

2016 MYSTERIUM: "I quiz all sounds, all thoughts, all everything"

Packet 8 – hisaishi

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 of this novel's final scenes, a man responds "up yours, Jack" to a heckler while hanging upside down from a crane. A character in this novel shows an industrialist a mummy that resembles him in order to get him to join the Pyramid Club, of which they are the only members. In this novel, a woman called the "first sex goddess" provides help to a poor silhouette artist and his daughter. That artist later becomes a filmmaker called Baron Ashkenazi. In this novel, some (*) racist firemen destroy a Model T, prompting its owner to attack J. P. Morgan's library. Coalhouse Walker is assisted by Mother's Younger Brother in this novel, which also features historical characters like Harry Houdini. For 10 points, name this novel by E. L. Doctorow titled for a musical genre.

ANSWER: Ragtime

<JB American Literature>

2. Phenols can be ortho-formylated by reacting them with these compounds in the Reimer-Tiemann ("RYE-mer TEE-mon") reaction. When the catalyst rhodium(II) acetate is reacted to generate *in situ* compounds with this functionality, they can simultaneously effect C-H activation and Cope rearrangement reactions. These compounds are most often formed from either alpha-elimination reactions or the photolysis of diazo-compounds. The ligand IMes ("eye-MESS"), first formulated by (*) Arduengo, is an "N-heterocyclic" compound containing this functionality that is present in the second generation Grubbs catalyst. They most often react by inserting themselves into C-H, H-heteroatom, and C-C bonds, or by the cyclopropanation of alkenes. When these compounds are ligated to metal atoms, they can be classified as Fischer electrophilic pi-acceptors or Schrock nucleophilic pi-donors. For 10 points, name these compounds containing a neutral, divalent carbon atom that has a lone pair.

ANSWER: carbene

<SP Chemistry>

3. A king of this name supposedly sponsored the creation of the Morgan Bible. Another king of this name first became known for defeating the siege of Roche-au-Moine ("roh-shoh-MWANN"). That king of this name defeated the final Raymond of Toulouse and forced him to sign the Treaty of Paris. Another king of this name sponsored the invention of Gothic architecture by Abbot Suger ("soo-ZHEHR") and was inspired to go on an expedition with Conrad III by (*) Bernard of Clairvaux. That king of this name went on the Second Crusade and was the first husband of Eleanor of Aquitaine. A king of this name was nicknamed "the Lion" and fathered another king of this name with Blanche of Castile. Jean de Joinville recounted how another king of this name died after the Seventh Crusade. For 10 points, give this name of the only French king who is also a saint.

ANSWER: Louis [accept Louis VII, Louis VIII, or Louis IX]

<JR European/Ancient History>

4. One of these pieces ends with the first statement of a shrill “victory symphony” in F major. One piece in this genre begins with three sustained unison C’s in the strings, each followed by a lacerating chord for the full orchestra. Beethoven used this term to denote the first section of his *Grosse Fuge*. An E-major piece in this genre begins with four mysterious chords in the winds and includes a theme that imitates a (*) donkey’s braying. The standalone variety of these pieces was pioneered by a 17-year-old composer in 1826, and later “developed into” the symphonic poem. Like its composer’s third symphony, an E-minor one of these pieces was inspired by an 1830 trip to Scotland. Beethoven wrote one of these pieces inspired by the play *Coriolan*, and three titled *Leonore* for versions of *Fidelio*. For 10 points, name this genre of early Mendelssohn pieces titled *The Hebrides* and *A Midsummer Night’s Dream*.

ANSWER: concert overtures [or overtura]

<JR Auditory Arts>

5. While travelling to this figure’s home, another character gives a speech that describes the grief of an old man who sees his son’s body hanging on the gallows. A lecture ends by noting that, “until [this figure] comes,” the work in which this figure calls “must ever call with a profound appeal.” A character *killed by this figure* is eulogized as the “most eager for fame” of his people. This character moves into the place where a speech lamenting “tuned timber” and “tumbling hawks” is given by the last survivor of a “high-born race.” Although ten other men flee, (*) Wiglaf helps fight this figure by stabbing him in the belly. This figure begins destroying farms after a slave steals one of his goblets, prompting the protagonist to fight him to the death. For 10 points, name this gold-hoarding wyrm, the last monster fought by Beowulf.

ANSWER: the dragon from *Beowulf* [accept the wyrm until read]

<JB British Literature>

6. PRDM9 is a histone methyltransferase that potentiates one type of this process. Spo-11 catalyzes the first step in one iteration of this process with its catalytic tyrosine residues; then, the RecA-homolog Dmc-1 binds in the subsequent step to form long nucleoprotein filaments. For a “gene drive” to work, the double strand-break induced by an endonuclease must then be repaired via this pathway, allowing the altered sequence to drive. This process involves (*) strand invasion of the 3-prime end of a single-stranded filament, followed by extension by DNA polymerases to form a Holliday junction. A double junction can be resolved to form a crossover in the “homologous” type of this process that occurs in meiosis. For 10 points, name this process that results in a transfer of genetic information from one DNA molecule to another, which also occurs in early B and T-cell development in its VDJ form.

ANSWER: genetic recombination [accept homologous recombination or V(D)J recombination; prompt on “DNA repair” and “crossing over”]

<SP Biology>

7. A resident of this state helped a man write the nutrition book “One Hundred Years of Health”; that resident was forced to drink whiskey until sick by a bodyguard nicknamed “Clenck.” Joe Huffington led an organization in this state. After being convicted on murder charges, a prominent resident of this state released documents that implicated governor Ed Jackson: the Little Black Boxes. At one event in this state, 200,000 people gathered in (*) Kokomo to hear a man with the title of Grand Dragon speak. This state was home to the notorious murderer of Madge Oberholtzer, D.C. Stephenson. A businessman from its town of Lafayette gave 150,000 dollars to found a university in this state, and was named John Purdue. For 10 points, name this state which had a strong KKK presence during the early twentieth century, with capital at Indianapolis.

ANSWER: Indiana

<LL American History>

8. An unfortunate saying in this text goes: “the more wives, the more witchcraft... the more servants, the more theft.”¹ It instructs you to “build a fence around” another text. This text states that “the world stands upon three things,” including “acts of lovingkindness.” The first full commentary on this text includes thirteen “principles of faith.” It includes a series of questions ending “And if not (*) now, when?” and it begins with a section on blessings called *Berakhot* (“bra-KHOTE”). This text, which includes *Pirkei Avot* (“peer-KAY ah-VOTE”), was the subject of commentaries named for Jerusalem and Babylon. This text’s six orders, or *sedarim* (“s’dar-EEM”), were supposedly organized by Hillel. This text was compiled into sixty-three tractates in the third century by Rabbi Yehuda HaNasi (“yehu-DAH ha-nah-SEE”). For 10 points, the *Gemara* is a commentary on what oldest portion of the Talmud?

ANSWER: the **Mishnah** [prompt on “Talmud” until read; accept *Pirkei Avot* until “thirteen” is read]
<JR Religion>

9. One of these places is home to lamps that burn a hallucination-inducing herb and is the subject of the phrase “The hand over the idol works on the first and the seventh of the four.” “Suicide and pulmonary disease” have decimated the population of one of these places, whose residents are thrown into its air shafts upon death. A chamber called the *finis africae* is hidden in one of these places, which is located on the top (*) floor of the Aedificium. That place of this type in *The Name of the Rose* was inspired by another author's description of an infinite one composed of hexagonal chambers. For 10 points, name this sort of place, one of which named Babel holds an infinite number of books in a Jorge Luis Borges story.

ANSWER: **libraries** [prompt on “labyrinths” or “monasteries”; prompt on “Aedificium” until read]
<JB Other Literature>

10. One treatment of this disease targets a nuclear receptor that forms a heterodimer with retinoid X receptor, influencing the transcription of genes involved in angiogenesis, adipocyte differentiation, inflammation, and other functions; that nuclear receptor is PPAR-gamma. Sufferers of this disease are less responsive to GIP and have decreased levels of GIP secretion. Thus, this disease can be treated with inhibitors of dipeptidyl-peptidase-4, which cleaves and inactivates incretins; (*) sitagliptin is one such drug. Another drug used for the treatment of this disease has a biguanide moiety, downregulates hepatic gluconeogenesis, and increases GLUT4 receptor expression in peripheral tissues; that is metformin. Approximately 60 percent of this disease’s sufferers have its namesake retinopathy, which causes progressive blindness. It can be diagnosed by looking at serum levels of hemoglobin A1c. Obesity and a sedentary lifestyle are two risk factors for this disease. For 10 points, name this often adult-onset disease characterized by insulin resistance.

ANSWER: **type 2 diabetes** mellitus [accept **adult-onset diabetes** mellitus until read; or type **2 DM** or **DM2**; prompt on partial answers]
<SP Other Science>

11. A member of this group was a stained glass painter who had his tongue bored for attacking a church procession and was named David Joris (“DOFF-it YORE-is”). A member of this group created a council of Twelve Elders and declared himself King David of the “New Jerusalem” before being torn apart by red-hot pincers on the orders of the Bishop of Waldeck. The prophecies of Melchior Hoffman inspired members of this group led by cloth merchant Bernhard Knipperdolling and (*) John of Leiden (“LIE-den”) to seize control of Munster. A Tyrolean member of this group founded the communal Hutterite sect. Offshoots of this movement were founded by Jakob Ammann and Menno Simons, the namesakes of the Amish and Mennonites. For 10 points, name this movement of radical Reformers who believed that a water-based sacrament shouldn’t be done on infants.

ANSWER: **Anabaptists** [prompt on “Protestants”]
<JB European/British History>

¹ “I mean, it’s totally true tho” —Eric Mukherjee

12. A painter from this country, who created a still life of a plate of lemons, a basket of oranges, and a rose next to a cup of water, is often contrasted with a “luminous” painter from here who created many versions of the Immaculate Conception. A tenebrist painter from this country created the *Apotheosis of Thomas Aquinas* and many paintings of Carthusian monks. In a large painting from this country, the heads of three figures form the lower half of a circle with the head of a kneeling girl wearing a (*) butterfly pin, and also form an X with a dog and the foot of a frame. A history painting from this country is dominated by halberds on its left and pikes on its right, and shows two men embracing and exchanging the key to the title city. The artist stares at you while painting a portrait of a princess from this country and her ladies-in-waiting. For 10 points, name this home country of Diego Velázquez.

ANSWER: Kingdom of Spain [or Reino de España] (the other painters are Bartolomé Esteban Murillo and Zurbarán; the Velazquez paintings are *Las Meninas* and *The Surrender of Breda*)
<JR Visual Arts>

13. This entity is assessed using the TCI devised by Robert Cloninger, which was partially inspired by an “alternative” model proposed by Zuckerman and Kuhlman. One model of it was promoted by Lewis Goldberg. An early theorist of this entity started his research in it by going through a dictionary, based on his hypothesis that important aspects of this entity will give rise to words about it. That lexical hypothesis about this entity was proposed by Gordon Allport. Biological theories of this entity were proposed by Jeffrey Alan Gray and his teacher Hans (*) Eysenck (“EYE-zunk”). The most well-known model of this entity was derived from a typology created by Carl Jung. This entity, the subject of the Big Five model, is assessed using a Multiphasic Inventory from the University of Minnesota. It is analyzed using traits like extraversion, neuroticism, and agreeableness. For 10 points, name this entity assessed by the Myers–Briggs test.

ANSWER: personality [prompt on “temperament” or “character”]
<JR Economics/Psychology>

14. This operation is used to couple neighboring particle spins in the Dzyaloshinskii–Moriya antisymmetric exchange Hamiltonian. Its k th component can be written as the Levi–Civita (“LAY-vee CHEE-vee-ta”) symbol of ijk times x -sub- i times y -sub- j . This operation is nested within itself in the expression for centrifugal force in a rotating reference frame. The result of this operation does not transform contravariantly under parity inversion, making it a (*) pseudovector. This operation is applied to the magnetic moment and the external magnetic field to give the torque on a dipole. This operation applied to a particle’s velocity and the magnetic field gives a component of the Lorentz force law, whose direction you can find using the right-hand rule. For 10 points, name this operation that takes two vectors and returns a vector orthogonal to both of them.

ANSWER: cross product
<SE Physics>

15. One of these people hosts a “floating feast” featuring butterfly-shaped boats at which his veiled wife declares her love to the protagonist in the woods. The lover of one of these people commits suicide after seeing an enchantress drug and drown a sacrificial falcon. A man with this title orders the death of a talkative merchant who then has his tongue torn out and is fed to a bear. That man with this title is forced to (*) spare a girl and her giant servant after the giant breaks the neck of a bull. Marguerite Yourcenar wrote the memoirs of a person with this title. A novel set during the reign of one of them centers on the protagonist’s love for the slave girl Ligeia. For 10 points, name this royal title held by a character who, in Henryk Sienkiewicz’s (“shen-KYEH-vitch’s”) *Quo Vadis*, fiddles while his capital burns.

ANSWER: Emperors of Rome [prompt on partial answers like “emperors” or “rulers of Rome”]
<JB European Literature>

16. Three members of the Nichiren sect were executed for losing a religious debate held in one of these places to representatives of the Pure Land sect. Several buildings of this type were decorated with gold screens painted by Kanō Eitoku. A Dutch warship shelled a shabby structure of this type named Hara during the Shimabara rebellion. Two of these buildings are the namesake of the Azuchi–Momoyama period. One of these buildings was (*) attacked in the Winter and Summer Campaigns during a siege that ended with it being burned down by Tokugawa Ieyasu. That example of this sort of structure was built by the Toyotomi clan in Ōsaka. For 10 points, name this sort of structure that in Japan, as in Europe, had barbicans, moats, and ramparts.

ANSWER: Japanese castles [or shiro; prompt on synonyms or related answers]

<JB World History>

17. An early scene in this opera begins with the brass swinging back and forth between A-flat-7 and D-7 chords over low C's in the low strings and tuba. That scene in this opera includes a tune many people know from Beethoven's Opus 59 No. 2. This opera includes songs about a parrot, a gnat, and a drake. Its title character enters with the monologue "My soul is sad." This opera was revised extensively in 1872, partially to include more female roles. Its title character was the signature role of the bass (*) Shalyapin. Like *Prince Igor*, this opera was once only performed in the "edited" version by Nikolai Rimsky-Korsakov. In the second scene of its first act, Varlaam sings about besieging Kazan with Ivan the Terrible. In its prologue, a crowd singing "glory" is led by Prince Shuisky to celebrate the title character's coronation. For 10 points, name this opera by Modest Musorgsky about an ill-fated tsar from the Time of Troubles.

ANSWER: Boris Godunov

<JR Other Arts>

18. This entity's "Odyssey" titles the second volume of an H. S. Harris book titled for its creator's "ladder." A section on the self-alienation of this entity discusses how the Enlightenment's quest for total freedom begat the Reign of Terror. This entity manifests itself as the "ethical order," and religion and art are it becoming conscious of itself. People first develop sensory perception, then self-consciousness, then consciousness of their (*) community's collective self-consciousness, which is *this* entity. One of these entities for a particular people and time is incarnated into a World-Historical individual, who advances the "world-" one of these entities. This entity is formed from the dialectical synthesis of the Idea and Nature to form the Absolute. For 10 points, name this central concept of Hegel's philosophy, and the title subject of his *Phenomenology*.

ANSWER: the Geist [or Spirit; accept Mind; accept Phenomenology of Spirit or Phänomenologie des Geistes]

<JR Philosophy>

19. A group of figures died in this manner after painting their faces white and using toys to lure the child Zagreus away from a cave to devour him. Evadne threw herself on a funeral pyre after her husband Capaneus was killed in this way on a ladder during the siege of Thebes. A king was killed in this manner for dragging bronze cauldrons behind his (*) chariot to simulate thunder; that man was Salmoneus. After reviving Hippolytus, Asclepius was killed in this manner, prompting Apollo to revenge-murder the Cyclopes, who had forged the weapons which are used to inflict this sort of death. For 10 points, name this way in which various mythical figures died after incurring the wrath of Hera's husband, Zeus.

ANSWER: being struck with Zeus's lightning bolts [or being struck by thunderbolts]

<JB Mythology/Other>

20. The second chapter of this book draws extensively on a racial trichotomy made by Henry Morselli. The first part of this book rejects the impact of psychopathology, alcoholism, and climate on the title phenomenon, and also lengthily rejects Gabriel Tarde's Imitation Theory. It was extended and criticized in a similarly-named book by the author's student Maurice Halbwachs. Like an earlier work, this book repeatedly discusses "collective sentiments." This book posits that married women and (*) Catholics are less likely to experience the title phenomenon due to stronger social integration. This book is often seen as an implementation of the ideas laid out in its author's previous book, *The Rules of Sociological Method*. It divides its title action into fatalistic, altruistic, egoistic, and anomic varieties. For 10 points, name this 1897 book by Émile Durkheim, which tries to explain why different groups of people kill themselves at different rates.

ANSWER: ***Suicide*** [or *Le ***Suicide****]

<JR Social Science/Thought>

Bonuses

1. The Vertex pharmaceutical drugs lumacaftor and ivacaftor are novel treatments for this disease. For 10 points each:

[10] Name this congenital disease that can result from a G551D mutation in a certain protein. It is common among Caucasians, and its sufferers have frequent *Pseudomonas* infections and breathing difficulties due to mucus in the airway.

ANSWER: **cystic fibrosis** [accept **CF**]

[10] Cystic fibrosis results from a defect in its namesake transmembrane conductance regulator, or CFTR. That protein is a channel for this species. The serum level of this species is often between 96 and 106 millimolar.

ANSWER: **chloride** ion [accept **Cl minus**]

[10] The most common mutation that causes CF is a deletion of this amino acid at position 508 in the CFTR. This amino acid corresponds to the mRNA codon UUU.

ANSWER: **phenylalanine** [accept **Phe** or **F**]

<SP Biology>

2. Large-scale production of this commodity in the West became profitable because the construction of railroads allowed it to be shipped quickly to the East. For 10 points each:

[10] Name this commodity, the main agricultural output of West Texas and other arid parts of the western United States.

ANSWER: **cattle** [accept **cows**, **bulls**, **bovines**, or **beef**; prompt on “meat,” “livestock,” “animals,” or other less-specific answers]

[10] In the 1860s, this doubly-eponymous trail brought cattle from Texas to markets in Colorado and Wyoming.

ANSWER: **Goodnight-Loving** Trail

[10] After they reached railroad stations, cattle were taken to this large midwestern city, where they were slaughtered and processed. Upton Sinclair wrote *The Jungle* about this city’s meat packing industry.

ANSWER: **Chicago**

<NC American History>

3. A man in the background of this painting holds a bell in an arm he is preparing to slam down. For 10 points each:

[10] Name this 1924 painting, in which one title character stands with his legs forming an almost equilateral triangle, while the other’s body lies momentarily tangled over some ropes.

ANSWER: **Dempsey and Firpo**

[10] *Dempsey and Firpo* was one of the many paintings of boxing scenes made by *this* Ashcan school artist, who also painted *Cliff Dwellers*.

ANSWER: George (Wesley) **Bellows**

[10] *Cliff Dwellers*, like Jacob Riis’s pioneering book of photojournalism *How the Other Half Lives*, depicts poor inhabitants of the Lower East Side in *this* borough of New York City.

ANSWER: **Manhattan**

<JR Visual Arts>

4. While engaging in this action, the speaker makes “an oath to journey forever free of feelings” and meet two other figures. For 10 points each:

[10] Name this action that the speaker of that poem performs alone “among the flowers” along with the moon and his shadow.

ANSWER: **drinking** wine

[10] The author of “Drinking Alone under the Moon,” Li Po, wrote in this language during the Táng dynasty.

ANSWER: **Chinese**

[10] This friend of Li Po asked, “what ten cups could make me as drunk as I always am with your love in my heart?” in “To My Retired Friend Wèi.” His poem “Song of the War Wagons” is set during the Ān Lùshān rebellion.

ANSWER: **Dù Fǔ** [or **Tu Fu**]

<JB Other Literature>

5. Answer some questions about the former presidential campaign of former Florida governor Jeb Bush, for 10 points each.

[10] While visiting McAllen, Texas, near the Mexican border, Bush controversially remarked that *this* term, referring to children born on US soil to parents who had come into the country illegally, was “more related to Asian people.”

ANSWER: **anchor baby** [or **anchor babies**]

[10] Bush coined this three-word phrase to refer to illegal immigration. It titles a Donald Trump attack ad that alternates mugshots of illegal immigrants who committed violent crimes with footage of Bush using this phrase.

ANSWER: **“Act of Love”**

[10] Despite the fact that *this* Super PAC had raised over 100 million dollars on Bush’s behalf, he suspended his campaign after performing poorly in Iowa, New Hampshire, and South Carolina.

ANSWER: **Right to Rise**

<WC Mythology/Other>

6. Answer the following about the last days of paganism in the Roman Empire. For 10 points each:

[10] The pagan orator Symmachus appealed to Valentinian II to return a pagan altar dedicated to this concept to the Senate. Nike, the Greek personification of this concept, is depicted in a winged statue from Samothrace.

ANSWER: **Victory**

[10] The usurper Eugenius and his supporter Arbogast declared the revival of polytheism in 392 CE, only to be defeated by Theodosius I at this battle which occurred along a river in present-day Slovenia.

ANSWER: Battle of **Frigidus** River

[10] After Theodosius put Cynegius in charge of destroying pagan temples, some angry monks in this city sacked its Serapeum temple. A Christian mob in this city also murdered the female mathematician Hypatia.

ANSWER: **Alexandria**

<JB European/Ancient History>

7. This effect posits a positive correlation between mean fitness and population size for small populations, and a negative correlation for large populations. For 10 points each:

[10] Name this effect, which can be explained by idea of “safety by numbers.” It allows for faster population growth at higher population sizes, if the population is in the right regime.

ANSWER: **Allee** effect

[10] The Allee effect adds an N over A minus one term to this simpler model, which assumes population growth rate to be a linearly decreasing function of population size. It predicts that the population size will follow a sigmoidal curve, and eventually level off at the carrying capacity.

ANSWER: **logistic** model/curve

[10] The population size will follow this curve if the resources are not limited, and the growth rate is constant. When a tumor is small, its size follows this curve, which is equal to some constant to the power of time.

ANSWER: **exponential** curve

<SP Other Science>

8. Answer the following about novelist Robert Walser, for 10 points each.

[10] The book *Microscripts* collects the writing Walser did in incredible tiny hand while at one of these places. Men claiming to be Newton and Einstein try to recruit the physicist Mobius in a play set in one of these places.

ANSWER: **sanatoriums** [accept **mental hospitals**, insane **asylums**, **psychiatric wards**, or obvious equivalents]

[10] Like the author of the aforementioned *The Physicists*, Friedrich Durrenmatt, Walser was from this country. This country is home to characters like Schiller’s Wilhelm Tell and Johanna Spyri’s Heidi.

ANSWER: **Switzerland**

[10] Walser’s novel *Jakob von Gunten* follows a boy training for this profession at the surreal Benjamenta Institute. A member of this profession named Gerasim (“gyeh-ruh-SEEM”) is the only true friend of the protagonist in Tolstoy’s *The Death of Ivan Ilyich*.

ANSWER: **servants** [or **butlers**]

<JB European Literature>

9. This author is often considered to be a founder of “world history” as a historiographical approach. For 10 points each:

[10] Name this chair of Chicago’s Committee on Social Thought. He is most famous for a huge three-volume history of *The Venture of Islam*.

ANSWER: Marshall (Goodwin Simms) **Hodgson**

[10] Hodgson was one of the major advocates of using Arabic terminology for terms in Islam. For instance, he promoted using *this* term instead of the generic translation “Islamic law.”

ANSWER: **sharia** law

[10] Many people have seen *this* 14th-century Muslim historian as either an influence on or a precursor of Marshall Hodgson. This man introduced the term *asabiyyah* or “social cohesion” in his *Muqaddimah*.

ANSWER: **Ibn Khaldun** [Abu Zayd ‘Abd ar-Rahman ibn Muhammad ibn Khaldun al-Hadrami]

<JR World History>

10. Answer some questions about ornaments in Architecture, for 10 points each.

[10] This architect's "Ornament and Crime" uses a "tattooed Papuan" as an example of the degeneracy of ornamentation. His buildings include the Steiner House and the Goldman & Salatsch Building.

ANSWER: Adolf **Loos** ("lohss")

[10] Although this American architect set out the paradigm "form follows function" in his essay *The Tall Office Building Artistically Considered*, he designed beautiful ornaments for his Wainwright and Guaranty buildings. This man is often called the "father of the skyscraper."

ANSWER: Louis **Sullivan**

[10] Sullivan's Carson, Pirie, and Scott Building was designed for *this* city, also home to his Auditorium building.

ANSWER: **Chicago**, Illinois

<LL Other Arts>

11. In a two-flavor model, the difference of the squares of these quantities appears in the formula for the probability of a flavor oscillation. For 10 points each:

[10] Identify these parameters of the Standard Model. Flavor oscillations show that at least one of them must be nonzero, but even their relative ordering is currently unknown.

ANSWER: **masses** of the **neutrinos** [or equivalent phrasings]

[10] The 2015 Nobel Prize in Physics was awarded in part for observing oscillations of neutrinos from this astronomical source, which produces enormous numbers of electron neutrinos during nuclear fusion.

ANSWER: the **Sun** [or **Sol**]

[10] The aforementioned research was headed up by Arthur MacDonald at the Sudbury Neutrino Observatory in this country, which also contains the Perimeter Institute for Theoretical Physics.

ANSWER: **Canada**

<SE Physics>

12. A girl spends five weeks recovering at this place after spying on its residents through a window and getting bitten by a guard dog. For 10 points each:

[10] Name this estate once owned by the Lintons where the housekeeper Nelly Dean lives. Its resident has a dream of a ghostly child at its window while visiting another location.

ANSWER: **Thrushcross Grange**

[10] Thrushcross Grange is rented to Lockwood by this man, a gypsy orphan who is eventually buried next to his love, Catherine Earnshaw.

ANSWER: **Heathcliff**

[10] Heathcliff appears in *Wuthering Heights*, the only novel by this sister of Anne and Charlotte.

ANSWER: **Emily Brontë** [or **Ellis Bell**; prompt on just "Brontë"]

<JB British Literature>

13. His most famous essay was expanded into the book *Modernity at Large*. For 10 points:

[10] Name this Indian anthropologist who described five forms of cultural transmission: the ethno-, idea-, media-, techno- and financescapes in his "Disjuncture and Difference." He recently wrote the book *Fear of Small Numbers*.

ANSWER: Arjun **Appadurai**

[10] Appadurai is known for his study of *this* phenomenon of worldwide cultural and economic interchange, which has accelerated with transportation and communication innovations.

ANSWER: **globalization**

[10] Appadurai's idea of "Imagination as a Social Practice" draws heavily from the work of *this* anthropologist, who studied the formation of national identities in *Imagined Communities*.

ANSWER: Benedict (Richard O'Gorman) **Anderson**

<IKD Social Science/Thought>

14. The Oberfohren Memorandum accused this party of orchestrating the Reichstag fire. For 10 points each:

[10] Name this political party that established a totalitarian regime after it gained control over the Weimar Republic.

ANSWER: **Nazi** Party [or **National Socialist** German Worker's Party or **NSDAP**]

[10] Following the Reichstag fire, the Reichstag passed this law to grant Adolf Hitler dictatorial powers by allowing the Cabinet to issue decrees independently of the Reichstag and the presidency.

ANSWER: **Enabling** Act [or **Law to Remove the Distress of the People and the State**]

[10] This man, the head of the Comintern in Central Europe, successfully defended himself in the Leipzig Trial against accusations of planning the Reichstag fire. He became the leader of Bulgaria after World War II.

ANSWER: Georgi Mikhailovich **Dimitrov**

<WC European/British History>

15. Tradition holds that most of the second book of this name was written by Gad and Nathan. For 10 points each:

[10] Name this two-part book of the Bible, whose title prophet anoints Saul King of Israel, but then kicks him out in favor of David. These two books are followed by Kings.

ANSWER: Books of **Samuel** [or Sefer **Shmuel**]

[10] The second book of Samuel tells of *this* man, who murdered Amnon. Although this son of David revolted against his father, David cried "would God I had died for thee!" when this man was killed.

ANSWER: **Absalom** [or **Avshalom**]

[10] *Description acceptable*. Absalom was killed after his defeat in battle when he became vulnerable in *this* way.

ANSWER: his **head** got caught in an oak **tree** [prompt on less specific answers; be generous about equivalents involving his **hair**, tree **branches**, etc.]

<JR Religion>

16. This man described early R&B as a return to more authentically "Black" music in the chapter "The Blues Continuum." For 10 points each:

[10] Name this author of a study of "Negro Music in White America," called *Blues People*. He is also known for his poetry inspired by and about the blues.

ANSWER: Amiri **Baraka** [or LeRoi **Jones**]

[10] In *Blues People*, Baraka traced the White commercial appropriation of Black music in a chapter called "[This word]—From Verb to Noun." As a verb, this word refers to playing eighth notes as uneven triplets.

ANSWER: **swing** [accept word forms like **swung**]

[10] This white-ass clarinetist was nicknamed "The King of Swing" for big band hits like "Sing, Sing, Sing," which he performed in 1938 at Carnegie Hall.

ANSWER: Benny **Goodman** [Benjamin David Goodman]

<JR Auditory Arts>

17. This man first developed relation algebra. For 10 points each:

[10] Name this nineteenth-century British logician. He formulated two laws, one of which goes: "not: *A-or-B* is equivalent to not-*A* or not-*B*."

ANSWER: Augustus **De Morgan**

[10] De Morgan's work in logic was greatly expanded by this other philosopher. This thinker formulated most of his ideas as triads, and coined terms like "abductive reasoning" and "rheme."

ANSWER: Charles Sanders **Peirce** ("purse")

[10] Peirce is considered to have founded *this* American school of philosophy, whose members included William James and John Dewey. Peirce wrote this school's maxim to always consider the "practical effects" of your thinking.

ANSWER: **pragmatism**

<JR Philosophy>

18. In a Louise Glück poem, a character from one of these stories tells her brother “we are there still and it is real, real, that black forest and the fire in earnest.” For 10 points each:

[10] Name this genre of “Hansel and Gretel,” one of the many stories of this type collected by the Grimm brothers.

ANSWER: fairy tales

[10] The line “This now is yours. I seek another place” concludes this poet’s revision of the Bluebeard fairy tale, which features an “empty room.” This poet also wrote “Renascence” and “Ballad of the Harp Weaver.”

ANSWER: Edna St. Vincent Millay

[10] Anne Sexton’s version of this fairy tale in *Transformations* notes “the virgin is a lovely number.” Donald Barthelme’s version of this story includes a factory that produces plastic buffalo humps and Chinese baby food.

ANSWER: “Snow White and the Seven Dwarfs”

<JB American Literature>

19. This element’s namesake “disease” is an allotropic change that takes place over time, which reduces it to a brittle, gray form. For 10 points each:

[10] Name this element, which forms the alloy bronze when mixed with copper. Its Latin name is stannum.

ANSWER: tin

[10] This reaction is a cross-coupling between an organotin compound and an alkenyl or aryl halide. Its mechanism involves an oxidative addition of the catalyst into the R–X bond, followed by transmetallation from tin.

ANSWER: Migita–Kosugi–Stille coupling

[10] Like Suzuki, Hiyama, and Heck cross-couplings, the Stille coupling relies on this element for catalysis. This element is often in its zero-oxidation state and attached to four triphenylphosphine ligands when added.

ANSWER: palladium [accept Pd]

<SP Chemistry>

20. For a given good, this equation gives the price elasticity of Marshallian demand as: price elasticity of Hicksian demand, minus income elasticity times a budget share. For 10 points each:

[10] Name this equation that decomposes the price-elasticity of a good into income and substitution effects.

ANSWER: Slutsky equation

[10] The Hicksian demand function is the demand for a good obtained by solving the dual problem, where cost is minimized but *this* function is held constant.

ANSWER: utility

[10] Utility functions are generally assumed to have *this* shape. Functions with this shape have a negative second derivative, so that they “curve down” or “bulge upwards.”

ANSWER: concave down [accept convex up, but do not accept or prompt on just “convex”]

<SP Economics/Psychology>