

## ACF Regionals 2019

Packet by Delaware, UCSD A, and Amherst A

### Tossups

1. A cantata from this country inspired a piano concerto that quotes “L’Internationale” in its finale titled “Defend [a river in this country].” In a concerto from this country, the percussion soloists hit cardboard tubes and shake pom-poms made of paper strips; the composer of that Paper Concerto wrote a brief “Eroica” symphony for the YouTube Symphony Orchestra. A piece that sets poetry from this country ends with sprinkles of mandolin, harp, and celesta over sustained chords in the rest of the orchestra, above which the alto soloist repeats the word “ewig” (“AY-vig”). That piece inspired by this country has movements titled “The Drunkard in Spring” and “The Drinking Song of Earth’s Sorrow.” That piece inspired by this country’s poetry, written as a way to circumvent the “Curse of the Ninth,” is Mahler’s *Song of the Earth*. For 10 points, name this home country of composer Tan Dun and poet Li Bai.

ANSWER: China [or People’s Republic of China; or Zhongguo or Zhōnghuá Rénmín Gònghéguó]

<Music>

2. In a novel whose title ends with this word, John unexpectedly confesses his love to the protagonist after she is hit in the head with a rock by a mob of striking workers. Victoria Ocampo published a literary magazine of this name. This is the last word in the title of a trilogy of novels that includes *Love and War* and *Heaven and Hell*, written by John Jakes. In a novel whose title ends with this word, Margaret Hale moves from her rural home to the poverty-stricken industrial town of Milton. In a short story of this title, a man gashes his forehead while carrying a copy of the *Arabian Nights* up the stairs and later gets in a knife fight with a gaucho, possibly in a septicemia-induced fever dream; that story is by Jorge Luis Borges (“BOR-hays”). For 10 points, name this word which is paired with “north” in the title of an Elizabeth Gaskell novel.

ANSWER: south [accept Sur or “El Sur”]

<Other Literature>

3. *Two answers required.* Though neither is related to pressure, these two quantities are measured in situ by CTD sondes (“sonds”), which can be paired with Niskin bottles to take samples. An abrupt increase in these two quantities in the Northern Atlantic is caused by the intrusion of MIW, which forms a distinct water mass below the common water. The meridional overturning circulation is primarily driven by gradients in these two quantities. Water in the Mediterranean Sea has high values of these quantities because of its low input and proximity to the Equator. These two quantities primarily determine the density of seawater, which is why Antarctic Bottom Water sinks. For 10 points, name the two driving forces behind the thermohaline circulation, which are often measured in degrees Celsius and parts per thousand.

ANSWER: temperature AND salinity [accept thermohaline circulation until read; accept temperature AND conductivity in the first sentence; accept descriptions of “salinity” like salt level or salt concentration; prompt on just concentration for “salinity”]

<Other Science (Earth Science)>

4. The founder of a religion practiced in this country was killed in an ambush at the Field of Reeds and had earlier managed to get himself out of an insane asylum by converting his psychiatrist. A religion originating in this country that centers around the consumption of coconuts was briefly practiced by John Steinbeck IV, the son of the famous author. The missionary Pigneau de Béhaine (“peen-YO duh bay-EN”) was responsible for the conversion of a prominent family from this country, which is also home to the agrarian Buddhist sect of Hoahaoism (“hwah-how-ism”). A religion that was founded in this country uses the left eye of God as its primary symbol and

worships Victor Hugo as a saint. Cao Dai (“cow die”) originated in, for 10 points, what southeast Asian country where Catholicism was practiced by several emperors of the Nguyen (“win”) dynasty?

ANSWER: **Vietnam** [or Socialist Republic of **Vietnam**; or Cộng hòa xã hội chủ nghĩa **Việt Nam**]

<Religion>

5. This leader refused clemency to a captured assassin after the assassin stated that all that was needed to capture him was to “take away his spectacles and braces.” This leader appeared on television wearing an army uniform to foil the Generals’ putsch against him. An attempt on this leader’s life inspired the plot of Frederick Forsyth’s novel *The Day of the Jackal*. This man tersely ordered the driver of his Citroën (“see-troh-EN”) DS limousine to drive faster while it was sprayed with bullets during an assassination attempt by the OAS. Jean Bastien-Thiry was the last person to be executed by firing squad in France for an attempted assassination of this leader after he signed the Evian Accords giving Algeria its independence. For 10 points, name this first president of the Fifth French Republic.

ANSWER: Charles **de Gaulle** [or Charles André Joseph Marie **de Gaulle**]

<European History>

6. This musician’s group wrote a six-track album containing the songs “Calcutta Blues” and “Golden Horn,” inspired by a US State Department-funded tour through Eurasia. The reissue of one of this musician’s albums contains a rendition of “So This Is Love” as a bonus track; that album is titled [*this musician*] *Digs Disney*. This musician used a Joan Miró (“zhoo-AHN mee-ROH”) painting for the cover of an album whose title says it goes “further” than another of his albums. Another of this musician’s albums includes a piece whose beat structure alternates between 2 + 2 + 2 + 3 and 3 + 3 + 3 and whose title is inspired by Mozart. This collaborator of Paul Desmond had a penchant for unusual time signatures, as can be seen in “Unsquare Dance,” “Blue Rondo à la Turk,” and a song whose title references it being in 5/4. For 10 points, name this jazz pianist whose album *Time Out* contains “Take Five.”

ANSWER: Dave **Brubeck** [or David Warren **Brubeck**]

<Other Arts>

7. In the story of the Rasa-lila, this instrument provides the music that the gopis of Vrindavana dance to for 4.32 billion years. According to some Chinese legends, one type of this instrument was invented by the Yellow Emperor, though historically it was probably imported during the Han Dynasty. A hunchbacked trickster deity that plays one of these instruments delivers unborn babies to young girls in myths from the American southwest. Krishna is often portrayed in the Tribhanga posture with one of these musical instruments. The Hopi god Kokopelli is commonly depicted playing one of these instruments, which represents his giant penis. For 10 points, name this class of musical instrument invented and played by the Greek god Pan.

ANSWER: **flute** [or **pipe**]

<Mythology>

8. The speaker of this poem hears “four voices of four hamlets round” in the first of this poem’s three sections set on Christmas. The last section of this poem takes place “thrice three years” after its start and depicts the wedding of its author’s sister. This poem, which names a type of ABBA (“A-B-B-A”) stanza in iambic tetrameter, starts with an invocation to the “strong son of God, immortal love.” One of this poem’s cantos, which depicts something that “with ravine, shrieked against God’s creed,” is often taken as a meditation on evolution. This poem is the source of the phrases “nature, red in tooth and claw” and “’Tis better to have loved and lost than never to have loved at all.” For 10 points, name this poem by Alfred, Lord Tennyson written after the death of Arthur Henry Hallam.

ANSWER: “**In Memoriam** A.H.H.”

<British Literature>

9. Benjamin Latrobe and William Strickland competed to design the headquarters for an institution of this type in Philadelphia. In 1811, Stephen Girard bought one of these institutions and made himself its sole proprietor to take advantage of a legal loophole. A political cartoon depicts one of these institutions as a “many-headed monster” with its leader as one of the heads in a top hat. After the demise of one of these institutions, a number of them called “wildcat” sprung up taking advantage of lax regulations. A Maryland state tax on one of these institutions led to a court case that established the existence of implied powers. Nicholas Biddle was the final president of a federal one of these institutions. Andrew Jackson fought against, for 10 points, what institutions which loan credit and store money?

ANSWER: **banks** [accept **Banks** of the United States; accept wildcat **banks**; accept pet **banks**]

<American History>

10. One gene that regulates these phenomena is unusually encoded by the complementary strand of the thyroid receptor gene. The DLMO protocol and actigraphy are used to diagnose disorders of these phenomena, which can be studied by measuring levels of a 6-sulphatoxy metabolite of a certain hormone in the urine. The nuclear receptors Rev-ErbA (“reverb-uh”) alpha and beta are critical to controlling these phenomena, which are also controlled by a negative feedback loop induced by the BMAL1 transcription factor. In *Drosophila* (“druh-SOFF-ill-uh”), the TIM protein stabilizes PER, which is displaced by CRY to reset these phenomena in a light-dependent manner. Entrainers are used to synchronize these phenomena, which in humans are controlled by the suprachiasmatic nucleus, which triggers the pineal gland to release melatonin. For 10 points, name these 24-hour cycles in animals.

ANSWER: **circadian** rhythms [accept **sleep-wake cycles** or **sleep**]

<Biology>

11. This mountain range is home to the four deepest known caves in the world, including the first one ever to be explored past a depth of 2000 meters, Krubera Cave. The culture hero Amirani was supposedly chained to a stratovolcano in this mountain range that is home to several surge-prone glaciers, including one that caused a 2014 mudslide in the Darial Gorge. The village of Noratus in the “Lesser” part of this mountain range is home to a field of *khachkar* gravestones on the shores of Lake Sevan. Mount Kazbek is in this range, which was legendarily the site of the Gates of Alexander. This range runs through such disputed territories as South Ossetia, Abkhazia, and Nagorno-Karabakh. For 10 points, Mount Elbrus is the highest point in what mountain range that runs between the Black and Caspian Seas and which, like the Urals, is often used to define the boundary between Europe and Asia?

ANSWER: **Caucasus** Mountains

<Geography>

12. This king’s ambassador to Venice, Francisco de Vargas, wrote that the Pope was “the poison at the root of all this trouble” after this ruler declared war on the Pope. Henry II of France died during a jousting tournament held to celebrate the marriage of his daughter Elisabeth to this ruler. The French historian Fernand Braudel wrote a book about *The Mediterranean World in the Age of* this king. This ruler’s soldiers mutinied and brutally sacked Antwerp after a year-long siege because this king could not pay them, having declared bankruptcy. A man boasted that he had singed (“sinj’d”) this king’s beard in a raid on Cádiz. After a fleet of ships sent by this ruler was defeated at the Battle of Gravelines, Elizabeth I gave a famous address to troops at Tilbury. For 10 points, name this king of Spain who sent the failed Spanish Armada.

ANSWER: **Philip II** of Spain [prompt on **Philip**]

<European History>

13. Quantum analogs to classical systems with this property exhibit scars corresponding to unstable orbits, and the inverse participation ratio can be used to quantify the extent to which a quantum system has this property. Bunimovich (“BUN-im-oh-vitch”) studied a “billiards” table with rounded ends that exhibits this property. The detailed structure of the first recurrence map for a system is used to determine if it has this property. This property is

characterized by positive Lyapunov exponents, meaning infinitesimally close trajectories grow exponentially apart in phase space. This property is exemplified by a set of three ordinary differential equations describing atmospheric convection that exhibit a Lorenz attractor, as well as physical systems like the double pendulum. For 10 points, name this property of systems that exhibit extreme sensitivity to initial conditions, sometimes called the butterfly effect.

ANSWER: **chaos** [or **chaotic** dynamics; accept **ergodicity** or word forms until “first recurrence map” is read]  
<Physics>

14. Mark Meadow argues that this painting’s use of thematic clusters was informed by the treatise *Copia: Foundations of the Abundant Style*. This painting [emphasize] *does not* include written words, a departure from a similar print by Frans Hogenberg. Near the center of this painting, a stork dips its head into a pitcher while sitting across a table from a fox. In this painting, a woman puts a blue cloak on her husband, an act that gives this painting its alternate name. In the lower right of this painting, a man fails to stretch his arms to reach two loaves of bread, an image intended to evoke the idea of struggling to live within a budget. This painting uses a high vantage point to depict a number of street scenes, similar to its artist’s depiction of *The Fight Between Carnival and Lent*. For 10 points, name this painting by Pieter Bruegel (“BROY-gull” or “BRUH-hull”) the Elder, in which peasants act out literal depictions of Dutch idioms.

ANSWER: **Netherlandish Proverbs** [or **Nederlandse Spreekwoorden**; accept *The Blue Cloak* until read] (*Copia* is a treatise by Erasmus.)  
<Painting>

15. This character listens to a rival’s howl, which is composed of the single vowel “A,” and notices that that rival’s hair is completely white, in a poem by Zbigniew (“z’BIG-nyeff”) Herbert. A poem that mentions “the way a morning sometimes looks through boughs not yet in leaf” is titled for an “early” version of this character. A poem named for this character describes a smile that runs through “to that dark center where procreation flared.” A representation of this character is “suffused with brilliance from inside, like a lamp,” even though “we cannot know his legendary head with eyes like ripening fruit.” A *Dinggedicht* (“DING-guh-dict”), or thing-poem, named after this character ends with the abrupt declaration “You must change your life.” For 10 points, Rainer Maria Rilke (“RILL-kuh”) wrote a poem about an “archaic torso” of what Greek god?

ANSWER: **Apollo** [accept “**Apollo** and Marsyas” or “Early **Apollo**” or “Archaic Torso of **Apollo**”]  
<European Literature>

16. One text dubs this thinker the “arch-Philistine” while criticizing him for establishing as dogma the “prejudice” that the labor-fund is a fixed magnitude. This thinker argued that the dictates of what he termed the “principle of antipathy and sympathy” could unintentionally merge with a theory he supported, unlike the “principle of asceticism.” At the beginning of his best-known work, this philosopher wrote that “every effort we can make to throw off our subjection, will serve but to demonstrate and confirm” mankind’s governance by the “two sovereign masters” of pain and pleasure. This author of *An Introduction to the Principles of Morals and Legislation* worked throughout his career on refining his defense of a system that would provide “the greatest happiness of the greatest number.” For 10 points, name this English philosopher who popularized the theory of utilitarianism.

ANSWER: Jeremy **Bentham** (The text in the first clue is Marx’s *Capital*.)  
<Philosophy>

17. This element names, and is used in, a matrix-free alternative to MALDI developed by Wei and Buriak. A functional group that contains this element bonded to alkyl chains moves from carbon to oxygen in the Brook rearrangement. This element is the heaviest in a reagent used to derivatize amino acids for gas chromatography, called MTBSTFA. Protecting groups containing this element are removed from alcohols using TBAF. Enol ethers of this element are used in the Mukaiyama variant of the Michael addition. This element bonded to four methyl groups

is used as a standard for proton NMR. An oxide of this element is the main component of normal soda-lime glass. It is tetrahedrally bonded to four oxygen atoms in quartz. For 10 points, name this element, located below carbon on the periodic table, commonly used in computer chips.

ANSWER: **silicon** [or **Si**]

<Chemistry>

18. This empire's artists made magnificent halberds of gold and silver for initiation rites in which nobility would don a red tunic and have their ears pierced, allowing them to wear huge earrings to mark their status. Rectangular residences in this empire were often neatly fitted around a central plaza by organizing them into *kancha* blocks. Uniquely, this empire's architecture features numerous walls made of irregularly shaped stones which were fitted together without mortar or paste. This empire's *ayllu* ("EYE-loo") clan structure organized the citizens who paid taxes in-kind via labor through its *mit'a* system. This empire used that labor to build a vast road network that connected its namesake "Four Regions," or *Tawantinsuyu* ("tah-wan-teen-SOO-yoo"), from the *puna* grasslands of Ecuador to Chile. For 10 points, name this pre-Columbian empire centered in the Andes.

ANSWER: **Inca** Empire [accept **Tawantinsuyu** until read]

<World History>

19. A character created by this author decides to give a nun "the freedom to follow her own destiny" and declares that "everyone is a nun" after having a mystical experience. That character created by this author pretends to be the great-nephew of a French painter in order to work for a Japanese-Canadian couple's correspondence art school. In another story by this author, a character who calls his wife "Miss Spiritual Tramp of 1948" is yelled at for looking at a woman's feet in an elevator. In a story by this author of "De Daumier-Smith's Blue Period," a man shoots himself at a Florida hotel after taking Sybil Carpenter to look for the title aquatic creatures. For 10 points, name this author who wrote about the death of Seymour Glass in "A Perfect Day for Bananafish" and who also wrote *The Catcher in the Rye*.

ANSWER: J. D. **Salinger** [or Jerome David **Salinger**]

<American Literature>

20. *Gebser v. Lago Vista Independent School District* established the criteria that in order to be held liable, school districts must have actual, not constructive, notice of this phenomenon and display "deliberate indifference" toward it. According to Barbara Gutek's theory of this phenomenon, a form of "spillover" leads to the frequent experience of it by people in nontraditional roles. In *Meritor Savings Bank v. Vinson*, the Supreme Court adopted the category of "quid pro quo" as one form of this phenomenon, drawing on Catharine MacKinnon's argument that it is an illegal form of discrimination. In deciding cases about this phenomenon, courts often try to determine whether it is sufficiently "severe or pervasive" to produce a "hostile environment" and employ the "reasonable woman standard." For 10 points, name this two-word phrase that refers to bullying and coercion typically targeted towards women.

ANSWER: **sexual harassment** [accept word forms and more specific forms, such as **sexual harassment** of students, **sexual harassment** of employees, etc.; prompt on harassment, sex discrimination, gender discrimination, or bullying until read]

<Social Science>

21. This leader controversially placed a wreath in a cemetery honoring SS members in Bitburg. In a presidential campaign, this man declared "I believe in states' rights." After the Symbionese Liberation Army demanded the distribution of food following the kidnapping of Patty Hearst, this man joked about a botulism outbreak contaminating the food. This leader blasted the Soviet Union after the shooting down of Korean Airlines Flight 007. This president authorized the overthrow of Hudson Austin in Operation Urgent Fury, the invasion of Grenada. This president's Secretary of State declared "I am in control here" after a failed assassination attempt on his life by John

Hinckley. This president's reputation was boosted after he ended the Iran Hostage Crisis. For 10 points, name this president throughout most of the 1980s.

ANSWER: Ronald **Reagan** [or Ronald Wilson **Reagan**]

<American History>

## Bonuses

1. Performing this task assigns differently sized codewords to symbols based on their frequency. For 10 points each:  
[10] Name this task that reduces the number of bits required to store information. Entropy coding is an example of a lossless scheme of performing this task.

ANSWER: lossless data **compression**

[10] This recursive optimal coding scheme for lossless data compression puts the symbols into a binary tree in order of their frequency, using each symbol's location to determine its binary encoding.

ANSWER: **Huffman** coding

[10] Huffman coding creates this kind of system, which consists entirely of uniquely distinguishable words, because no codeword is contained in the beginning of another. The Kraft–McMillan inequality can check if a set of words with given lengths is this kind of system.

ANSWER: **prefix** codes [or **prefix** coding or **prefix-free** codes or **comma-free** code]

<Other Science (Mixed)>

2. In this novella, Doctor Ivan Bormenthal notes that the pituitary gland gives “not rejuvenation but total humanization” and “predetermines the human image.” For 10 points each:

[10] Name this novella in which Professor Preobrazhensky transplants two organs into Sharik, turning him into a human.

ANSWER: **Heart of a Dog** [or **Sobachye syerdsye**; accept *A Dog's Heart*; accept any English translation that is identical to **Heart of a Dog** or *A Dog's Heart* if you ignore the articles “a” and “the”]

[10] *Heart of a Dog* is a satire on Communist theories of human perfectibility written by this author, who also wrote *The Master and Margarita*.

ANSWER: Mikhail **Bulgakov** [or Mikhail Afanasyevich **Bulgakov**]

[10] Bulgakov's science fiction-themed satires also include *The Fatal Eggs*, in which Vladimir Persikov accidentally creates a plague of snakes, ostriches, and crocodiles while trying to breed these animals.

ANSWER: **chickens**

<European Literature>

3. This composer's Ninth Piano Concerto was written for Victoire Jenamy, whose name was transcribed incorrectly, resulting in the concerto's nickname being “Jeunehomme” (“zhun-UMM”). For 10 points each:

[10] Name this composer of 27 piano concertos and 41 symphonies, the last of which is nicknamed *Jupiter*.

ANSWER: Wolfgang Amadeus **Mozart** [or Johannes Chrysostomus Wolfgangus Theophilus **Mozart**]

[10] This Mozart piano concerto opens with the strings softly playing a highly chromatic melody in unison. This piano concerto is the second of only two by Mozart written in a minor key.

ANSWER: Piano Concerto No. **24** in **C minor** [accept either underlined part; or **K. 491**]

[10] Mozart's other minor-key piano concerto, No. 20, is in this key. This is also the key of “Der Hölle Rache” (“dair HUR-luh RAH-khuh”) and Mozart's Requiem.

ANSWER: **D** minor [do not accept “D major”]

<Music>

4. The economic success of agricultural reforms implemented by this man in Abasha helped propel his political career. For 10 points each:

[10] Name this politician known as the “Silver Fox” who was ousted in 2003 after mass protests sparked by accusations of electoral fraud. He was also Minister of Foreign Affairs under Mikhail Gorbachev.

ANSWER: Eduard **Shevardnadze** [or Eduard Ambrosiyevich **Shevardnadze**]

[10] Shevardnadze was president of this former Soviet Republic and was forced to resign after its Rose Revolution.

ANSWER: **Georgia** [or Republic of **Georgia**]

[10] This ethnic Georgian led the Soviet Union during World War II. He purged millions of political enemies during the 1930s.

ANSWER: Joseph **Stalin** [or Iosif **Dzhugashvili**]

<European History>

5. This author's *Broken Earth* series is set on a supercontinent called the Stillness that is home to oppressed earth-controlling "orogenes," one of whom cracks the continent to trigger a "Fifth Season." For 10 points each:

[10] Name this author who won the 2018 Hugo Award for Best Novel, making her the first person to win that award three years in a row.

ANSWER: N. K. **Jemisin** [or Nora K. **Jemisin**]

[10] Jemisin's first trilogy of novels, which began with *The Hundred Thousand Kingdoms*, is titled for this word. It also names a much worse "Cycle" by Christopher Paolini about Eragon and his dragon Saphira.

ANSWER: **inheritance** [accept the *Inheritance Trilogy* or *Inheritance Cycle*]

[10] The first person to win the Hugo for Best Novel two years in a row was this homophobic Mormon, who won it for *Ender's Game* and *Speaker for the Dead*.

ANSWER: Orson Scott **Card**

<Trash>

6. Factor H serves as an inhibitor of this pathway, which is abnormally activated in both atypical hemolytic-uremic syndrome and paroxysmal nocturnal hemoglobinuria. For 10 points each:

[10] Name this pathway that has classical and alternative portions. The terminal part of this pathway generates the membrane attack complex, which directly destroys pathogens.

ANSWER: **complement** system

[10] One of the three activating pathways for the complement system is named after these proteins that bind to carbohydrates. In particular, the versions of these proteins in the complement system bind to mannose and glucose.

ANSWER: **lectins** [accept **MBL** or **mannose-binding lectins**]

[10] Complement levels, along with anti-dsDNA antibodies, are commonly measured during flares of this disease. The most well-recognized symptom of this rheumatologic disease is a butterfly rash on the face.

ANSWER: **lupus** [or systemic **lupus** erythematosus; or **SLE**]

<Biology>

7. A poem by this author follows a description of uncollected bones with a description of new ghosts angered by injustice and old ghosts weeping. For 10 points each:

[10] Name this 8th-century poet who described a procession of conscript archers in his "Song of the Wagons."

ANSWER: **Du Fu** [or **Tu Fu**]

[10] Du Fu lived in this country, which is the setting of his poem "Autumn Day in Kui Prefecture."

ANSWER: **China** [or **Zhongguo**]

[10] Thirty-nine Du Fu poems are included in an anthology whose title promises this many Tang poems, compiled by Sun Zhu during the Qing ("ching") Dynasty. The *Classic of Poetry* is also often said to have this many poems, though it actually has slightly more.

ANSWER: **300**

<World Literature>

8. A paper that argues [emphasize] *against* this philosophical principle analyzes three versions of a man named Jones who is alternatively indifferent to, "stampeded by," or unaffected by a threat in deciding whether to perform an action. For 10 points each:

[10] Name this principle which says that an agent is only morally responsible for an action if the agent could have done otherwise.



ANSWER: principle of **alternate possibilities** [or **PAP**]

[10] The aforementioned paper presents the namesake “cases” of a philosopher with this last name, which he shares with a city that names a Marxist school of philosophers affiliated with its Institute for Social Research, including Max Horkheimer.

ANSWER: **Frankfurt** [accept Harry **Frankfurt**; accept **Frankfurt** School]

[10] The principle of alternate possibilities is often used as an argument against compatibilism, which claims that determinism is consistent with this ability of people to have control over their own actions.

ANSWER: **free will**

<Philosophy>

9. California State Route 13 in Oakland was named after this man in 1957. For 10 points each:

[10] Name this governor of California who later became Chief Justice of the Supreme Court. He was Chief Justice during the *Brown v. Board* case.

ANSWER: Earl **Warren**

[10] Warren was the running mate of this Governor of New York during his presidential run. This man lost votes from Southern voters after Strom Thurmond broke away from the Democratic Party.

ANSWER: Thomas **Dewey** [or Thomas Edmund **Dewey**]

[10] The first recorded debate between presidential candidates took place during the 1948 Republican primaries between Thomas Dewey and this man, who ran for president seven more times. In that debate, Dewey told him “you can’t shoot an idea with a gun” after he proposed banning the Communist party in the United States.

ANSWER: Harold **Stassen**

<American History>

10. Malcolm Hailey directed a decade-long research survey on the “extent to which modern knowledge” was being applied to this region. For 10 points each:

[10] Name this region described as a potential source of “results of striking practical importance” in a “view” of it written by Julian Huxley. The idea of this region as a “living laboratory” is explored in a book by Helen Tilley.

ANSWER: **Africa** [accept *An **African** Survey*, ***Africa** View*, or ***Africa** as a Living Laboratory*; accept Sub-Saharan **Africa**]

[10] Tilley describes how these things were introduced to Kenya by Richard Oliver. Oliver was a student of Lewis Terman, who developed the “Stanford–Binet (“bin-AY”)” one of these things that produced a namesake “quotient.”

ANSWER: **intelligence tests** [accept word forms; or **IQ tests**]

[10] Tilley coined the phrase “thinking like an empire” to refer to Britain’s colonial use of scientific ideas, a reference to James Scott’s work on “seeing like” one of these entities. Max Weber (“VAY-bur”) argued that a monopoly on the legitimate use of force defines these entities.

ANSWER: **states** [accept *Seeing Like a **State***]

<Social Science>

11. Fionnula Flanagan wrote a play entitled [*this author’s*] *Women*, about the women in his life and some of his female characters. For 10 points each:

[10] Name this author. In the movie version of the aforementioned play, Flanagan portrays his patron, Harriet Shaw Weaver.

ANSWER: James **Joyce** [or James Augustine Aloysius **Joyce**]

[10] In the movie, Flanagan also plays Nora, Joyce’s wife, who had this last name.

ANSWER: **Barnacle**

[10] Among the fictional characters brought to life in *James Joyce’s Women* is Cissy Caffrey, one of the girls on the Sandymount Strand in the “Nausicaa” episode of this novel about a day in the life of Leopold Bloom.

ANSWER: **Ulysses**

<British Literature>

12. This body was formed as a reaction to Peter the Great's comparison of Russia to the rest of Europe. For 10 points each:

[10] Identify this body that was formed by Peter in 1721 and was the highest governing body of the Russian Eastern Orthodox church until 1918.

ANSWER: **Most Holy Synod** ("SIN-uhd")

[10] The Most Holy Synod was replaced by the return of the Patriarchate of Moscow, which is currently led by this man. Political opponents often accuse him of cozying up to the Putin regime.

ANSWER: Patriarch **Kirill** of Moscow [or **Cyril**; or Vladimir Mikhailovich **Gundyayev**]

[10] The first patriarch of Moscow, installed in 1589, was this man, who shares his name with a Biblical figure subjected to torment by God to test his faith.

ANSWER: **Job** of Moscow [or **Iov**]

<Religion>

13. According to the book *Film Form*, this technique imbues all of Japanese culture except for cinema, including Sharaku's portraits of kabuki actors and "transitionless acting" in Japanese theater. For 10 points each:

[10] Name this editing technique used by many early Soviet directors. This term also refers to scenes like the training sequence in *Rocky*.

ANSWER: **montage**

[10] *Film Form* is by this theorist who tested out his theories of montage in a scene in which a baby carriage rolls down the Odessa Steps.

ANSWER: Sergei **Eisenstein** [or Sergei Mikhailovich **Eisenstein**]

[10] This director of *By the Law* demonstrated the power of montage by alternating identical shots of an actor's expressionless face with different images.

ANSWER: Lev **Kuleshov** [or Lev Vladimirovich **Kuleshov**]

<Other Arts>

14. This result was published 10 years after earlier laws including the law of equal areas in equal times. For 10 points each:

[10] Name this law which states that the square of the period of an elliptical orbit is proportional to the cube of the semimajor axis.

ANSWER: **Kepler's third** law of planetary motion [or the **third** law of **Kepler**]

[10] Though Kepler determined his laws empirically, they can be derived with this inverse square law put forth by Newton.

ANSWER: Newton's law of universal **gravitation** [accept **gravity** in place of "gravitation"; prompt on Newton's law; do not accept any numbered laws]

[10] Applying Newton's law of gravitation to the whole Solar System results in a very complicated  $n$ -body problem. However, the motion is relatively simple, thanks to this theorem from classical mechanics. Loosely speaking, this theorem states that quasi-periodic orbits are stable to small perturbations.

ANSWER: **KAM** theorem [or **Kolmogorov–Arnold–Moser** theorem]

<Physics>

15. This ruler won the 955 Battle of Lechfeld against the Magyars. For 10 points each:

[10] Name this first Holy Roman Emperor after Charlemagne.

ANSWER: **Otto I** [or **Otto** the **Great**; prompt on Otto]

[10] Otto was the son of a king of this name who was nicknamed "the Fowler." A Holy Roman Emperor of this name walked to Canossa after being excommunicated by Gregory VII.

ANSWER: **Henry** [accept **Henry** the Fowler; accept **Henry IV**]

[10] Henry II signed the Peace of Bautzen with this Polish king, who captured Kiev to install his son-in-law Sviatopolk the Accursed as king. He was the son of Mieszko I (“m’YESH-ko the first”), the first Christian king of Poland.

ANSWER: **Boleslaw I** [or **Boleslaw** the **Brave**; or **Boleslaw Chrobry**; prompt on **Boleslaw**]

<European History>

16. A short story by Will Self replaces the title object of this story with a rock of crack. For 10 points each:

[10] Name this story in which Percy Washington boasts that his father is the richest man in the world because he owns the enormous title object.

ANSWER: “The **Diamond as Big as the Ritz**”

[10] “The Diamond as Big as the Ritz” is one of the five stories by this author known collectively as the “Gatsby cluster” because of their relationship to *The Great Gatsby*.

ANSWER: F. Scott **Fitzgerald** [or Francis Scott Key **Fitzgerald**]

[10] In this story from the Gatsby cluster, Father Schwartz collapses after hearing confession from Rudolph Miller. This story developed out of a discarded early draft of *The Great Gatsby*.

ANSWER: “**Absolution**”

<American Literature>

17. The oldest known depiction of this creature is found on the mace of Scorpion II. For 10 points each:

[10] Name this mysterious creature that most scholars suspect is either a composite or represents a now-extinct animal. Ancient Egyptians used hieroglyphics of this creature to represent weather events like storms.

ANSWER: the **Set animal** [accept **sha** or any answer indicating the unknown **animal** used in depictions of **Set’s head**]

[10] The hieroglyphics of the Set animal somewhat resemble this pointy-eared doglike creature. The head of the god of mummification, Anubis, is traditionally one of these creatures.

ANSWER: **jackal**

[10] Appropriately, Anubis is the son of Set and this goddess, his wife. In addition to her funerary duties, this goddess was worshipped as the protector of the bennu, the rough Egyptian equivalent of the phoenix.

ANSWER: **Nephthys**

<Mythology>

18. Answer the following about the peripatetic German painter Moritz Rugendas, for 10 points each.

[10] Rugendas’s depiction of a so-called *Virgin Forest* in this modern-day country’s province of Rio de Janeiro became the archetypal European image of a tropical forest.

ANSWER: **Brazil** [or Federative Republic of **Brazil**; or República Federativa do **Brasil**; accept *Picturesque Voyage to **Brazil*** or *Voyage Pittoresque dans le **Brésil***]

[10] With the help of Victor Aimé Huber (“ay-MAY yoo-BAIR”), Rugendas published that image in a set of landscapes titled for this type of voyage to Brazil. William Gilpin popularized this term in the English art world of the late 18th century.

ANSWER: **picturesque** [or **pittoresque**; accept ***Picturesque Voyage to Brazil***]

[10] Rugendas was inspired by the travels of Alexander Humboldt, as was this American member of the Hudson River School, who depicted a landscape traversed by Humboldt in his painting *Heart of the Andes*.

ANSWER: Frederic Edwin **Church**

<Painting>

19. Coupling between instances of this element is the basis for the INADEQUATE experiment. For 10 points each:

[10] Name this element, whose 13 isotope is a common one used in NMR spectroscopy. Its 14 isotope decays to nitrogen-14 with a half-life of 5700 years.

ANSWER: **carbon** [or **C**]

[10] Coupling between directly bound protons and carbon-13 nuclei can be observed in this 2D NMR experiment developed by Bodenhausen, which largely replaced HETCOR due to its higher sensitivity.

ANSWER: 2D **HSQC** [or **Heteronuclear Single Quantum Coherence**]

[10] This quantity is plotted on the x-axis of a simple 1D NMR experiment. It is usually in units of parts per million, and is a normalized version of the resonance frequency of a particular nucleus relative to a standard.

ANSWER: **chemical shift** [prompt on **delta**]

<Chemistry>

20. This leader escaped to Libya by helicopter when his country's capital fell in 1979. For 10 points each:

[10] Name this former dictator who expelled all Asians from his country and made a dubious claim to the crown of Scotland.

ANSWER: Idi **Amin** [or Idi **Amin** Dada Oumee]

[10] Idi Amin was overthrown when Julius Nyerere, the president of this country, invaded Uganda. This country was formed from the merger of Tanganyika and Zanzibar.

ANSWER: **Tanzania**

[10] The overthrow of Idi Amin was the culmination of a war which resulted from Uganda's attempt to annex this northwestern region of Tanzania.

ANSWER: **Kagera** Region [or **West Lake** Region]

<World History>

21. After being afflicted with leprosy, this novel's protagonist starts to advocate cannibalism. For 10 points each:

[10] Name this Christian Kracht novel which fictionalizes the story of August Engelhardt, who founded a nudist colony whose members subsisted entirely on coconuts.

ANSWER: **Imperium**

[10] Kracht was called the "bouncer of right-wing thought" in a controversial review of *Imperium* published in this weekly German newsmagazine whose name means "The Mirror."

ANSWER: *Der* **Spiegel**

[10] Kracht's pop-lit debut novel, *Faserland*, has often been compared to the novels of this American author, including *Less Than Zero* and *American Psycho*.

ANSWER: Bret Easton **Ellis**

<European Literature>