The Liffey is well-known mostly because it flows through this capital city of the Republic of Ireland.

ANSWER: **Dublin**

[10] Ireland is traditionally divided into four provinces: Connacht, Leinster, Munster, and this province which largely makes up Northern Ireland and remains part of the United Kingdom.

ANSWER: **Ulster** <VC, Geography>

19. The Yongle Emperor overthrew this man’s chosen successor, the Jianwen Emperor, after only three years. For 10 points each:

[10] Name this leader of the Red Turbans who won the largest naval battle in history, the Battle of Lake Poyang, to become founder of the last ethnically Han Chinese dynasty.

ANSWER: **Hongwu** Emperor [or **Zhu** Yuanzhang]

[10] The Hongwu emperor founded this dynasty famous for its porcelain which was followed by the Qing Dynasty.

ANSWER: **Ming** dynasty [or **Ming** chao]

[10] The Hongwu Emperor established this city as the Ming capital, though it was moved to Beijing by Yongle. Iris Chang wrote a notable book about this Chinese city which was also the capital of the Taiping Heavenly Kingdom.

ANSWER: **Nanjing** [or **Nanking**] <CH, Misc/Other History>

20. Kuheiji pretends that another character’s promissory note is actually an extortion attempt in this work. For 10 points each:

[10] Name this play about the oil merchant Tokubei, who kills himself with his love Ohatsu in the Wood of Tenjin after his money is stolen.

ANSWER: *The **Love Suicides at Sonezaki***

[10] *The Love Suicides at Sonezaki* was written by this author of *The Battles of Coxinga*.

ANSWER: **Chikamatsu** Monzaemon

[10] *The Love Suicides at Sonezaki* and *The Battles of Coxinga* are both plays in the bunraku genre, which use these objects instead of actors to represent the characters. Geppetto creates one of these objects that comes to life in another story.

ANSWER: **Puppets** <CH, World Lit>