

ACF Fall 2019

Packet by Duke B, Rice B, Vanderbilt B, Wright State

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Tossups

1. The creator of this character wanted “pure colors” and “melting clouds” on the cover of the novel that she titles rather than this character herself. After consuming drugged ice cream at a hotel, this character enrolls at a private school in Beardsley. According to a preface by the fictional John Ray, Jr., this character dies in childbirth after marrying Richard Schiller. After reading a man’s diaries, this character’s mother Charlotte is killed by a car. The playwright of *The Hunted Enchanters*, Clare Quilty, kidnaps this character. This character is called a “nymphet” by the pedophile Humbert Humbert. For 10 points, name this teenage girl who titles a novel by Vladimir Nabokov.
ANSWER: **Lolita** Haze [or **Dolores** Haze; or **Lo** Haze; prompt on Haze or Schiller; accept “Schiller” in place of “Haze”]

<European Literature>

2. Cordelia Fine critiqued an experiment by Connellan and Baron-Cohen in which subjects with this trait stared longer at a mechanical mobile than a human face. In a 2005 controversy, Larry Summers echoed the hypothesis that people with this trait are more genetically variable, especially in IQ. These people express the “dark triad” traits of psychopathy and narcissism more often than their counterparts. Simon Baron-Cohen claims these people systemize more than they empathize, and has researched why those with this binary trait are much more likely to be diagnosed with autism. For 10 points, name this common trait characterized by having heightened testosterone and a Y chromosome.

ANSWER: being **male** [or being a **man** or a **boy**; or being assigned **male** at birth or **AMAB**; prompt on masculinity] (The second line refers to the Greater Male Variability Hypothesis.)

<Social Science>

3. For this dance, the International closed change is a variation on the standard box step. Vernon and Irene Castle introduced a fast variety of this dance that features “hesitations.” A sliding step replaced a hop when the country *Ländler* transitioned into this progressive dance. Even Lord Byron was scandalized by how closely partners were positioned in this dance, from which most other closed position dances are derived. The last beat of this “king of dances” seems late due to the anticipation of beat two in the Viennese tradition. For 10 points, name this partner dance, music for which includes “The Blue Danube” and is in triple meter.

ANSWER: **waltz** [accept **International Standard waltz**; accept “**hesitation**” **waltz**; accept **Viennese waltz**]

<Other Arts>

4. This quantity is measured by an ISFET (“ISS-fet”) device, which is a modified MOSFET (“MOSS-fet”). The allowed values of this quantity in a solvent are restricted to a “discrimination window” due to the leveling effect. Carborane compounds can be quantified using a modified version of this measure named for Louis Plack Hammett. The value for this quantity at which a molecule carries no net electric charge is the isoelectric point. At the half-equivalence point of a titration curve, this quantity is equal to pKa. For 10 points, name this quantity that typically ranges from 0 to 14 and measures the acidity or basicity of a substance.

ANSWER: **pH** [accept **acidity** or **basicity** until read]

<Chemistry>

5. A king of this city was the second husband of Gorgophone (“gor-GOFF-uh-nee”), who was said to be the first woman to remarry. After losing a footrace, a prince of this city named Icarus gave his daughter Penelope to Odysseus in marriage. This city was named for the naiad who married Lacedaemon (“lass-uh-DEE-mun”). Two

princes of this city rescued their sister after she was abducted by Pirithous (“py-RITH-oh-us”) and Theseus, and held a rivalry with Idas and Lynceus. This home of Castor and Pollux was ruled by Tyndareus, whose wife gave birth to two eggs after she was seduced by Zeus in the form of a swan. During the Trojan War, this city was led by Menelaus (“men-uh-LAY-us”) by virtue of his marriage. For 10 points, name this Peloponnesian city that was the hometown of Helen.

ANSWER: **Sparta** [accept **Lacedaemon** until read]

<Mythology>

6. This location titles the odd-numbered chapters of a novel whose protagonist puzzles over a chubby woman saying the word “Proust” in a long corridor. This is the first title location of a novel where a man reads dreams from unicorn skulls. A girl wakes her sister after brushing off leaves mistaken for playing cards in a dream about a trial in this place. A novel by Haruki Murakami alternates between “The End of the World” and a “Hard-boiled” place of this name. The protagonist is asked “Why is a raven like a writing desk?” at a tea party in this place, which titles a book in which the Cheshire Cat meets a girl who falls down the rabbit hole. For 10 points, name this setting of a Lewis Carroll novel about *Alice’s Adventures*.

ANSWER: **Wonderland** [accept *Hard-Boiled Wonderland* and *the End of the World*; accept *Alice’s Adventures in Wonderland* or *Alice in Wonderland*]

<World/Other Literature>

7. The colossal German battleship *Tirpitz* spent almost the entirety of its service confined to the coast off of this country. In a contingency plan titled for “Fortress” and this country, Josef Terboven argued for this country’s viable role as the last Nazi stronghold. A parliamentary debate nicknamed for this country involved Leo Amery quoting Cromwell’s command “In the name of God, go!”, leading to the resignation of Neville Chamberlain. In 1933, this country’s fascist *Nasjonal Samling* (“na-sho-NAHL SAHM-ling”) party was founded by a Nazi collaborator whose surname would later become synonymous with “traitor,” Vidkun Quisling. For 10 points, name this Scandinavian country, once led by King Haakon VII from Oslo.

ANSWER: **Norway** [or Kingdom of **Norway**; accept Fortress **Norway** or Festung **Norwegens**]

<European History>

8. This excerpt from a larger musical work is preceded by an introduction in which the orchestra “tries out” themes from three previous movements. Brahms quipped “any ass could see” that the *allegro* theme in the finale of his First Symphony evoked this earlier excerpt. A variation on the main theme of this excerpt appears in the composer’s earlier *Choral Fantasy*. The Council of Europe adopted this excerpt’s melody for their “Anthem of Europe.” This excerpt sets text about a “beautiful spark of divinity” and “daughter of Elysium” by Friedrich Schiller. For 10 points, name this choral excerpt that closes Beethoven’s “Choral” Ninth Symphony, based on a poem praising a happy emotion.

ANSWER: “**Ode to Joy**” [or “**An die Freude**”; accept the **fourth** movement of Beethoven’s **Ninth** Symphony; accept the **finale** of Beethoven’s **Ninth** Symphony; prompt on Beethoven’s **Ninth** Symphony or “**Choral**” Symphony until read by asking “what section of that symphony?”]

<Classical Music>

9. CLASP proteins bind these structures to prevent their breakdown through “catastrophe” events. These structures originate from a gamma-TuRC ring complex on an MTOC. These structures, which are the subject of the “search-and-capture” model, bind the drugs colchicine (“COAL-chih-seen”) and taxol to inhibit their polymerization during “dynamic instability.” These structures are traversed by the ATP-dependent dynein (“DY-neen”) and kinesin (“kih-NEE-sin”) motor proteins. These hollow structures are composed of dimers in a nine-plus-two arrangement in cilia and flagella. For 10 points, name these cytoskeletal structures that compose the mitotic spindle fibers, made from alpha- and beta-tubulin.

ANSWER: **microtubules** [prompt on mitotic **spindle** fibers until read]

<Biology>

10. This region lends its name to one people that held annual meetings at Marklo, and wrote the epic poem *Heliand* in their namesake language. Mikhail Bakunin and Richard Wagner participated in the 1849 May Uprising in this region's capital, which opposed a king from the House of Wettin, Frederick Augustus II. During World War I, George V renamed a royal house named for this region, Coburg, and Gotha to the House of Windsor. The Zwinger Palace was rebuilt in this region's capital, a famous cultural hub, following World War II's probably-unnecessary bombing of Dresden. For 10 points, name this German region which lends its name to an ethnic group that inhabited pre-Norman England, along with the Angles.

ANSWER: **Saxony** [accept **Saxons**; accept Anglo-**Saxons**; accept the House of **Saxe**-Coburg and Gotha; accept Old **Saxon**]

<European History>

11. Two children in this short story begin slapping each other after one of them claims that a cow-shaped cloud looks like an automobile. A woman in this story talks about Mr. Edgar Atkins Teagarden, who brought her a watermelon with the initials "E. A. T." cut into it. In this story, the central characters stop at a restaurant run by Red Sammy called The Tower during their road trip to Florida. A car accident caused by the cat Pitty Sing leads to Hiram and Bobby Lee shooting June Star and John Wesley near the end of this story. For 10 points, name this story in which the grandmother is shot by the Misfit, written by Flannery O'Connor.

ANSWER: "A **Good Man is Hard to Find**"

<American Literature>

12. An effect named for this scientist is described by the equation "beta equals B times d times the Verdet constant"; that effect occurs when a magnetic field causes the plane of light's polarization to rotate. A law named for this scientist explains how loops of current called eddies are produced by a change in magnetic field. This scientist lowered a charged ball into a metal container to demonstrate electrostatic induction in his "ice pail" experiment. A device invented by this man blocks electromagnetic fields using a conducting mesh; that is his namesake "cage." For 10 points, what English physicist names a law of induction and the SI unit of capacitance?

ANSWER: Michael **Faraday**

<Physics>

13. In one poem, this author wrote "There's nothing but our own red blood / Can make a right Rose Tree." In another poem, this author described a "drunken, vainglorious lout" who "has resigned his part / in the casual comedy." That poem by this author laments the deaths of "MacDonagh ("muck-DON-uh") and MacBride / and Connolly and Pearse ("pierce")" and concludes each stanza with the line "A terrible beauty is born." Another poem by this author asks, "What rough beast, its hour come round at last / Slouches towards Bethlehem to be born?" For 10 points, name this Irish poet of "Easter, 1916" and "The Second Coming."

ANSWER: William Butler **Yeats**

<British Literature>

14. This man halted a campaign and returned to his home state to confirm the execution of Ricky Ray Rector. This man's support among black voters jumped after he performed "Heartbreak Hotel" on a late night show. After a closer-than-expected primary loss to Paul Tsongas ("SONG-gus"), this man declared himself the "Comeback Kid" weeks after his campaign was hurt by accusations of an affair with Gennifer Flowers. This candidate's War Room, which included strategist James Carville, created slogans like "It's the economy, stupid." This man beat an incumbent Republican president while running with Al Gore. For 10 points, what Arkansas Democrat won the 1992 presidential election?

ANSWER: Bill **Clinton** [or William Jefferson **Clinton**]

<American History>

15. To adhere to this state, Origen of Alexandria supposedly performed an infamous action after a literal reading of Matthew 19:12, which is often interpreted as advocating this practice. In his *Commentary on First Corinthians* 7, Martin Luther described this practice as a “sinful suffering,” and often asserted his opposition to it. The Shakers promoted a strict form of this practice, which heavily contributed to the decline in their membership. In Catholicism, all bishops and most priests are required to adhere to this practice, as are all Mormons until they are legally married. For 10 points, name this religious practice often begins with a vow of chastity.

ANSWER: remaining celibate [or word forms; or chastity; or sexual abstinence; or descriptions of not having sex; or remaining a virgin; prompt on castration or becoming a eunuch or removing your genitals by asking “for what purpose?”]

<Religion>

16. Casagrande’s method can be used to calculate one of the Atterberg limits of this substance, whose color is officially described by the Munsell system. When alkaline, this substance tends to have a higher cation-exchange capacity, which is around 11.6 centimoles per kilogram for entisols. Aeolian processes can lead to the formation of the loess (“LOH-iss”) variety of this substance, and “profiles” of this substance are divided by layers called “horizons.” Based on its texture, this substance is divided into silt, clay, and sand classifications. For 10 points, name this nutrient-rich mixture of organic matter and minerals that supports plant growth.

ANSWER: soil [accept topsoil; prompt on pedolith; prompt on dirt or earth]

<Other Science>

17. A fourteen-line statement of this type introduced the concept of a “positive property,” which it uses to define an “essence” in modal logic. A *reductio ad absurdum* rebuttal to these statements is presented within *In Behalf of the Fool* by the monk Gaunilo. A “victorious” statement of this type that diverges from a previous modal attempt by Kurt Gödel (“GUR-tle”) was made by Alvin Plantinga. The “Lost Island” mocks this argument as presented in the *Proslogion*. This argument is more popular than its cosmological and teleological counterparts. For 10 points, St. Anselm of Canterbury put forth what sort of argument that seeks to prove the existence of God?

ANSWER: ontological arguments [prompt on arguments for the existence of God or synonyms]

<Philosophy>

18. In a “digression” in *The Wealth of Nations* named for this commodity, Adam Smith uses its history to dispute a link between this commodity’s price and the prosperity of states. After the Battle of Sekigahara, the Tokugawa clan gained the massive Iwami Ginzan (“ee-WA-mee GHEEN-zahn”) complex where this commodity was produced. In 1554, the patio process was developed in Mexico to extract this commodity using mercury. Spanish galleons carried this commodity to Manila after it was extracted from mines like Potosí. After the discovery of the New World, global inflation resulted from increased production of gold and, for 10 points, what other precious metal?

ANSWER: silver

<World History>

19. It’s not China, but this country’s Good Luck Cave contains the largest underground chamber by area in the world. This country’s Bayan Lepas (“BA-yahn luh-POSS”) Free Industrial Zone has been nicknamed the “Silicon Valley of the East” and lies in the colonial city of George Town. This is the larger of two countries separated by the Straits of Johor. César Pelli designed a pair of connected structures in this country’s capital that remain the tallest twin towers in the world. This country’s state of Sarawak lies on the island of Borneo. The Malacca Strait separates Indonesia from, for 10 points, what Southeast Asian country that contains the Petronas Towers in its capital of Kuala Lumpur?

ANSWER: Malaysia

<CE/Geo/Other/Pop Culture>

20. In a painting by this artist, a woman in a red dress and a man who has dropped his hat are two of the figures who look out on the title geological feature. This artist featured *Rückenfiguren* (“ROOK-in-fee-GOOR-in”) in many of his paintings, including *The Monk by the Sea* and *Chalk Cliffs on Rugen*. A purple sky and fir trees dominate an altarpiece by this artist that places the crucifixion in the context of a landscape, titled *The Cross in the Mountains*. This artist is best known for a painting of a man with a walking stick standing with his back to the viewer before a cloud-covered landscape. For 10 points, name this German Romantic painter of *Wanderer above the Sea of Fog*.

ANSWER: Caspar David **Friedrich**

<Painting/Sculpture>

Bonuses

1. The Montanist heresy originated, and was sometimes named for, this historical region, whose king supposedly committed suicide by drinking bull's blood after an invasion by the nomadic Cimmerians. For 10 points each:

[10] Name this Anatolian region ruled by multiple kings named Midas. According to prophecy, whichever man could solve an age-long puzzle in this region's capital of Gordium was destined to become the king of Asia.

ANSWER: **Phrygia** [prompt on central Anatolia or western Anatolia; prompt on central Asia Minor or western Asia Minor]

[10] The Gordian Knot was sliced in half by this ancient conqueror. This young Macedonian succeeded his father Philip II, creating a massive empire that stretched across Eurasia.

ANSWER: **Alexander the Great** [or **Alexander III** of Macedon; or **Aléxandros ho Mégas**; prompt on Alexander]

[10] Alexander's campaigns in Asia Minor began with a victory at one of these features named Granicus. Porus was defeated in a battle named for one of these features in the last meaningful clash during Alexander's invasion of India.

ANSWER: a **river** [accept Battle of the Granicus **River** or Battle of the Hydaspes **River**]

<European History>

2. This theorem can be used to define p -adic gamma functions. For 10 points each:

[10] Name this theorem which states that for a natural number n greater than one, [read slowly] if the quantity n -minus-one factorial is congruent to negative-one mod n , then n must be prime.

ANSWER: **Wilson's** theorem

[10] Another proof of Wilson's theorem uses this theorem named for a Frenchman. It holds that [read slowly] the quantity " a to the power of p ," minus a , is an integer multiple of p .

ANSWER: **Fermat's little** theorem

[10] Fermat also formulated his "Last Theorem," which describes an equation that, for n equals 2, is analogous to this theorem named for an ancient Greek thinker that holds for the side lengths of right triangles.

ANSWER: **Pythagorean** theorem [or **Pythagoras's** Theorem]

<Other Science>

3. In the summer of 2019, this musician published the third entry in a series of "hashtag *100daysoffpractice*" videos to the Instagram account @violincase. For 10 points each:

[10] Name this American violinist for whom Jennifer Higdon wrote her Pulitzer-winning violin concerto. She won a 2013 Grammy for the album *In 27 Pieces*, but is equally renowned for her recordings of Bach's solo violin pieces.

ANSWER: Hilary **Hahn**

[10] Hahn plays using a reproduction of this violinist's *Cannone Guarnerius*. This composer of 24 Caprices was refused a Catholic burial for 36 years in part due to a rumored deal with the devil.

ANSWER: Niccolò **Paganini**

[10] Hahn's *In 27 Pieces* consists entirely of works intended for these extra performances after the main program of a concert. Their name comes from a French word for "once more."

ANSWER: **encores**

<Classical Music>

4. The speaker says, "You think life is fire, / that progress is eruption; / where you put your bullet / you put the future" in a poem by this poet that criticizes US imperialism. For 10 points each:

[10] Name this poet of "To Roosevelt." This founder of *modernismo* wrote the collection *Azul...*

ANSWER: Rubén **Darío** [or Félix Rubén García **Sarmiento**]

[10] Darío wrote that this object lights Roosevelt's "path to easy conquest." Emma Lazarus's poem "The New Colossus" describes this sculpture in New York Harbor as "a mighty woman with a torch."

ANSWER: the **Statue of Liberty** [or *Liberty Enlightening the World* or **Lady Liberty**; accept *La Liberté éclairant le monde*; prompt on **Liberty**]

[10] This Cuban poet and member of *modernismo* wrote *Versos Sencillos* (“sen-SEE-yohs”), which was sampled to write a patriotic song titled “Guantanamera.”

ANSWER: José **Martí** [or José Julián Martí **Pérez**]

<World/Other Literature>

5. In September 2019, actor Mohammad Ali began protests against this leader over failed payments to the construction company Amlaak. For 10 points each:

[10] Name this world leader who defeated Moussa Moussa’s El-Ghad party with 97% of the vote in March 2018 elections. This leader offered voters boxes of food in exchange for supporting constitutional changes.

ANSWER: Abdel Fattah el-**Sisi** [or Abdel Fattah Saeed Hussein Khalil El-**Sisi**]

[10] Ali’s protests are occurring near Tahrir Square in this country’s capital of Cairo, where earlier protests during the Arab Spring mounted opposition against Hosni Mubarak’s presidency.

ANSWER: **Egypt** [or Arab Republic of **Egypt**]

[10] Egypt and Ethiopia are at odds over one of these projects named the Grand Ethiopian Renaissance. Nubians who relocated due to one of these projects are suing the Egyptian government over rights to the Abu Simbel complex.

ANSWER: **dams** on the Nile [prompt on **reservoirs** by asking “what projects create reservoirs?”; prompt on **levees** or **floodgates**; accept the Aswan High **Dam**]

<CE/Geo/Other/Pop Culture>

6. This man’s campaign for the White House was boosted by the reveal of the Murchison letter, which indicated that the British government favored his opponent. For 10 points each:

[10] Name this Republican who won the 1888 presidential election over Grover Cleveland, but lost to him four years later. His grandfather also served as president, though only for 31 days.

ANSWER: **Benjamin Harrison** [prompt on **Harrison**; do not accept or prompt on “William Henry Harrison”]

[10] Harrison signed many pieces of legislation passed by the 51st Congress, whose high spending earned it this derisive nickname in cartoons by magazines like *Puck*.

ANSWER: **Billion Dollar** Congress

[10] Though the 51st Congress did spend one billion dollars, it also raised revenue through an ultra-protectionist tariff framed by this Ohio congressman. He later won a higher office with the help of Mark Hanna.

ANSWER: William **McKinley**

<American History>

7. The stretch rule states that this quantity is not changed in certain deformations. For 10 points each:

[10] Name this quantity, the ratio of torque to angular acceleration. It is the angular analogue of mass.

ANSWER: **moment of inertia** [or **rotational inertia**; prompt on **I**]

[10] Rigid bodies have three principal moments of inertia, each corresponding to one of these things. A theorem relates the moment of inertia at an object’s center of gravity to its value about a parallel one of these things.

ANSWER: **axis** of rotation [accept principal **axes** or parallel **axis** theorem]

[10] The parallel axis theorem is sometimes named for this scientist, whose invention of the pendulum clock built on his studies of moment of inertia. He discovered that a traveling wave can be thought of as a spherical wavelet at every point on the wavefront.

ANSWER: Christiaan **Huygens** (“HOY-guns”) [accept **Huygens’s** principle]

<Physics>

8. Before Chomsky and Herman, this scholar described the corrective force that manages the dissonance between “news” and “truth” as the “manufacture of consent” in *Public Opinion*. For 10 points each:

[10] Name this scholar who coined the modern sense of “stereotype.” His opinion that democracies could not create an informed citizenry, which he advanced in *The Phantom Public*, was challenged in John Dewey’s *The Public and Its Problems*.

ANSWER: Walter **Lippman**

[10] Lippman is considered to be the father of the modern form of this discipline, which he practiced as an editor for *The New Republic*. “The Kentucky Derby is Decadent and Depraved” is among Hunter S. Thompson’s “gonzo” works in this discipline.

ANSWER: **journalism** [or synonyms such as **reporting**; accept gonzo **journalism**]

[10] This earlier work argues that democracies spring from “love of virtue.” Chapter 11 of this French treatise claims “there is no liberty if the judiciary power be not separated from the legislative and executive.”

ANSWER: *The **Spirit of the Laws*** [or ***On the Spirit of the Laws***; or *De l’**esprit des lois***] (by Baron de Montesquieu)
<Philosophy>

9. This religion’s namesake founder was known as “The Painter” for creating the *Arzhang*, a Syriac picture book that would later heavily influence Middle Eastern miniature painting. For 10 points each:

[10] Name this Persian religion that was based on the eternal conflict between the realms of light and darkness. Founded in the 3rd century AD, this religion was followed by Augustine of Hippo before his conversion to Christianity.

ANSWER: **Manichaeism** (“man-ih-KEE-ism”) [accept Religion of **Mani**; accept ***Ayīn-i Mānī***; accept ***Móni Jiào***; do not accept or prompt on “Mandaeism”]

[10] Centered on light and darkness, Manichaeist cosmology is characterized by this fundamental belief, which is also exhibited by the Zoroastrian faith via the struggle between the good Ahura Mazda and the evil Angra Mainyu.

ANSWER: **dualism** [accept **dualistic** religion or other word forms; accept moral **dualism**; prompt on answers regarding the existence of **two** fundamental **concepts**]

[10] In Zoroastrian eschatology (“ess-kuh-TOLOGY”), molten metal will flow across the Earth during Frashokereti, the Zoroastrian name for this type of event. According to Christianity, this general event will include the Rapture and the Last Judgement.

ANSWER: the **end of the world** [accept descriptive answers; accept **apocalypse**; accept **armageddon**]
<Religion>

10. This author corrected common misconceptions, which he called “vulgar errors,” in his encyclopedia *Pseudodoxia Epidemica*. For 10 points each:

[10] Name this doctor who described his own religious beliefs in *Religio Medici*. He is best known for a pair of discourses titled *The Garden of Cyrus* and *Hydriotaphia*.

ANSWER: Thomas **Browne**

[10] *Hydriotaphia* discusses a Roman burial ground filled with these objects near Norfolk. John Keats declared “Beauty is truth, truth beauty” in an “Ode on a Grecian” one of these objects.

ANSWER: **urns** [accept “Ode on a Grecian **Urn**”]

[10] Much of Browne’s work addresses this specific emotion, the subject of a 1621 “anatomy” by Robert Burton. Another of Keats’ 1819 odes, which begins “No, no, go not to Lethe (“LEE-thee”),” is a meditation on this emotion.

ANSWER: **melancholy** [or **melancholia**; accept *The Anatomy of **Melancholy*** or “Ode on **Melancholy**”; do not accept or prompt on synonyms such as “sadness”]

<British Literature>

11. This artist’s prints include one called *Fine Wind, Clear Morning* and another that depicts the title object through the opening of a barrel. For 10 points each:

[10] Name this artist who depicted a woman having sex with octopuses in *The Dream of the Fisherman’s Wife*. His namesake *Manga* consists of sketches of everyday scenes.

ANSWER: Katsushika **Hokusai** [accept names in either order]

[10] A print from Hokusai's *36 Views of Mt. Fuji* uses a mix of indigo and Prussian blue to render a "great" one of these things "off Kanagawa." He also made *Masculine* and *Feminine* depictions of these things.

ANSWER: waves [accept *The Great Wave* off Kanagawa; or *The Great Wave*; accept *Masculine Wave* or *Feminine Wave*; accept tsunami; accept rogue wave; prompt on sea or ocean]

[10] This artist also created a series of *36 Views of Mt. Fuji*, but is better-known for depicting the routes between Edo and Kyoto in his series *The 53 Stations of the Tōkaidō*. He was the last master of *ukiyo-e* ("oo-kee-yo-EH").

ANSWER: Utagawa Hiroshige [or Ando Hiroshige; accept names in either order]

<Painting/Sculpture>

12. During a period of violence in this country, directives like "cut down the tall trees" were broadcast by the RTLM radio station. For 10 points each:

[10] Name this African country where the assassination of prime minister Juvénal Habyarimana in 1994 sparked a genocide against its minority Tutsi population.

ANSWER: Rwanda

[10] Most killings during the Rwandan genocide were perpetrated by this Hutu paramilitary group. Leaders of the group like Georges Rutaganda have been convicted of crimes against humanity.

ANSWER: Interahamwe

[10] The Interahamwe were driven from Rwanda and the genocide stopped when this man's Rwandan Patriotic Front took control of the country. This man has served as Rwanda's authoritarian president since 2000.

ANSWER: Paul Kagame

<World History>

13. This molecule assumes a "twist-boat" conformation to alleviate steric strain between its flagpole hydrogens. For 10 points each:

[10] Name this cyclic alkane produced from the hydrogenation of benzene.

ANSWER: cyclohexane [or C6H12; do not accept or prompt on "hexane"]

[10] This Latin prefix denotes an isomer with substituents across a ring or carbon chain, unlike cis isomers.

ANSWER: trans [accept trans isomers]

[10] A ring flip between two chair conformations of cyclohexane switches hydrogen atoms between these *two* orientations, which align above and out from the plane of the ring respectively.

ANSWER: axial AND equatorial [accept in either order]

<Chemistry>

14. This character battles Giteclin ("GHEE-tuh-klin") in a *chanson* ("shawn-SAWN") by Jean Bodel, who classified legends about this man's court as the "matter of France." For 10 points each:

[10] Name this character who kills Baligant and his armies after discovering the dead body of his nephew. Ganelon betrays this ruler by helping the Saracens attack the rear-guard of his army.

ANSWER: Charlemagne

[10] Charlemagne is the uncle of this hero at the Battle of the Roncevaux ("RON-suh-voh") Pass. This knight dies midway through his namesake epic by blowing his oliphant horn to call for help.

ANSWER: Roland [or Orlando; accept the Song of Roland or Chanson de Roland]

[10] Astolfo travels to the moon to recover Roland's wits in this other epic from the matter of France. Roland loves the maiden Angelica in this epic by Ludovico Ariosto.

ANSWER: Orlando Furioso

<European Literature>

15. After signing the Treaty of Tordesillas, the Portuguese seemingly took a tour to see as many locations as possible. Answer some questions about their travels, for 10 points each.

[10] In his diary, Portuguese Jesuit Luís Fróis observed Yasuke (“YOSS-keh”), a samurai with this unusual characteristic who was employed by Oda Nobunaga. Prior to then, Yasuke travelled to Japan with Alessandro Valignano via the *nanban* system.

ANSWER: **African** samurai [or **black**; accept descriptive answers that indicate his **dark** skin color or his **African** heritage; accept that he was from **Mozambique**, **Ethiopia**, **Sudan**, **South Sudan**, **Eritrea**, **Somalia**, or **Africa** as his heritage isn’t well known; prompt on being a **slave** by asking “from where?”; prompt on answers indicating that he **wasn’t Japanese**]

[10] Portuguese exploration often entailed visits to the Maluku Islands of Indonesia, where they could procure varieties of this general good, such as clove and nutmeg.

ANSWER: **spices** [prompt on **seasonings** or **flavorings**]

[10] The Portuguese commonly used these snazzy ships, whose triangular, lateen sails allowed for high speed and maneuverability. They would later be largely replaced by the carrack.

ANSWER: **caravels** [accept **caravela**; do not accept or prompt on “*nau*,” which is another word for carrack]
<European History>

16. Full and lengthened ablaut are differentiated in the first and second of nearly four thousand rules for this language’s grammar formulated by Pāṇini (“PA-nih-nee”). For 10 points each:

[10] Name this language, whose similarity to Latin and Greek led William Jones to theorize Proto-Indo-European. It remains in use as a liturgical language for Hindus.

ANSWER: **Sanskrit**

[10] Frits Stahl argued that Pāṇini created an early grammar of this type, labelled Type 1 in the Chomsky hierarchy. Non-terminals cannot be moved at will in these grammars, so they are more general than their “free” counterpart.

ANSWER: **context-sensitive** grammar [accept **context-sensitive** languages]

[10] Grammars vary between these general linguistic systems that encompass languages, registers, and styles. This four-letter word is prefixed with “idio-” when speaking of one person’s speech, or “dia-” when discussing examples like Cockney and AAVE.

ANSWER: **lects** [accept language **varieties**; accept **dialects** or **idiolects** or **sociolects**]
<Social Science>

17. Motoo (“mo-TOH”) Kimura’s neutral theory posits that most molecular evolution is caused by this phenomenon. For 10 points each:

[10] Name this phenomenon that describes the change in allele frequencies through random sampling, which is often observed after a population undergoes a bottleneck event.

ANSWER: genetic **drift** [accept allelic **drift**]

[10] Drift does not occur in populations under this condition. The frequencies for homozygous dominant and recessive genotypes are p -squared and q -squared in this type of equilibrium, which is derived assuming random mating and infinite population size.

ANSWER: **Hardy–Weinberg** equilibrium

[10] Alleles that achieve 100% frequency in a population by natural selection and genetic drift are said to have undergone this process, the opposite of allele extinction.

ANSWER: **fixation** [or word forms]

<Biology>

18. This artist was commissioned to create a series of murals for the Four Seasons restaurant, resulting in a series dominated by shades of maroon and black. For 10 points each:

[10] Name this painter. A chapel dedicated to this 20th-century artist’s work displays his trademark style of painting large rectangles of solid colors.

ANSWER: Mark **Rothko** [or Markus Yakovlevich **Rothkowitz**]

[10] The Rothko Chapel is at the Menil Collection, a museum designed by this architect. This architect collaborated on the Centre Pompidou (“SAWN-truh pom-pee-DOO”) with Richard Rogers.

ANSWER: Renzo **Piano**

[10] A Barnett Newman sculpture titled for a *Broken* one of these objects stands outside the Rothko Chapel. Three of these square pillars with pointed, pyramidal tops all known as “Cleopatra’s Needle” were moved from Egypt to London, Paris, and New York.

ANSWER: **obelisks** [accept *Broken Obelisk*]

<Other Arts>

19. A novel titled for this character’s *Boys* features the Plumfield siblings and her own children, Rob and Teddy. For 10 points each:

[10] Name this character who writes the play “The Witch’s Curse” for her and her sisters to perform. She rejects Teddy Laurie’s marriage proposal and later marries Professor Bhaer.

ANSWER: **Josephine** March [or **Jo** March or **Josephine** Bhaer or **Jo** Bhaer; prompt on March]

[10] This author wrote about Jo teaching at a school in *Little Men*, which is preceded by her novel about Jo and the other March sisters titled *Little Women*.

ANSWER: Louisa May **Alcott**

[10] In the first chapter of *Little Women*, Marmee suggests that the sisters act out scenes from this novel. The protagonist of this novel escapes Doubting Castle using a key called Promise.

ANSWER: ***Pilgrim’s Progress***

<American Literature>

20. The Sacred Band of Thebes, which consisted of 150 pairs of gay lovers, swore oaths at a shrine dedicated to this person. For 10 points each:

[10] Name this son of Iphicles (“IF-ih-kleez”) and nephew of Heracles. Some authors write that this man was a lover of Heracles as well as his assistant.

ANSWER: **Iolaus** (“eye-OH-lay-us”)

[10] Iolaus helped Heracles defeat this monster by burning the stumps of its heads so that they would not regenerate. Heracles killed this many-headed monster for his second labor.

ANSWER: the Lernaean **Hydra**

[10] Iolaus and Heracles fight Cynus, the son of Ares, in an epic by Hesiod (“HEE-see-id”) titled for one of these objects. Book XVIII of the *Iliad* contains an ekphrasis on one of these objects belonging to Achilles.

ANSWER: **shield** [accept the **shield of Heracles** or the **shield of Achilles**]

<Mythology>