

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

Packet 1 – alyabyev

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. A poem by this author states “Then I was back in it. The War was on” after the speaker is disoriented by seeing “black naked women with necks wound round... with wire” in *National Geographic*. A poem by this author concludes “Somebody embroidered the doily. Somebody waters the plant... Somebody loves us all” and opens “Oh, but it is dirty!” A poem by this author contains the parentheticals “the joking voice, a gesture I love” and (*) “Write it!” in its last stanza. This poet’s time in Brazil with her lover Lota Soares inspired a poem about “illegal fire balloons” and a villanelle that repeats “The art of losing isn’t hard to master.” For 10 points, name this poet of “In the Waiting Room,” “The Armadillo,” and “One Art.”

ANSWER: Elizabeth Bishop

<JB American Literature>

2. During the Siege of Danzig, this military force supported Peter Lacy’s army by blockading the fortress of *Wiechsele*. During that siege, this force was commanded by Thomas Gordon, a former officer of the Royal Scots Navy. In one battle, this navy defeated a detachment of nine ships led by Nils Erensköld and captured the *Elephant* near the Hanko Peninsula. This victorious navy at the Battle of Gangut nearly caused a war with Great Britain when it attacked the Gamecock fishing fleet, in the (*) Dogger Bank incident. The fleet of this navy involved in that incident was later defeated by Tōgō Heihachirō’s fleet at Tsushima. During the Siege of Sevastopol, this navy scuttled several ships of its Black Sea fleet. For 10 points, name this navy whose construction was initiated by Peter the Great.

ANSWER: (Imperial) Russian Navy [do not accept “Soviet Navy” or similar answers]

<WC European/Ancient History>

3. It’s not magnesium, but the tri-aceto-acetonate compound of this element can be used to catalyze the Kumada coupling, where it forms an “inorganic Grignard” (“green-YARD”) species. After binding oxygen, a peroxide bridge forms between this element and tetrahydro-biopterin, which is transformed into an activated oxo compound where this element is at its +4 oxidation state; that occurs in the mechanism for phenylalanine hydroxylase. When reacted with CO, this element forms a pentacarbonyl compound where it has oxidation state zero. It’s not (*) aluminum, but this element’s trihalide salts are used as Lewis acid catalysts in the halogenation and Friedel–Crafts reactions of arenes. The powdered oxide of this element is a catalyst in the Haber process. Austenite is phase on the binary phase diagram between this element and carbon. This element is mixed in its +2 and +3 oxidation states in magnetite. For 10 points, name this element complexed by the heme in hemoglobin.

ANSWER: iron

<SP Chemistry>

4. A character created by this director curses at two grocery store owners to check the dates on twenty D batteries and is told “motherfucker you!” This director created a Greek-chorus-like trio of three men, including Coconut Sid and ML. This director had a man wearing a Celtics T-shirt drink a carton of orange juice while running over a new pair of shoes with his bike. In that movie by this director, Mister Señor Love Daddy repeatedly says “and that’s the truth, Ruth!” and announces how (*) hot it is. That movie by this director ends with a still of a photo the mentally disabled man Smiley had been trying to sell, of MLK and Malcolm X shaking hands. This director depicted a riot that destroys a pizzeria after Sal takes a bat to Radio Raheem’s jukebox, which plays “Fight the Power” by Public Enemy. For 10 points, name this director of *Do the Right Thing*.

ANSWER: Spike Lee [Shelton Jackson Lee]

<JR Other Arts>

5. These functions are generally assumed to satisfy the Inada conditions. At the point of profit maximization, the partial derivative of this function with respect to each of its arguments is equal to the price of that argument. In the Solow model, this function is re-engineered to contain a function “ A -of- t ,” which is an exogenously imposed rate of technological progress that multiplies L . A common one of them is given by the minimum between linear functions of each of its arguments; that Leontief one of these functions has zero substitutability. If these functions are homogenous in their arguments, they exhibit constant (*) returns to scale. The most common *a priori* form taken by these functions involve some constant, times capital-to-the-alpha, times labor-to-the-beta; that is their Cobb–Douglas form. For 10 points, name these functions that relate inputted “factors” like materials and labor to the number of goods that are outputted.

ANSWER: production functions [accept “utility functions” until the second line; accept any specific production function, e.g. Cobb–Douglas functions]

<SP Economics/Psychology>

6. Jacques Lefèvre d’Étaples (“luh-FEV day-TAP”) is best known for his summaries of this philosopher’s works. His works are cited with Bekker numbers, and their standard English edition was edited by Julian Barnes’s brother, Jonathan. This man’s ideas were the basis for one half of the “double truth.” Porphyry’s *Isagoge* was an introduction to one of this philosopher’s works. This man originated the idea that the “imperfect seeks its perfection,” or final (*) cause, an aspect of his hylomorphism. Alasdair MacIntyre partially rehabilitated this philosopher’s ethics in *After Virtue*. Many of this man’s works first became known in Europe along with commentaries by Averroes. In the Classical Arabic world, he was called “the First Teacher”; Aquinas’s main project was to reconcile this man’s philosophy with Christianity. For 10 points, name this founder of the Lyceum’s Peripatetic School, the most famous student of Plato.

ANSWER: Aristotle [or Aristoteles of Stagira]

<JR Philosophy>

7. This man tutored the children of Hugh Douglass and John Cockburn, with whom he moved into the castle of St. Andrews, just months after its owner had been murdered there. This man had earlier served as a chaplain to the murderers of that castle-owner, Cardinal David Beaton. This man developed an unrealized plan for providing systematic relief to the poor in his *Book of Discipline*. This friend of George (*) Wishart inserted a clause stating that kneeling at communion implies no adoration of the elements into the Book of Common Prayer; that clause was called the black rubric. This man criticized three female monarchs in his *The First Blast of the Trumpet Against the Monstrous Regiment of Women*. For 10 points, name this religious reformer who founded the Presbyterian Church of Scotland.

ANSWER: John Knox

<WC European/British History>

8. In a play from this country, a priest is visited by a flute-playing reaper who is revealed to be the ghost of a soldier he killed. A character in a play from this country angers his father-in-law by planning to sell his family's clothes to ransom his love interest. A massive history and many translations of this country's literature were produced by Donald Keene. While hiding from a friend who claims he forged his seal, a salesclerk in a play from this country touches the foot of his (*) lover from under a porch. A playwright from this country wrote about a general who defeats the Great King of Tartary. *The Battles of Coxinga* and two plays about love suicides were written in this country for a genre featuring large puppets: *bunraku*. For 10 points, name this country home to the playwrights Zeami and Chikamatsu.

ANSWER: Japan [accept Nihon or Nippon]

<JB Other Literature>

9. An F-minor piece for this ensemble is played entirely *attacca*, has a slow movement and scherzo in F-sharp minor, and reprises its first movement before its closing fugue. A C-major piece for this ensemble was once thought to be a draft of its composer's lost Gastein Symphony, and was orchestrated by Joseph Joachim ("YO-zef YAW-khim"). A piece for this ensemble includes the movements "Kitty-Waltz" and "Mi-a-ou." Brahms's Opus 39 is a set of sixteen waltzes for this ensemble. Jörg Demus ("yurg DAY-mus") played in one of these ensembles with Paul Badura-Skoda. Fauré's (*) *Dolly Suite* was written for it. Schubert wrote an F-minor fantasy for this ensemble. Benjamin Britten played Mozart's five sonatas for it with Sviatoslav Richter. Before audio recording, most people knew the orchestral repertoire through transcriptions for this "domestic" ensemble. For 10 points, Schubert's *Grand Duo* was written for what one-keyboard ensemble?

ANSWER: piano duet [or piano four-hands; accept any answer indicating two pianists playing one piano; do not accept "two pianos" or other answers indicating that two separate pianos are being played]

<JR Auditory Arts>

10. A displacement in this parameter is a trivial example of a continuous canonical transformation. Binet's ("bee-nay's") equation is used to compute solutions to the Kepler problem that do not depend explicitly on this parameter. Hamilton's principal function is differentiated with respect to this quantity in the Hamilton–Jacobi equation. Virtual displacements are taken with this value (*) fixed. The invariance of the Lagrangian under translation in this parameter leads to conservation of energy. The action is defined by integrating the Lagrangian with respect to this quantity. The right-hand side of Newton's second law contains a second derivative with respect to this quantity. For 10 points, velocity is obtained by differentiating position with respect to what quantity?

ANSWER: time

<SE Physics>

11. A book of mythology named for one of these animals was allegedly written by Máel Muire ("mile murray") on the skin of one. While searching for one of these creatures, Cian ("KEY-in") disguised himself as a woman to enter the tower of Eithne ("AY-nyeh"), whose father, Balor the One-Eyed, had stolen that animal. After becoming ravens, stags, and worms, two feuding swine keepers were reborn as these animals. Men protecting one of these animals were disabled by the curse of a woman who was forced to race horses while pregnant, Macha. A (*) quest for one of these animals began after the "pillow-talk" episode, in which a woman discovers that her husband Ailill is richer than her. A hero took challengers at a ford while fighting off an army created to steal one of these animals by Queen Medb ("mave"). For 10 points, the Ulster cycle centers on a raid for a brown animal of what sort from Cooley?

ANSWER: cows [or cattle; or bulls]

<JB Mythology/Other>

12. An attempt to buy 25 tons of a steel alloy for use in this program resulted in the arrest of a Canadian citizen nicknamed “Archie.” In 1990, a sale of F-16 planes was aborted after the passage of the Pressler Amendment, which refused aid to a country due to this program. The initiator of this project organized it under Project 706 and promised that “we will eat grass and leaves for a thousand years” to ensure its success. The development of this program was (*) hastened by another country’s Operation Smiling Buddha. The technology of this program was brought to North Korea by Abdul Qadeer Khan. For 10 points, name this program which developed a weapon of mass destruction in a Muslim country that disputes Kashmir with India.

ANSWER: Pakistani nuclear weapons program [or anything indicating Pakistan’s development of an atomic bomb; accept Project 706 until it is read; prompt on partial answers]

<JB World History>

13. An organism living in one of these environments concentrates nitrates in its blood to 100 times environmental levels. That organism has multiple complex hemoglobins, which are uniquely selective for oxygen. Those aforementioned annelids have vascularized red plumes at their free ends, and belong to the genus *Riftia*. One hypothesis regarding abiogenesis inspired by these ecosystems involves the use of metal (*) sulfides to catalyze the formation of peptides from gases; that is the iron-sulfur world theory. These ecosystems were first directly observed and sampled by the unmanned submersible ALVIN. The mean pH of these environments was measured to be roughly 2.8, due to the oxidation of sulfides into sulfuric acid by chemosynthetic bacteria. For 10 points, name these ocean floor ecosystems that include “black smokers,” and which are driven and sustained by the outpouring of volcanically-derived mineral-laden water.

ANSWER: hydrothermal vents [accept hydrothermal chimneys or black smokers until it is read; prompt on “vents” or “thermal vents”; prompt on any answer involving the “ocean” or “deep sea”]

<SP Biology>

14. This character mocks some rats for fleeing a recently-refurbished ship that has “Do or Die” written on its stern. In a later scene, this character uses a technique called “delayed decoding” by Ian Watt to narrate the explosion of that ship, the *Judea*. This character watches a French vessel shell the coastline for no apparent reason. In a city called the “whited sepulchre,” he meets a doctor who wants to measure his skull, then has tea with his (*) aunt, who has secured him a job as Fresleven’s replacement. In his most notable appearance, this protagonist of the story “Youth” lies to the Intended to conceal that another character’s last words were “the horror! the horror!” For 10 points, name this narrator who searches for Kurtz in Joseph Conrad’s *Heart of Darkness*.

ANSWER: Charles Marlow [prompt on “Charles”]

<JB British Literature>

15. This thinker originated a method later adopted by Schleiermacher, the “psychological” method of interpretation through “divination.” This thinker popularized the notion that each culture or era of history can be fundamentally different and should be understood “on its own terms.” Isaiah Berlin saw this student of Johann Georg Hamann as both a “root of Romanticism” and a (*) “critic of the Enlightenment.” He’s not Rousseau, but this man’s *Treatise on the Origin of Language* inspired Wilhelm von Humboldt to found modern linguistics. He argued that geography and language link a *Volk*, which should cultivate its distinctive traditions. For 10 points, name this 18th-century German thinker who coined the terms “folksong” and “nationalism.”

ANSWER: Johann Gottfried (von) Herder

<JR Social Science/Thought>

16. This material was adopted to make works like *Black Cover Flat* and *Early One Morning* after their artist met a sculptor who used this material to make *Agricola I* and the series *Cubi*. This main material of Anthony Caro and David Smith was used to make an untitled, long-faced, 1967 sculpture that has functioned as a sort of jungle gym in Daley Plaza. In 1969, it was used to make the ironically-named Grand Rapids sculpture *La Grande (*) Vitesse*. This material was used by Picasso to create his huge Chicago sculpture, and by Richard Serra to create *Tilted Arc*. A highly polished sculpture in this material has been nicknamed “the bean” and was made by Anish Kapoor. Unlike most works by the sculptor of *Flamingo*, it was *not* used to make *Lobster Trap and Fish Tail*. For 10 points, name this metal used to make most of the stabiles and mobiles of Alexander Calder.

ANSWER: steel [accept more specific answers like stainless steel or CorTen; prompt on “metal” or “sheet metal”]
<JR Visual Arts>

17. Herbert Gans described how several Jewish inhabitants of one of these places sought out a full-time, “go-getter” rabbi in his 1967 study titled after their inhabitants. Governor George Leader called in state troopers to protect Daisy Myers, the “Rosa Parks of the North,” as she entered one of these places. Thurgood Marshall fought against the discriminative policies of these places, like the 25th clause of a standard lease that allowed only Caucasians to become (*) residents of these places. Over thirty houses could be built per day in these communities in an assembly-line fashion. For 10 points, name these suburban communities, built by a namesake Jewish real-estate developer for returning World War II veterans.

ANSWER: Levittowns [prompt on “suburbs”]
<WC American History>

18. The size of this set for the upper field over the lower field determines the degree of any field extension, whether it is Galois or not. The construction of this set is crucial for the Lagrange interpolation formula. These sets can be interchanged step-by-step with others of the same size, according to the most famous Replacement Theorem. In a common procedure, an element of this set is subtracted from its projection onto the previously-constructed elements, and then divided by the norm. A matrix M is transformed to a similar matrix, its conjugate pMp -inverse, under a (*) change in this set. One of these sets can be orthonormalized with the Gram–Schmidt process. The coordinates of a vector are multiples of *these* vectors. The size of one of these sets is the dimension of its vector space. In R^3 , the standard one consists of the vectors 1-0-0, 0-1-0, and 0-0-1. For 10 points, name these sets of linearly independent vectors that span a vector space.

ANSWER: basis [or bases; or basis vectors]
<JR Other Science>

19. A group of people with this profession fawn over some ducks on a train ride to the confirmation of their boss’s niece, where they all burst out crying. While waiting for people with this job in a ransacked mansion, a man blows up a teacup in a room full of china. An old nun lectures a character with this job about her work nursing soldiers with smallpox, and claims that God pardons sins carried out for the good of others. A Jewish person with this job hides in a (*) bell-tower after knifing an effeminate soldier. A member of this profession who, despite sharing her food basket with some coach passengers, is forced by them to sleep with a Prussian officer. For 10 points, name this profession shared by the protagonists of Guy de Maupassant stories like “Madame Tellier’s Establishment,” “Mademoiselle Fifi,” and “Boule de Suif.”

ANSWER: prostitutes [or courtesans; or obvious equivalents]
<JB European Literature>

20. While serving as the pastor of Glarus, this man wrote an allegorical poem titled “The Labyrinth” to warn against involvement in foreign wars. During a disputation with John Faber, this man summarized his opinions in his **Sixty-Seven Articles**. His ideas were organized into the Tetrapolitan Confession by Martin Bucer. This man’s sermon *Of Choice and Freedom Regarding Foods* was published after Martin Froschauer had served him (*) sausages during Lent. This man referred to members of a certain movement as “drowners” in *Tricks of the Catabaptists*, which refuted Anabaptist claims. He was succeeded by Heinrich Bullinger. This man rejected the real presence of Christ’s body and blood during the Eucharist at the Marburg Colloquy, coming into disagreement with Martin Luther. For 10 points, name this Swiss leader of the Protestant Reformation in Zurich.
ANSWER: Huldrych Zwingli [or Ulrich Zwingli]

<WC Religion>

Bonuses

1. Answer the following about the hit Serbian propaganda song “God is a Serb,” sometimes erroneously called “Serbia Strong.” For 10 points each:

[10] “God is a Serb” was created during a conflict in this predominantly-Muslim country, led by Alija Izetbegović at the time. The song’s music video includes footage of fighting in this country’s capital, Sarajevo.

ANSWER: **Bosnia** and Herzegovina

[10] “God is a Serb” refers to Croats as members of *this* fascist organization. Founded by Ante Pavelić, it collaborated with German and Italian occupiers and nominally ruled Croatia during World War II.

ANSWER: **Ustaše** (“oo-stah-shay”) [or **Ustaša** – Croatian Revolutionary Movement]

[10] Bizarrely, this man repeatedly sips water in the song’s music video. He founded the Serb Democratic Party in Bosnia, and ordered ethnic cleansing against Bosniaks as president of the autonomous Republika Srpska.

ANSWER: Radovan **Karadžić** (“car-ah-jitch”) [or Dragan **Dabić**]

<WC European/British History>

2. Ovid’s *Metamorphoses* discusses a boy who becomes one of these animals after jumping into a lake when Phyllis stops bringing him random animals. For 10 points each:

[10] Name this sort of animal which various people named Cynus transformed into. Leda was raped by Zeus in the form of one of these birds.

ANSWER: **swans** [prompt on “birds”]

[10] In the *Metamorphoses*, Achilles kills Neptune’s son Cynus in this manner. Heracles killed the Nemean Lion using this method.

ANSWER: **strangling** [or **choking**; or word forms or obvious equivalents]

[10] Ovid claims that *this* person had a friend named Cynus who lamented him until he turned into a swan as old man. Upon his death, this person’s sisters turned into poplar trees which shed amber tears.

ANSWER: **Phaethon**

<JB Other Literature>

3. This painter spent most of his career employed by the dukes of Saxony. For 10 points each:

[10] Name this painter best-known for his many portraits of Martin Luther.

ANSWER: Lucas **Cranach** the Elder

[10] Cranach created a famously unusual 1503 painting of *this* scene, integrating a turbulent landscape and placing Jesus in profile and off to the right. Instead, the focus is on Mary looking up at the recently deceased Christ.

ANSWER: the **crucifixion**

[10] Cranach’s *Crucifixion* belongs to *this* German art museum. Other sixteenth-century paintings in this museum include Altdorfer’s *Battle of Issus*, El Greco’s *Disrobing of Christ*, and Dürer’s *Self Portrait in a Fur-Collared Robe*.

ANSWER: the **alte Pinakothek** (“ALL-tuh PEE-nah-koh-take”), Munich [accept **Old Pinacotheca** or **Old Picture Gallery**]

<JR Visual Arts>

4. These plants have a complex conducting tissue that moves water and nutrients. For 10 points each:

[10] Name these plants that appeared after mosses, hornworts, and liverworts. They were able to grow taller than their predecessors because of their xylem and phloem.

ANSWER: **vascular** plants

[10] This lateral meristematic tissue, part of the periderm, is responsible for secondary growth in vascular plants, and is one of many layers of bark that is present lateral to the phloem.

ANSWER: **cork cambium** [prompt on partial answers]

[10] Up to 40 percent of bark tissue is made of *this* class of complex organic polymers found in plant cell walls, which contain many phenol groups. It is only second to cellulose in its abundance on Earth.

ANSWER: **lignin**

<SP Other Science>

5. Answer some questions about a tenth-century Renaissance. For 10 points each:

[10] That Renaissance is usually named for the three Holy Roman Emperors of *this* name. The first person to actually take the title Holy Roman Emperor was a king of this name who defeated the Magyars at Lechfeld.

ANSWER: **Otto** [accept more specific Ottos like **Otto the Great**; accept **Ottonian** Renaissance]

[10] R.W. Southern's *The Making of the Middle Ages* begins with *this* man, who in 999 became the first French pope. This scholar likely introduced Arabic numerals to Europe, to accompany his reintroduction of the abacus.

ANSWER: **Sylvester II** [accept **Gerbert** of Aurillac; prompt on "Sylvester"]

[10] The Ottos sponsored huge libraries in abbeys like Reichenau and Saint-Gall in *this* modern-day country. During the Reformation, this country engaged in the Kappel Wars.

ANSWER: **Switzerland** [or **Swiss Confederation**; or Confédération **suisse**; or **Schweiz** erische Eidgenossenschaft; or Confederazione **Svizzera**; or Confederaziun **svizra**]

<JR European/Ancient History>

6. Two characters with these names watch an old woman and a young man revealed to be the angel of death in *The Sandbox*. For 10 points each:

[10] Give these *two* names shared by a couple who dismember a "bumble of joy" they adopt from Mrs. Baker's Bye-Bye Adoption Service in that same author's play *The American Dream*.

ANSWER: **Mommy** AND **Daddy** [either order is fine, but both names are required; do **not** accept synonyms]

[10] In this first play by the author of *The Sandbox* and *The American Dream*, Peter converses with a weird guy named Jerry while sitting on a bench in Central Park.

ANSWER: **Zoo Story**

[10] *Zoo Story* was written by this absurdist American playwright of *Who's Afraid of Virginia Woolf?*

ANSWER: Edward (Franklin) **Albee** (III)

<JB American Literature>

7. Answer some questions about Kenneth Pike, for 10 points each.

[10] Kenneth Pike worked mainly in *this* field, in which he was a student of Leonard Bloomfield. Like Fernand de Saussure, Bloomfield was well-known for his work related to Proto-Indo-European in this discipline.

ANSWER: **linguistics**

[10] Pike is best-known for coming up with a pair of terms to describe two different approaches in linguistic research. One was *this* term, which refers to research done from "within the culture," and is contrasted with "etic."

ANSWER: **emic**

[10] Pike's concepts of "emic" and "etic" were popularized by anthropologist Marvin Harris, who advocated a "cultural" form of *this* approach. Karl Marx's focus on modes of production introduced this approach.

ANSWER: **materialism** [accept **historical materialism**, **dialectical materialism**, or **cultural materialism**]

<JR Social Science/Thought>

8. Answer the following questions about nucleophilic acyl substitution reactions, for 10 points each.

[10] In a nucleophilic acyl substitution, the nucleophile first approaches this group on the Burgi–Dunitz trajectory. This group is bonded to two alkyl groups in ketones, to a hydrogen in aldehydes, and to an oxygen in esters.

ANSWER: **carbonyl**

[10] The nucleophile attacks the carbonyl group at *this* position to form the tetrahedral intermediate, since this position has the partial positive charge.

ANSWER: the **carbon** atom

[10] In this reaction's first step, a deprotonated peroxyacid attacks the carbonyl group of a ketone or aldehyde to generate a tetrahedral intermediate. The product distribution of this reaction can be predicted if you know the migratory aptitudes of the R-groups involved.

ANSWER: **Baeyer–Villiger** reaction

<SP Chemistry>

9. If you ever really want something, just pray to Shiva for a few million years. For 10 points each:

[10] After penance involving cutting off his heads and playing his innards like a sitar, this Lankan king ignorantly asked for Shiva's consort Parvati as a boon. This guy didn't learn from the experience and stole Sita from Rama.

ANSWER: **Ravan**asura [or **Ravana**]

[10] After severe penance, the elephant demon Gaja asked Shiva to do *this* specific action. Vishnu eventually tricked Gaja into death to retrieve Shiva, and the head of Gaja's carcass was given to Ganesha.

ANSWER: **live in his stomach** [accept equivalents indicating that Gaja wanted Shiva to **reside inside of him**]

[10] Vali was granted a boon by Shiva that anyone who opposed him would lose half their strength. Vali was a son of Surya, who is *this* kind of God. In Egyptian mythology, Ra was this kind of god.

ANSWER: **Sun** God [accept equivalents like **solar** deity]

<AP Religion>

10. In the fourth and final act of the opera, this character sings the prayer "Ave maria, piena di grazia, eletta fra le spose." For 10 points each:

[10] Name this character who repeats the word "salce" ("SAHL-chay") in a song she learnt from her mother's maid.

ANSWER: **Desdemona**

[10] Desdemona appears in *Otello*, which begins with one of *these* weather events. The last act of *Rigoletto* is set during one of these events, using the piccolo to depict lightning.

ANSWER: a thunder**storm**

[10] Verdi came out of retirement to write *Otello* and *Falstaff* in large part because of the talent of *this* librettist. This librettist also wrote the opera *Mefistofele*.

ANSWER: Arrigo **Boito**

<JR Other Arts>

11. Mary Chesnut's journal was originally published as a "diary" from this place. For 10 points each:

[10] Identify this term that provides the nickname of the State's Rights Party, which ran Fielding Wright and Strom Thurmond in the 1948 election.

ANSWER: **Dixie** [or **Dixiecrats**]

[10] The minstrel song "Dixie" begins "Oh, I wish I was in the land of" this Southern cash crop, whose production was revitalized with an engine designed by Eli Whitney.

ANSWER: **cotton**

[10] This organization initiated Operation Dixie, a failed attempt to unionize black textile workers in the South. In 1952, this organization began negotiations with a former rival led by George Meany.

ANSWER: **C**ongress of **I**ndustrial **O**rganizations

<JB American History>

12. Answer the following about literary last sentences that feature dead dogs, for 10 points each.

[10] The protagonist's elderly daughters throw his taxidermied dog out a window in the last sentence of this novel, whose subplots include the romance of Tancredi and Angelica.

ANSWER: *The **Leopard*** [or *Il **Gattopardo***] (by Giuseppe Tomasi di Lampedusa)

[10] "Someone threw a dead dog after him down the ravine" is the last line of a Malcolm Lowry novel titled for one of these entities. Otto, Axel, and Hans descend through one of these places in a Jules Verne novel.

ANSWER: **volcanoes** [accept *Under the **Volcano***]

[10] Joseph K. exclaims "Like a dog!" in the last sentence of this author's *The Trial*. An adjective form of this author's name refers to situations reminiscent of the bizarre bureaucracies often portrayed by him.

ANSWER: Franz **Kafka**

<JB European Literature>

13. In a horrific experiment, this phenomenon was found in the somatosensory cortices of monkeys who had their fingers sewn together. For 10 points each:

[10] Give this general term for lasting changes in the brain. In extreme cases like losing a sense, it can involve a complete cortical remapping, where new data is fed to the now-inactive area.

ANSWER: neuro**plasticity** [accept any answer involving **plasticity**]

[10] In an example of cortical remapping, reading Braille has been shown to activate the region of the brain involved in *this* sense. Braille was developed for people who have impairments in this sense.

ANSWER: **vision** [or **sight**; accept reasonable equivalents involving words like **seeing**]

[10] In a classic example of neuroplasticity, *these* strips of neurons that take input from one eye change size if you block one or both of an infant's eyes. Like everything in the visual cortex, they were discovered by Hubel and Wiesel.

ANSWER: **ocular dominance columns**

<JR Economics/Psychology>

14. A March 2016 paper in *Science* announced the realization of a scalable version of the quantum Shor algorithm. Answer some questions about the physics behind it, for 10 points each.

[10] The authors were able to reduce the necessary number of *these* units of quantum information from twelve to five. These objects can take on a continuum of values rather than just the values 0 or 1.

ANSWER: **qubits** [accept **quantum bits**; do not accept or prompt on “bits”]

[10] The improvement was made possible by Kitaev’s efficient implementation of the quantum version of *this* operation. This operation translates functions in position space into momentum space and vice versa.

ANSWER: discrete **Fourier transform**

[10] The experimenters successfully factored *this* two-digit number with two odd prime factors, which co-author Isaac Chuang had previously factored in a non-scalable way in 2001.

ANSWER: **fifteen** [or **15**]

<SE Physics>

15. This philosopher’s critique of his predecessors culminated in the chapter “Dilthey’s entanglement in the aporias of historicism.” For 10 points each:

[10] Name this coiner of the term “historically-effected” (or: “effective-historical”) consciousness.

ANSWER: Hans-Georg **Gadamer**

[10] Gadamer’s *Truth and Method* was a landmark in *this* philosophical field, which is concerned with the interpretation of texts. This field was developed by Friedrich Schleiermacher, Wilhelm Dilthey, and Paul Ricœur.

ANSWER: **hermeneutics** [or **hermeneutik**]

[10] In *Truth and Method*, Gadamer models the ideal form of interaction with a text after *this* kind of text. Almost all of Plato’s surviving works are in this form.

ANSWER: **dialogue**

<JR Philosophy>

16. Ryszard Kapuściński (“RIH-shart kah-poo-CHEEN-ski”) wrote about the exodus of Europeans from this country in *Another Day of Life*. For 10 points each:

[10] Name this African nation that was embroiled in civil war from its independence in 1975 until 2002. Holden Roberto was an anti-colonial leader in this country, whose first president was Agostinho Neto (“a-goos-CHEE-nyu NYEH-tu”).

ANSWER: Republic of **Angola** [or República de **Angola**]

[10] This anti-communist led UNITA during Angola’s civil war. His death led to the end of the conflict.

ANSWER: Jonas **Savimbi**

[10] This country intervened on behalf of UNITA in 1975 but suffered a catastrophic defeat at the Battle of Quifangondo. Its government enforced apartheid until 1994.

ANSWER: Republic of **South Africa**

<NC World History>

17. In his introduction to this poem, T.S. Eliot claimed that when it is “widely enough known... it will no doubt undergo the same sort of detective analysis and exegesis as the later work of James Joyce.” For 10 points each:

[10] Name this seven-part poem by Welsh poet David Jones. It was followed by *The Anathemata*.

ANSWER: **In Parenthesis**

[10] David Jones’s *In Parenthesis* is about *this* war, which killed Wilfred Owen and the author of “In Flanders Fields,” John McCrae.

ANSWER: **World War I** [or the **Great War**; or **First World War**]

[10] In his introduction, Eliot defended the publication of *In Parenthesis* alongside a text of this type. T.S. Eliot’s own *The Waste-Land* was published with a text of this sort to make it long enough to publish as a book.

ANSWER: author’s **notes** [accept **endnotes**, but not “footnotes”]

<JR British Literature>

18. This scale is often notated approximately as a pentatonic scale. For 10 points each:

[10] Name this five-note scale and tuning system. Its notes are roughly equally-spaced within the octave, contrasting with a related seven-note system.

ANSWER: **slendro** [accept **salendro**]

[10] Hearing gamelans play in *slendro* tuning inspired Debussy and Messiaen (“mess-YANN”) to use *this* Western scale, which consists of six equally-spaced notes. It is usually named for the interval between each note.

ANSWER: **whole tone** scale [do **not** accept or prompt on “hexatonic scale”]

[10] If you consider scales with the same notes to be identical, how many different whole tone scales are there? The ordinal version of this number names an interval whose “major” variety is also called a whole tone or whole step.

ANSWER: **two** [or **second**; accept **major second**]

<JR Auditory Arts>

19. Answer some questions about some of the overseas visits that Pope Francis has made. For 10 points each:

[10] Francis’s first overseas visit was to *this* South American country, where he oversaw the 2013 World Youth Day celebrations. After arriving in this country, he met its widely-hated president, Dilma Rousseff.

ANSWER: **Brazil**

[10] Francis’s first visit to the United States ended with *this* event in Philadelphia, where he reminisced about a child’s question about what God did before creating the world. His answer? “God loved, because God is love.”

ANSWER: **World Meeting of Families** Congress

[10] In February 2016, Francis held talks with *this* head of the *Russian* Orthodox Church in Havana. Major issues addressed at those talks included the persecution of Christians in the Middle East and the situation in Ukraine.

ANSWER: **Kirill** [or Vladimir Mikhailovich **Gundyaev**]

<WC Mythology/Other>

20. ADH is synthesized in the hypothalamus and secreted from the “posterior” part of this organ. For 10 points each:

[10] Name this endocrine gland at the base of the brain, a master regulator of homeostasis.

ANSWER: **pituitary** [accept **hypophysis**]

[10] This synthetic replacement for ADH is often used to control neurogenic diabetes insipidus. It mimics ADH by binding to V2 receptors in the collecting duct.

ANSWER: **DDAVP** [accept **desmopressin**]

[10] DDAVP also binds to vascular endothelial cells, stimulating the secretion of Weibel–Palade bodies containing this glycoprotein needed in the clotting response. Its deficiency causes the most common hereditary coagulation abnormality.

ANSWER: **von Willebrand** factor [accept **vWF**]

<SP Biology>