

ACF Regionals 2020

Packet E by Central Florida A, Illinois A, North Carolina B, and Penn State B

Edited by JinAh Kim, Jordan Brownstein, Geoffrey Chen, Taylor Harvey, Wonyoung Jang, Nick Jensen, Dennis Loo, Nitin Rao, and Neil Vinjamuri, with contributions from Billy Busse, Ophir Lifshitz, Tejas Raje, and Ryan Rosenberg

Tossups

1. Cornelius Castoridias's concept of "magma" explains how social institutions create a stable identity allowing subjects to ignore this concept's "constant emergence." In *The Visible and the Invisible*, Maurice Merleau-Ponty wrote that a "primordial" form of this concept structures subjectivity. According to one book, all it takes for this concept to become apparent is for three travelers to share the same train compartment. Gabriel Marcel claimed that those who are *disponible*, or available, are open to this concept. Emmanuel Levinas traced the origin of morality to an encounter with the "face of" this concept. The state of embodying this concept is termed "alterity." In *The Second Sex*, Simone de Beauvoir described how men relegate women to, for 10 points, what status, which in philosophy is defined in opposition to the Self?

ANSWER: the **other** [or the constitutive **other**; accept **othering** or l'**autre**; accept **alterity** until read; accept the primordial **other**]

<Philosophy>

2. This property can be improved by adjusting values occupying small regions in the process of adaptive histogram equalization. The main clinical use of microbubbles is to enhance this property by vibrating differently when exposed to sound waves. In one technique, the oral or IV ("eye-vee") intake of certain chemicals improves this property by reducing T1 or T2 relaxation time in tissues. Frits Zernike ("ZER-nik-uh") won a 1953 Nobel Prize for a form of microscopy that enhances this property by inducing phase shifts in background light. Paramagnetic elements like gadolinium are used as "agents" to enhance this property in MRI images. For 10 points, what property refers to the difference in appearance between multiple pixels viewed at the same time, and can be adjusted along with brightness on a monitor?

ANSWER: image **contrast** [or **contrast** ratio; or **contrast** agents; or phase-**contrast** microscopy]

<Other Science (Engineering)>

3. A character with this first name is treated by a barber-surgeon with the fake name "little Benjamin" after Ensign Northerton smashes his head with a bottle. An author caricatured Robert Walpole as a character with this first name who wins the hand of Princess Huncamunca by defeating some giants for King Arthur and is later eaten by a cow. While in prison, a character with this first name is wrongly told by a visitor that he had slept with his own mother when she went by the name "Mrs. Waters." Master Blifil conspires against a character with this first name who marries Sophia Western with the blessing of Squire Allworthy. For 10 points, give this first name of two Henry Fielding protagonists: one a foundling surnamed Jones, and another a boy no larger than his father's thumb.

ANSWER: **Tom** [or **Tom** Thumb; or **Tom** Jones; accept **Thomas**]

<British Literature>

4. A captured general in this war was allowed to temporarily return home to negotiate a peace, but urged his country to reject the peace, then returned to his captors to be tortured and executed. A moniker meaning "ass" was given to Scipio Asina after his naval defeat and capture at the Lipari Islands in this war. The Treaty of Lutatius devastated the defeated side's treasury, sparking a mutiny of unpaid soldiers in the Mercenary War. The battles of Cape Ecnomus and Mylae were won during this war with the help of a naval boarding device known as the *corvus*. The occupation of Massana by the Mamertines preceded this conflict, which also saw Rome ally with Hiero II of Syracuse. For 10 points, name this war fought mainly on the island of Sicily, the first of three conflicts between Rome and Carthage.

ANSWER: **First Punic** War [prompt on Punic Wars until “first” is read, but accept it after] (The general in the first line is Marcus Atilius Regulus.)

<Other History>

5. A recently-rediscovered A major piano piece by a composer with this surname contains a second movement “ecclesiastical fugue” and is called the *Easter Sonata*. A collection of pieces by another composer with this surname includes an A-flat major *Duetto*. A cycle of piano pieces titled *The Year* was written by a composer with this surname who also collected many *Songs For the Piano*; that collection may have inspired another composer with this surname to write a similar collection that includes a piece referred to as “Bee’s Wedding” or “Spinner’s Song.” A composer with this surname collected Venetian boat songs in *Songs Without Words*, some of which may have been composed by his sister. For 10 points, name this surname shared by the sibling composers Fanny and Felix.

ANSWER: **Mendelssohn** [accept Fanny (Cäcilie) **Mendelssohn** Bartholdy; accept (Jakob Ludwig) Felix **Mendelssohn** Bartholdy; prompt on Fanny Hensel by asking “to what family was she born?”]

<Classical Music>

6. These linguistic elements can take low-tone prefixes in presentative constructions, making them morphologically nominal, in many Bantu languages. In English, the mnemonic OSASCOMP denotes restrictions on the order of these elements. According to some linguists, Igbo only uses five to eight of these elements, since their functions are mostly replaced by stative verbs. Degree constructions result from the gradability of these elements, which can be classified as predicative or attributive depending on their position. In Romance languages, these elements are usually postnominal, since they are placed after the head noun. Unlike determiners, these elements confer novel attributes to the nouns they modify. For 10 points, name these descriptive words, exemplified by “new” and “good.”

ANSWER: **adjectives** [prompt on words; prompt on descriptive answers like descriptors or modifiers]

<Social Science (Linguistics)>

7. These people undergo *dumal* in the Somali law system *Xeer* (“*khair*”). In medieval Mainz (“*mines*”), the *Takkanot Shum* (“*ta-ka-NOTE SHOOM*”) determined that these people could receive a lump sum instead of entering a ritual. Beinta Broberg and Lovisa von Burghausen underwent these people’s namesake “conservation,” which applied to vicars (“*VICK-ers*”). These people spat in someone’s face and removed their shoe in the *chalitzah* (“*kha-leet-SAH*”) ceremony to renounce their participation in *yibbum* (“*yee-BOOM*”). Kenya’s Luo people may force the “cleansing” of these non-divorcée people, who wait during the *iddah* period. Boaz acts as a *go’el* (“*go-AIL*”) to marry Ruth because she is one of these people, who must marry their in-laws in “levirate” (“*LEV-uh-rit*”) customs like *Nuer* (“*NOO-er*”) “ghost marriage.” The Bible often pairs them with orphans. For 10 points, name these women who outlive their husbands.

ANSWER: **widows** [prompt on mourners or women or wives or other nonspecific answers; accept descriptions like **women with dead husbands**]

<Religion>

8. The presence of distortions on these diagrams caused by spectral skewing can be reduced by increasing scan rate. One of these diagrams can be generated by performing a Fourier transform on the transient of an image current. The tropylium cation can typically be observed on these diagrams when they correspond to analyte containing a benzyl. The rule of 13 and the nitrogen rule are applied to one of these diagrams to determine the properties of the analyte it was generated from. A 1-to-2-to-1 triplet on these diagrams is indicative of molecular bromine. The intensity of peaks on these diagrams, such as the molecular ion peak, are expressed as proportions of the base peak. For 10 points, identify these diagrams, which are histograms where peak intensity is plotted against mass to charge ratio.

ANSWER: **mass spectrums** [or **mass spectra**; accept answers referring to the output of a **mass spectrometer**; accept answers referring to the diagrams generated in **mass spectrometry** or **MS**]

<Chemistry>

9. Soldiers in this country lured thousands of poor and mentally impaired people to remote areas and killed them to inflate their body count of insurgents in the “false positives” scandal. The “Southern Bloc” of an organization in this country formed from remnants of the Marquetalia Republic, which was crushed in Plan Lazo. While campaigning for the presidency in this country in 2002, Oxygen Green party candidate Ingrid Betancourt (“bay-tahn-KOOR”) was kidnapped by a guerilla group. A referendum on an agreement to end this country’s civil conflict was defeated shortly before the 2016 Nobel Peace Prize was awarded to this country’s president Juan Manuel Santos. For 10 points, name this country where the guerrilla FARC movement recently disarmed and seated representatives in Congress in Bogotá.

ANSWER: **Colombia**

<World History>

10. *Note to players: Two answers required.* One of these two people depicted the other as an angel “in an Ecbatana palace” in the poem “Crime of Love.” One of these people wrote a poem to the other in which “A conscript, open-mouthed... sleeps” in a valley. One of these two people wrote a poem in which the other addresses him in a confession beginning “O Lord, O Celestial Bridegroom!” A “banquet where every heart revealed itself” is described in a work written by one of these two authors that represents the other as the “Foolish Virgin.” Their trysts are recounted in the collection *Romances sans paroles* (“ro-MONCE sawn pa-ROLE”), which was written by one of them who drunkenly shot the other. Two “Delirium” sections of *A Season in Hell* describe the stormy relationship between, for 10 points, what two French Symbolist poets?

ANSWER: Arthur **Rimbaud** (“ram-BOH”) AND Paul **Verlaine** (“vair-LEN”) (The second poem is “The Sleeper in the Valley.”)

<European Literature>

11. The dual of Chasles’s (“shahl’s”) theorem shows that every wrench can be equated to this quantity and force applied along the same axis; a wrench without this component has screw coordinates of a line and zero pitch. When nutation occurs, this quantity at any instant is equal to the cross product of angular velocity and instantaneous angular momentum. Rigid body motion can be visualized using Poinot’s (“pwann-SOH’s”) construction when this quantity equals zero. This quantity is equal to the product of the angular velocity of spin, the moment of inertia, and the angular velocity of precession in gyroscopic precession. This quantity is calculated by taking the derivative of angular momentum with respect to time, or as “ r cross F .” For 10 points, name this rotational analog of force.

ANSWER: **torque** [accept **moment** or **moment of force**]

<Physics>

12. This country names a variation of the *pas de chat* (“pah duh SHAH”) in which the legs are brought to *attitude derrière* instead of *retiré*. The garmon accordion accompanies a lewd folk dance from this country that involves stomping and chanting the word “landlady.” A ballet method developed in this country was outlined in *The Foundation for Dance* and emphasizes equal importance on both the arms and legs. This country’s state company premiered the early ballets *The Little Humpbacked Horse* and *La Bayadère* (“bah-yah-DAIR”), which were choreographed by Frenchman Marius Petipa (“PET-ee-pa”). A dancer born in this nation was known for thousands of performances of her solo piece *The Dying Swan*. A company [emphasize] *named for* this country premiered *The Rite of Spring*. For 10 points, name this home country of Agrippina Vaganova (“va-GA-nuh-va”) and Anna Pavlova.

ANSWER: **Russia** [or **Russian Federation**; or **Russian Empire**; accept **Soviet Union** or **USSR** or **Union of Soviet Socialist Republics**; accept **Russian pas de chat**; accept Ballets **Russes**] (The second sentence refers to the *barynya*.)

<Other Arts (Dance)>

13. This monarch requested the apostolic constitution *Regiminis Apostolici* from Pope Alexander VII (“the seventh”), which required all clergy to subscribe to a “formula for submission” and led to the Formulary Controversy. The mystic Jeanne Guyon (“gwee-YAWN”) briefly convinced this king’s secret wife to adopt Quietism. This king, who razed the Jansenist stronghold at Port-Royal Abbey, forced religious minorities to quarter destructive and unruly soldiers with his *dragonnade* policy. This king was tutored by Cardinal Mazarin, who signed the Peace of Westphalia and dealt with the Fronde as chief minister during this king’s regency. This monarch revoked religious toleration with the Edict of Fontainebleau (“fon-ten-BLOH”), leading most of his country’s Huguenots to flee. For 10 points, name this “Sun King” of France.

ANSWER: Louis XIV (“the fourteenth”) of France [or Louis the Great; accept Sun King or le Roi Soleil before “Sun King” is read; prompt on Louis]

<European History>

14. This politician’s thesis, “Uncovering the Dome,” focused on a 10-year political battle over building a football field. This “senator of small things” tied Jon Tester for third place in FiveThirtyEight’s “Popularity Above Replacement Senator” ranking, behind Doug Jones. This top Democrat on the Senate antitrust subcommittee joined Mark Warner in introducing the Honest Ads act, requiring online platforms to disclose funders of political ads. Brett Kavanaugh belligerently responded “I don’t know, have you?” when this senator asked if he had ever blacked out after discussing her father’s alcoholism. This senator was called “one of the most difficult bosses on Capitol Hill” in a BuzzFeed story that accused her of abusing staffers. For 10 points, name this 2020 presidential candidate and senator from Minnesota.

ANSWER: Amy Klobuchar

<Current Events>

15. A playwright from this country wrote about two lovers who each electrocute and shoot themselves after finding out that they are half-siblings in his play *Thunderstorm*. The Crowd and Man are turned against each other by the Card Player in a play by an author from this country that opens with twelve actors playing a rope game. A playwright from this country who wrote *The Other Shore* also wrote a play in which a Silent Man leaves instead of waiting for years at the title *Bus Stop*. An author from this country became a French citizen after writing a novel that features the characters “He,” “She,” “You,” and “I.” That novel, which centers on a man traveling through this country after a cancer misdiagnosis, is called *Soul Mountain*. For 10 points, name this home country of Cao Yu (“tsao yoo”) and Gao Xingjian (“gao sheeng-j’yen”).

ANSWER: China [or People’s Republic of China; or PRC; or Zhongguo]

<World/Other Literature>

16. These molecules are the substrates of enzymes in the ADAMTS family. MEROPS is an online database of enzymes that act on these molecules; those enzymes are classified into groups like the S1 family and the PA clan. These molecules are the substrate of a group of enzymes that are irreversibly inhibited by serpins. These molecules are degraded by papain, an enzyme found in papaya. These molecules are the substrate of the most widely industrially produced enzyme, subtilisin (“suh-till-EYE-sin”). The presence of a catalytic triad containing a serine nucleophile allows elastases and trypsin to cleave these molecules. Ubiquitin is attached to these molecules to mark them for degradation. Proteases degrade, for 10 points, what macromolecules made of amino acid monomers?

ANSWER: polypeptides [or proteins; or oligopeptides; anti-prompt on immunoglobulins or antibodies or Igs or Abs by asking “can you be less specific?”; do not accept or prompt on “proteases”]

<Biology>

17. Mafia families competed to illegally haul this company’s waste to the Ringwood Mines landfill site in New Jersey. Mayor Frank Murphy denounced this company’s head of security, Harry Bennett, for firing into a crowd of unemployed workers during the Hunger March. After World War II, Air Force veterans specializing in management

science known as the “Whiz Kids” joined this company, including future Defense Secretary Robert McNamara. Security guards for this company’s River Rouge plant thrashed Walter Reuther and other union organizers at the Battle of the Overpass. This company’s founder published antisemitic ideas in *The International Jew*. For 10 points, name this company whose founder introduced the Model T automobile.

ANSWER: **Ford** Motor Company

<American History>

18. A king with this name is buried at Janus’s shrine near the Roman Jewry Wall. The daughter of a god with this name names a Bronze Age “Bedd” (“bathe”) in Anglesey. A “Half-Speech” figure with this name became one of the “three exalted prisoners” in the Welsh Triads for his captivity by Euroswydd (“air-OH-swith”). After King Bladud dons wings and falls to his death, his son with this name founds Leicester (“LES-ter”), per Geoffrey of Monmouth. A variant of the folktale “Love Like Salt” concerns a king with this name, the tenth successor of Brutus of Troy. This is the name of the father of Branwen, Brân the Blessed, and Manannán, a Celtic sea god. A king with this name exiles Kent and meets “Tom o’ Bedlam” after raving at a storm with his Fool. For 10 points, what king’s daughter Cordelia inspired a Shakespeare play?

ANSWER: King **Lear** [or **Leir**; or **Llŷr** Llediaith or **Llŷr** Half-Speech; or variants; prompt on Bedd **Branwen** by asking “who is Branwen’s father?”]

<Mythology>

19. David Foster Wallace’s story “Good People” is a retelling of a story titled for these places. The narrator tells Kandisky that “the good American writers are [James], [Crane], and [Twain]” and argues that readers of *Huck Finn* should stop when Jim “is stolen from the boys” in a memoir titled for these features that refers to the author’s wife as “P.O.M.” In a story titled for these places, a character who is assured that they “just let the air in” repeats “please” seven times while asking a man to stop talking. An author who depicted his safari with Pauline Pfeiffer in a book titled for “green” places of this sort wrote a story in which two Americans notice some of these geographical features across the Ebro River while discussing Jig’s abortion. For 10 points, Hemingway titled a story for what objects “Like White Elephants?”

ANSWER: **hills** [accept *Green Hills of Africa* or “**Hills** Like White Elephants”]

<American Literature>

20. A painting by this artist literally illustrates a simile about a “naked new-born babe” by depicting a woman on a flying horse reaching down to snatch an infant. Arthur Boyd depicted one of this artist’s subjects “on fire falling over a waterfall” after viewing his painting of a mad king with long fingernails crawling on all fours. This artist used the term “fresco” to describe the monotypes he executed on millboards, including his twelve “large color prints.” Those prints include *Pity*, *Nebuchadnezzar*, and an image of a nude man sitting on a rock and drawing with a compass. This artist of *Newton* also depicted Urizen using a compass in his *The Ancient of Days*, a frontispiece for one of his books. For 10 points, name this artist who illustrated his *Songs of Innocence and of Experience*.

ANSWER: William **Blake**

<Painting/Sculpture>

21. A painting of the 16-year-old Robert Walser dressed up as a character from this play inspired the description of the title character of Walser’s last novel. In *The Brothers Karamazov*, Fyodor repeatedly compares Ivan and Dimitri to characters from this play. After his supporters kill a mutinous character, the protagonist of this play accompanies himself with a lute as he sings a song about Brutus and Caesar. After his servant Daniel refuses to do the deed, a character strangles himself with the golden cord of his hat in this play’s bloody fifth act, in which the protagonist kills his lover Amalia. In this play, the elderly count Maximilian is tricked by his son Franz into disinheriting Karl. For 10 points, Karl Moor leads a group of outlaws in what *Sturm und Drang* drama by Friedrich Schiller?

ANSWER: *The **Robbers*** [or *Die **Räuber***]

<European Literature>

Bonuses

1. In 1978, 533 previously lost silent film reels were discovered in this country, as documented in Bill Morrison's *Dawson City: Frozen Time*. For 10 points each:

[10] Name this home country of David Cronenberg and Guy Maddin, as well as the francophone directors Xavier Dolan (“gzahv-YAY doh-LAWN”) and Denis Villeneuve.

ANSWER: **Canada**

[10] Another significant moment in the rediscovery of lost silent films was the 2008 find of the lost reels of this 1927 sci-fi film in Buenos Aires. In a famous shot from this film, the likeness of the labor leader Maria is given to a robot.

ANSWER: **Metropolis** (by Fritz Lang)

[10] *The Moonshiners*, the now-lost first narrative film ever made in this country, was remade in 2017 using only a written synopsis. This country's most acclaimed director made the films *The Match Factory Girl* and *The Man Without A Past*.

ANSWER: **Finland** [or Republic of **Finland**] (The director is Aki Kaurismäki.)

<Other Arts (Film)>

2. Though he could not read Sanskrit or Arabic, this writer claimed “a single shelf of a good European library was worth the whole native literature of India and Arabia.” For 10 points each:

[10] Name this British historian who advocated for educating Indians in the Western tradition through the English language in his *Minute on Indian Education*.

ANSWER: Thomas Babington **Macaulay**

[10] In works like his *History of England*, Macaulay followed this historical approach that advances an inevitable progression towards liberty and enlightenment. A “Junto” (“JUN-toh”) named for a party with this name dominated the reign of William III and Queen Anne.

ANSWER: **Whig** [accept **Whig Junto**]

[10] This philosopher, whose father wrote *The History of British India*, drafted a criticism of Macaulay's *Minute* for the East India Company. This utilitarian defended imperialism by not applying his harm principle to “uncivilized” communities in his treatise *On Liberty*.

ANSWER: John Stuart **Mill**

<Other History>

3. Both birdwatchers and scholars of the American Revolution will find plenty of interest on a Caribbean vacation. For 10 points each:

[10] Visitors to this country's Morne Trois Pitons (“morn twah pee-TAWN”) National Park may spot the endemic Imperial amazon parrot, or sisserou, which appears on its flag. The Marquis de Bouillé (“boo-YAY”) led a 1778 invasion at Scotts Head in this island country named because the Spanish first saw it on a Sunday.

ANSWER: **Dominica** [or Commonwealth of **Dominica**; or **Dominique**; or **Wai'tu kubuli**; do not accept or prompt on “Dominican Republic” or “República Dominicana”]

[10] A critically endangered dove is named for this island, where birds like the Lesser Antillean tanager live near Grand Etang crater lake. In 1779, the French attacked Fort Frederick to recapture this island from the British, who later reacquired it and founded its nutmeg industry.

ANSWER: **Grenada** (“gruh-NAY-duh”) [or La **Gwenad**]

[10] In 1782, the Comte de Grasse besieged this island's slave-built Brimstone Hill fortress. Alcohol-stealing green monkeys introduced by the French may raid grassquit nests on this island, which forms a country with the former sugar colony Nevis (“NEE-viss”).

ANSWER: **Saint Kitts** [or **Saint Christopher**]

<Geography>

4. This quantity is plotted against rank on a Whittaker plot, a common method of visualizing it. For 10 points each:
[10] Identify this quantity, distributions of which observationally take on a characteristic “hollow curve” shape. Fisher derived a distribution for this quantity within a community called the log-series.

ANSWER: relative species **abundance** [or species **abundance** curves; or species **abundance** distributions; prompt on **SAD**; prompt on **population** size, population **size**, or population **density**]

[10] Relative species abundances partially determine this property of a community, which is often described by the Shannon index. This property is a measure of the variety of species found within a community.

ANSWER: species **diversity** [or bio**diversity**; or biological **diversity**; accept alpha **diversity**; accept species **richness**]

[10] The species diversity within a community is determined by species richness, which does not account for relative species abundances, and this quantity, which quantifies how close the abundances of each species within a community are. Evelyn Chrystalla Pielou names a common index of this quantity.

ANSWER: species **evenness**

<Biology>

5. A “Feminist Rereading” of this poem by Georgina Sabat de Rivers partly examines the feminine past participle in its final words, which translate to “as daylight breaks on the illuminated world and I awake.” For 10 points each:

[10] Name this *silva* poem, which opens by describing a shadow that is “pyramidal” (“pih-RAM-ih-dull”) and “funereal” (“fyoo-NEE-ree-ul”).

ANSWER: “First **Dream**” [or “Primero **Sueño**”]

[10] Sor Juana Inés de la Cruz, the poet of “First Dream,” was studied in this poet’s book *The Traps of Faith*.

ANSWER: Octavio **Paz**

[10] Paz is best known for a 584-line poem titled for a “Stone” that resembles or is related to this celestial body, which also appears as a recurring symbol in Sor Juana’s “First Dream.”

ANSWER: the **Sun** [accept “**Sun** Stone” or “Piedra de **Sol**”]

<World/Other Literature>

6. Answer the following about materials used to depict eyes in ancient Egyptian sculpture, for 10 points each.

[10] Sophisticated rock crystal lenses are inlaid on the magnesite eyeballs of this sculpture discovered in Saqqara, which is noted for the naturalism of the pudgy torso of its cross-legged subject.

ANSWER: *The **Seated Scribe*** [or *The **Squatting Scribe***]

[10] The lines around the eyes on the Mask of Tutankhamun were made with lapis lazuli, a precious stone of this color that is ground to make the pigment ultramarine.

ANSWER: **blue** [accept more specific answers such as **turquoise**]

[10] The absence of a piece of quartz representing the iris on the left eye of this sculpture has led to a fringe theory that its subject lost her eye to an infection. This artwork accentuates the serpentine neck and tall crown of its subject.

ANSWER: **Bust** of **Nefertiti** [or the **Nefertiti Bust**; prompt on answers mentioning **Nefertiti** without “bust”]

<Painting/Sculpture>

7. Opponents accused this candidate of cannibalizing the Native Americans whom he defeated in the Creek War. For 10 points each:

[10] Name this general who narrowly lost to John Quincy Adams in the election of 1824 because of a “corrupt bargain” in the House of Representatives.

ANSWER: Andrew **Jackson**

[10] The “Coffin Handbills” accused Jackson of executing six of his militiamen at this battle. Edward Pakenham died storming the earthworks at this battle without the ladders that Thomas Mullins was supposed to provide.

ANSWER: Battle of **New Orleans**

[10] Two answers required. Jackson sparked a diplomatic incident with the British during the First Seminole War, when he court-martialed and executed these two British agents who were supplying the Indians.

ANSWER: Alexander **Arbuthnot** AND Robert **Ambrister**

<American History>

8. This poem takes its epigraph “Vicisti (“vee-chee-stee”), Galilee” from the apocryphal dying words of Julian the Apostate. For 10 points each:

[10] Name this poem that begins “I have lived long enough, having seen one thing, that love hath an end” and laments the downfall of paganism, telling the “pale Galilean” that the “world has grown grey from thy breath.”

ANSWER: “**Hymn to Proserpine**”

[10] When he wasn’t enjoying being whipped or bragging about having sex with a monkey, this diminutive Victorian poet wrote classical-myth-inspired poetry like “Hymn to Proserpine” and *Atalanta in Calydon*.

ANSWER: Algernon Charles **Swinburne**

[10] “Hymn to Proserpine” ends by claiming that “there is no God found stronger than [this concept]; and [this concept] is a sleep.” John Donne’s Holy Sonnet X (“ten”) tells this phenomenon to “be not proud.”

ANSWER: **death**

<British Literature>

9. This principle is often demonstrated by dropping a strong magnet through a long copper tube. For 10 points each:

[10] Name this law responsible for the negative sign in Faraday’s law of induction. It states that the magnetic field created by an induced current must oppose the change in the magnetic flux that generated the current.

ANSWER: **Lenz**’s law

[10] Lenz’s law helps explain these induced current loops produced inside a conductor by changing magnetic fields. This phenomenon is often used in trains and power tools for braking purposes.

ANSWER: **eddy** currents [or **eddies**]

[10] Magnetic cores may be laminated to reduce energy loss due to eddy currents and this other type of loss caused by magnetization and demagnetization of the core.

ANSWER: **hysteresis** (“HIST-er-EE-siss”) loss

<Physics>

10. An Etruscan-like language is recorded on a Bronze Age funerary stele (“STEE-lee”) from this island, which is inhabited by the metal-working Sintians, whose speech is “barbarous.” For 10 points each:

[10] Name this island, which along with Samothrace was a cult center of the Cabeiri craftsmen. The *Little Iliad* recounts a prophecy of Calchas that leads to a voyage to this island, where an archer lives with a festering snakebite.

ANSWER: **Lemnos** [accept **Lemnian** language] (The archer is Philoctetes.)

[10] Homer uses the term “ákhos” to ascribe this state to Philoctetes on Lemnos. In Book 18, Thetis tells the Nereids about this emotional state, which Achilles experiences right after Agamemnon decides to take Briseis. A synonym of this state is the etymology of the name of a woman described as “furēns” or “raving” in the *Aeneid*.

ANSWER: intense **grief** [or **sorrow**; or **lamentation**; accept **mourning** or **weeping** or **wailing** or **suffering**; prompt on **sadness** or **depression** or equivalents; accept **pénthos** or **Penthesilea**; accept **keening**; accept being **so sad that you express it publicly** or similar]

[10] Achilles also feels intense grief after the death of this man, who kills Sarpedon before Hector kills him.

Xenophon’s *Symposium* argued that this man and Achilles were not lovers, though Plato’s *Symposium* claimed that they were.

ANSWER: **Patroclus** [or **Pátroklos**]

<Mythology>

11. The mezzo-soprano Cecilia Bartoli helped revive interest in this composer when she released a 2003 album consisting of thirteen arias from his various operas. For 10 points each:

[10] Name this Classical composer of *Twenty-Six Variations for the Orchestra on a Theme called La Folia di Spagna*. This Kapellmeister also wrote many operas for Joseph II, including *Les Danaïdes* (“lay da-na-EED”).

ANSWER: Antonio **Salieri**

[10] The music for *Les Danaïdes* was supposed to be written by this German composer and protégé of Salieri, but he suffered a stroke and had Salieri take the commission instead. This composer wrote the reform opera *Orfeo ed Euridice* (“ew-ree-DEE-cheh”).

ANSWER: Christoph Willibald **Gluck** [or Christoph Willibald Ritter von **Gluck**]

[10] Scholars have argued that Salieri’s use of these low brass instruments for comical effect in *Les Danaïdes* influenced orchestration styles for later Classical operas. They primarily control pitch using their slides.

ANSWER: **trombones**

<Classical Music>

12. The Treaty of San Stefano prompted Abdyl Frashëri to lead the League of Prizren in resistance against the partition of lands inhabited by this ethnic group. For 10 points each:

[10] Name these people whose first prime minister Ismail Qemali waved the flag from the Assembly of Vlorë (“VLAW-ruh”) after declaring independence in 1912.

ANSWER: **Albanians** [or **Shqiptarët**]

[10] Though the League of Prizren advocated Muslim solidarity, they fought these overlords to stop their cession of Albanian lands to Montenegro. This Turkish empire lost most of its European possessions after the First Balkan War.

ANSWER: **Ottoman** Empire

[10] Although Ghegs like King Zog dominated post-independence Albania, members of this rival ethnic subgroup dominated the Communist period and standardized the Albanian language based on their southern dialect.

ANSWER: **Tosks** [or **Toskët**; accept **Tosk** Albanian]

<European History>

13. The title of a 2019 Lila Anolik biography inverts the title of a memoir about this place by an author who retired from public life in 1997 after being severely burned in a fire started by her cigar ash. For 10 points each:

[10] Name this place that the socialite Eve Babitz described in a memoir titled “Eve’s [this place].” Carter and Maria work in this place in the novel *Play It As It Lays*.

ANSWER: **Hollywood** [or **Tinseltown**; accept *Hollywood’s Eve* or *Eve’s Hollywood*; prompt on Los Angeles or LA or Southern California or SoCal]

[10] As an “it girl” in 1960s L.A., Eve Babitz was discovered as a literary talent by this author of *Play It As It Lays*. The volume *We Tell Ourselves Stories in Order to Live* collects this author’s non-fiction.

ANSWER: Joan **Didion**

[10] Babitz tried to talk her lover Jim Morrison out of naming his band after this author’s book about taking mescaline, *The Doors of Perception*. This one-time Hollywood resident also wrote *Brave New World*.

ANSWER: Aldous **Huxley**

<American Literature>

14. In geochemistry, elements are classified as incompatible if this quantity between the element and the mantle is far less than 1. For 10 points each:

[10] Name this quantity. In organic chemistry, lipophilicity can be quantified by determining the value of this quantity with respect to the octanol–water system.

ANSWER: **partition coefficient** [or **distribution coefficient**; or **P**; or **D**; or log **P**; or log **D**]

[10] In geochemistry, trace elements are said to obey Henry's law because their concentration is directly proportional to this dimensionless quantity. It represents effective concentration.

ANSWER: thermodynamic **activity** [do not accept or prompt on "activity coefficient"]

[10] One of Goldschmidt's rules states that elements with lower values of the ionic form of this quantity are more likely to be incorporated into a solid mineral. This quantity is the average distance from the nucleus to the electron cloud of an atom.

ANSWER: atomic **radius** [or ionic **radius**]

<Chemistry>

15. This thinker was one of the few women to support herself entirely by her writing in the Victorian Era, and her book *Society in America* drew controversy for its stances on girls' education and abolition. For 10 points each:

[10] Name this first female sociologist. She explored Adam Smith's ideas through a collection of fictional short stories called *Illustrations of Political Economy*.

ANSWER: Harriet **Martineau**

[10] Martineau was also known for her translations of this French thinker, who outlined how society passed through theological, metaphysical, and scientific stages. This man was a disciple of the utopian socialist Henri de Saint-Simon.

ANSWER: Auguste **Comte**

[10] Comte's positive philosophy influenced English thinkers like Herbert Spencer, who is best known for applying this scientist's ideas to social systems. Spencer coined the term "survival of the fittest" after reading this man's work.

ANSWER: Charles Robert **Darwin**

<Social Science (Sociology and Other)>

16. Muhammad sent the Expedition of Alqammah bin Mujazziz against suspected pirates from this kingdom who gathered near Jeddah. For 10 points each:

[10] Name this kingdom that was the site of the First Hijra, where some early Muslims fled to the protection of Ashama ibn Abjar to escape Meccan persecution.

ANSWER: Kingdom of **Aksum** [or Kingdom of **Axum**; prompt on **Ethiopia**]

[10] This Aksumite king converted his country to Christianity under the influence of Saint Frumentius in the mid-4th century. This ruler's namesake stone is a stele ("STEE-lee") that documents his conquest of Meroë ("MEH-ro-ee").

ANSWER: **Ezana**

[10] Tradition holds that a 10th-century queen named Gudit who belonged to this religion laid waste to Aksum, though modern historians challenge her ethnicity. Ethiopia's community of this religion is known as the Beta Israel.

ANSWER: **Judaism** [or **Jewish** or word forms; accept **Beta Israel** until read]

<World History>

17. The Bogomils taught that a contract placed in the River Jordan gave power to this figure, who refuses to worship the "protoplast" in the Slavonic Book of Second Enoch. For 10 points each:

[10] Name this figure who reigns for seven ages according to the Cathar text *The Secret Supper*. This figure represents nine statements like "undefiled wisdom instead of hypocritical self-deceit" for a sect inspired by Ragnar Redbeard's Social Darwinist text *Might is Right*.

ANSWER: **Satan** [or **Satanail**; or **Sotona**; accept the **Devil**; accept **Lucifer**; accept euphemisms such as the **adversary** or **Old Scratch**; accept LaVeyan **Satanism** or Church of **Satan**]

[10] Cathar views of Satan were influenced by the "demiurge" of the Gnostics, whom Irenaeus attacked as Satanic. Irenaeus's theology stressed this title given to Jesus in First Corinthians 15:45 ("chapter 15, verse 45") and Romans 5:12–21 ("chapter 5, verses 12 to 21"), which compares Him to an Old Testament figure.

ANSWER: Jesus is the **last Adam** [or **final Adam** or **ultimate Adam** or **new Adam** or **second Adam**; accept **Death Through Adam, Life Through Christ** or similar answers; prompt on **Adam**]

[10] Irenaeus expanded on Paul's idea of Jesus as the "last Adam" by calling the Virgin Mary the second iteration of this figure. The feminine principle "Barbelo" emanates from God in Sethian Gnosticism, named for a son of this knowledge-seeking wife of Adam.

ANSWER: **Eve** [or **Eva**; or **Chava**; or **Heúa**]

<Religion>

18. Various definitions state that these mathematical constructs must have a higher Hausdorff dimension than topological dimension, or higher box-counting dimension than topological dimension. For 10 points each:

[10] Name these constructs that are often self-similar. Examples of them include the Koch snowflake and the Sierpinski triangle.

ANSWER: **fractals**

[10] The iterated function system for constructing fractals is formally defined as a finite set of these maps from a metric space to itself. The Banach ("BAH-nuck") fixed point theorem guarantees that these maps admit a unique fixed point.

ANSWER: **contraction** maps [or **contraction** mappings]

[10] These curves are special cases of fractals and have a range that contains a ball. One of these non-differentiable curves named for David Hilbert has both a Hausdorff dimension and a box-counting dimension of 2.

ANSWER: **space-filling** curves [or **plane-filling** curves; accept Hilbert **space-filling** curve]

<Other Science (Math)>

19. This philosopher wrote that humans have a set of innate moral senses known as his "sprouts" or "hearts" that can be cultivated by corresponding virtues. For 10 points each:

[10] Name this thinker who used the example of a child about to fall into a well as evidence for innate moral intuitions distinct from ulterior motives or independent reasoning.

ANSWER: **Mengzi** [accept **Mencius**; accept Master **Meng**]

[10] Mengzi was a follower of this ancient Chinese philosopher who wrote *The Analects*.

ANSWER: **Confucius** [or **Kǒngfūzi**; accept **K'ung-fu-tzu**; accept **Kǒngzǐ**; accept Master **Kong**]

[10] This one of Mengzi's "sprouts" is cultivated from the sense of shame felt if one fails to act correctly in a situation when *li*, or respect for ritual, does not apply.

ANSWER: **yǐ** [or **rightness**; accept **appropriateness**; accept **justice**;]

<Philosophy>

20. Answer the following about novels narrated entirely by characters sitting in bars, for 10 points each.

[10] Lobo Antunes's *The Land at the End of the World* consists of the narrator telling a woman in a bar about his time in this occupation in Angola. Yuri Zhivago has this profession in a Boris Pasternak novel.

ANSWER: medical **doctors** [or **medics**; prompt on **soldiers**]

[10] The narrator regales his bartender with a tale about the "last" one of these animals in a Laszlo Krasznahorkai novella. A character who believes himself to be partly this animal sees an exhibit about his "marvelous taming" in a building advertised "for madmen only."

ANSWER: **wolf** [or **wolves**; accept *The Last **Wolf***, *Steppenwolf*, or *Az utolsó **farkas***] (That character is Harry Haller from Herman Hesse's *Steppenwolf*.)

[10] An Israeli author with this surname won the 2017 Booker International for his novel *A Horse Walks Into a Bar*, which is set entirely during a standup comic's routine at a bar. A Soviet author of this surname wrote *Life and Fate*.

ANSWER: **Grossman** [accept David **Grossman** or Vasily **Grossman**]

<European Literature>

21. During an exchange between these two thinkers, one stated “the real harm will not come in unless there is an application, in which a bridge may fall down” after the other stated that the logical contradiction was not some “sort of devil.” For 10 points each:

[10] Name these two philosophers who gave vastly different lectures on the foundations of mathematics at Cambridge in 1939. One developed an “anthropological” approach to logic after being influenced by the other at the 1933 Moral Sciences Club talk.

ANSWER: Ludwig **Wittgenstein** AND Alan **Turing**

[10] According to Juliet Floyd, Turing’s paper “On Computable Numbers” provides a justification to Wittgenstein’s post-1933 application of these concepts to logic. These concepts, introduced in *Philosophical Investigations*, outline the rules for the use of words and phrases in different contexts.

ANSWER: **language games**

[10] Wittgenstein’s focus on language games in *Philosophical Investigations* was a sharp break from the picture theory presented in this earlier book of his, which begins “The world is everything that is the case.”

ANSWER: ***Tractatus Logico Philosophicus*** [or *Logical-Philosophical **Treatise***]

<Philosophy>