

2016 MYSTERIUM: “I quiz all sounds, all thoughts, all everything”

Packet 14 – nazareth

Questions by Yale (Jacob Reed, Stephen Eltinge, Laurence Li, Adam Fine, Isaac Kirk-Davidoff) and Maryland (Jordan Brownstein, Weijia Cheng, Ophir Lifshitz, Naveed Chowdhury, Ani Perumalla), with Sriram Pendyala

Tossups

1. In *One Inc. v. Oleson*, the Supreme Court ruled in favor of a magazine about this subject, defending free speech regarding it for the first time. Harry Hay recommended his own expulsion from the Communist Party of the U.S.A on the basis of this issue. Previously, Hay had organized people with this characteristic into the Mattachine Society. People with this characteristic led protests of the (*) acquittal of George Moscone’s killer by the “twinkie defense” in the White Nights Riots. People with this characteristic participated in a protest described as the “hairpin drop heard round the world,” which took place in Greenwich Village at the Stonewall Inn. For 10 points, *Obergefell v. Hodges* allowed people with what sexual orientation to marry?

ANSWER: **homosexuality** [accept: **gay**, **lesbian**, **bisexual**, **queer**, **LGBTQ** (or **GLBT**), or less polite synonyms; accept **sodomy**; prompt on more general answers like “sexual orientation” or “sexuality”]

<WC American History>

2. This scientist calculated a mutation rate of 2 times 10 to the negative five per gene per generation for the X-chromosomal hemophilia gene, which is the first estimate of a human point mutation rate. When mating occurs between two sufficiently-distinct species or subspecies, this man predicted that hybrid sterility would most likely affect the heterogametic sex. This man was the first to notice that hemoglobinopathies mainly affect malaria-endemic areas, and correctly inferred the existence of heterozygote advantage. This biologist names an effect that is explained by (*) carbon dioxide’s affinity for amino groups as well as its acidity in aqueous solution, thus predicting that deoxygenation increases hemoglobin’s affinity for carbon dioxide. That effect is similar to one named for Bohr. For 10 points, name this scientist who names the enzyme-substrate steady-state assumption in Michaelis–Menten kinetics along with George E. Briggs.

ANSWER: J.B.S. **Haldane** [John Burdon Sanderson Haldane]

<SP Biology>

3. This thinker defended his most famous book in a series of letters to Ehrenfried Walther von Tschirnhaus. Moses Mendelssohn was drawn into a controversy over him after his friend Lessing was accused of following this philosopher by Friedrich Jacobi (“YA-koh-bee”). This philosopher related active and passive states of mind to confused “inadequate” ideas and clear “adequate” ones. He proposed that the emotions derive from the fact that “each thing strives to persevere in its being,” as part of his theory of (*) *conatus*. This philosopher claimed that mind and body are two separate substances that are nonetheless inseparable in a book that describes the “powers of the affects” in the section “Of Human Bondage.” He concluded that “God is Nature” in a “geometrically-ordered” book. For 10 points, name this opponent of Descartes whose pantheistic *Ethics* got him kicked out of Dutch Jewry.

ANSWER: Baruch **Spinoza** [or Benedict **Spinoza**; or Benedictus de **Spinoza**]

<JR Philosophy>

4. In a novel by this author, the protagonist plays squash at the Hellenic Club, where he often goes with a lover whom he beats and spits on before leaving for London. In that novel of his, a man sends the Youth Guard to do forced labor after they fail to promote his book of maxims. A character created by this author writes about “Deserving Destitutes” for *The Sentinel* and later gets a car while working as a Community Welfare officer. A protagonist of this author helps (*) Ferdinand, the son of the magician Zabeth, attend school and runs a shop with his assistant Metty in the Domain. This author of a novel set in an African country ruled by the “Big Man” created a sign painter who tries to escape the Tulsis by getting his own home. For 10 points, name this author of *A Bend in the River* and *A House for Mr. Biswas*.

ANSWER: V.S. Naipaul [Vidiadhar Surajprasad Naipaul]

<JB Other Literature>

5. An artist from this country was, by attendance, the most popular living artist in the world in 2014. Another contemporary artist from this country has created characters like Mr. DOB and Miss Ko2. An artist from this country famously painted her naked self with polka dots and has produced a series of “infinity mirror rooms.” Another artist from this country describes his style as (*) “superflat.” An artist from this country was famous for works like *Three Beauties of the Present Day*, depicting waitresses and concubines. One of its artists depicted *Fifty-Three Stations* along one of its roads, after another artist from this country used woodblock printing to make an *ukiyo-e* (“oo-kee-yoh EH”) series of *Thirty-Six Views*, including *The Great Wave off Kanagawa*. For 10 points, name this home country of Yayoi Kusama and Hokusai.

ANSWER: Japan [accept Nihon or Nippon]

<JR Visual Arts>

6. A liberal journalist in this country translated Rousseau’s *Social Contract* into Spanish and established this country’s first newspaper with the help of Manuel Alberti. This country home to Mariano Moreno was also home to Francisco Laprida, the president of the Congress of Tucuman. General Julio Roca won land for this country to its south in a 1879 to 1880 campaign. A leader of this country led the Federalists against the Unitarian League and ran the Mazorca secret police. That (*) *caudillo* (“cow-DEE-yo”) from this country was named Juan Manuel de Rosas. It’s not Chile, but one leader of this country met with Simon Bolivar at the Guayaquil conference and teamed up with Bernardo O’Higgins to win the Battle of Maipu. For 10 points, name this country whose national hero is José de San Martin, with capital at Buenos Aires.

ANSWER: Argentina [accept United Provinces of the Rio de la Plata until “Roca” is read; accept Argentine Republic]

<LL World History>

7. While autism has been linked to high brain volumes, a lessened ability to use *this* faculty has been linked to low brain volumes. Lesions to the right temporoparietal junction can cause an asymmetry in mobilizing *this* faculty, which makes patients draw clocks with all the numbers crammed to one side. Mismatch negativity tests showed that this faculty is only partially controlled consciously. This faculty is assessed using arrows in a task named for Michael Posner. Using this faculty can cause an (*) “inhibition of return.” It was modelled for vision as “feature integration” by Anne Treisman. This faculty can cause a “blindness” demonstrated by an experiment involving basketball and a gorilla suit. It can be oriented by endogenous or exogenous cues. Donald Broadbent modelled this faculty as a “filter.” A lessened ability to use this faculty can be treated with methylphenidate, or Ritalin. For 10 points, name this faculty of concentrating or focusing.

ANSWER: attention [prompt on “awareness”]

<JR Economics/Psychology>

8. Femtosecond mid-IR laser pulses can be used to produce higher-energy replicas of these structures in a Floquet–Bloch (“flo-KAY blokh”) state. A surface-sensitive technique that can visualize several of these structures at once in momentum-energy space is called angle-resolved photoemission spectroscopy, or ARPES. When these things are concave downward, they are associated with a negative (*) effective mass. These things are usually visualized by plotting their dispersion relations within the first Brillouin (“bree-wann”) zone. They’re not molecular orbitals, but tight-binding models construct them from combinations of periodically-arranged atomic orbitals. In semiconductors and insulators, the valence and conduction ones are separated by a gap. For 10 points, name these ranges of energy which are filled by electrons in solids.

ANSWER: electronic bands [or energy bands; do not accept “Fermi surface”]

<SE Physics>

9. This book includes an almost exact reprise of an earlier passage about king Sihon gathering in Jahaz to block the Israelites’ passage. A man in this book flees from his brothers to the land of Tob. That man in this book lets his daughter spend two months walking up and down mountains “weeping her virginity” and kills anybody who could not pronounce the “sh” in the word “shibboleth.” Another man in this book eats some honey from the carcass of a lion. Like Idomeneus and Agamemnon, a man in this book promises to (*) sacrifice the first thing he sees, which ends up being his nameless daughter. In this book, Jael knocks a tent peg through the temple of Sisera. A man in this book beats up an entire army using a donkey’s jawbone, but dies after being blinded and having his hair cut by Delilah’s servant. For 10 points, name this book of the Old Testament featuring leaders like Jephthah, Deborah, and Samson.

ANSWER: Book of Judges [or Sefer Shoftim]

<JR Religion>

10. Harold Bloom argued that a speech in this play in which a character mumbles “God rest his soul in peace” after “a long-forgotten faith returns to him for a moment” is the weakest of the play. A fat character in this play with a face that has a “good-humored, parasite’s characterlessness” was kicked out of the police force on criminal charges. A character in this play once angrily called another character’s mother a “free woman”, and quits “The Movement” because he could “see all sides of a question.” Two veterans of the (*) Boer War, Wetjoen and Cecil Lewis, plan to return to their home countries in this play. In this play, a character known as “The Old Foolosopher” puts his face in his hands after hearing Parritt commit suicide off the fire escape, and character who kills his wife “to give her peace,” Hickey, urges others to give up their “pipe dreams.” For 10 points, name this play set in Harry Hope’s Bar, written by Eugene O’Neill.

ANSWER: *The Iceman Cometh*

<LL American Literature>

11. The papal legate Leo of Trevi mediated this monarch’s conflict with Richard of Normandy by bringing about the Peace of Rouen. A poem set during this monarch’s reign describes how Byrhtnoth refused to buy peace with *gafol*, or tribute, following defeat at the Battle of Maldon. He ascended the throne after the assassination of his half-brother Edward the Martyr. This monarch ordered the massacre of all (*) Danes in England on St. Brice’s Day, causing Sweyn Forkbeard to invade his kingdom and depose him. After being defeated at Ashington, this monarch’s son Edmund Ironside divided up his lands with Canute. For 10 points, name this Anglo-Saxon king, whose epithet means that he was being badly counseled, not unprepared.

ANSWER: Æthelred the Unready [or Æthelred II]

<WC European/British History>

12. One of this man's films describes how its protagonist dreams to "take the glorious message of peace to the barbarous Anglo-Saxons, sons of turmoil and strife." That protagonist, who shoots the boxer Battling after he kills his daughter Lucy, the object of that protagonist's love, is referred to only as "The Yellow Man." Besides *Broken Blossoms*, this man directed a film in which shots of Eternal Motherhood rocking a (*) cradle bridge four stories about the titular concept, like the crucifixion of Jesus and the St. Bartholomew's Day Massacre. This director of a "film fugue" most famously followed the Cameron and Stoneman families through the Civil War and Reconstruction in a film that ends with African-Americans "heroically" being stopped from voting. For 10 points, name this director of *Intolerance*, who glamorized the Ku Klux Klan in *Birth of a Nation*.

ANSWER: D.W. Griffith [Dwight Llewelyn Wark Griffith]

<WC Other Arts>

13. This symbol represents both the argument of periapsis and the longitude of the ascending node. This symbol is used for the smallest subunit of the bacterial RNA-polymerase, which is required throughout transcription for the recruitment and maintenance of the beta-subunit. In complexity theory, f is said to be "this uppercase symbol" of g if f is bounded below by g asymptotically. It's not O , but a well-known conjecture states that any multiplication algorithm is big-*this* of $n \log n$. The (*) noncomputable probability that a randomly constructed program will halt, Chaitin's ("CHY-tin's") constant, is represented by this uppercase letter. This *uppercase* letter is used in cosmology for the density of the universe over the critical density. Its lowercase is given to the first infinite ordinal. For 10 points, name this Greek letter whose lowercase in physics represents angular velocity or frequency.

ANSWER: omega

<SP Other Science>

14. Characters in a story by this author include a woman dressed in an orange coat decorated with monkeys and a playwright who complains about a taxi-driver who sped up when asked to stop. In that story by this author, those characters praise a poem beginning "Why must it always be tomato soup?" One of this author's characters says "pardon my hat" before fleeing a house and returning home, where she stammers (*) "Isn't life—isn't life—" to Laurie. The protagonist of a story by this author contemplates a blooming pear tree with Pearl Fulton, who she realizes is having an affair with her husband Harry. In one of her stories, the death of a lower class neighbor prompts Laura Sheridan to bring a basket of food to his family from the title event. For 10 points, name this author of "Bliss" and "The Garden Party."

ANSWER: Katherine Mansfield (Murry)

<JB British Literature>

15. A loan given to this man by Bona Sforza became known as the Neapolitan Sums. Forces under this man's commander Sancho D'Avila defeated the Marquis of Havre and Otto IV van Eberstein in one engagement. This king helped bolster his country's finances by entering into the Iberian Union, and he was the main financial backer of the Catholic League. Because this man was unable to pay them, mutinous soldiers engaged in a (*) sack of Antwerp called the "Fury." This king was forced to declare bankruptcy four times, and his half-brother John of Austria won the Battle of Lepanto. This man's commander, the Duke of Medina Sidonia, lost the battle of Gravelines, and his father was Holy Roman Emperor Charles V. For 10 point, name this King of Spain who ruled from 1556 to 1598 and sent the Spanish Armada.

ANSWER: Phillip II [or Felipe II; prompt on "Phillip"]

<LL European/Ancient History>

16. A homologation reaction which generates these compounds proceeds through an unstable vinyl carbene intermediate; aryl aldehydes are added to diazomethyl phosphonate derivatives in that reaction named for Seyferth and Gilbert. Molecules that contain an alkene and two of this functional group can cyclize to form a reactive *para*-benzyne biradical, which is quickly quenched in a reaction named for Bergman. These compounds can be deprotonated by sodium amide and reacted with ketones to form their alpha-hydroxy derivatives; that transformation requires the (*) terminal variety of these compounds with pKa values around 22 to 25. They are converted to *cis*-alkenes by Lindlar palladium. The simplest of these compounds combusts at 2500 degrees Celsius in air, which explains its use in welding torches; that is acetylene. For 10 points, name these compounds with carbon-carbon triple bonds.

ANSWER: alkynes

<SP Chemistry>

17. This thinker's most famous book was acknowledged as "fundamental" in the fourth chapter of *Powers of Horror*, Julia Kristeva's book about the "abject." This thinker discussed "latent groups" in a book whose title entities that are "founded on analogy," "confer identity," and "remember and forget." This thinker's most famous book asserts that, rather than being established for health reasons or as "tests of faith," kosher laws were meant to establish "symbolic boundaries." This author of *How Institutions Think* formulated a Cultural Theory in essays collected as *Risk and Blame*. This follower of Émile Durkheim and student of E. E. Evans-Pritchard defined (*) dirt as "matter out of place" in a 1966 book on how notions of ritual uncleanness and other kinds of "pollution" enforce broader taboos. For 10 points, name this female British anthropologist who wrote *Purity and Danger*.

ANSWER: Dame Mary Douglas

<JR Social Science/Thought>

18. This author deemed Classical tragedy "a school in which virtue was taught not less well than in the schools of the philosophers." This author was known for his small vocabulary and simple diction, depicting characters "trapped" by passion. One of his characters declares "like virtue, crime has its degrees." This playwright came out of retirement to write two Old Testament plays for the Madame de Maintenon, (*) *Esther* and *Athalie*. In Act 5 of one of his plays, Theramène describes the protagonist's horses running into the sea after being attacked by a sea monster. This playwright wrote a classic alexandrine describing a title character as "daughter of Minos and Pasiphæe." That play introduces the character Aricie, whose love Hippolytus is incestuously loved by the title character. For 10 points, name this 17th-century French tragedian who wrote *Phèdre*.

ANSWER: Jean (Baptiste) Racine

<JR European Literature>

19. *Description acceptable*. This project's leaders are mocked in a Tolkien story by Farmer Giles' blunderbuss, which is never used and has a wide mouth. One of its major contributors used his experience as an army surgeon to cut off his own penis with a knife used in this project. Early on, this project was led by Herbert Coleridge and Frederick Furnivall. W.C. Minor's contributions to this project were narrated by Simon Winchester in *The Meaning of Everything*, a follow-up to his *The Surgeon of Crowthorne*, which was later retitled *The Professor and the Madman*. This project was led for forty years by James Murray. Its result is the series winner's prize on (*) *Countdown*. The result of this project is often consulted in a nine-up format distributed with a magnifying glass. Most of this project consisted of compiling extensive quotations showing the historical development of a word's meaning. For 10 points, name this project of creating the standard dictionary of the English language.

ANSWER: compiling the Oxford English Dictionary [or OED; accept obvious equivalents; prompt on any answer that involves "compiling a dictionary" until "For 10 points"]

<JR Mythology/Other>

20. A solo for this instrument opens Berlioz's orchestration of *Invitation to the Dance*. This instrument accompanies the soloist's entrance in the third movement of Beethoven's fourth piano concerto. These instruments play the tune at the opening of the second movement of Brahms's second symphony, and the third movement of his third symphony. One of them has a long solo at the beginning of the slow movement of Brahms's second (*) piano concerto. A concerto for this instrument begins with a quadruple stop-filled recitative for the soloist. Five of these instruments open Rossini's *William Tell*. These instruments introduce the first theme of the first movement of the "Eroica" Symphony, and they play the very opening of *Tristan und Isolde*. Elgar's E-minor concerto for this instrument was popularized by multiple sclerosis patient Jacqueline du Pré. For 10 points, name this low string instrument played by Pablo Casals and Yo-Yo Ma.

ANSWER: violoncello

<JR Auditory Arts>

Bonuses

1. This play ends with an orator making noises like “Heu, heu, gu gou” and writing “ANGELFOOD” on a blackboard. For 10 points each:

[10] Name this play in which the Old Man and the Old Woman welcome invisible guests to a gathering on their island before throwing themselves out the window.

ANSWER: *The Chairs* [or *Les Chaises*]

[10] *The Chairs* is by this Romanian playwright whose other absurdist works include *The Bald Soprano* and *Rhinoceros*.

ANSWER: Eugène **Ionesco** [or Eugen **Ionescu**]

[10] The couple in *The Chairs* is overcome with emotion when an invisible person with this role enters the room. In another Ionesco play, a character with this profession is told that he will die by his wife Marguerite before disappearing in gray light and a “kind of mist.”

ANSWER: a **king** [or an **emperor**]

<JB European Literature>

2. The success of a woman from this city during the Battle of Salamis prompted the quote “My men have become women, and my women men.” For 10 points each:

[10] Name this capital of Caria, where Artemisia II supposedly drank the ashes of a deceased husband for whom she had a famous large tomb built.

ANSWER: **Halicarnassus**

[10] The Mausoleum of Halicarnassus was one of this group of landmarks listed by Antipater of Sidon, which also included the Great Pyramid of Giza and the Colossus of Rhodes.

ANSWER: **Seven Wonders** of the Ancient World [prompt with “How many?” on “Wonders of the (Ancient) World”]

[10] The burning of Halicarnassus by its Persian defenders during Alexander the Great’s siege was described in the *Anabasis of Alexander*, a history by this writer.

ANSWER: **Arrian** of Nicomedia

<JB European/Ancient History>

3. This critic called music “tonally moving forms” in his treatise *On the Beautiful in Music*. For 10 points each:

[10] Name this Austrian critic and staunch advocate of Brahms. This critic commented that Tchaikovsky’s violin concerto “stinks to the ears,” and he is partly responsible for Tchaikovsky’s reputation as a compositional lightweight.

ANSWER: Eduard **Hanslick**

[10] Hanslick spent much of his career trashing Richard Wagner, who paid him back by using him as the basis for the character of Beckmesser in *this* late opera. This late opera was Wagner’s only mature comedy.

ANSWER: *Die Meistersinger von Nürnberg* [or *The Master-singers of Nuremberg*]

[10] Hanslick wrote an influential review of the posthumous premiere of an “unfinished” Schubert work in this genre. Brahms’s first piece in this genre was nicknamed “Beethoven’s tenth.”

ANSWER: **symphony**

<OL Auditory Arts>

4. These equations can be written compactly by setting the time derivative of a state vector equal to a connection matrix times the state vector. For 10 points each:

[10] Name this class of equations used to describe Markovian physical processes, in which the rate of change of the occupation probability of a single state is a linear combination of the occupation probabilities for all possible states.

ANSWER: **master** equations

[10] This equation arises as the second-order expansion of a continuum master equation. This doubly-eponymous equation describes phenomena that occur in the presence of drift and diffusion forces.

ANSWER: **Fokker–Planck** equation [or **Kolmogorov forward** equation; or **Smoluchowski** equation]

[10] The Fokker–Planck equation can be used to describe this random fluctuation of particles in a fluid. Einstein showed that the RMS displacement in this process grows with the square root of time.

ANSWER: **Brownian motion**

<SE Physics>

5. According a legend, this man invented the form of address “Mr. President.” For 10 points each:

[10] Name this first Speaker of the House, who apocryphally prevented German from becoming a national language.

ANSWER: Frederick **Muhlenberg**

[10] Muhlenberg came from this state, which was where the Constitutional Convention was held in its city of Philadelphia.

ANSWER: **Pennsylvania**

[10] Pennsylvania was also home to *this* 1763 vigilante group led by John Elder, which was formed to retaliate against attacks by Native Americans. They killed 21 Susquehannock people in the Conestoga Massacre.

ANSWER: **Paxton Boys**

<LL American History>

6. Answer some questions about Apologies “pro vita sua,” for 10 points each.

[10] This North Carolina-born poet’s early works include “Corsons Inlet” and “Apologia Pro Vita Sua.” He wrote the long poems *Sphere* and *Garbage*.

ANSWER: A.R. **Ammons** [Archie Randolph Ammons]

[10] John Henry Newman wrote the most famous *Apologia Pro Vita Sua* to explain his conversion to *this* branch of Christianity, which then used Latin as its liturgical language.

ANSWER: Roman **Catholicism**

[10] This earlier poet wrote a very short “Apologia Pro Vita Sua,” as well as the prose work *Biographia Literaria*. The title character of one of his poems “on honey dew hath fed, and drunk the milk of paradise.”

ANSWER: Samuel Taylor **Coleridge**

<JR Other Literature>

7. For every iteration of this Monte Carlo algorithm, the vector of weights is incremented by negative the learning rate times the derivative of the objective function for a single example. For 10 points each:

[10] Name this stochastic optimization algorithm, which when combined with backpropagation is used to train most artificial neural networks.

ANSWER: stochastic **gradient descent** [accept **SGD**]

[10] The BFGS algorithm is another optimization method that is based on this simpler iterative method. In this 1D method, each guess is incremented by negative the value of the function over its first derivative.

ANSWER: **Newton–Raphson** method

[10] In introductory calculus, Newton’s method is often used to find these values for a polynomial, which are the *x*-values where the polynomial equals zero. Descartes’ rule of signs gives an upper bound on the number of these.

ANSWER: **roots** [prompt on “zeroes”]

<SP Other Science>

8. Answer some questions about everyone's favorite crazy seventeenth-century painter, Salvator Rosa, for 10 points each.

[10] Rosa trained in this city, where Jusepe de Ribera spent the Italian part of his career. A century later, painters in this city were inspired by the discovery of the nearby ruins of Herculaneum and Pompeii.

ANSWER: **Naples** [or **Napoli**]

[10] Rosa's craziest and most "characteristic" paintings were of *this* kind, depicting the "wild" countryside of southern Italy. Poussin and Claude Lorrain were known for their idealized "pastoral" paintings of this kind.

ANSWER: **landscape** painting

[10] Rosa stars in *Born Under Saturn*, a book about artists' personalities co-written by *this* German-American art historian. He wrote extensively about Palladio in *Architectural Principles in the Age of Humanism*.

ANSWER: Rudolf **Wittkower** [or Rudi **Wittkower**]

<JR Visual Arts>

9. In a novel partly titled for these animals, Hannes carries out Siggy's plan for a zoo break after the latter is stung to death by bees. For 10 points each:

[10] Name this sort of animal which Susie disguises herself as in a novel also featuring State of Maine, one of these animals who is owned by a blind Viennese Jew named Freud.

ANSWER: **bears**

[10] *Setting Free the Bears* and *The Hotel New Hampshire* are by this American author, who managed to not write about bears, motorcycles, or Vienna in his *A Prayer for Owen Meany*.

ANSWER: John **Irving**

[10] A unicycle-riding bear appears in "The Pension Grillparzer," a novella by the title author of this other Irving novel.

ANSWER: *The **World According to Garp***

<JB American Literature>

10. The late stages of this civilization grew into the Cemetery H culture. For 10 points each:

[10] Name this Bronze Age river civilization of modern-day Pakistan. Its centers included Mohenjo-Daro.

ANSWER: **Indus Valley** Civilization [or **Harappan** Civilization]¹

[10] Like many other civilizations, a number of seals carved from *this* soft rock survive from the Indus Valley Civilisation. It was also used for the bird statues of Great Zimbabwe.

ANSWER: **soapstone** [or **steatite**]

[10] It has been hypothesized that the Indus Valley Civilization was part of *this* large ethnolinguistic group of South India, which includes Tamil and Telugu speakers.

ANSWER: **Dravidian**

<JR World History>

¹ Partially excavated by "K.N. Dikshit" –JR

11. This figure inherited the kingdom of Mysia through his marriage to Argiope, daughter of King Teuthras. For 10 points each:

[10] Name this hero who killed Thersander while preventing the Achaeans from reaching Troy. Achilles agreed to heal this man with fragments of his spear after he finally told the Achaeans how to get to Troy.

ANSWER: **Telephus**

[10] Telephus is the son of this other hero, whose exploits include defeating Achelous in a wrestling match for the hand of Deianira and cleaning the Augean stables.

ANSWER: **Heracles**

[10] Telephus's mother was this woman, who served as a priestess of Athena before being exiled since her son Telephus was prophesied to overthrow her father, Aleus.

ANSWER: **Auge**

<AF Mythology/Other>

12. This rearrangement reaction is responsible for the industrial synthesis of epsilon-caprolactam from cyclohexanone, an important precursor for nylon 6. For 10 points each:

[10] Name this reaction that uses acid catalysis to transform an oxime into an amide through a nitrilium ion intermediate which is subsequently hydrated.

ANSWER: **Beckmann** rearrangement

[10] An oxime is a subtype of this functional group, which is formed by reaction of primary amines or ammonia with ketones or aldehydes. These compounds are important intermediates in the mechanism of aldolase.

ANSWER: **imine** [accept **Schiff base**; do not accept "amine"]

[10] Imines are often reacted with sodium cyano-borohydride to generate amines, in a reaction of this type. This type of reaction also transforms carbonyl groups to alcohols, and involves a "gain of electrons."

ANSWER: **reduction**

<SP Chemistry>

13. Georges Duby wrote a detailed account of how this battle has been reinterpreted by French nationalist historians. For 10 points each:

[10] Name this 1214 battle, in which Philip Augustus recaptured most of the French territories controlled by England's King John. Frederick II took power in the wake of this battle.

ANSWER: Battle of **Bouvines** ("boo-VEEN")

[10] The defeat for King John was so embarrassing that he was forced to sign *this* document, which guaranteed rights for the barons. This document has often be construed as a precursor to the American Constitution.

ANSWER: **Magna Carta** Libertatum [or **Great Charter** of (the) Liberties]

[10] Among the territories subjugated by Philip was *this* duchy, which was strongly tied to the earldom of Richmond. A war over this duchy was fought between John of Montfort and Charles of Blois.

ANSWER: **Brittany** [or **Bretagne**]

<JR European/British History>

14. Answer some questions about Paul Samuelson, for 10 points each.

[10] Samuelson's *Foundations of Economic Analysis* was based on the principle that individuals want to do *this* to utility and firms want to do *this* to profits. Description acceptable.

ANSWER: **maximize** [accept word forms; accept equivalents like "**make it as high as possible**"]

[10] One Samuelson's main economic contributions was *this* theory, in which a given consumer's utility function for various goods can be deduced based on what they actually buy.

ANSWER: **revealed preference** theory [or **RP**]

[10] With Abram Bergson, Samuelson names one of *these* functions, which is a kind of aggregate utility function for a whole society.

ANSWER: social **welfare** function

<JR Economics/Psychology>

15. After undergoing this process, Alex remarks that he "would like to have the old hammer and nails" when shown a picture of Jesus carrying his cross up a hill. For 10 points each:

[10] Name this process that restores Alex's violent urges, and allows him to enjoy Beethoven's Ninth Symphony once again. While describing the effects of undergoing this process, Alex narrates, "I was cured all right."

ANSWER: deep **hypnopaedia** [or **sleep-learning**; or **sleep-teaching**; or anything involving conveying information to a sleeping person]

[10] Deep hypnopaedia reverses the effects of this procedure, which causes Alex to feel ill when he thinks about violence. It involves administering an injection before subjecting the recipient to violent movies.

ANSWER: **Ludovico's** Technique

[10] Before being used in *A Clockwork Orange*, the word hypnopaedia was originally coined in this dystopian novel by Aldous Huxley. Characters in this novel frequently take the hallucinogenic drug soma.

ANSWER: **Brave New World**

<WC British Literature>

16. This man was hailed as the first "pioneer of modern design" in the book by Nikolaus Pevsner. For 10 points each:

[10] Name this designer who, among other things, revolutionized wallpaper design with his "Trellis" and "Honeysuckle" patterns.

ANSWER: William **Morris**

[10] Morris also revolutionized architecture with his "red" one of *these* buildings. Frank Lloyd Wright designed one for Edgar J. Kaufmann called Fallingwater.

ANSWER: **houses** [accept **homes**; prompt on "residences," "dwellings," or answers that don't necessarily indicate that only one family is living there; do **not** accept "apartments" or anything indicating a multifamily dwelling]

[10] William Morris led a British movement named for these *two* related practices. The former was supposed to be practiced "for [its own] sake," while the latter was supposed to show fine workmanship and quality construction.

ANSWER: **Arts** and **Crafts**

<JR Other Arts>

17. This man's best-known work is divided into the volumes *Bubbles*, *Globes*, and *Foam*. For 10 points each:

[10] Name this contemporary German philosopher, who analyzed relations of space in the trilogy *Spheres*.

ANSWER: Peter **Sloterdijk** ("pee-tuh SLOW-tuh-dyke")

[10] *Spheres* was partly intended to be a follow-up to this book, which examines the concept of *Dasein*. It was the *magnum opus* of Martin Heidegger.

ANSWER: ***Being and Time*** [or ***Sein und Zeit***]

[10] Sloterdijk attacked the notion of literary "debts" in a book critiquing *this* earlier philosopher's "megalomania." After he went insane, this philosopher's sister edited his works to be more anti-Semitic and Nazi-y.

ANSWER: Friedrich (Wilhelm) **Nietzsche** [accept ***Nietzsche Apostle*** or ***Nietzsches fünftes Evangelium***]

<JR Philosophy>

18. This disease is endemic in Sub-Saharan Africa, and is caused by a glutamic acid to valine mutation in hemoglobin. For 10 points each:

[10] Name this anemia where erythrocytes have a rigid, distinctive shape. Sufferers have frequent "pain crises," strokes, and bacterial infections.

ANSWER: **sickle cell** anemia [accept **SCA**]

[10] This antineoplastic drug is often used for myelo-dysplastic syndromes, but it is also used for sickle cell anemia. It acts by gradually increasing the concentration of fetal hemoglobin over years of daily ingestion.

ANSWER: **hydroxyurea** [accept **hydroxycarbamide**]

[10] The most widely-accepted mechanism of action is that hydroxyurea generates this gas *in vivo*, which activates guanylyl cyclase. Then, higher cGMP levels lead to gamma-globin chain synthesis, leading to hemoglobin F persistence.

ANSWER: **nitric oxide** [accept **NO** or **nitrogen monoxide**]

<SP Biology>

19. This book recounts how its author gave students thirteen poems without their authors or any other information, and then watched them make dumb mistakes analyzing them. For 10 points each:

[10] Name this 1929 book by I. A. Richards, which followed on his *Principles of Literary Criticism*.

ANSWER: ***Practical Criticism***

[10] Richards was a major influence on New Criticism, which emphasized *this* practice of intensively analyzing a short passage in great detail. This English-language practice is similar to the more formal *explication du texte*.

ANSWER: **close reading**

[10] Another big influence on New Criticism was *this* author of "Tradition and the Individual Talent." He also wrote "The Love Song of J. Alfred Prufrock."

ANSWER: T.S. **Eliot** [Thomas Stearns Eliot]

<JR Social Science/Thought>

20. A depiction of this figure in Sokkuram shows him with eleven faces, showing his power in each dimension. For 10 points:

[10] Name this Bodhisattva of compassion. While a common depiction of this figure gives him one thousand arms, this figure was depicted in early Indian iconography as a bejeweled man, wearing a crown containing Maitreya.

ANSWER: **Avalokiteshvara** [accept **Lokeshvara**; do not accept or prompt on “Guānyīn”]

[10] A well-known depiction of Avalokiteshvara in Ajanta Caves shows him as the “Padmapani,” or the holder of *this* flower, the namesake of a Buddhist sutra. It also names a cross-legged position in Yoga.

ANSWER: **lotus** [accept **Nelumbo nucifera**]

[10] Samantabhadra, the patron of the Lotus Sutra, is also featured in *this* sutra. This sutra, depicted on the upper levels of Borobudur, tells of Sudhana talking to 30 teachers before attaining enlightenment through Samantabhadra.

ANSWER: **Gandavyuha** [accept **Avatamsaka Sutra**; accept **Flower-Garland Sutra** or **Flower Adornment Sutra** or **Flower Ornament Scripture**]

<IKD Religion>