

## ACF Regionals 2020

Packet B by McGill A and Princeton A

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Tossups

1. Citing “indecenty,” the Seattle City Council shut down a 1936 all-black production of this play. A 1946 all-black Broadway production of this play closed after just four performances. This play begins with a character lamenting that the streets would be more crowded “if only they had been invited to a Bacchic revelling.” A group of people in this play refuse to “crouch down like the lioness on the cheese grater.” In this play, Cinesias laments that his son had not been washed for six days. A parabasis-like section of this play references the failures of the Sicilian Expedition. Lampito, Calonice, and this play’s title character persuade a group of women to seize the Acropolis. Wives withhold sex from their husbands to end the Peloponnesian War in, for 10 points, what Aristophanes comedy?

ANSWER: Lysistrata

<World/Other Literature>

2. *Note to moderator: Read the answerline carefully. Note to players: Description acceptable.* Douglas Hanahan created a common substance used for this purpose called “Super Optimal.” Heating a substance used for this purpose to 80 degrees Celsius, causing the lysis of erythrocytes, produces a substance used for this purpose named for its resemblance to chocolate. This task is difficult to perform for organisms described with the adjective fastidious. Blood is added to a substance used for this purpose to assay for hemolytic activity. Mixtures used for this purpose are commonly made selective by adding ampicillin or tetracycline. A mixture used for this task contains tryptone, nutrients, minerals, and trace elements; that mixture is LB, a nutrient broth. For 10 points, agar in a Petri dish is common medium for what task, in which organisms like *E. coli* are allowed to reproduce?

ANSWER: growing bacteria [or culturing bacteria; accept equivalents like bacterial growth; accept answers referring to providing nutrients or sustenance or food or minerals for bacteria; accept answers referring to microbe or microorganisms in place of “bacteria”; prompt on answers referring to culturing cells or growing cells by asking “what type of organism are you growing?”; prompt on transformation by asking “other than inducing competence, what other task do you have to perform before you can transform cells?”]

<Biology>

3. With Ning Wang, this thinker discussed “marginal revolutions” like private farming in *How China Became Capitalist*. Kahneman, Knetsch, and Thaler demonstrated the endowment effect by showing that this thinker’s best-known idea failed to accurately describe how participants would trade mugs. A paper by this economist uses a court case involving a confectioner who lives on Wigmore Street to argue that litigation is not a good solution to its title problem. The theorem named for this thinker was actually formalized by George Stigler. This economist used the example of a rancher purchasing fencing to argue that as long as transaction costs are zero, bargaining will lead to an efficient outcome in the presence of externalities. For 10 points, name this author of *The Problem of Social Cost*.

ANSWER: Ronald Coase (“koce”)

<Social Science (Economics)>

4. According to Plutarch, this person once asked his tutor to “give me a sword, that I might free my country from slavery.” Publius Clodius Pulcher conspired to remove this politician from Rome by appointing him Quaestor pro Praetore and assigning him to Cyprus. After his death, Cicero wrote a panegyric (“pan-uh-JEER-ick”) titled for this politician, which prompted another politician to respond with a polemic titled “Anti [his name].” This member of the

Optimates pioneered the filibuster to prevent Julius Caesar from standing for consul in absentia. After the Battle of Thapsus, this politician rejected Caesar's pardon and committed suicide at Utica. For 10 points, name this Roman politician, the great-grandson of a man who repeatedly claimed "Carthage must be destroyed."

ANSWER: **Cato the Younger** [or Marcus Porcius **Cato Uticensis**; prompt on Marcus Porcius **Cato**; do not accept or prompt on "Cato the Elder"]

<European History>

5. The products of a biochemical process named after this functional group are detected by the TBARS assay. 4-hydroxynonenal ("4-hydroxy-NO-noon-al") and malondialdehyde are end products formed by this functional group's reaction with lipids. Heme iron cleaves a bridge formed by this functional group in the likely mechanism of artemisinin ("ar-teh-MIS-in-in"). A compound containing this functional group is eliminated with the glutathione-ascorbate cycle. This functional group's homolysis produces a pair of hydroxyl radicals. A compound produced by superoxide dismutase containing this functional group is further disproportionated by catalase in an organelle named after this functional group. For 10 points, name this functional group containing an oxygen-oxygen single bond, found in H<sub>2</sub>O<sub>2</sub>.

ANSWER: **peroxide** [accept hydrogen **peroxide** or lipid **peroxides** or lipid **peroxidation**; accept **peroxisome**]

<Chemistry>

6. A 2015 book links this modern-day country's three "others," sorcerers, kings, and priests, to the culture of the Talmud. A text from this country describes 17 types of water and the "battles" preceding seven "creations," such as sky and the "sole-created" primordial bovine. The founder of Atheist Republic left this country for Canada. Like India, this country drew on ancient texts venerating the "child of the waters," Apām Napāt. The Khurramite sect arose in this country, inspired by the heretical proto-socialist mobad ("mo-BAD") Mazdak. The Allahdad made Mashhadi Jews convert to Islam in this country. Its namesake calendar marks the New Year with Nowruz. The divine plant haoma and holy fire ātar are attested in this country's Avestan texts, like the Gathas in the *Yasna*. For 10 points, name this homeland of Zoroastrianism.

ANSWER: **Iran** [or **Persia**; or Islamic Republic of **Iran**; or Jomhuri-ye Eslāmi-ye **Irān**; accept historical names of **Persia**] (The early clues in order are: Ibn al-Rawandī, the Bun-dahišnīh, and Armin Navabī.)

<Religion>

7. In this story, a man writes a poem in which his heart is burned with its own blood while a black hand menaces his beloved at the altar. The protagonist of this story exclaims "Madman!" when he misunderstands the business of a gray-eyebrowed salesman who spreads some lorgnettes ("Iorn-YETS") on his table. At the end of this story, a man throws himself from a church tower after repeating "Spin round, wooden doll!" and trying to strangle his fiancée. The fear of this story's protagonist is linked with the "castration-complex" in Sigmund Freud's essay "The Uncanny." In this story, Nathanael recounts his childhood encounter with Coppelius, who he believed wanted to steal his eyes. For 10 points, name this story by E. T. A. Hoffman named for a figure who pours a substance into the eyes of sleeping children.

ANSWER: "The **Sandman**" [or "Der **Sandmann**"]

<European Literature>

8. This composer instructed performers to use razor blades on electric cellos and guitars for a nine-minute suite that centers on two notes. In one piece, this composer and collaborator Benjamin Wallfisch sampled Elgar's "Nimrod" from *Enigma Variations* and slowed it down to six beats per minute. This composer sampled a ticking pocket watch and used three Shepard tones, representing "sea," "air," and "mole" timelines, in one of his scores. This composer used a low brass fanfare that imitates a slowed-down version of Édith Piaf's "Non, je ne regrette rien" to accompany scenes taking place within nested dreams. For 10 points, name this prolific German film composer who scored *Dunkirk*, *The Dark Knight*, and *Inception*.

ANSWER: Hans **Zimmer** [For the first clue, prompt on James Newton **Howard** with “Who was Howard’s collaborator for that piece?”] (The first clue refers to “Why So Serious?” from *The Dark Knight*, whose soundtrack was a collaboration by Zimmer and Howard; Zimmer, however, composed “Why So Serious.”)  
<Other Arts (Film)>

9. The film *Story of Women* dramatizes the story of the last person in this country to be executed for providing abortions. Lucien Neuwirth (“loose-YAN nur-VEERT”) sponsored a law legalizing contraception in this country in 1967. Fadela Amara’s book *Neither Whores, Nor Doormats* shares its name with a feminist group in this country founded by Samira Bellil. Women in this country signed the “Manifesto of the 343” declaring that they had had an abortion. The Veil Law legalized abortion in this country. Vigilantes in this country shaved the heads of women accused of “horizontal collaboration” for sleeping with Nazi officers. Activists in this country lobbied for a law banning hijabs in schools to conform to the value of *laïcité* (“la-ee-see-TAY”). For 10 points, name this country where thousands protested against domestic violence against women in 2019 in Paris.

ANSWER: **France**  
<European History>

10. Anthony Peratt claimed that these events inspired “Squatter Man” petroglyphs. The anger of Mungan Ngour causes these events for the Gunai (“GUN-eye”) people in Gippsland. In Lakota myth, the dancers who create these events are guarded by the cold wind giant Waziya. In Inuit myth, dead people playing a ballgame with a walrus skull cause these events, which Māori call the “great burning.” These events result from the gleaming armor of riding Valkyries. These events share their name with the daughter of a Perrault princess, which Disney took for the adult Briar Rose in *Sleeping Beauty*. These events are named for the Roman equivalent of a goddess to whom Homer gave the epithet “rosy-fingered,” and they occur when solar wind hits the magnetosphere. For 10 points, the Roman counterpart of the Greek dawn goddess Eos names what displays of polar lights?

ANSWER: **auroras** [or **aurorae**; or **Aurora** Borealis/Australis; accept **Northern Lights** or **Southern Lights** or **polar lights** until read; accept **geomagnetic storms** or **solar storms**, but do not accept or prompt on “storms” or “thunderstorms”; prompt on **dawn** or **Eos** by asking “who is the Roman goddess of dawn?”; accept Princess **Aurora** or **Aurore**]  
<Mythology>

11. In 2000, Matthew Bunkers suggested a method for predicting supercell motion by analyzing vertical changes in this quantity with the help of hodographs. The power proportional to the cube of this quantity is limited by a so-called “power coefficient” that cannot exceed 16/27 (“16 over 27”). Since the surface stress that drives Ekman transport depends on the square of this quantity, scientists can use it to estimate the extent of coastal upwelling. Sudden changes in this quantity called “shear” are displayed by Terminal Doppler Weather Radar, and produce downdrafts that lead to aviation accidents. The Fujita scale assesses tornado damage using this quantity, which is measured using a spinning shaft fitted with four cup-like attachments. For 10 points, name this quantity measured by anemometers, sometimes in units of knots.

ANSWER: **wind speed** [or **wind velocity**; accept **air speed** or **air velocity**; prompt on **speed** or **velocity** by asking “the speed/velocity of what?”]  
<Other Science (Earth Science)>

12. This poem imagines a “winged courser” who “shows most true mettle when you check his course” in a stanza that praises an “unerring... clear, unchang’d, and universal light.” This poem depicts John Dennis as a “certain bard” who enrages Don Quixote by fussing about the opinions of “the Stagirite” and condemning those who “durst depart from Aristotle’s rules.” The heroic couplet that opens this poem wonders whether “greater want of skill” appears in writing badly or doing the title action badly. This poem advises “Drink deep, or taste not the Pierian (“py-AIR-ee-in”) spring” because “A little learning is a dangerous thing.” The phrases “fools rush in where angels

fear to tread” and “To err is human; to forgive, divine” were coined in, for 10 points, what Alexander Pope satire about the art of judging art?

ANSWER: *An Essay on Criticism*

<British Literature>

13. Surgeon General Samuel P. Moore established Chimborazo Hospital in this city, though it eventually became a refugee camp. An infested room in this city became known as “Rat Hell” and was used to tunnel to freedom by POWs escaping Libby Prison. Mayor Joseph Mayo read the Riot Act to women in this city who were led by Mary Jackson in riots over the high price of bread. The Battle of Seven Pines took place on the outskirts of this city and prevented it from being captured. This city’s Tredegar Iron Works supplied artillery to one army and survived when retreating troops burned this city. This city was the final target of George McClellan’s Peninsular Campaign. For 10 points, name this Virginia city that served as the capital of the Confederacy throughout most of the Civil War.

ANSWER: **Richmond**, Virginia

<American History>

14. Georgetown professor Pietra Rivoli and author Elizabeth Cline are best known for their popular nonfiction about this industry. It’s not cinema, but a company in this industry apologized for a product with an “incorrect” map of China that did not include Taiwan. Ahead of the 2019 G7 summit on climate change, Emmanuel Macron and Kering CEO François-Henri Pinault unveiled a plan to reduce this industry’s environmental impact. This industry developed higher safety standards following the Rana Plaza collapse in Dhaka, Bangladesh. Two years after her father was elected president, Ivanka Trump shut down her company in this industry. For 10 points, environmental concerns with what industry’s “fast” variant have spurred pushes to promote recycling at stores like Madewell and H&M?

ANSWER: **fashion** industry [or **clothing**; or **apparel**; accept **footwear**; accept **textiles**; prompt on retail or luxury goods; prompt on the names of specific companies]

<Current Events>

15. A book by this author opens with a parable in which a man yells “Stop! I did not drag my father beyond this tree” as he is dragged through an orchard by his son. A long poem by this author includes the one-line stanza “I wish that I had spoken only of it all” and ends “Certainly I come having come. / These stanzas are done.” The poodle Basket appears in a work by this author whose narrator imagines writing a book titled *The Wives of Geniuses I Have Sat With*. This poet included “A Carafe (“kuh-RAFF”), That Is a Blind Glass” in a collection with the sections “Objects,” “Food,” and “Rooms.” This author of *The Making of Americans* and *Tender Buttons* coined the term “Lost Generation” and wrote “a rose is a rose is a rose.” For 10 points, what Paris-based modernist wrote *The Autobiography of Alice B. Toklas*?

ANSWER: Gertrude **Stein** (The poem in the second sentence is *Stanzas in Meditation*.)

<American Literature>

16. A [emphasize] *response* to this work makes the distinction between an expression, the use of an expression, and the utterance of an expression before asserting that meanings are akin to “directions for use.” This work jokes about what Hegelians (“huh-GAIL-ee-ins”) “who love a synthesis” will conclude about a figure who seems not to exist according to the law of the excluded middle. This essay criticizes Meinong’s (“MY-nong’s”) view on “the round square” and notes that Frege (“FRAY-guh”) assigns no constituent to one component of phrases like “the center of mass of the solar system” that are “only known to us by description.” This work discusses statements like “Scott is the author of Waverley” and “The present King of France is bald.” For 10 points, name this essay that presents a theory of definite descriptions, written by Bertrand Russell.

ANSWER: “**On Denoting**” (The essay in the first sentence is “On Referring” by P. F. Strawson; the joke in the second sentence reads “Hegelians, who love a synthesis, will probably conclude that he wears a wig” with regards to the bald present King of France.)

<Philosophy>

17. Large-scale immigration to this country led to conspiracy theories about a Jewish takeover or Israeli conquest called the Andinia Plan. It's not Spain, but a "Patriotic League" targeted supposedly anarchist Jews in its capital during this country's 1919 "Tragic Week." The Tacuara Nationalist Movement launched a wave of antisemitic violence in this country after Simon Wiesenthal's investigation ended with a 1960 state-sponsored kidnapping here. Hezbollah probably carried out a 1994 bombing in this country's capital targeting its Israelite Mutual Association. The Mossad ("mo-SOD") tracked down Adolph Eichmann in this country, where a military junta ("HOON-ta") carried out the Dirty War. For 10 points, name this country that hosts the largest Jewish population in South America in Buenos Aires.

ANSWER: **Argentina**

<World History>

18. A solution to the baryon asymmetry problem considers neutrons to behave like these systems, because these systems violate parity and time symmetries. In spectroscopy, if the interaction energy between incoming radiation and a transition named for these systems is zero, then the transition is said to be "[this system] forbidden." The simplest balanced antennas are based on these systems. Lead zirconate titanate spontaneously becomes one of these systems below a phase transition that breaks its centrosymmetry. Electrical insulators that increase the strength of capacitors can be treated as a continuum of these systems. The torque on these systems equals the cross product of the electric field and their namesake moment. For 10 points, name these systems that consist of two opposite charges separated by a distance.

ANSWER: **electric dipoles** [or **electric dipole moment**; anti-prompt on dielectrics by asking "can you be less specific?"; prompt on dipole; prompt on polarized or word forms by asking "what is the resulting system?"]

<Physics>

19. One section of this collection inspired a *lied* ("leed") by Hanns Eisler that proclaims, "The times, they are changing." A  $3/2$  *lento* section of this collection opens with the low strings playing a low D drone before the horns enter with a repeated melody consisting of two short Ds and two long Ds. It opens with the harp establishing the motif B-flat, E-flat, D, B-flat. A theme in this collection was adapted from Giuseppe Cenci's song "La Mantovana" and was in turn adapted into "Hatikvah," the Israeli national anthem. The Hussite hymn "Ye Who Are Warriors of God" supplies a theme introduced in this collection's *Tábor* section and reprised in its *Blaník* section. It opens by depicting the "High Castle" *Vyšehrad*. *Vltava* is included in, for 10 points, what collection of six tone poems by Bedřich Smetana?

ANSWER: ***Má vlast*** [or ***My Country*** or ***My Homeland***; prompt on *Vyšehrad* or *Vltava* or *Die Moldau* or "Song of the Moldau" or "Lied Von Der Moldau" or *Tábor* or *Blaník* by asking "what larger work is that piece a part of?"]

<Classical Music>

20. A mysterious Netherlandish "master" is named for the "embroidered" style of his works in this genre. Anna Seghers took her pen name from an artist whose oddly-colored prints in this genre were the subject of a 2017 Met exhibit, Hercules Seghers. This genre was the main output of the *Donauschule* ("DOH-now-shoo-luh") group, including an artist whose *St. George and the Dragon* is mostly of this genre. Albrecht Dürer made an early standalone mention of this genre when he wrote of Joachim Patinir, the inventor of its "world" type. Albrecht Altdorfer was one of the first Europeans to make paintings purely of this genre. A plowman appears in a painting in this genre that depicts legs disappearing into the sea. For 10 points, the "Fall of Icarus" appears in a Dutch painting of what genre that depicts natural scenery?

ANSWER: **landscape** painting [or **landschap**; or **landschaft**; accept **world landscape** or **Weltlandschaft**; accept **foliage** or **tree** paintings until "prints" is read, but prompt on those answers and nature painting after that; accept ***Landscape with the Fall of Icarus***]

<Painting/Sculpture>

21. The composition of this material differed drastically between the north and south in one country due to a lack of petuntse in the north. After huge quantities of this substance were auctioned off in the Netherlands following the capture of the *Santa Catarina*, a corruption of the word “carrack” came to name its “kraak” variety. In *The Pilgrim Art*, Robert Finlay claims that the “largest industrial operation in the world” in the 16th century was a factory for this substance at Jingdezhen. Qingbai was an early style of this good that lost popularity when the opening of Silk Road trade under the Yuan dynasty allowed the importation of cobalt for the “blue and white” variety of this product. For 10 points, name this type of ceramic from China.

ANSWER: **porcelain** [accept **china** until “China” is read; prompt on pottery or ceramic]

<World History>

## Bonuses

1. Circles bisected into hemispheres decorate each side of a monumental “gate” named for this action. For 10 points each:

[10] Name this action. The original version of a sculpture with this title was donated by its artist to the tomb of Tatiana Rachevskaja in Montparnasse Cemetery, and depicts its two figures as simple limestone blocks.

ANSWER: **kissing** [accept *The Gate of the Kiss*, *The Kiss*, or *Sărutul*]

[10] Constantin Brâncuși’s (“brin-KOOSH’s”) *The Gate of the Kiss* is part of an ensemble at Târgu Jiu (“TER-goo JEE-oo”) that also includes an “endless” one of these objects. In Greek architecture, the tops of these objects are simplest in the Doric order.

ANSWER: **columns** [accept *Endless Column* or Doric **column**]

[10] One of Brâncuși’s other site-specific works is an oak sculpture titled for one of these figures, the only completed part of his Temple of Meditation. Tal Streeter’s homage to *Endless Column* is located at an art center in New York State named for a “storm” figure of this type.

ANSWER: **kings** [or **rois**; accept *King of Kings*, *Le roi des rois*, or Storm **King** Art Center]

<Painting/Sculpture>

2. This emperor issued the first *haijin* sea ban on private foreign trade to stamp out *wokou* (“wo-ko”) pirates. For 10 points each:

[10] Name this emperor who came to power after an enormous sea battle on Lake Poyang. This emperor left a guide for his descendants in the *Ancestral Instructions*.

ANSWER: **Hongwu** Emperor [or **Zhu** Yuanzhang; or **Ming Taizu**; prompt on **Taizu**]

[10] The Hongwu Emperor rose to power by leading a rebellion named for a red version of this type of headwear. An earlier peasant revolt during the Eastern Han Dynasty was named for a yellow version of this type of headwear.

ANSWER: **turbans** [accept the Red **Turban** Rebellion or the Yellow **Turban** Rebellion]

[10] The Hongwu Emperor wrote this inscription praising Muhammad and Islam, and included it in many mosques he built in his capital at Nanjing.

ANSWER: The **Hundred-Word Eulogy** [or **Bǎizìzàn**]

<World History>

3. For one technique used to perform this task, the Lax equivalence theorem gives the relationship between convergence and stability. For 10 points each:

[10] Name this task whose rate of convergence can be controlled using the homotopy analysis method. In a different method for doing this task, the Courant–Friedrichs–Lewy condition is a necessary criterion for convergence.

ANSWER: **solving differential** equations [or **approximating** solutions to **differential equations**; accept **diff eqs** or **ODEs** or **PDEs** in place of “differential equations”]

[10] The CFL condition is a stability criterion for this technique that solves differential equations by discretizing the domain into a rectangular grid. Unlike a similarly-named method, it isn’t used often for irregularly shaped models.

ANSWER: **finite differences** method [or **FD**M; do not accept or prompt on “finite element method”]

[10] Error in the finite difference method arises mainly because the difference equations implement only a finite part of these series named for a British mathematician. They use polynomials to approximate a function.

ANSWER: **Taylor** series [or **Taylor** polynomials; or **Maclaurin** series]

<Other Science (Math)>

4. Vindice (“vin-DEE-chay”) and his co-conspirators use one of these events to kill Lussurioso in *The Revenger’s Tragedy*, and Hippolita attempts to poison Soranzo during one in *’Tis Pity She’s a Whore*. For 10 points each:

[10] Name these elaborately-costumed court entertainments that often serve as setpieces for murder in 17th-century tragedies. Examples of this genre include Milton’s *Comus* and Jonson’s one “of Blackness.”

ANSWER: **masques**

[10] Hieronimo uses a play as a pretext to stab his enemies in Thomas Kyd's *The Spanish Tragedy*, which is noted for the elements it shares with this Shakespeare play about a prince of Denmark.

ANSWER: ***Hamlet*** [or *The Tragedy of **Hamlet**, Prince of Denmark*]

[10] A bloody masque featuring poisoned incense, a trapdoor, and arrows shot by cupids ends this Thomas Middleton tragedy, which centers on Bianca and features a scene in which Livia plays chess with her mother.

ANSWER: ***Women Beware Women***

<British Literature>

5. In one work, this thinker argues that scientific facts are made invisible through success in a process called "blackboxing." For 10 points each:

[10] Name this French philosopher and sociologist of science, the author of works like *We Have Never Been Modern* and *Laboratory Life*.

ANSWER: Bruno **Latour**

[10] In his essay "Why Has Critique Run Out of Steam?", Latour argues that social criticism has lost legitimacy and must return to the sort of realist empiricism expounded by this American Pragmatist thinker. This thinker wrote *The Principles of Psychology*.

ANSWER: William **James**

[10] In "Why Has Critique Run Out of Steam?", Latour cites this thinker's notion that the objective of the philosopher of science is to "protect and care" for a matter of fact rather than debunk it, a notion drawn from her essay "Situated Knowledges."

ANSWER: Donna **Haraway**

<Philosophy>

6. The U.S. government sentenced Nationalist Party leader Pedro Albizu Campos to eighty years in prison after an attempt on this president's life. For 10 points each:

[10] Name this president whom Oscar Collazo and Griselio Torresola attempted to assassinate while he stayed in the Blair House.

ANSWER: Harry S **Truman**

[10] Albizu Campos led the independence movement on this island, where Truman named Jesús T. Piñero as its first native governor. The Jones Act granted U.S. citizenship to the residents of this Caribbean territory.

ANSWER: **Puerto Rico** [prompt on **PR**]

[10] Nationalists attacked this first elected governor of Puerto Rico on the same day as the Jayuya and Utuado uprisings in 1950. This governor applied the repressive Gag Law to arrest thousands during his sixteen-year tenure.

ANSWER: Luis **Muñoz Marín**

<American History>

7. In March 2017, this hip-hop artist donated one million dollars to Chicago Public Schools. For 10 points each:

[10] Name this musician who released his debut album *The Big Day* in July 2019. He won a 2017 Grammy Award for his mixtape *Coloring Book*, which featured artists such as Kanye West and the Chicago Children's Choir.

ANSWER: **Chance the Rapper** [or Chancellor Johnathan **Bennett**; prompt on **Chance**]

[10] This artist behind the albums *Venice* and *Malibu* was one of the many musicians featured in *Coloring Book*. This artist's song "Bubblin" tied for Best Rap Performance with "King's Dead" at the 2019 Grammy Awards.

ANSWER: Anderson .**Paak** [or Brandon Paak **Anderson**]

[10] This Chicago-based musician and feminist poet behind the albums *HEAVN* and *Legacy! Legacy!* is featured on the first version of "Blessings" on *Coloring Book*. She had earlier collaborated with Chance on "Sunday Candy."

ANSWER: Jamila **Woods**

<Pop Culture>



8. When Galilean symmetry is broken in fluids, longitudinal phonons fulfill the role of these particles. For 10 points each:

[10] Name these massless particles that accompany spontaneously broken continuous symmetries.

ANSWER: Nambu–**Goldstone** bosons [or **NGBs**]

[10] Goldstone bosons have spins of this value. Pions, kaons, and scalar mesons are all particles with this spin.

ANSWER: spin-**0** [or **spinless**; accept descriptive answers indicating that these particles have **no spin**]

[10] A mechanism named for this man helps explain how the “eating” of Goldstone bosons gives W and Z bosons mass. In 2012, the Large Hadron Collider detected this man’s namesake boson, nicknamed the “God particle.”

ANSWER: Peter **Higgs** [accept the **Higgs** mechanism or **Higgs** boson]

<Physics>

9. Answer the following about feminist women poets in East Asian literature, for 10 points each.

[10] In 2017, this South Korean poet penned “Monster,” recounting her experiences of being sexually harassed and abused by another poet, Ko Un, which ignited the #MeToo movement in her country.

ANSWER: **Choi** Young-mi

[10] Yosano Akiko, a Japanese poet and activist who wrote for the all-women literary magazine *Seitō*, published the first major translation of this Heian (“HAY-on”)-period novel by Lady Murasaki Shikibu into modern Japanese.

ANSWER: *The Tale of Genji* [or *Genji monogatari*]

[10] Despite living in the Qing dynasty, feminist revolutionary and poet Qiu Jin (“ch’yoh jin”) wrote in traditional lyric poetic forms inspired by poets of the Tang dynasty, such as this poet of “Deer Park.”

ANSWER: **Wang** Wei [or **Wang** Youcheng or **Wang** Mojie or **Wang** Weimojie]

<World/Other Literature>

10. A photo by I. Russell Sorgi shows a woman doing this action in front of the Genesee Hotel in Buffalo. For 10 points each:

[10] Name this action that also titles a chilling Richard Drew photograph that shows a man crossing his legs while suspended upside-down in front of the Twin Towers on 9/11.

ANSWER: **falling** [or **jumping**; accept committing **suicide** by jumping; accept synonyms for **falling**, such as **plummeting**; accept *The Falling Man*; prompt on **dying** or about to **die**]

[10] This war photographer captured a soldier falling backwards after being shot in the head during the Spanish Civil War. This photojournalist later died himself when he stepped on a landmine in Indochina.

ANSWER: Robert **Capa** [or Endre Ernő **Friedmann**]

[10] This artist appears to be falling from a second-story rooftop in his photo series *Leap into the Void*, which was collected in his artbook *Dimanche* (“dee-MONSH”).

ANSWER: Yves **Klein** (“eev clan”)

<Other Arts (Photography)>

11. This thinker’s seminal 1951 work on political parties classified them into mass-based or elite-based. For 10 points each:

[10] Name this French political scientist whose namesake “law” states that plurality voting in single-member districts tends to create two party systems.

ANSWER: Maurice **Duverger** (“doo-vair-ZHAY”) [accept **Duverger**’s law]

[10] In this sort of plurality voting system, one candidate is indicated on a ballot and the candidate with the most votes wins. This “winner takes all system” is used in the United Kingdom, Canada, and the United States.

ANSWER: **first-past-the-post** voting [accept **FPTP** or **FPP**]

[10] When voting systems fail the participation criterion, this paradox occurs. This paradox elaborated by Brams and Fishburn occurs when abstaining from voting will actually help a voter’s preferred choice win.

ANSWER: **no-show** paradox  
<Social Science (Political)>

12. This musician, who established the École de Musique Ancienne in Paris, had many of her writings edited and translated by her partner Denise Restout (“duh-NEESE russ-TOO”). For 10 points each:

[10] Name this musician, the dedicatee of *Concert champêtre* (“con-SAIR shawm-PET”) by Francis Poulenc (“frawn-SEESE poo-LANK”) and a neoclassical chamber concerto by Manuel de Falla (“deh FAH-yah”).

ANSWER: Wanda **Landowska** (“VAHN-dah lahn-DOHV-skah”)

[10] In 1933, Landowska became the first person to record this collection on the harpsichord. This collection features thirty movements based on an initial aria.

ANSWER: **Goldberg Variations**

[10] The *Goldberg Variations* were written by this Baroque composer of *The Well-Tempered Clavier*.

ANSWER: Johann Sebastian **Bach**

<Classical Music>

13. The Antonine Plague of 166 AD is sometimes named for this man. For 10 points each:

[10] Name this Greek physician who served Marcus Aurelius. The 16th-century anatomist Andreas Vesalius disproved many of this scientist’s assertions in *De humani corporis fabrica*.

ANSWER: **Galen** of Pergamon [or Aelius **Galenus**; or Claudius Galenus]

[10] As a student, Galen traveled to this city to study at its famed medical academy, where Erasistratus (“air-uh-SIS-tra-tus”) and Herophilus practiced human dissection and vivisection. This city’s Great Library contained thousands of texts.

ANSWER: **Alexandria**

[10] Erasistratus was once rewarded with one hundred talents for diagnosing this prince’s illness as lovesickness for his stepmother Stratonice (“strat-oh-NYE-see”). This monarch shares his name with a capital built by his father on the Orontes River.

ANSWER: **Antiochus I** Soter [prompt on Antiochus or Antioch] (Seleucus I built Antioch on the Orontes.)

<European History>

14. Cone cells are most concentrated in the fovea centralis of this structure. For 10 points each:

[10] Name this layer of photoreceptors in the eye composed of cone and rod cells.

ANSWER: **retina**

[10] Retinal (“RET-in-AL”), a cofactor of this G-protein coupled receptor, isomerizes from the 11-cis conformation to the all-trans conformation after this pigment gets hit by a photon. The activation of this protein activates its associated G-protein transducin.

ANSWER: **rhodopsin**

[10] Activation of transducin then activates an enzyme that catalyzes the hydrolysis of this signalling molecule. The A and B natriuretic peptide receptors catalyze the synthesis of this molecule upon activation.

ANSWER: **cGMP** [or **cyclic guanosine monophosphate**]

<Biology>

15. This king supposedly conducted a longitudinal experiment in which identical twins were forced to drink massive amounts of coffee and tea to test the drinks’ health effects. For 10 points each:

[10] Name this enlightened despot who ended his country’s Age of Liberty with the Union and Security Act. This ruler signed the Treaty of Varala to end a war with Catherine the Great.

ANSWER: **Gustav III** [prompt on Gustav]

[10] This country’s Riksdag presided over its Age of Liberty until Gustav III’s self-coup. Gustav III founded this country’s Academy, which awards the Nobel Prize in Literature.

ANSWER: **Sweden** [or Kingdom of **Sweden**]

[10] Gustav III commissioned a royal one of these buildings in Stockholm where Jacob Johan Anckarström would later assassinate him. The Belgian Revolution began when a crowd of rioters left one of these buildings.

ANSWER: **opera houses** [prompt on **theaters**, **music halls**, or equivalents]

<European History>

16. A boss of people with this occupation accidentally shoots one of their children in “The Children Couldn’t Wait,” one of the stories in the short novel *...And the Earth Did Not Devour Him* by Tomás Rivera. For 10 points each:

[10] Name this job of people who performed plays by Luis Valdez as part of the El Teatro Campesino troupe while participating in strikes led by César Chávez.

ANSWER: **farm** workers [or fruit-**pickers**; or grape-**pickers**; or **migrant** workers; accept terms for agricultural laborers like **farmers**]

[10] This activist described moving from Mexico to Riverbank, California, to live with his peach-picker father in *Autobiography of a Brown Buffalo*. You may also give his alias in *Fear and Loathing in Las Vegas*, in which he is named after Hunter S. Thompson’s style of journalism.

ANSWER: Oscar Zeta **Acosta** [or Dr. **Gonzo**]

[10] Cleofilas moves to the United States, where her abusive husband finds work in Texas near the title brook, in the title story of this Sandra Cisneros collection that also includes “Eleven” and “Barbie-Q.”

ANSWER: **Woman Hollering Creek** *And Other Stories*

<American Literature>

17. This biblical book shares its name with a collection of gnomic poetry from Durham Cathedral. For 10 points each:

[10] Name this book that addresses the reader as “my son” to warn against adultery and folly. Michael V. Fox identified pairs and clusters in his two commentaries on this book, which is an anthology of sayings, many attributed to Solomon.

ANSWER: Book of **Proverbs** [or **Mishlê** Shlomo; or **Paroimiai**; or **Proverbia**]

[10] Along with other “Poetic Books” like Ecclesiastes (“uh-KLEE-zee-ASS-teez”) and Psalms, Proverbs grew out of this ancient literary genre, which includes Egyptian sebayt texts. Other examples are the *Shuruppak* tablet, the Dialogue of Pessimism, and Sirach (“SIGH-rack”).

ANSWER: **wisdom** literature [or **sophia**; or **chokhmah** or **chokhmot**; or **Sapiential** Books; or Book of **Wisdom**; accept **instruction** or **teaching** stories or similar answers; prompt on **Ketuvim** or **Hagiographa** by asking “in what section are these books grouped in the Christian Old Testament?”]

[10] After the advice of King Lemuel’s mother, Proverbs describes this unnamed figure, who “speaks with wisdom,” “considers a field and buys it,” and “does not eat the bread of idleness.” Before Shabbat dinner, some husbands recite an acrostic about this figure. You can answer with the chapter of the passage or a common description.

ANSWER: the **Woman of Valor** [or **Eshet Hayil**; or the woman from Proverbs **31**:10–28; or the **Ideal Wise Woman**; prompt on the **Wise Woman**; accept any answer that combines **Woman** or **Wife** with a positive adjective like **Accomplished** or **Strong** or **Worthy** or **Good** or **Capable**]

<Religion>

18. The 1850 Riancey (“ree-on-SAY”) Amendment imposed a tax on novels published in this medium. For 10 points each:

[10] Name this type of publication that, in 19th-century France, often included sections of literature called *feuilleton* (“fuh-ee-TAWN”). Émile Zola’s article “J’Accuse...!” first appeared in a publication of this general type, *L’Aurore*.

ANSWER: **newspapers** [accept **periodicals** or **serial** novels]

[10] This author evaded the tax by presenting his serial satire *The Salt Smugglers* as “not a novel.” The protagonist discovers that he is rich again by glancing at a newspaper at the beginning of this author’s novella *Sylvie*.

ANSWER: Gerard de **Nerval**

[10] An 1842 novel by Eugène Sue partly titled for Paris popularized the serial novel and founded a “city” genre of this name. Gaston Leroux’s novel about the “Yellow Room” and Georges Simenon’s (“seem-NON’s”) novels exemplify another genre of this name.

ANSWER: **mystery** [accept **detective** fiction; accept *The **Mysteries** of Paris*, *Les **Mystères** de Paris*, *The **Mystery** of the Yellow Room*, or *Le **mystère** de la chambre jaune*]

<European Literature>

19. Valerius Flaccus substantiated the claim by Herodotus and Pliny that this region was colonized by Egyptians under Sesostrius. For 10 points each:

[10] Name this ancient state ringed with poplars along the Phasis River, where King Saulaces mined silver and gold. A sacred grove of Ares lies in this state, whose princess escapes it by chopping her brother up and tossing him in the sea.

ANSWER: **Colchis** [accept **Egrisi**; prompt on Georgia or Sakartvelo] (The princess is Medea.)

[10] Colchis is located near this mountain range, where the Ossetian Nart sagas informed the trifunctional hypothesis of far-right philologist Georges Dumézil (“zhorzh doo-may-ZEEL”). The Oghuz Turkic epics of Koroghlu and Dede Korkut influenced this range’s Azerbaijanis.

ANSWER: **Caucasus** Mountains [or **Caucasia**]

[10] In Persian myth, winged spirits called pariān live in the Caucasus around this mythical mountain, where the title birds seek the Simurgh in *The Conference of the Birds*. This first wonder is either the axis mundi, or surrounds the world.

ANSWER: Mount **Qāf** [or **Cāfcuh**; or Jabal **Qaf** or Djebel **Qaf**; or Koh-i-**Qaf** or Koh-**Qaf**; accept Mount **Hara**]

<Mythology>

20. To avoid side reactions, synthesis of these molecules typically follows the “high dilution principle.” For 10 points each:

[10] Name this type of molecule. One of these molecules is threaded by a dumbbell-shaped molecule in a type of mechanically interlocked molecular architecture called a rotaxane (“ro-TAX-ane”).

ANSWER: **macrocycles** [or **macrocyclic** compounds; prompt on cyclic molecules; prompt on answers referring to large or big rings]

[10] Following the high dilution principle is useful because macrocycle formation competes with this type of reaction. “Chain-growth” and “step-growth” are mechanisms of these reactions.

ANSWER: **polymerizations**

[10] A common example of a macrocycle is this type of molecule consisting of repeating CH<sub>2</sub>CH<sub>2</sub>O (“C-H-two-C-H-two-O”) subunits. These molecules can be produced through the Williamson synthesis using a metal cation template.

ANSWER: **crown ethers** [prompt on ethers]

<Chemistry>

21. The first paper to describe this concept was an 1842 work by Julius von Mayer, whose idea received experimental support when James Joule used a falling weight to heat water via a rotating paddle. For 10 points each:

[10] Name this statement that Joule demonstrated by showing that the gravitational potential energy lost by the weight equaled the heat gained by the water.

ANSWER: **conservation of energy** [accept the **first law of thermodynamics**]

[10] Conservation of energy is the result of symmetry of time invariance according to a theorem named for this mathematician, who also worked on noncommutative algebras while a professor at Bryn Mawr.

ANSWER: Amalie Emmy **Noether** (“NUR-tuh”) [accept **Noether**’s theorem]

[10] Noether's theorem, when applied to this global property of the electromagnetic field, results in the conservation of electric charge.

ANSWER: **gauge ("gayj") invariance**

<Physics>