

2022 ACF Fall

Packet L by Editors

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Tossups

1. After being appointed commander-in-chief of a country's armies in this year, General Lavr Kornilov ("koar-NEE-loff") was arrested for leading a failed coup d'état. The American journalist John Reed chronicled events in this year in his book *Ten Days That Shook the World*. Due to its use of the Julian calendar, a country commemorates the overthrow of Alexander Kerensky's provisional government in this year on the 25th of October. Unlike an earlier "revolution" in 1905, this year's February Revolution forced Nicholas II to abdicate his throne. For 10 points, name this year when the Romanov dynasty was overthrown and the Bolshevik government took power in Russia.

ANSWER: **1917**

<European History>

2. One of these features may have deposited the brown-colored stripes that crisscross the crust of a tectonically active moon. Gas plumes ejected from one of these features produce Saturn's E ring and lie at the south pole of Enceladus. One of these features may be up to 150 kilometers thick on Jupiter's moon Europa. The discovery of these features under the surfaces of moons has led to an expanded notion of a star's habitable zone. A possible solution to Fermi's paradox posits that most intelligent life is trapped in examples of these features that are located underground. For 10 points, name these massive bodies of liquid water, which cover over 70 percent of Earth's surface.

ANSWER: **oceans** [accept **seas**; accept more specific answers such as subsurface **oceans** or subterranean **oceans** or underground **oceans** or extraterrestrial **oceans**; prompt on bodies of water or H₂O]

<Other Science>

3. A poem in this language is said to have been written in a "sweet new style," which this language's authors used as the title of a reflective literary movement. This language was the subject of an 14th-century essay that criticized Latin and promoted the usage of this language's vernacular. A poem in this language describes the narrator getting lost in a wood and meeting a leopard, a lion, and a she-wolf. In that poem in this language, the narrator follows Virgil before being guided by Beatrice through Purgatory into Paradise. For 10 points, name this language used to write the *Divine Comedy* by Dante Alighieri.

ANSWER: **Italian** [or **italiano**; or lingua **italiana**; accept **Tuscan** or dialetto **toscano** or **Florentine** or dialetto **fiorentino**] (The first line refers to *Dolce Stil Novo*. The second line refers to *De vulgari eloquentia*.)

<European Literature>

4. This dynasty's *fēngjiàn* ("fung-j'yen") system, in which imperial family members ruled as regional marquesses, was originated by a duke of the same name. The father of this dynasty's founder, King Wén, is praised in the *Book of Songs*. This dynasty won the Battle of Mùyě ("moo-YEH") and overthrew a corrupt ruler who filled an entire pool with wine. This dynasty originated the concept of the emperor as the "Son of Heaven" and the belief that natural disasters showed a dynasty's loss of the Mandate of Heaven. This dynasty's "Eastern" half included the Spring and Autumn Period and the Warring States Period. For 10 points, Sun Tzu, author of *The Art of War*, lived during what second Chinese dynasty, which occurred between the Shāng and Qín?

ANSWER: **Zhōu** dynasty [or **Zhōu** cháo; accept Eastern **Zhōu** or Dōngzhōu; accept Duke of **Zhōu** or **Zhōu** Gōng or **Zhōu** Wén Gōng Dàn]

<Other History>

5. Lowering this physiological quantity is the purpose of the “DASH diet” developed by the National Institute of Health. A decrease in this quantity is the intended effect of lowered levels of angiotensin II in patients taking ACE (“ace”) inhibitors. Devices measuring this quantity are called sphygmomanometers (“SFIG-moh-muh-NAH-meters”). This quantity has a positive correlation with dietary sodium intake. The systolic (“sis-TALL-ick”) form of this quantity is typically expressed “over” its diastolic form. A high value for this quantity, known as hypertension, is a risk factor for cardiovascular disease. For 10 points, name this quantity often measured using an arm cuff.

ANSWER: **blood pressure** [accept mean **arterial pressure**; accept systemic **arterial pressure**; accept **systolic pressure** until read; accept **diastolic pressure** until read; prompt on **pressure**]

<Biology>

6. One movement in this work includes a unison on the notes [read slowly] “long A, B C-sharp D low D long high D.” A shaking melisma on the word “shake” occurs in this work’s first bass solo, while a later bass solo emphasizes the words “raised incorruptible” and is accompanied by a solo natural trumpet. “Comfort ye” follows this work’s opening orchestral “Sinfony.” This work’s pastoral “Pifa” follows the chorus “For unto us a child is born,” which describes its subject as “the mighty god, the everlasting father.” Due to George II supposedly standing at its premiere, the audience stands during this work’s “Hallelujah” chorus. For 10 points, name this oratorio by George Frederick Handel about the birth of Jesus.

ANSWER: **Messiah**

<Classical Music>

7. A work on this subject calls people who imitate right conduct and people who fail to do so because of pleasure or anger “continent” and “incontinent,” respectively. That work on this subject states that people develop friendships for goodness, pleasure, or practical benefit. A work on this subject instructs people to cultivate the habits associated with virtue before becoming virtuous through the use of practical wisdom, or *phronesis*. A work on this subject analyzes vice as excess or lack of virtue in order to advance the doctrine of the mean. That work states that the ultimate goal of this title discipline should be the good life, or *eudaimonia* (“yoo-day-moan-ee-ah”). For 10 points, name this subject of an Aristotle work edited by his son Nichomachus.

ANSWER: **ethics** [accept Nicomachean **Ethics** or **Ēthika Nikomacheia**; accept *Aristotle’s Ethics*; accept **moral philosophy**]

8. One of these buildings with a zigzag design in Berlin features an underground “Entry Void.” Moveable wings shade a pavilion designed for one of these buildings by Santiago Calatrava in Milwaukee. Renzo Piano designed asymmetric terraces to reflect a meatpacking district for one of these buildings named for Gertrude Vanderbilt. The firm Herzog & de Meuron converted a power station on the Thames into one of these buildings owned by the Tate group. An “inverted ziggurat” design was used for one of these buildings that features a white spiral ramp that visitors can walk all the way up; that example of these buildings in Manhattan was designed by Frank Lloyd Wright. For 10 points, what type of buildings include New York’s Guggenheim?

ANSWER: **museums** [accept **galleries**; accept Solomon R. **Guggenheim** Museum until “Guggenheim” is read; accept **Tate** Modern until “Tate” is read; accept **Whitney** Museum of American Art; accept Milwaukee Art **Museum**; accept Jewish **Museum** Berlin]

<Other Fine Arts>

9. These events name a Mexican “folk saint” who, in 2013, was decried by Cardinal Gianfranco Ravasi. In the Gospel of John, Thomas’s first attributed words are “Let us also go, that we may” experience these events. In Acts, one of these events gives *Akeldama* its name shortly after it was purchased. Jesus says “*Talitha koum*” to reverse one of these events in Jairus’s house. Paul claims that these events are “the wages of sin” in Romans. After one of these events, Jesus weeps and calls “come out” to Lazarus, thereby reversing it. For 10 points, what kind of event occurred for Jesus on the cross, necessitating his resurrection?

ANSWER: **death** [or **die** or **dying** or being **killed**; accept “for the wages of sin is **death**”; accept “Let us also go, that we may **die** with him”; accept **crucifixion**; accept Santa **Muerte** or Saint **Death**; accept descriptions of Judas’s **intestines falling out**; prompt on **bleeding** or shedding **blood**; prompt on Field of **Blood**]
<Religion>

10. In an essay, this author compared *Diana of the Crossways* and *Antony and Cleopatra* to a novel that features two women who mince liver together in a laboratory. This author discusses the line “Chloe liked Olivia” and advises young women to “earn five hundred a year by your wits” in that essay, which describes the destitution that would befall a hypothetical Judith Shakespeare. A novel by this author uses square brackets to describe the deaths of Andrew and Prue in the section “Time Passes.” In that stream-of-consciousness novel by this author, the painter Lily Briscoe and the Ramsay family spend summers near the title structure. For 10 points, name this British author of “A Room of One’s Own” and *To The Lighthouse*.

ANSWER: Virginia **Woolf** [or Adeline Virginia **Woolf**; or Adeline Virginia **Stephen**]
<British Literature>

11. In a story from the *Metamorphoses*, a goddess makes one of these animals from a woman’s corpse using Hecate’s (“HECK-a-tee’s”) herb aconite, thus leaving the body hairless. This non-human form is taken by the Lakota trickster god Iktomi. In Navajo legends, one of these animals is a “mother” or “grandmother” who teaches humans how to survive winter. Before turning into one of these animals, a Lydian maiden hung herself out of shame for creating four scenes that condemn Zeus’s misdeeds. That woman, the first of these animals, lost a contest after boasting that her weaving skills were greater than Athena’s. For 10 points, what animal is personified in Greek myth by Arachne?

ANSWER: **spiders** [or **asdzáá**; or **sowuhti**; accept Mother **Spider** or Grandmother **Spider**; accept Kokyang**wuti**; accept Gogyeong Sow**uhti**; accept **arachnid**s or **arachne**s until “Arachne” is read and prompt afterwards]
<Mythology>

12. To commemorate forces who died fighting this leader, Mustafa Jalil (“jah-LIL”) renamed a landmark in Martyr’s Square. The foundation of the African Union was announced in a declaration made in this leader’s hometown of Sirte (“sert”). This leader’s Jamahiriya (“jum-ah-HER-yah”) political system implemented the “Third International Theory,” the “social basis” of which is outlined in *The Green Book*. This leader ordered a bomb be planted on Pan Am Flight 103, which exploded and killed 270 people over the Scottish town of Lockerbie. Viral cell phone footage of this leader’s death was recorded at the end of a 2011 civil war that included the fall of Tripoli. For 10 points, the Arab Spring resulted in the overthrow of what longtime Libyan dictator?

ANSWER: Muammar al-**Gaddafi** [or Muammar Muhammad Abu Minyar al-**Gaddafi**; or variants like Muammar **Qaddafi**]
<World History>

13. An equation named for this physicist relates the contact angle of a liquid drop on a surface to the free energy of each interface. This physicist and Laplace (“luh-PLAHSS”) co-name an equation that quantifies surface tension. A value named for this physicist equals the slope of a graph prior to the yield point, and describes elastic deformation. In an experiment by this physicist, constructive interference produced a banded grating after light was shined through parallel apertures. The ratio of stress to strain in a material is known as this physicist’s “modulus.” For 10 points, name this English physicist who proved the wave nature of light in his “double-slit experiment.”

ANSWER: Thomas **Young** [accept **Young**’s double-slit experiment; accept **Young**’s interference experiment; accept **Young**’s modulus; accept **Young**–Laplace equation; accept **Young**’s relation]

<Physics>

14. At the end of this novel, a character is tasked with cleaning altars in exchange for getting to eat the leftovers. A character in this novel wears a necklace made of nine skulls and crosses rivers with the help of a magic gourd. Another character in this novel urinates on one of five pillars that turn out to be the fingers of a giant hand, which then turns over and traps him under a mountain. In this novel, a golden-banded staff that can change size at will is commanded by a character who hatched from a stone egg and travels with characters named Sandy and Pigsy. For 10 points, name this Chinese novel in which the monk Táng Sānzàng attempts to retrieve Buddhist scriptures from India with Sūn Wùkōng, the Monkey King.

ANSWER: **Journey to the West** [or **Xī Yóu Jì**; accept **Monkey: A Folk-Tale of China** until “Monkey King” is read] <World/Other Literature>

15. An analogue of this event in Danbury, Connecticut was allegedly performed by the teenage girl Sybil Ludington. During this event, a young doctor evaded capture near the town of Lincoln by jumping off his horse over a stone wall. Like the Powder Alarm a year prior, this event responded to an attempted seizure of arms by Thomas Gage. This event’s central figure was assisted by Samuel Prescott and William Dawes, as well as Robert Newman’s hanging of two lanterns in the Old North Church, on the journey to Lexington and Concord. For 10 points, a Henry Wadsworth Longfellow poem dramatizes what act by a colonial silversmith to signal the arrival of British soldiers?

ANSWER: the midnight **ride** of Paul **Revere** [or equivalent such as the **race** of Paul **Revere**; accept “**Paul Revere’s Ride**”]

<American History>

16. In one of this director’s films, a character rubs ice cubes over his girlfriend’s body after complaining that he wants his son to speak English, saying “it’s bad enough his name is Hector.” In a film by this director, a character is asked if they are “circumstanced” by Felix Kendrickson during a polygraph test, after which a police officer throws a rock through a kitchen window as a distraction. In one of his films, this director played Mookie, who throws a trash can through the window of Sal’s Pizzeria after the death of Radio Raheem. In a 2018 film by this director, Ron Stallworth impersonates a white nationalist over the phone to join a chapter of the Ku Klux Klan. For 10 points, name this director of the “joints” *BlacKkKlansman* and *Do the Right Thing*.

ANSWER: Spike **Lee** [or Shelton Jackson **Lee**]

<Pop Culture>

17. Two artists from this country presented a “worst artist” award to the creator of a plaster cast of a house and filmed themselves burning cash in a boathouse. This country’s Upper Room Gallery contained 13 paintings of monkeys resting on elephant dung. The Iraqi billionaire Charles Saatchi finances artists from this country, such as the creator of the readymade *My Bed*. A shark was encased in formaldehyde by a “Young” artist from this country named Damien Hirst. The Fourth Plinth features biennial installations outside of this country’s National Gallery in Trafalgar Square. For 10 points, name this country whose artists receive the J.M.W. Turner Prize from the Tate Modern.

ANSWER: **United Kingdom** [or **UK**; or **United Kingdom** of Great Britain and Northern Ireland; accept **Great Britain**; accept **England**]
<Painting/Sculpture>

18. A type of this product gains its distinctive crust from a mite of the genus *Tyrophagus*. Formation of this product requires the enzyme chymosin (“KAI-muh-sin”), which is produced by recombinant bacteria using a gene from bovine stomachs. This product may develop tyrosine crystals formed by proteolysis (“pro-tee-oh-LAI-sis”) over a period of months, during which fermentation breaks down linkages between glucose and galactose. Some forms of this produced are made with fungi of the genus *Penicillium*. Rennet is used to make casein (“KAY-seen”) curdle when producing this product, leaving behind a liquid known as whey (“way”). For 10 points, name this dairy product with varieties like Camembert and mozzarella.

ANSWER: **cheese** [accept hard **cheese**; accept aged **cheese**; accept blue **cheese** or **Milbenkäse** or other varieties of **cheese**; accept processed **cheese** product; prompt on **dairy** products; reject “yogurt”]
<Chemistry>

19. In a play by this author, a character finds his father sitting playing solitaire after returning home late at night. At the end of that play by this author, a woman stumbles down the stairs in her wedding gown, reminiscing about when she abandoned being a nun after she fell in love. In a play by this author in which Hugo humorously repeats that “the days grow hot, O Babylon!”, a character’s guilt over betraying his anarchist mother ultimately leads him to jump off a fire escape. Characters in that play by this author continually muse on their “pipe dreams” while drinking in Harry Hope’s bar. For 10 points, name this author of *Long Day’s Journey into Night* and *The Iceman Cometh*.

ANSWER: Eugene **O’Neill** [or Eugene Gladstone **O’Neill**]
<American Literature>

20. During a May 2022 speech, a candidate in this country was targeted by laser pointers, causing fears of a sniper attack. A loose confederation of right-wing paramilitaries in this country are known by the name Águilas Negras. The first woman of African descent to serve as vice president of this country was elected alongside a former M-19 member. A value-added tax initiated 2021 protests in this country against then-president Iván Duque. Left-wing presidential candidate Gustavo Petro won a 2022 election in this country on a platform of cracking down on this country’s cocaine industry. For 10 points, name this South American country that was formerly home to the guerrilla group FARC and drug lord Pablo Escobar.

ANSWER: **Colombia** [or Republic of **Colombia** or República de **Colombia**]
<Current Events>

Bonuses

1. High-speed digital integrated circuits often feature the “bipolar junction” type of these components due to their performance at high frequencies. For 10 points each:

[10m] Moore’s law describes advancements in the use of what components, whose “field-effect” type is commonly made with metal oxides?

ANSWER: **transistors** [accept bipolar junction **transistor**s or (metal-oxide-semiconductor) field-effect **transistor**s; prompt on **BJTs** or **MOSFETs**]

[10e] Bipolar junction transistors are controlled by this quantity, which measures the flow of charge over time and has units of amperes (“AM-peers”).

ANSWER: electric **current** [prompt on **I**]

[10h] For a BJT, the transconductance is often used to measure sensitivity to this quantity. Multiplying 20 times the logarithm of this quantity converts it into units of decibels.

ANSWER: **gain** [accept voltage **gain** or current **gain**; prompt on **amplification** factor or **attenuation** factor]
<Physics>

2. This leader expanded a young kingdom’s territory during a period of bloody conflict known as the Mfecane (“emf-uh-KAH-nay”), during which this ruler defeated the forces of Zwide, a leader of the Ndwandwe (“unn-DUND-way”) people. For 10 points each:

[10m] Name this ruler whose military innovations included the development of the “buffalo horn” formation.

ANSWER: **Shaka** [accept, but DO NOT OTHERWISE REVEAL, **Shaka** Zulu; or **Shaka** kaSenzangakhona or **Sigidi** kaSenzangakhona]

[10e] Shaka ruled this kingdom, which greatly expanded its holdings in southern Africa during the early 19th century. This kingdom was later led by Cetshwayo (“ketch-WAI-oh”) during a namesake war against Britain.

ANSWER: **Zulu** Kingdom [or kwa**Zulu**; or **Zulus** or ama**Zulu**; or **Zulu** Empire; accept Anglo-**Zulu** War]

[10h] Despite a significant technological disadvantage, the Zulu slaughtered the army of Lord Chelmsford (“CHELMZ-fuhrd”) during this first major battle of the Anglo-Zulu War. Zulu troops fighting in this battle were later defeated at Rorke’s Drift.

ANSWER: Battle of **Isandlwana** (“iss-AHN-dul-WAH-nuh”)
<World History>

3. This figure was once given red feathers while fleeing from his grandmother Mahuika, whose fingernails he destroyed one at a time. For 10 points each:

[10h] Name this grandson of Rangi who was discovered wrapped in a topknot as a newborn. A bird’s laughter caused this man’s death during an attempt to crawl through an obsidian-toothed ancestor.

ANSWER: **Māui** [or **Māui**-tikitiki]

[10e] In Polynesian legends, Māui uses his grandmother’s jawbone to create this magical tool. While on a canoe trip with his brothers, Māui pulled Hawai’i up from the ocean floor with this tool, which Polynesians used to catch fish.

ANSWER: fish **hook** [prompt on **angle**]

[10m] In Hawaiian myth, Māui’s grandmother aided him in lassoing the sun from a tree in this type of location. A goddess of these locations named Pele regularly feuded with the snow goddess Poli’ahu at sledding.

ANSWER: **volcanoes** [prompt on **mountains**] (Maui lassoes the Sun from Haleakalā.)
<Mythology>

4. In the conclusion of this story, four friends resolve to undergo a pilgrimage to Florida to find the Fountain of Youth. For 10 points each:

[10h] Name this story in which the title character demonstrates his discovery by unveiling a rose that has been preserved for fifty-five years.

ANSWER: "**Dr. Heidegger's Experiment**"

[10e] "Dr. Heidegger's Experiment" is by this author, who also wrote about Hester Prynne being forced to wear the title *Scarlet Letter*.

ANSWER: Nathaniel **Hawthorne**

[10m] In a Hawthorne story, a group of characters search the White Mountains for a "great" example of these objects. An F. Scott Fitzgerald novella is titled for one of these objects that is "as big as the Ritz."

ANSWER: **gems** [or **jewels**; accept **diamonds**; accept **carbuncles**; accept "The **Diamond** as Big as the Ritz"; accept "The Great **Carbuncle**"; prompt on **stones** or **rocks** or **minerals** or equivalents]

<American Literature>

5. These objects were painted white and placed for public use in a system that originated in Amsterdam, which is known as the "capital" of these objects. For 10 points each:

[10m] Name these objects that are also widely used in Copenhagen. The largest sharing program for these objects in Europe is operated by Vélib' ("vay-LEEB") in France.

ANSWER: **bicycles** [or **bikes**; accept **cycle**; accept pedal **cycles**]

[10e] This city began building Cycle Superhighways to promote cycling in the early 2010s. A bike-sharing program in this city is nicknamed for former mayor Boris Johnson.

ANSWER: **London**

[10h] Bicycle sharing can help solve this common "problem" in public transportation and logistics. It is named for the distance needed to bridge the gap between a transit stop to a final destination.

ANSWER: **last mile** problem

<Geography>

6. "Linkages" of this functional group are formed when an alcohol reacts with a carboxylic acid. For 10 points each:

[10m] Name this functional group that consists of a carbonyl ("car-buh-NEEL") singly bonded to an oxygen atom, with R groups on either side.

ANSWER: **ester** [accept **ester** linkages]

[10e] Ester linkages often join fatty acids to molecular backbones to form these compounds, such as di- and triglycerides ("try-GLISS-er-ides"). This class of compounds includes fats, oils, and waxes.

ANSWER: **lipids**

[10h] In this reaction, a lipid's ester linkages are broken by adding sodium or potassium hydroxide. This reaction forms a salt that has both hydrophilic and hydrophobic ends.

ANSWER: **saponification** [or **saponifying**] (Saponification is the process of forming soap.)

<Chemistry>

7. In a commission by Felice Brancacci, Masaccio decorated one of these buildings with two frescoes of Adam and Eve's expulsion from Eden alongside scenes from the life of Saint Peter. For 10 points each:

[10h] Name this type of building where Perugino's *The Delivery of the Keys* is displayed along with another artist's paintings of muscular ignudi floating around scenes from Genesis.

ANSWER: **chapels** [accept Sistine **Chapel** or **Cappella** Sistina or **Cappella** Magna; accept Brancacci **Chapel** or **Cappella** dei Brancacci; reject "church" or "basilica" or "chiesa"]

[10e] Masaccio's works in the Brancacci Chapel were an early inspiration for this artist, who painted Adam lazily reaching toward God on the ceiling of the Sistine Chapel.

ANSWER: **Michelangelo** [or Michelangelo **Buonarroti** or **Michelangelo** di Lodovico Buonarroti Simoni]

[10m] In addition to Masaccio's frescoes, Michelangelo's *The Creation of Adam* drew on the "Gates of Paradise" in this church's baptistry. Brunelleschi designed the world's largest brick dome for this cathedral.

ANSWER: **Florence** Cathedral [or Duomo di **Firenze**; or Cathedral of **Saint Mary of the Flower**; or Cattedrale di **Santa Maria del Fiore**; prompt on **duomo**; prompt on **Saint Mary's** Cathedral]

<Painting/Sculpture>

8. The speaker claims "this earth is one island in archipelagoes of stars" in a poem titled for one of these events. For 10 points each:

[10e] Aimé Césaire wrote a postcolonialist update of a Shakespeare play titled for what kind of weather event, which depicts Caliban as a slave on a Caribbean island rebelling against Prospero?

ANSWER: **tempest** [or rain**storm**; accept **hurricane**; accept *Une **Tempête*** or *The **Tempest***; accept "After the **Storm**"]

[10m] This author wrote the poems "After the Storm" and "Huracán." The fisherman Hector loses his canoe in a storm in an episode from *Omeros*, an epic poem by this St. Lucian writer of "A Far Cry From Africa."

ANSWER: Derek **Walcott** [or Sir Derek Alton **Walcott**]

[10h] A poet from this country wrote about "unholy high winds" of a hurricane that left "waterlogged memories." In a novel by another author, Beli is beaten in a cane field before moving to this country and giving birth to Oscar Wao.

ANSWER: **United States** of America [or the United States of **America** or the **U.S.A.**] (The poem is Yusuf Komunyakaa's "Requiem," which was written for Hurricane Katrina. The novel is Junot Díaz's *The Brief Wondrous Life of Oscar Wao*.)

<World/Other Literature>

9. Like a similar "scare" for suspected Communists, the Johns Committee in Florida investigated homosexuals in a "scare" named for this color. For 10 points each:

[10h] Starting in 1949, the U.S. federal government and military banned non-heterosexual individuals from service as part of a "scare" named for what color?

ANSWER: **lavender** [accept **Lavender** Scare; reject "purple" or "violet"]

[10e] The first gay service member to openly out himself to protest the Lavender Scare, Leonard Matlovich, served in this war that ended with the fall of Saigon.

ANSWER: **Vietnam** War [or **Second Indochina** War; or Chiến tranh **Việt Nam** or Kháng **chiến chống Mỹ**]

[10m] The Clinton administration loosened the ban with this policy, which is commonly known by a four-word name. This policy allowed gay and bisexual individuals to serve if they did not openly discuss their orientation.

ANSWER: "**don't ask, don't tell**" [or **DADT**]

<American History>

10. This piece opens with the cave's theme, [read slowly] "F-sharp, D C-sharp D, B, low F-sharp," played in the violas, cellos, and bassoons. For 10 points each:

[10h] Name this piece that juxtaposes the ocean with the grandeur of Fingal's Cave, a basalt cave named for a giant from James McPherson's Ossian translations.

ANSWER: **Hebrides** Overture [or *The Hebrides* or *Die Hebriden*]

[10m] This composer wrote the *Hebrides* Overture at age 21. At that point, he had already popularized a new chamber genre with the string octet he wrote at age 16.

ANSWER: Felix **Mendelssohn** [or Jakob Ludwig Felix **Mendelssohn** Bartholdy]

[10e] Mendelssohn visited Fingal's Cave on a trip to this country to write his third symphony. This country's Holyrood Palace in Edinburgh inspired the theme of that symphony, which is named for this constituent country of the UK.

ANSWER: **Scotland** [or **Alba**; accept **Scottish** Symphony]

<Classical Music>

11. This psychologist watched the psychic Douglas Home levitate as part of his study of the occult, which was also the subject of his doctoral thesis. For 10 points each:

[10e] Name this Swiss psychologist who split with Freud to found analytical psychology. He is known for theorizing the collective unconscious and inventing the concepts of introversion and extraversion.

ANSWER: Carl **Jung** ("yung") [or Carl Gustav **Jung**]

[10m] These concepts from Jungian ("YUNG-ee-in") psychology represent common aspects of the human experience that express themselves in art and dreams. These concepts include the shadow, the anima, and the persona.

ANSWER: **archetypes** [or **Archetypus** or **Archetypen**]

[10h] Jung proposed that this concept exists in girls in the phallic stage. Unlike a related concept that is resolved through castration anxiety, this concept is resolved through penis envy.

ANSWER: **Electra** complex (The related concept is the Oedipus complex.)

<Social Science>

12. An operation described by this adjective is often denoted by a curly "d" and makes up entries of the gradient vector. For 10 points each:

[10m] An integration technique uses decomposition into fractions described by what adjective?

ANSWER: **partial** [accept **partial** derivative; accept **partial** fraction decomposition]

[10e] The partial type of these equations is contrasted with their "ordinary" type, such as initial value problems, which relate a function and its derivatives.

ANSWER: **differential** equations [accept **DEs**; accept partial **differential** equations or ordinary **differential** equations]

[10h] *Two answers required.* The Picard–Lindelöf theorem gives situations when solutions to initial value problems have these two properties. A problem is well-posed if its solution has these two properties and is stable.

ANSWER: **existence** AND **uniqueness** [accept answers in either order; accept **existing** or word forms in place of "existence"; accept being **unique** or word forms in place of "uniqueness"]

<Other Science>

13. Answer the following about the theatrical Indonesian art form of wayang, for 10 points each.

[10h] This percussion-heavy genre of music typically accompanies wayang performances. The pentatonic scales and complex rhythms of this genre inspired music by Claude Debussy and other Western composers.

ANSWER: **gamelan** [accept specific genres of gamelan such as Balinese **gamelan** or Javanese **gamelan**]

[10e] Wayang is performed using “shadow” versions of these performance props that are manipulated by actors to play parts. Marionettes are examples of these props that are controlled by tugging on strings.

ANSWER: **puppets** [accept shadow **puppets**; prompt on **dolls**]

[10m] As a traditional art in danger of disappearing, wayang theater has been designated one of the “Masterpieces of the Oral and Intangible Heritage of Humanity” by this organization that also recognizes World Heritage Sites.

ANSWER: **UNESCO** [or **United Nations Educational, Scientific and Cultural Organization**; prompt on **United Nations** or **UN**]

<Other Fine Arts>

14. The victorious admiral during this battle commented on the happiness he felt in commanding a “band of brothers.” For 10 points each:

[10h] Name this battle, during which a naval convoy that had transported Napoleon across the Mediterranean was obliterated. During this battle, fighting paused for 10 minutes as sailors watched the explosion of the flagship *L'Orient*.

ANSWER: Battle of the **Nile** [or Battle of **Aboukir** Bay or Bataille d'**Aboukir**]

[10m] This winning commander at the Battle of Aboukir Bay was made a baron after the battle. This admiral was killed while captaining the HMS *Victory* at the Battle of Trafalgar.

ANSWER: Horatio **Nelson** [or Horatio Nelson, 1st Viscount **Nelson**; or Duke of **Bronte**]

[10e] During Napoleon’s Egyptian campaign, his troops apocryphally fired a stray cannonball that knocked the nose off of this monument. This Egyptian monument depicts a mythical creature with a human head and a lion's body.

ANSWER: Great **Sphinx** of Giza

<European History>

15. An Italian chemist described his experiences during this event in the short story collection *The Periodic Table*. For 10 points each:

[10m] Name this event, during which Moishe the Beadle issues a warning that goes unheeded. In a memoir that chronicles this event, someone asks “where is God?” only to be told that he is “hanging here from this gallows.”

ANSWER: **Holocaust** [or Ha**Shoah**; prompt on **WWII** or **World War II** or **Second World War**] (The author in the first line is Primo Levi.)

[10e] Moishe the Beadle appears in this Elie Wiesel (“elly vee-zell”) memoir, which ends with his liberation at Buchenwald. This memoir is followed by *Dawn* and *Day*.

ANSWER: **Night** [or *La Nuit*]

[10h] Elie Wiesel was deported from his home in this country’s town of Sighet. This country was the birthplace of the German-language author Paul Celan, whose Holocaust poem “Death Fugue” begins “black milk of morning.”

ANSWER: **România**

<European Literature>

16. In an essay titled for why she is one of these people, Zitkála-Šá reflects on manifestations of the Great Spirit in nature before rejecting Christianity. For 10 points each:

[10m] Give this Roman-era term for non-Christian polytheists. As part of a “neo-” movement named for these people, Wicca worships ancient nature deities such as the Triple Goddess and Horned God.

ANSWER: **pagans** [accept neopaganism or modern **paganism**; accept “Why I Am a **Pagan**”]

[10e] To develop an animist connection with nature, some neopagans adopt these supernatural ancestral spirits common in Native American belief. These spirits are carved onto namesake cedar poles in the Pacific Northwest.

ANSWER: **totems** [accept **totem** poles]

[10h] In a more extreme form of appropriation, New Age groups replicate the sacred use of these structures, such as the Lakota’s Inipi rite. Stones heated inside of these structures create purifying atmospheres for prayer.

ANSWER: **sweat lodges** [or **sweat houses**; accept **medicine lodge** or **medicine houses**]

<Religion>

17. In 2019, the FDA approved Trikafta, a triple combination therapy for this disease that includes two “correctors” and a “potentiator” of the faulty protein CFTR. For 10 points each:

[10m] Name this genetic disease identified by high amounts of chloride in a patient’s sweat.

ANSWER: **cystic fibrosis** [prompt on **CF**]

[10e] The allele for cystic fibrosis may protect against cholera in an example of this genetic trait’s “advantage.” Organisms with this trait have two different alleles of the same gene.

ANSWER: **heterozygous** [accept **heterozygote** advantage]

[10h] Cystic fibrosis is named after the scarring it causes in this organ. This organ secretes a namesake “juice” that neutralizes stomach acid.

ANSWER: **pancreas** [accept **pancreatic** juice]

<Biology>

18. This author used fictional music theory terms like “crushed cadences” and “pigmented triads” in a novel about the pianist Ryder. For 10 points each:

[10h] Name this author of *The Unconsoled*. An Artificial Friend is bought for the sickly child Josie in this author’s most recent novel, *Klara and the Sun*.

ANSWER: Kazuo **Ishiguro**

[10m] A fictional Judy Bridgewater song titles this 2005 Ishiguro novel about Kathy H and other clones who are created for the purpose of donating their organs.

ANSWER: ***Never Let Me Go***

[10e] Stevens has this profession in Ishiguro’s *The Remains of the Day*. P. G. Wodehouse created an “inimitable” character with this profession named Jeeves.

ANSWER: **butler** [or **valet**; prompt on **servants**]

<British Literature>

19. For 10 points each, answer the following about the concept of time in philosophy.

[10h] This French philosopher visualized time as a tape running between two spools in *Time and Free Will*. This philosopher accused special relativity of not understanding time as experience in a debate with Einstein.

ANSWER: Henri **Bergson** [or Henri-Louis **Bergson**]

[10e] Zhuāngzǐ, (“j’WAHNG-dzuh”) a philosopher from this school, compared his wife’s death to the changing of the seasons to advance a cyclical view of time. This Chinese school of philosophy was founded by Lǎozǐ and emphasizes *wú wéi*.

ANSWER: **Taoism** [or **Daoism**; or **Dàojiā**]

[10m] This philosopher argued that Newton’s absolute theory of space and time violated his identity of indiscernibles. This philosopher stated that we live in the “best of all possible worlds” in the *Theodicy*.

ANSWER: Gottfried **Leibniz** [or Gottfried Wilhelm **Leibniz**]

<Philosophy>

20. The Antikythera mechanism was found by divers at one of these sites in 1901. For 10 points each:

[10e] Name these sites used as a source to reconstruct trade routes in the ancient world. Amphorae used for storage are often found at these underwater archaeological sites that might contain preserved wooden oars.

ANSWER: **shipwrecks** [prompt on **ships**]

[10m] Amphorae were most commonly used to transport this good, which the Romans traded to the Gauls in exchange for enslaved people. Romans often added lead acetate to this good as a sweetener.

ANSWER: **wine** [or **vinum**; prompt on **alcohol**]

[10h] Many of the best-preserved shipwrecks are found in this body of water due to its oxygen-poor environment. Mithridates VI fought a series of wars with Rome while leading the Kingdom of Pontus on this body of water.

ANSWER: **Black** Sea [accept **Euxine** Sea or **Eúxinos** Póndos or Póntos **Áxeinos**; accept Sea of **Azov** or Palus **Maeotis** or **Maeotian** Swamp]

<Other History>