

SUBMIT 2014: “sometimes referred to as Groper[citation needed]”

Packet by Illinois A, Alabama, and Yale B

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Tossups

1. **One work by this artist shows a bonnet-wearing woman carrying a butcher knife to the left of the artist’s sister Katherine. Gertrude Käsebier and Clarence H. White joined an art movement led by this artist, which was created as a response to England’s The Link Ring. Ten of his works called “Music” evolved into his series of abstract cloud depictions called (\*) *Equivalents*. Horses pull a trolley labeled “Harlem” in his photograph *The Terminal*. In *Camera Work*, he frequently published the works of Edward Steichen, a man who co-founded New York’s Gallery 291 with him. For 10 points, name this Photo-Secession photographer of *The Steerage*, the husband of Georgia O’Keeffe.**

ANSWER: Alfred Stieglitz

2. **To atone for his violent rise to power over his siblings, this ruler married his son to his nephew’s daughter, Salima Begum, and his daughters to his nephews, Sipihir Shikoh and Izid Bakhsh. Policy changes implemented by this ruler include the banning of the printing of the kalima on coins and discontinuation of the practice of jharokha darshan. This ruler’s ascent to power was completed with his victory at the battle of (\*) Samugarh. This ruler exercised his religious intolerance by reinstating his empire’s *jizya* tax and executing Tegh Bahadur for refusing to convert from Sikhism to Islam. The chief military rival of the Marathan ruler Shivaji, for 10 points, name this predecessor of Bahadur Shah I and successor to Shah Jahan who ruled the Mughal Empire during its greatest extent.**

ANSWER: Aurangzeb Alamgir

3. **After this character’s girlfriend warns him that he will be accused of rape, he imagines rape as “what one felt when one’s back was against a wall and one had to strike out.” The author who created this character described 5 real people from his youth who inspired this character in the essay “How [this character] Was Born.” This character pulls a knife on his friend Gus in a poolroom in order to avoid having to follow through on their plans to (\*) rob Blum’s store without appearing cowardly. In the section of the novel in which he appears titled “Flight,” this character runs away when a group of newspaper reporters discover an earring inside of a furnace. Jan Erlone arranges for the lawyer Boris Max to defend this character for the crime of the murder of Mary Dalton. For 10 points, name this protagonist of Richard Wright’s *Native Son*.**

ANSWER: Bigger Thomas (accept either)

4. **This region can be modeled as the outer edge of a waveguide in which sferic waves can propagate and Schumann resonances can occur. Modulated heating is used to generate ELF and VLF waves in this region by the HAARP project. One structure that connects this region to one above are field aligned and forms a z-pinch; that is the Birkeland current. The interaction of Lyman-alpha radiation with nitric oxide causes increased (\*) electron density in this region’s D layer. Also consisting of an F layer and a E layer, which is also called the Kennelly–Heaviside layer, this region is notable for its refraction and reflection of radio waves. For 10 points, name this layer of the atmosphere which forms the aurora borealis where it meets the magnetosphere and is composed of many electrically charged molecules.**

ANSWER: ionosphere

5. **This book states that man is “entangled with infinite questions” as part of his creation. This text notes that men should refrain from great ambitions, focusing on the fact that all are fated to die, and that men should**

enjoy simple pleasures as gifts from God. After proposing a number of reasons for man's vanity, the narrator of this text focuses on the sinfulness of (\*) women as the most salient cause. One part of this book begins by asking "who is as the wise man?" Evangelical scholars argue for a pre-exile date, focusing on the Rabbinic tradition that Koheleth, as the author calls himself, was King Solomon in his old age. For 10 points, identify this book of the Bible that differs from the other wisdom books like Psalms and Proverbs by doubting the efficacy of wisdom itself, with a title from the Greek word for preacher.

ANSWER: Ecclesiastes (accept Koheleth before mentioned)

6. When one character in this play complains endlessly about bearing a heavy load, his master suggests that he pick up the donkey he is riding on. One character in this play threatens to stop another character's speech using an oil jug, and then proceeds to disrupt his speeches with the phrase "lost his little oil jug." That character in this play wins a contest after speaking the word "death" onto a scale because death is "the heaviest of harms." When the protagonist of this play is confronted for his alleged theft of Cerberus, he switches outfits with his servant (\*) Xanthias, who is subsequently dragged off to a lavish feast by servants of Persephone. This play details Dionysus' journey to the underworld as he attempts to bring the playwright Euripides back from the dead, but ends up taking Aeschylus instead. For 10 points, name this play by Aristophanes, named for some croaking creatures.

ANSWER: *The Frogs* (or *Batrachoi*)

7. When the glass transition temperature equals  $f\text{-sub-}g$  over  $\alpha\text{-sub-}f$ , the VFTH equation reduces to this equation. One quantity in this equation is equal to the the square root of  $8 kT$  over the product of  $\pi$  and the reduced mass times Avogadro's number times the cross-section. The temperature dependence of the diffusion coefficient in a solid can be modeled using this equation. Another (\*) quantity in this equation is equal to the product of the steric factor and the collision frequency, and has units of frequency for a first-order reaction. This equation states that the exponential of minus activation energy over  $RT$  times the pre-exponential factor is equal to the rate constant. For 10 points, name this equation which gives the temperature dependence of a reaction rate.

ANSWER: Arrhenius equation

8. This character stands next to a bare-chested black woman in a pink dress and headscarf in painting by Paolo Veronese. This figure is wearing white gloves with gold rings and a large red feathered hat in a work by Lucas Cranach the Elder. In one painting, a woman with a basket over her head runs behind this figure, who is walking with an olive branch; that work is by Botticelli. Another version of this character by Mantegna has red curly hair and stands in front of a (\*) bed where a single foot is visible. Caravaggio's depiction of this woman shows her maid as a wizened old woman carrying a cloth. A more youthful version of that maid, Abra, helps hold down this woman's victim in one of another artist's bloody paintings of her. For 10 points, name this woman painted by Artemisia Gentileschi, who is commonly depicted holding a sword and the head of Holofernes.

ANSWER: Judith

9. In a 1921 *Yale Review* article, Franz Boas wrote that this practice would be the easiest way to solve the "greatest question of our time." Clinical psychologist Maria Root interviewed 200 people engaged in this practice in a book which traces societal outlines toward it. In one work, Ashley Montagu cited a study of this phenomenon in South (\*) Africa. California Chief Justice Roger Traynor wrote a famous opinion striking down state laws against this in *Perez v. Lippold*. In *Pace v. Alabama*, the U.S. Supreme Court upheld state laws banning this. The Court reversed course on June 12, 1967, in a case where the plaintiff left and later returned to Virginia so that he could marry Mildred Jeter. For 10 points, identify this type of union, legalized nationwide by *Loving v. Virginia*.

ANSWER: interracial marriage (prompt on "miscegenation"; accept interracial couples before "Perez"; accept clear knowledge equivalents; prompt on "marriage" before "racism")

10. At this battle, Henry Horne deployed a tactic in which the infantry line advanced under the cover of artillery fire smoke. This battle featured offensives at Flers–Courcellette and Albert, and the second phase of this battle began with a victory at Bazentin Ridge for Henry Rawlinson. Early in this engagement, Geoffrey Malins filmed the explosion of a mine at Hawthorne (\*) Ridge redoubt, and this battle is commemorated by a monument at Thiepval Wood. British losses here earned Douglas Haig the moniker “Butcher of [this battle].” The Mark I Tank was deployed for the first time at this battle. Launched with the intent of relieving pressure on the French at Verdun, for 10 points, name this 1916 battle of World War I, which took place on a namesake river in northern France.

ANSWER: Battle of the Somme (or Somme Offensive)

11. The third stanza of this poem describes how “dictators” talk “elderly rubbish” “to an apathetic grave.” At the end of this poem, the speaker resolves to “Show an affirming flame” after noting that like “the Just,” he is composed “Of Eros and of dust.” In the second stanza of this poem, the speaker claims he knows “What huge imago made / A psychopathic god” before noting that (\*) “Those to whom evil is done / Do evil in return.” The speaker asserts that “What mad Nijinsky wrote / About Diaghilev / Is true of the normal heart” and later proclaims “We must love one another or die.” As this poem begins, the speaker notes he is “uncertain and afraid” as he “sit[s] in one of the dives / On Fifty-Second street.” For 10 points, name this poem by W.H. Auden, whose title refers to the first day of World War II.

ANSWER: “September 1, 1939”

12. Two binding sites for this element are found on the dockerin protein domain, and CKD-MBD occurs when the kidneys do not maintain proper levels of phosphorus and this element in the body. Along with diacyl-glycerol, ions of this element activate enzymes in the protein kinase C family. The albumin protein Parvalbumin is able to bind to ions of this element because it contains (\*) three helix-loop-helix domains: an AB-, a CD-, and an EF-hand, which directly binds to this ion. Stimulation of the T-tubules causes the release of these ions, which bind to troponin in order to move the tropomyosin complex. Parathyroid hormone serves to increase levels of this ion in the blood by increasing osteoclast activity. For 10 points name this ion that is necessary for the contraction of muscles and is found in your bones.

ANSWER: Calcium (accept Ca<sup>2+</sup>)

13. This composer used the *Kyrie* and *Benedictus* from one of his masses in a symphony in which trumpet triplets close the first movement. This composer’s seventh symphony contains a simultaneous cymbal clash and triangle roll at the climax of the second movement, the only appearance of either instrument in the score. His *Mass in E minor* contains a theme that would later be reiterated in his eighth symphony, where it would be associated with (\*) Deutscher Michel. This composer’s second symphony is nicknamed the “Symphony of Pauses,” and a duplet paired with a triplet constitutes his namesake “rhythm.” For 10 points, name this Wagner fan and Austrian composer, whose fourth symphony is known as the “Romantic.”

ANSWER: Anton Bruckner

14. This case overturned a decision involving Utah’s Old Jordan mine, *Holden v. Harden*. One brief in this case focused on the “lack of knowledge” of citizens and was written by Julius Mayer. This case’s majority opinion cited a case from 8 years prior, *Allgeyer v. Louisiana*, while a dissent in this case referenced a 1720 plague in Marseilles. In a case three years later, David (\*) Brewer claimed that his opinion only differed from this decision on the issue of sex, and this case was upheld in *Adkins v. Children’s Hospital*. With a majority opinion by Rufus Peckham, this case prompted a dissent which claimed “the Fourteenth Amendment does not enact Mr. Herbert Spencer’s Social Statics.” Featuring dissents from Harlan and Holmes, for 10 points, name this Supreme Court case which overturned a law limiting working hours for bakers and ushered in a namesake era of pro-contract

rights decisions.

ANSWER: Lochner v. *New York* (accept in either order)

15. The Cavally River forms the bottom of this nation's western border, and the Sassandra River runs throughout this country. This country's only mountain range literally translates as the "Eighteen Mountains," which include Mont Nimba. This nation's Baoulé people are part of the Kwa language group-speaking Akan. This nation's longest river, the Bandama, was dammed to create the artificial Lake Kossou, and both the Bandama and Sassandra flow into the Gulf of (\*) Guinea. This nation's president Félix Houphouët-Boigny moved the capital to his hometown in 1983. For 10 points, name this former French colony between Ghana and Liberia on the Gulf of Guinea, with capital at Yamoussoukro.

ANSWER: Ivory Coast (accept Côte d'Ivoire)

16. This philosophical work contrasts the "continent," who successfully resist irrational internal pressures, with the "incontinent," who fail to do so. Late in this work, its author claims that many who argue against hedonism do so insincerely, but for good reasons. This work claims that when dealing with its title subject, one should draw conclusions "roughly and in outline," since many rules hold only for the most part. This work classifies justice as either (\*) distributive or rectificatory. One thesis of this work is interpreted as stating that every virtue lies between a vice of excess and a vice of deficiency; that is the Doctrine of the Mean. The first book of this work discusses the ultimate goal of life, *eudaimonia*. For 10 points, name this work of moral philosophy, edited by and named for the son of Aristotle.

ANSWER: Nicomachean Ethics

17. This author wrote a novella in which two men decapitate themselves before a statue of Kali, only to have Sita place the wrong heads on each body. This author created a character who is embarrassed when he is called "Fraulein" after making an incorrect move in a dance class and becomes infatuated with Ingeborg Holm. A character created by this author has a dream about a swampland dotted with islands and encounters several (\*) red-haired men in straw hats. One of this author's novels depicts the divorces of Antonie from Herr Grunlich and Herr Parmeneder and her brother Christian's quarrels with Tom, which lead to the decline of the title merchant family. One character created by this man dies after consuming some over-ripe strawberries and has a loving obsession with a Polish boy named Tadzio while on vacation. For 10 points, name the author of *Buddenbrooks* and *Death in Venice*.

ANSWER: Thomas Mann

18. The translational partition function of a single particle in a container is equal to the volume of the container divided by the cube of this quantity. The Sackur-Tetrode equation only applies when the density of particles times this quantity cubed is much less than one. For an ideal gas, one form of this quantity is equal to Planck's constant divided by the square root of quantity two pi times mass times Boltzmann's constant times temperature. (\*) The energy of a particle is equal to 1240 electron volt-nanometers divided by this quantity for the particle. The existence of this quantity was confirmed by an experiment which fired electrons at a nickel target and observed a Bragg diffraction pattern; that experiment was conducted by Davisson and Germer. For 10 points, name this quantity equal to Planck's constant divided by momentum which represents the wavelength of a particle's matter wave.

ANSWER: de Broglie wavelength (accept thermal wavelength or thermal de Broglie wavelength before "electrons"; prompt on "wavelength" before mentioned; "wavelength" unnecessary after mentioned)

19. This empire's troops linked themselves together with chains at one battle; earlier, Vardan led a revolt against this empire but was defeated at Avarayr. An unborn infant became ruler of this empire when a crown was placed on his mother's stomach, while another ruler won a pyrrhic victory at the Battle of Callinicum.

**The last emperor of this polity was allegedly killed by a miller in Merv after losing the battle of Nahavand. One ruler of this empire may have stuffed Valerian's (\*) skin with straw after capturing him at Edessa. This empire conquered the western portion of the Kushan Empire under its second king, while its founder overthrew Artabanus IV of the Arsacid Empire. Featuring kings named Ardashir, Shapur, and Khosrau, this was the last empire whose state religion was Zoroastrianism. For 10 points, name this empire which succeeded the Parthians, the last pre-Islamic Persian dynasty.**

ANSWER: Sassanid empire

**20. According to Apollodorus, the eventual captor of these creatures sailed across the Aegean to a land near the Danube River where he drove the caretakers of these creatures to the sea. That man and his group engaged in battle with Bistonian soldiers that were later sent to recapture these creatures. These creatures dragged a young boy to his death, which in turn led to the city of Abdera being named for him. Two of these creatures are named (\*) Podargos and Lampon. Some sources claim that these creatures were dedicated to Hera and set free in Argos, while others state that they were taken to Olympus and killed by wild animals sent by Zeus. The owner of these fire-breathing creatures was fed to them by their capturer. For 10 points, name these man-eating creatures that Eurystheus tasked Heracles with retrieving, which belonged to a Thracian king who shares a name with a Trojan war hero.**

ANSWER: the mares of Diomedes (or anything to do with horses and Diomedes)

**21. Donald McHenry, a member of President Carter's transition staff at the State Department, was the second African American to hold this position. The first holder of this position resigned after meeting with representatives of the Palestine Liberation Organization; that was Andrew Young. One man serving in this position declared "Don't wait (\*) for the translation!" and George H.W. Bush held this post from 1971 to 1973. Daniel Patrick Moynihan served in this position under Gerald Ford and Adlai Stevenson served in this position under JFK. The first person to hold it was Edward Stettinius, Jr., while Arthur Goldberg resigned from the Supreme Court to take this diplomatic job based in New York City. For 10 points, name this position more recently filled by John Bolton and Susan Rice.**

ANSWER: U.S. Ambassador to the United Nations (accept U.S. Permanent Representative to the UN)

## Bonuses

1. P. J. Ciampa claimed he needed this event like he need a hole in the head, and this event began after Echol Cole and Robert Walker were accidentally crushed to death. For 10 points each:

[10] Name this event during which a group of predominantly African American workers walked off the job, much to the chagrin of Mayor Henry Loeb, a “white unity” advocate.

ANSWER: 1968 Memphis Sanitation Strike (anything indicating a strike or walkout that occurred in Memphis in 1968 and/or a strike or walkout that occurred in Memphis among garbage or sanitation workers)

[10] This civil rights activist gave his “I’ve Been to the Mountaintop” speech to support the striking workers but was shot that night at the Lorraine motel.

ANSWER: Martin Luther King, Jr. (accept MLK)

[10] After King’s death, Ralph Abernathy assumed leadership of this organization. This non-militant organization helped plan the March on Washington and also ran the Birmingham Campaign and the Poor People’s Campaign.

ANSWER: Southern Christian Leadership Conference

2. It’s time to show off your knowledge of the work of Georg Frobenius. For 10 points each:

[10] Frobenius was the first person to provide a complete proof to this doubly-eponymous theorem, which states that each matrix satisfies its own characteristic polynomial.

ANSWER: Cayley–Hamilton theorem

[10] One famous result of representation theory is Frobenius’ reciprocity theorem, which states that the character of a subgroup has this relation to the character of the group. For a matrix, one can find it by taking the conjugate transpose.

ANSWER: adjoint

[10] Frobenius also names this type of group on a finite set. This type of group consists of rearrangements of the elements of a set where order does matter, unlike in the case of combinations.

ANSWER: permutation

3. The beginning of this poem describes how the Duke “turns his dreadful prow” to the Dutch in referencing the 1665 Battle of Lowestoft. For 10 points each:

[10] Name this lengthy poem detailing the events of 1665 to 1666, written while its author was in western Britain attempting to escape the Great Plague of London.

ANSWER: Annus Mirabilis

[10] *Annus Mirabilis* was written by this English poet and dramatist of *Absalom and Achitophel* and *MacFlecknoe*.

ANSWER: John Dryden

[10] Dryden wrote this ode for St. Cecilia’s Day commemorating an event in Persepolis following the titular character’s defeat of Darius. It was adapted into a choral work by Handel.

ANSWER: Alexander’s Feast, or the Power of Music

4. A Slavic creature of this type was named the Kudlak and was constantly hunted by a shaman who turns into white animals, called the Kresnik. For 10 points each:

[10] Name these creatures that were generally reanimated humans bodies that sucked blood and were often killed with stakes.

ANSWER: vampires

[10] This woman gives her name to a set of vampiric monsters, but she’s better known for having her children killed by Hera, and angrily eating other people’s children as a result.

ANSWER: Lamia

[10] The Roma believed that if a vampire impregnated a woman the result would be one of these creatures, which

were useful for their ability to detect and kill vampires.

ANSWER: **dhampir** (or **dhampyre**)

5. This bonus is on pseudoscience current events. For 10 points each:

[10] In 2012, scientists at the OPERA experiment announced that they had observed these particles moving faster than the speed of light. They hadn't.

ANSWER: **neutrinos**

[10] Jenny McCarthy's completely wackadoo interpretation of autism led her to feed her son a diet free of both gluten and this other protein family found in milk and delicious, delicious cheese.

ANSWER: **casein**-free

[10] A recent *Slate* article was about the furor over this substance in the 1970s, supposedly discovered by Soviet scientists. This form of water supposedly had unique properties, but just turned out to be water with sweat in it.

ANSWER: **polywater** or **anomalous water**

6. This poem opens as the speaker explains that the title vessel "was going down impassive Rivers" and "no longer felt" itself "guided by haulers." For 10 points each:

[10] Name this Rimbaud poem whose title vessel cannot "Follow in the waves of the cotton boats, / Nor cross through the pride of flags and flames, / Nor swim under the eyes of prison ships."

ANSWER: "The **Drunken Boat**" (or "Le **Bateau Ivre**")

[10] Arthur Rimbaud is a member of this literary movement whose other members include Auguste Villiers de l'Isle-Adam and Stephane Mallarmé.

ANSWER: **symbolism**

[10] This French author of "The Graveyard by the Sea" and "The Young Fate" was also a prominent member of the symbolist movement.

ANSWER: Paul **Valéry**

7. Answer the following about choral music by Italian composers. For 10 points each:

[10] Written in honor of Alessandro Manzoni, this sacred choral work uses the pounding of the timpani and bass drum to depict thunder in its "Dies Irae" movement.

ANSWER: Giuseppe **Verdi**'s **requiem** (prompt on "requiem")

[10] This Renaissance composer supposedly convinced the Church not to ban polyphony by writing the *Pope Marcellus Mass*.

ANSWER: Giovanni Perluigi da **Palestrina**

[10] Grigorio Allegri is most famous for this composition, a setting of Psalm 51 that is commonly performed during the Tenebrae service during holy week. Two alternating choirs generally sing this piece in *falso bordone* style.

ANSWER: **Miserere**, *mei Deus*

8. This kingdom was centered in Modern-day Staffordshire and reached its zenith under Offa, who built a giant dike on the border with Wales. For 10 points each:

[10] Name this Anglo-Saxon kingdom which dominated the Heptarchy in the 8th century and was once ruled by the victor at the Battle of Hatfield Chase, Penda.

ANSWER: **Mercia**

[10] This "great" King of Wessex divided Mercia with Guthrum by signing the Treaty of Wedmore.

ANSWER: **Alfred** the Great

[10] Before becoming king, Alfred won this battle after allegedly summing troops with the Blowing Stone. Bagsecg and his five earls all died here, but the invasion of The Great Heathen Army wasn't ended until the Battle of Edington seven years later.

ANSWER: Battle of **Ashdown**

9. In the first few steps of the Hajos–Parrish reaction, proline is reacted with a ketone to produce one of these intermediates. For 10 points each:

[10] Name these compounds that are also used to alkylate carbonyls in a reaction analogous to the Michael addition discovered by Gilbert Stork. They are produced spontaneously by the alpha-deprotonation of an iminium (“ih-min-ee-um”) ion.

ANSWER: enamines

[10] Enamines undergo this process to convert to imines and vice versa. The mechanism is exactly analogous to another case in which this process causes an interconversion between ketones and enols.

ANSWER: tautomerization (accept word forms like tautomerism)

[10] 2-hydroxypropane converts via tautomerization to this simplest ketone, whose common uses include nail polish remover and as a solvent used to clean lab glassware.

ANSWER: acetone (or propanone)

10. A Gothic tower is seen in the distance in this painting, which depicts the landscape of the Stour Valley around it. For 10 points each:

[10] Name this 1802 painting of a village in Essex.

ANSWER: Dedham Vale

[10] The artist of *Dedham Vale* was also responsible for this painting, which depicts three horses pulling a large wagon across a river.

ANSWER: *The* Hay Wain

[10] This English Romantic artist of *Weymouth Bay* painted *Dedham Vale* and *The Hay Wain*.

ANSWER: John Constable

11. This man convinced Charles V to pass the Leyes Nuevas and debated a rival at the Council of Valladolid. For 10 points each:

[10] Name this Dominican missionary who exposed the atrocities committed by Spanish conquistadores in his *Short Account of the Destruction of the Indies*.

ANSWER: Bartolomé de Las Casas

[10] Las Casas would likely not have approved of the Spanish adoption of this Incan labor system which allowed them to conscript natives for public service work.

ANSWER: mita (or repartimiento)

[10] The implementation of the Mita occurred as part of the namesake reforms of this Viceroy of Peru. This man firmly established his awfulness by ordering the summary execution of Tupac Amaru.

ANSWER: Francisco de Toledo

12. This process is described by transmission and reflection coefficients. For 10 points each:

[10] Name this process in which a particle penetrates a barrier which it is classically forbidden to penetrate.

ANSWER: quantum tunneling

[10] Gamow used this approximation to formulate his theory of quantum tunneling in nuclei during alpha decay. This technique is used to obtain approximate solutions to the one-dimensional time-independent Schrödinger equation.

ANSWER: Jeffreys–Wentzel–Kramers–Brillouin or JWKB approximation (accept any ordering of the letters W, K, and B; accept Liouville–Green method; accept semiclassical)

[10] The WKB method fails when the energy of a particle equals the height of the potential well. These solutions to the Schrodinger approximate with a linear potential are used to patch the wave functions together across the boundary.

ANSWER: Airy functions



13. Theodore Andersson splits certain works of these types into six sections, an introduction, conflict, climax, revenge, reconciliation, and aftermath. For 10 points each:

[10] Name these Medieval Icelandic works of literature which mostly describe historical events that occurred some three centuries before they were written.

ANSWER: Icelandic sagas

[10] One famous saga is about this facial hair lacking friend of Gunnar, who is burned in his house as revenge for his son Skarp-hedin's killing of Thrain Sigfusson.

ANSWER: Njal Thorgeirsson

[10] Both Njal, and another character from Njal's saga, Mord Fiddle, are said to be proficient in this discipling. This discipline was conducted at a meeting held between the godar every year called the Althing.

ANSWER: law (accept anything having to do with the law such as being a lawyer)

14. Don Juan is cited as an example of this mode of existence taken to an unhealthy extreme. For 10 points each:

[10] Name this mode, or "sphere," of existence which is discussed by "A" and Johannes Climacus in the first part of *Either/Or*. It is characterized by attention to personal experiences and imagination, and is contrasted with the ethical.

ANSWER: aesthetic

[10] *Either/Or* was written by this Danish philosopher, a forerunner of existentialism who wrote much of his work using pseudonyms.

ANSWER: Søren Kierkegaard

[10] In *Either/Or*, Kierkegaard argues that a happily married man in the ethical sphere maintains his happiness by means of this process, which he contrasts with recollection.

ANSWER: repetition

15. Gracchus Babeuf was guillotined for leading the Conspiracy of Equals against this government. For 10 points each:

[10] Name this five-member body which held executive power in France under the constitution of 1795. It was later replaced by the consulate.

ANSWER: the Directory (or Directoire)

[10] Napoleon tricked the directors into leaving and dispersed the Council of Five Hundred in this coup which is compared with Napoleon III's coup in a Marx essay.

ANSWER: Coup of 18 Brumaire

[10] Two years earlier, Napoleon had helped begin the second phase of the directory by sending Pierre Augereau to support this coup, in which three of the directors seized power and deported the alleged monarchist Charles Pichegru.

ANSWER: Coup of 18 Fructidor

16. Cupid holds a finger to his lips in this sculptor's *Menacing Love*. For 10 points each:

[10] Name this French sculptor of *Milo of Croton* who was patronized by Madame de Pompadour. His sculpture of Peter the Great on horseback is called *The Bronze Horseman*.

ANSWER: Etienne Maurice Falconet

[10] Falconet is commonly associated with this ornate artistic movement from the 18th century. Other members of this movement include Antoine Watteau and terracotta enthusiast Clodion.

ANSWER: Rococo

[10] This Rococo master showed an impish-looking Cupid with a stolen weapon in *Amor Fashioning a Bow After the Club of Hercules*.

ANSWER: Edme Bouchardon

17. This religion had two primary classes of deities, the Devas and the Asuras. For 10 points each:

[10] Name this precursor to modern Hinduism that gets its name from a set of four texts which provide instructions for various rituals such as the Agnihotra.

ANSWER: **Vedic religion** (accept anything that contains **Vedic** or **Vedism** unless it contains the phrase “post-Vedic”)

[10] This concept in the Vedic religion was a principle that regulated the universe and maintained cosmic order. It is closely related to karma and dharma, which became more prominent during the ascension of Hinduism.

ANSWER: **Rta**

[10] Rta was protected by this water deity, who used the rope he carried to preserve cosmic order.

ANSWER: **Varuna**

18. In one scene in the book he appears in, this man protests a decision the title character makes to take in a lion cub, but the title character refuses to listen, promptly naming the lion cub Dahfu. For 10 points each:

[10] Name this guide who leads a title character to the village of the Arnewi before traveling to the village of the Wariri.

ANSWER: **Romilayu**

[10] Romilayu is a character in this novel in which the title millionaire travels to Africa and lifts a statue of Mummah to earn the titular epithet.

ANSWER: **Henderson the Rain King**

[10] *Henderson the Rain King* is a novel by this author who wrote about Charlie Citrine in *Humboldt's Gift* and also wrote about a “registrar of madness” in *Mr. Sammler's Planet*.

ANSWER: Saul **Bellow**

19. Elastin enhances the elasticity of the structure made by these cells. For 10 points each:

[10] Name these cells that create extracellular matrix. 3T3 cells are a mouse embryonic line of these cells.

ANSWER: **extracellular matrix** (or **ECM**)

[10] This protein with a triple helix structure enhances the structural integrity of ECM. It's the most abundant protein in the ECM, as well as the most abundant protein in the human body.

ANSWER: **collagen**

[10] This structure is a specialized form of the extracellular matrix which provides a surface for the growth of epithelial tissue. It consists of the basal lamina and the reticular lamina.

ANSWER: **basement membrane**

20. According to the CIA World Factbook, Lesotho has the highest value of all countries for this quantity with a value of 0.632. For 10 points each:

[10] Name this measure of income inequality, which is zero for a country whose wealth distribution is the perfect 45-degree line of equality.

ANSWER: **Gini** coefficient (or **Gini** index)

[10] The Gini coefficient is defined as the ratio of the area between the line of equality and this curve divided by the total area below the line of equality. This curve plots the percentage of people at or below a certain wealth percentile on the *x*-axis and the total wealth owned by those people on the *y*-axis.

ANSWER: **Lorenz** curve

[10] This man postulated that in developing countries, as income per capita increases, income inequality first increases, then decreases, forming a U-shaped curve that bears his name.

ANSWER: Simon **Kuznets**

21. A major contributor to the field of analysis, this man developed the epsilon-delta definition of a limit of a function. For 10 points each:

[10] Name this German mathematician, the second namesake of a theorem which states that every bounded sequence in  $\mathbf{R}^n$  must possess a convergent subsequence.

ANSWER: Karl Weierstrass

[10] The terms in a sequence with this mathematician's namesake type of completeness get arbitrarily close together. This French mathematician names an inequality on vector spaces with Schwarz, as well as a residue theorem.

ANSWER: Augustin-Louis Cauchy

[10] The Bolzano–Weierstrass theorem can be proven by noting that every sequence in  $\mathbf{R}^n$  has a subsequence with this property, then invoking this property's namesake convergence theorem, which states that every bounded sequence with this property in  $\mathbf{R}^n$  converges to an element of  $\mathbf{R}^n$ .

ANSWER: monotonic (or monotone)