

2019 Terrapin: Come on Angel, Come and Save Us

Packet 15

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Tossups

1. **In 1983, the discovery of this artist’s signature on a tempera and gold painting led to the attribution of several of his works, such as his *St. Luke Painting the Virgin and Child* and *The Adoration of the Magi*. This artist was contractually obligated to include portraits of contemporary noblemen who wanted to be depicted witnessing a miracle in a painting whose foreground features his son pointing at the center. Picasso’s *Les Femmes d’Alger* (O.J. version O) drew on a painting by this artist in which a blue-clad (\*) saint holds his arms out to a group of nude souls holding yellow and green garments. This artist of the *Vision of St. John* also painted a work in which Saint Augustine and Saint Stephen hold a man dressed in black armor and lower into his tomb. For 10 points, *Opening of the Fifth Seal*, *View of Toledo*, and the *Burial of the Count of Orgaz* are by what Spanish artist born on Crete?**

ANSWER: El **Greco** [or **Doménikos** Theotokópoulos]

<JH, Painting & Sculpture>

2. **A citadel complex of this civilization contained a mud-brick platform with seven clay-lined pits that have been identified as “fire altars” for sacrificial offerings. Sir John Hubert Marshall, who first excavated this civilization’s ruins, proposed that it worshipped a “Mother Goddess” based on several clay female figurines. Cultural artifacts from this civilization include many “unicorn” seals, and the statues of the (\*) “Priest King” and the “Dancing Girl.” A city of this civilization was equipped with what was possibly the first indoor plumbing system, and a bitumen-lined “Great Bath”; that city of this civilization was Mohenjo-Daro. For 10 points, name this ancient Indian civilization from the Bronze Age that is sometimes named after a Pakistani river.**

ANSWER: **Indus** River Valley civilization [or **Harappan** civilization]

<AE, World History>

3. **The kappa number, which is related to residual lignin content, describes the efficiency of this process. The fungal enzyme xylanase can be used in a low-environmental impact form of this process. The chemical basis for this process can involve demobilizing electrons in conjugated double bond systems, or reducing double bonds to single bonds. Environmentally friendly types of this process use ozone, and other versions of this process are classified as elemental (\*) chlorine-free or totally chlorine-free. Chromophores lose their effectiveness through this process, which can be done using oxidizing agents like hydrogen peroxide. For 10 points, name this process carried out with household sodium hypochlorite solution, which reduces the color of pigments and whitens stains.**

ANSWER: chemical **bleaching** [or word forms; or wood pulp **bleaching**]

<GR, Chemistry>

4. **Geoffrey Pullum argued that early linguists failed to appreciate that this people’s language was agglutinative in an article about this people’s “great vocabulary hoax.” In *Systems of Consanguinity and Affinity*, Lewis Henry Morgan used this ethnic group as the name for kinship systems that do not distinguish between patrilineal and matrilineal ancestors, but instead emphasize distance. As evidence of linguistic-relativity, Benjamin Whorf famously cited Franz Boas’s erroneous claim that these people have an unusually high number of (\*) words for precipitation. In a famous work of salvage ethnography, Robert J. Flaherty**

filmed a documentary about a man from this ethnic group married to Nyla who apocryphally died of starvation two years after its completion. For 10 points, name this ethnic group documented in the film *Nanook of the North*.

ANSWER: Inuit [accept Eskimo]

<JL, Social Science>

5. **This poem describes threshed rushes that are filled with the “white dust of ibises whose cries / have wheeled since civilization’s dawn.” This poem imagines a worm crying “Waste no compassion on these separate dead!” in its first stanza, which opens by describing “a wind ruffling a tawny pelt.” After noting how “The gorilla wrestles with the superman,” this poem’s narrator reflects on his (\*) mixed-race heritage by stating that he is “poisoned with the blood of both.” This poem’s narrator, who has “cursed the drunken officer of British rule,” rues the deaths of Kikuyu during the Mau Mau Uprising by asking, “How can I face such slaughter and be cool?” For 10 points, the question “How can I turn from [the title continent] and live?” concludes what Derek Walcott poem?**

ANSWER: “A Far Cry From Africa”

<AP, British Literature>

6. **Plato’s *Phaedrus* is set in a part of the Attic countryside where this god was said to have abducted a girl playing along the Ilissus River. According to Hyginus, Jupiter ordered this deity to convey Latona to the island of Delos in order to escape the Python. A lost work of Aristeas supposedly described the wars between the one-eyed Arimaspi and a race of griffins that took place in the region beyond this deity’s domain in Thrace. Two of this god’s (\*) children drive the harpies away from Phineas in the *Argonautica*. This god abducted the Athenian princess Orithyia, who gives birth to this god’s feathered children Zetes and Calais. This god, who is often depicted with a conch, cloak, and winged feet, is the herald of cold winter air. For 10 points, name this Greek god of the north wind.**

ANSWER: Boreas [accept Aquilo until “harpies” is read]

<JS, Mythology>

7. **In the decade before this leader came to power, a sacrilegious act was carried out in his city by Megacles, who murdered backers of Cylon’s attempted coup as they were supplicating in a temple. This leader’s legislation was publicly displayed on wooden tablets attached to rotating three-sided pyramids called *kyrbeis*. This leader, who enfranchised all men who could equip themselves as hoplites, distinguished between intentional and unintentional (\*) killing in his law on homicide. Centuries after his death, Demades quipped that this leader wrote in blood and not ink. With the exception of his law on homicide, this leader’s successor Solon replaced his entire law code. For 10 points, name this harsh Athenian lawgiver whose laws punished almost every crime with death.**

ANSWER: Draco [or Drakon; accept Draconian constitution or Draconian law]

<CK, European History>

8. **KAI1 (“kai-one”) belong to class of genes named for suppressing this process. In addition to inhibiting bone resorption, the monoclonal antibody Denosumab can be used to prevent this process. This process requires lysyl oxidase in low-oxygen environments through the activation of focal adhesion kinase. The cascade of this process includes degradation of ECM molecules like E-cadherin, leading to loss of (\*) cohesion, and the creation of CTCs. This process typically affects the lymph nodes before other areas of the body, and cells undergoing this process can spread through canicular spaces or through the bloodstream. For 10 points, name this process in which cells from a primary tumor spread to other parts of the body.**

ANSWER: metastasis

<GR, Biology>

9. This composer's so-called "opera" *A Hand of Bridge* consists of four characters, who each sing an aria about their inner thoughts while playing the titular game. The first movement of this composer's piano concerto begins with a cadenza for the soloist, while the flute introduces the theme of the second-movement *Canzone*. The second movement of this composer's Second Symphony was excerpted as the tone poem *Night Flight*, whereas this composer's First Symphony synthesizes the four movements of a classical symphony into one movement. The second movement of his (\*) String Quartet was excerpted as a standalone piece that was played during the announcement of JFK's funeral. For 10 points, name this American composer of *Adagio for Strings*.

ANSWER: Samuel **Barber**  
<AE, Classical Music>

10. An essay on this topic discusses a connoisseur of this topic named Toad-in-the-Hole who admires the beauty of a series of events on Ratcliffe Highway involving John Williams. Another essay titled for this practice calls English authors "incomparably the best dull writers" and criticizes an A. A. Milne novel titled for a red house. An essay on this topic considers "a Sunday afternoon, preferably before the war" on which "naturally, "you want to read about" this topic in *News of the World*. Thomas (\*) de Quincey wrote about this activity "as a Fine Art," and another essay considers a case involving a person with a cleft chin to explain why "you never get a good [one of these events] nowadays." Raymond Chandler discussed "the simple art" of this crime. For 10 points, a George Orwell essay about the decline of what type of crime in England places Jack the Ripper "in a class by [himself]?"

ANSWER: **murder** [accept **homicide** or **manslaughter**; prompt on **crime**; anti-prompt on **serial killings**]  
<AP, World/Other Literature>

11. This explorer's travels were the subject of a letter to the Cardinal of Salzburg by Maximilianus Transylvanus, based on interviews with this explorer's crew members. This explorer was accompanied on a voyage by Antonio Pigafetta, who wrote an account of his travels describing a stop in the land of Verzin and an encounter a race of giants in (\*) Patagonia. This explorer encountered the friendly king Rajah Humabon on Cebu, and baptized him as Don Carlos in honor of his patron, Charles I of Spain. Juan Sebastián Elcano completed this explorer's last voyage when he killed was by the chief Lapu-Lapu in the Philippines. For 10 points, name this Portuguese explorer who was the initial leader of the first expedition to successfully circumnavigate the earth.

ANSWER: Ferdinand **Magellan** [or Fernão de **Magalhães** or Fernando de **Magallanes**]  
<AE, European History>

12. According to Sard's theorem from measure theory, the set of critical values of a smooth function is a set described by this term. Subsets of those sets described by this term are called negligible. The isotropic cone in a pseudo-Euclidean space consists of a set of vectors described by this term. Similarly, vectors with zero spacetime interval in Minkowski space are referred to by this term. The (\*) kernel of a linear transformation is a vector space referred to by this term. The rank of a matrix plus the dimension of a space described by this term must equal the dimension of the matrix's domain according to a theorem partially named for this term. For 10 points, give this term used as alternate name for the empty set, a synonym of the number zero.

ANSWER: **null** [accept **null** set, **null** vectors, **null** space, or **nullity**]  
<GR, Other Science: Mathematics>

13. One of this author's characters explains his father's love as "Pure vanity on his part, the besetting sin of all artists in love with their own work, however hideous." In a play by this author, a sword with the words "all-powerful Death dissolves your vow" written on it in blood is presented by a disguised character. Men throw firebrands into a city's powder-magazine while rescuing Roller from the gallows in that play by this author, whose protagonist later upholds an (\*) oath he made upon Roller's death by stabbing his betrothed Amelia. This author penned a poem that describes how we enter "fire-drunk" into the "sanctuary" of the title

“Daughter of Elysium.” For 10 points, name this German author who wrote about the struggle between Karl and Franz Moor in *The Robbers* and who penned “Ode to Joy.”

ANSWER: Friedrich **Schiller**

<VS, European Literature>

14. **The fourth ritual performed by Shingon Buddhist priests during their initiation is the *goma* ritual, which centers on performing this action. This action is done with a red heifer (“HEFF-er”) to produce a ritual substance historically used in Judaism to purify things defiled by corpses. The *korban olah* (“kor-BAHN oh-LAH”) was a ritual performed by Jewish priests in the Temple based around this action, sometimes known by the Greek word (\*) *holocaust*. During the Qīngmíng (“ching-ming”) Festival, it is customary to give your ancestors money by doing this action with joss paper that comes in the form of folded foil-covered ingots. Hindu *yajñas* (“YUG-n’yuh”) are offerings done by this action that are intermediated by Agni. For 10 points, name this action that is done with incense to produce fragrant smoke.**

ANSWER: **burning** [or **burnt**; accept **incinerate**, **combust**, **cremate**, or synonyms; accept **fire** or **flame**; prompt on **sacrifice**, **offering**, or **oblation** by asking “what specifically is done to the sacrifice?”]

<WC, Religion>

15. **This opera’s libretto, which was written by Jules Barbier (“zhooh barb-YAY”) and Michel Carré (“mee-SHELL ka-RAY”), was spoken at its premiere rather than sung. The soprano sings an aria that refers to Goethe’s “Der König in Thule” (“dair KUR-nish in TOO-luh”) in this opera’s second act. In this opera, the chorus “Gloire immortelle de nos aïeux” (“GLWAHR ee-mor-TEL duh noze ah-YUH”) signifies a character’s return from war, after which he meets Siébel (“see-ay-BEL”) at his sister’s house. A chorus sings “Christ est ressuscité!” (“KREEST ay ruh-soo-see-TAY”) at the end of this opera’s fifth act, which takes place in a prison cell. The tenor and bass-baritone sing the duet “Me voici” (“muh vwah-SEE”) in this opera as an image of a character at her (\*) spinning wheel is shown. That character, Marguerite, sings the “Jewel Song” upon discovering a box containing jewelry and a mirror. For 10 points, name this opera by Charles Gounod (“goo-NOH”) about the titular scholar’s deal with Mephistopheles.**

ANSWER: **Faust**

<JS, Other Arts>

16. **An essay written by this person notes that the natural limit of a republic is the distance to the center of the republic, which will barely allow representatives to meet as often as necessary. That essay by this person notes that because the jurisdiction of the national government is restricted to certain areas, state governments will retain authority. In another essay, this politician wrote that (\*) “Ambition must be made to counteract ambition,” and “If men were angels, no government would be necessary.” Along with two other politicians who took the pen name “Publius,” John Jay and Alexander Hamilton, this politician wrote the Federalist Papers. For 10 points, name this Virginia politician and “Father of the Constitution” who succeeded Thomas Jefferson as President.**

ANSWER: James **Madison** [prompt on **Publius** until read]

<AE, American History>

17. **Porkchop plots represent the solutions to Lambert’s problem that define these structures, and they correspond to rectangles on cobweb plots. The Laplace–Runge–Lenz (“la-PLOSS ROON-guh LENTS”) vector is a conserved quantity for these structures. An effective potential with a centrifugal term is used to simplify a differential equation characterizing these structures. Tidal forces can cause phase lag, resulting in the decay of these structures. The virial (“VEE-ree-ul”) theorem relates the average potential and kinetic energy for these structures, which are solutions to the (\*) Kepler problem. Hohmann derived a minimum-energy procedure to transfer between two of these paths. These trajectories are characterized by eccentricity and are followed by objects with negative total energy and speeds that remain below escape velocity. For 10 points, name these trajectories, the paths traced by gravitationally bound objects around the Sun.**

ANSWER: **orbits** [accept elliptical **orbits**, or Kepler **orbits**, or closed **orbits**; accept anything indicating bodies **orbiting** each other; prompt on two-body system or problem by asking “what dynamical situation are the bodies in?” until “paths” is read; prompt on orbital elements or Keplerian elements in the first line by asking “which define what structures?”]

<GR, Physics>

18. **The solution to the standard independence problem for this piece is 14. The Trompowsky attack counters Indian openings by moving this piece to g5. During the “Game of the Century,” a 13-year-old Bobby Fischer launched a famous attack by moving this piece to e6, deliberately sacrificing his queen in the process. A quip by Mihai Suba claims that “bad” types of these pieces “protect good pawns.” A “Greek (\*) gift” sacrifices this piece by taking the opponent’s kingside pawn at h2 or h7. This is the third piece moved by both White and Black in the Giuoco (“j’WOCK-oh”) Piano. White attacks Black’s knight with this piece on the third move of the Ruy (“ROO-ee”) López opening. The movement of this piece, which can be “fianchettoed” (“fee-an-CHET-toed”), is combined with that of a rook to yield the movement of a queen. For 10 points, name this chess piece that only moves diagonally.**

ANSWER: **bishops** [prompt on B]

<JL, Other>

19. **A monologue in this play repeatedly claims that “We all know that something is eternal.” A character in this play who later dies of pneumonia remarks that “People are meant to go through life two by two. ’Tain’t natural to be lonesome.” A character in this play explains his choice to forgo college and marry over ice-cream sodas in Morgan’s drugstore. The hymn (\*) “Blessed Be the Tie that Binds” is repeated throughout this play, whose first act, subtitled “Daily Life,” includes a lecture by Professor Willard about the history of the setting. In the final act of this play a character asks “Does anyone ever realize Life while they live it...?” after reliving her 12th birthday party. For 10 points, name this Thornton Wilder play in which the Stage Manager tells the audience about the people of Grover’s Corners.**

ANSWER: ***Our Town***

<JH, American Literature>

20. **Sydney Shoemaker’s “too many thinkers” argument contends that each person is identical with this kind of thing. A 1986 book arguing that these things have moral status based on the criterion of a “subject-of-a-life” was written by Tom Regan. In the 1970s, Richard Ryder and Mary Midgley participated in discussions about the ethical status of these things as part of the Oxford Group. The “argument from marginal cases” argues that they have moral status if (\*) infants and the severely disabled have moral status. Jeremy Bentham famously said of these things, “the question is not, Can they reason? nor, Can they talk? but, Can they suffer?” For 10 points, Peter Singer introduced the notion of speciesism (“species-ism”) in a 1975 book advocating the “liberation” of what creatures?**

ANSWER: **animals** [accept ***Animal Liberation***]

<CK, Philosophy>

## Bonuses

1. After being accidentally left alone aboard a prototype of these vehicles, Jacques Charles (“zhahk sharl”) wrote “Never has a man felt so solitary, so sublime – and so utterly terrified.” For 10 points each:

[10] Name these lighter-than-air vehicles that started a 1780s “mania” after their invention by the Montgolfier brothers. Charles and the Robert (“roh-BAIR”) brothers built the first one of these vehicles to use hydrogen.

ANSWER: **balloons** [or hot air **balloons**; or hydrogen **balloons**]

[10] During this battle, the French aeronaut Eugène Godard used a balloon for reconnaissance of the opposing Austrian army. The bloodshed at this battle inspired Henri Dunant (“on-REE due-NAWN”) to found the International Red Cross.

ANSWER: Battle of **Solferino**

[10] Following the Franco-Prussian War, this French statesman escaped Paris by floating over the Germans with a balloon. He established the Third Republic’s Government of National Defense.

ANSWER: Léon **Gambetta**

<AP, European History>

2. These functions must satisfy the Cauchy–Riemann (“koh-SHEE REE-mon”) conditions. For 10 points each:

[10] Identify these complex-valued functions that are differentiable everywhere in their domain. A major result of complex analysis shows that these functions are analytic functions and vice versa.

ANSWER: **holomorphic** functions

[10] Analytic functions are defined as having a local one of these representations that converges. Taylor and Maclaurin name examples of these infinite sums of terms that include the variable raised to integers from zero to infinity.

ANSWER: **power series** [prompt on series representation or series expansion]

[10] This major result in complex analysis states that the integral of a holomorphic function defined in a disk along a closed curve in that disk is equal to zero.

ANSWER: **Cauchy** integral theorem [or **Cauchy**–Goursat theorem; do not accept or prompt on “Cauchy integral formula” or any other answer involving “formula”]

<JN, Other Science: Mathematics>

3. In one of this author’s novels, Xu Sanguan (“shoo san-gwen”) discovers that his first son, Yile (“yee-luh”), is illegitimate. For 10 points each:

[10] Name this author of *Chronicle of a Blood Merchant*. He wrote a novel about Xu Fugui (“shoo foo-gway”), who survives the Cultural Revolution after gambling away his father’s fortune in *To Live*.

ANSWER: **Yu** Hua [or Hua **Yu**]

[10] This poet “translated” a poem by Li Bai that begins while the speaker’s “hair was still cut straight across [her] forehead”; that poem is “The River Merchant’s Wife.”

ANSWER: Ezra **Pound**

[10] In *The Plum in the Golden Vase*, Ximen Qing (“shee-mun cheeng”) is a wealthy merchant who first appeared in this other classical Chinese novel, about Song Jiang (“sung j’yong”) and his band of 108 outlaws.

ANSWER: **Water Margin** [or **Shui Hu Zhuan**; or **All Men Are Brothers**; or **Outlaws of the Marsh**; or **Tale of the Marshes**; or **Men of the Marshes**; or **The Marshes of Mount Liang**]

<JS, World/Other Literature>

4. Answer the following about the British Empire’s activity in modern-day Argentina before the Falklands War. For 10 points each:

[10] Great Britain agreed to maintain purchases of this commodity from Argentina in the Roca-Runciman Agreement. Argentine gauchos in the Pampas helped produce this commodity on ranches called *estancias*.

ANSWER: **beef** [or **cows** or **cattle**; prompt on meat]

[10] In 1845, Great Britain and France blockaded the Río de la Plata to support José Fructuoso Rivera, a leader of this Uruguayan political party, against the Argentine-supported Manuel Oribe.

ANSWER: **Colorado** Party [or Partido **Colorado**; accept **Red** Party]

[10] This company, founded by Robert Harley, proposed a British capture of Buenos Aires in 1711. A decade later, speculation about this company's proposal to take over the national debt led to a namesake "bubble."

ANSWER: **South Sea** Company [accept **South Sea** Bubble]

<AP, World History>

5. The poet Vallathol ("VUH-luh-thohl") is credited with the revival of a form of dance from this state whose five stock characters include "Knife," "Beard," and "Black." For 10 points each:

[10] Name this state whose traditional dance forms include Mohiniyattam ("MO-hee-nee-yuh-tum") and the aforementioned Kathakali ("KUH-thuh-kuh-lee"), whose performers wear a thick white facial border and green makeup when they play heroic characters.

ANSWER: **Kerala** ("CARE-uh-luh") [or **Keralam**]

[10] Three instruments of this type are used in musical accompaniments to Kathakali. The damaru, mridangam, and tabla are other Indian types of these percussion instruments.

ANSWER: **drums** [prompt on percussion until read]

[10] Kathakali tradition dictates 24 primary *mudrās*, which are expressed by manipulating this body part. Carnatic vocalists often keep *tāla*, or rhythm, by moving this body part.

ANSWER: **hands** [accept **fingers**]

<AP, Other Arts>

6. In his youth, this character is "one of those boys for whom a motorbike is the most compelling model of the universe." For 10 points each:

[10] Name this German businessman who saves Polish Jews from a concentration camp operated by Amon Goeth in a 1982 novel. That novel was adapted by Steven Spielberg as a film titled for this character's "List."

ANSWER: Oskar **Schindler** [accept **Schindler's Ark** or **Schindler's List**]

[10] This Australian author fictionalized the deeds of Oskar Schindler during the Holocaust in his novel *Schindler's Ark*.

ANSWER: Thomas **Keneally** ("kuh-NEEL-ee")

[10] This other World War II novel by an Australian writer follows Dorrigo Evans's time in a Japanese POW camp. It won its author, Richard Flanagan, the 2014 Man Booker Prize.

ANSWER: *The **Narrow Road to the Deep North***

<AP, British Literature>

7. These devices have a Fourier transforming property for transmissive objects placed a focal length away. For 10 points each:

[10] Name these devices that focus light through refraction. They are called converging if they have convex geometry.

ANSWER: **lenses**

[10] The Fourier transforming property of lenses is valid in this approximation in which rays make a small angle with respect to the optical axis.

ANSWER: **paraxial** approximation

[10] This other approximation neglects the length of the lens along the optical axis. In this approximation, the focal length of a lens is the index of refraction minus one times the difference of the reciprocal radii of curvature.

ANSWER: **thin** lens approximation [accept **thin** lens equation]

<SY, Physics>

8. Franklin D. Roosevelt frequently mocked this politician's lisp, stating on one occasion, "if [this politician] says 'Oh Chwist' again, I'm going to scream." For 10 points each:

[10] Name this Tennessean who served as FDR's Secretary of State. He implemented the Good Neighbor Policy to improve relations with Latin America and drafted the United Nations Charter.

ANSWER: Cordell **Hull**

[10] Through Hull initially drafted the UN Charter, the UN was not formally established until a conference held in this US city, which was attended by Hull's successor Edward Reilly Stettinius, Jr.

ANSWER: **San Francisco**

[10] FDR said that quote to this Secretary of Labor, the first woman to serve in the Cabinet. After witnessing the Triangle Shirtwaist Factory fire, she became executive secretary of the Committee of Safety in New York.

ANSWER: Frances **Perkins** [or Fannie Coralie **Perkins**]

<AP, American History>

9. In this country's national church, married men are allowed to be ordained as priests and are given the title of *kahana*. For 10 points each:

[10] Name this country whose church is traditionally said to have been established by Thaddeus and Bartholomew. Like the Coptic Church, this country's church does not recognize the Council of Chalcedon.

ANSWER: **Armenia** [or **Hayastan**; accept **Armenian** Apostolic Church or **Armenian** Orthodox Church]

[10] The Armenian Church is partly named after these disciples of Jesus and leaders of early Christianity. The history of the early Christian church is recorded in a book of their "Acts."

ANSWER: **apostles** [or **apostolic**]

[10] According to legend, Christianity was first introduced to Armenia when Agbar V of Osroene ("oss-ro-EE-nee") wrote to Jesus about his miracles and received this miraculous portrait of Jesus that was supposedly imprinted on a towel.

ANSWER: **Mandyllion** [or **Image of Edessa**]

<WC, Religion>

10. The mirror images of compounds with this property are called enantiomers. For 10 points each:

[10] Name this property of molecules whose mirror images cannot be superimposed on one another.

ANSWER: **chirality**

[10] These compounds have at least two stereocenters but [emphasize] *can* be superimposed on their mirror image, and are thus achiral ("ay-KYE-rull"). These compounds have at least one internal mirror plane.

ANSWER: **meso** compounds [or **meso** isomers]

[10] Non-chiral molecules have inversion centers, so their symmetry is described by point groups with this property. If there is an atom at the point  $(x, y, z)$  in a compound with this property, then there is also an atom at the point  $(-x, -y, -z)$ .

ANSWER: **centrosymmetry** [accept **centrosymmetric** molecules]

<AE, Chemistry>

11. In a letter to to Paul Gauguin ("go-GAN"), this artist told a story about riding from Paris to Provence and wondering "if [the countryside] was like Japan yet!" For 10 points each:

[10] Name this artist whose namesake museum in Amsterdam hosted a 2018 exhibit on him "and Japan." His other works include *Wheatfield with Crows* and *The Starry Night*.

ANSWER: Vincent van **Gogh**

[10] Van Gogh modeled his *Bridge in the Rain* after the style of this *ukiyo-e* ("oo-kee-yo-EH") artist of *The Fifty-three Stations of the Tōkaidō* and the *One Hundred Famous Views of Edo*.

ANSWER: Utagawa **Hiroshige** ("hee-ro-SHEEN-geh") [or Ando **Hiroshige**]

[10] Vincent organized a sale of Japanese prints in Montmartre while living with this man. This man was an art dealer, but nonetheless only managed to sell one of Vincent's paintings during his life.

ANSWER: **Theo** van Gogh [prompt on Vincent van Gogh's brother]  
<JH, Painting & Sculpture>

12. In a novel, a butterfly lands on the coffin of Rufus's father, who dies in this manner soon after Rufus's great-aunt buys Rufus a cap. For 10 points each:

[10] Name this manner in which Jay Follett dies in James Agee's novel *A Death in the Family*. In a J. G. Ballard novel, Dr. Robert Vaughan oversees a group of people who are sexually aroused by dying in this manner.

ANSWER: dying in a **car accident** [accept **car crash** or **automotive accident** in place of "car accident"; prompt on dying in a collision or crash or accident by asking "involving what objects?"; do not accept "airplane crash" or "train crash"] (The novel is *Crash*.)

[10] In this F. Scott Fitzgerald novel, Daisy Buchanan strikes and kills Myrtle Wilson while driving a car owned by the title character.

ANSWER: *The **Great Gatsby***

[10] In this author's novel *The Shipping News*, Quoye's newspaper articles cover fabricated car accidents. This author wrote about the relationship between two young men on a Wyoming sheep farm in "Brokeback Mountain."

ANSWER: E. Annie **Proulx** ("proo") [or Edna Annie **Proulx**]

<AP, American Literature>

13. While conducting a blockade of Charleston, this pirate took Samuel Wragg hostage in an attempt to bargain for medicine. For 10 points each:

[10] Name this pirate, whose ship, the *Queen Anne's Revenge*, was discovered in 1996. This pirate supposedly put lit fuses in his beard to intimidate enemies.

ANSWER: **Blackbeard** [or Edward **Teach** or Edward **Thatch**]

[10] Blackbeard was mentored by the pirate Benjamin Hornigold, who started a "pirate republic" based in this city that lasted until the arrival of Woodes Rogers as this city's governor.

ANSWER: **Nassau**

[10] Another pirate based out of Nassau was "Calico Jack" Rackham, whose crew had two female pirates who escaped execution because they were found to be pregnant. Name either of the two women.

ANSWER: Anne **Bonny** OR Mary **Read** [accept Anne **Cormac** in place of "Anne Bonny"; accept Mark **Read** in place of "Mary Read"]

<AE, European History>

14. These locations were thought to be haunted by the forest spirit Chullachaqui ("choo-ya-CHAH-kee"), though their lack of biodiversity is actually the result of ants that poison all other plants in the area. For 10 points each:

[10] Name these locations in the Amazon rainforest that only contain *Duroia hirsuta* trees, which grow galls inside of which the ants make colonies.

ANSWER: **Devil's gardens** [or **Jardín del Curupira** or **supay-chakra**]

[10] The aforementioned ants of the *M. schumanni* species and the trees exist in this relationship, in which both organisms benefit from the interaction.

ANSWER: **mutualism** [or **mutualistic**; prompt on sympiosis]

[10] The *M. schumanni* ants poison plants using this chemical, which was first isolated from ants. This chemical is the simplest carboxylic acid.

ANSWER: **formic acid** [or **methanoic acid** or **HCO<sub>2</sub>H**]

<JH, Other>

15. In this novel, Sarricte ("sar-YET"), the curator of the d'Esparvieu ("dess-par-VIEW") family library, goes insane after he murders his friend Père Guinardon ("pair ghee-nar-DON") to steal a lost *Lucretius* once owned by the Prior de Vendôme ("von-DOME"). For 10 points each:

[10] Name this novel in which Arcade (“ar-KAHD”) abandons his ward Maurice d’Esparvieu in his quest to overthrow God, whom Arcade considers to be a “vain and ignorant demiurge.”

ANSWER: *The **Revolt of the Angels*** [or *La **Révolte des anges***]

[10] *The Revolt of the Angels* was written by this French author who also wrote a novel featuring a mass baptism of penguins who are subsequently transformed into men, *Penguin Island*.

ANSWER: Anatole **France** [or François-Antoine **Thibault**]

[10] In the last chapter, this character tells the rebellious angels to destroy ignorance and fear in themselves instead of revolting. In Milton’s *Paradise Lost*, this character declares, “Better to reign in Hell, than serve in Heaven.”

ANSWER: **Satan** [or the **Devil**]

<WC, European Literature>

16. Like DNA repair, this process depends upon the Artemis nuclease, as well as RAG1 and RAG2 proteins. For 10 points each:

[10] Name this process that follows the 12/23 rule. It creates diverse products used in heavy and light chains.

ANSWER: **V(D)J recombination** [or **VJ recombination**; prompt on somatic **recombination**]

[10] V(D)J Recombination also diversifies these cells’ namesake receptors. These lymphocytes mature in the thymus, and CD8 is expressed on the surface of their “cytotoxic” variety.

ANSWER: **T cells** [accept **T-cell** receptors or cytotoxic **T cells**]

[10] T-cell receptors recognize antigens presented by surface proteins from this complex. All nucleated cells express proteins from the class I form of this complex, while only “professional antigen presenting cells” express the class II version.

ANSWER: **MHC** [or **major histocompatibility complex** accept **MHC** class I or **MHC** class II]

<VS, Biology>

17. This book argues that while US political parties strongly favor the wealthy, Republicans wear “black hats,” whereas Democrats wear “grey hats.” For 10 points each:

[10] Name this 2010 book by political scientists Jacob Hacker and Paul Pierson, which argues that income inequality in the United States is largely a product of political forces.

ANSWER: ***Winner-Take-All Politics*** [or ***Winner-Take-All Politics: How Washington Made the Rich Richer—and Turned Its Back on the Middle Class***]

[10] This plurality voting system is often called “winner-take-all.” In this system, voters pick a single candidate and the candidate with the most votes wins. It usually results in a two-party system due to Duverger’s (“doo-vair-ZHAY’s”) law.

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

[10] Since first-past-the-post voting leads to many wasted votes, it is more susceptible to this practice in which district boundaries are manipulated to favor one party or group over another.

ANSWER: **gerrymandering**

<CK, Social Science>

18. This paper argues that physicalism cannot capture the “subjective character of experience,” using the example of a creature with a radically different sensory apparatus. For 10 points each:

[10] Name this 1974 Thomas Nagel paper that critiques reductionism, arguing “consciousness is what makes the mind-body problem really intractable.”

ANSWER: “**What Is it Like to Be a Bat?**”

[10] David Chalmers dubbed the “hard problem of consciousness” explaining how and why creatures have these subjective conscious experiences.

ANSWER: **qualia**

[10] In a thought experiment, Frank Jackson argued that qualia exist because Mary the scientist learns something when she first perceives these things. Individuals systematically differ in how they perceive these things in a thought experiment called the “inverted spectrum.”

ANSWER: **colors** (The first thought experiment is Mary’s Room.)

<CK, Philosophy>

19. Every third variation in *The Goldberg Variations* is one of these pieces. For 10 points each:

[10] Identify this type of musical composition in which the main melody is presented and imitated at regular intervals. A round is a simple example of this type of imitative polyphony.

ANSWER: **canon**

[10] A recording by Jean-François Paillard (“pie-YARR”) popularized this German Baroque organist and composer’s Canon in D.

ANSWER: Johann **Pachelbel**

[10] This composer of the Franco-Flemish school used several mensuration canons in his *Missa L’homme armé super voces musicales*, the first of two masses that this composer wrote based on the melody “L’homme armé” (“LUM ar-MAY”).

ANSWER: **Josquin des Prez** (“joe-SCAN deh-PRAY”) [accept either underlined portion]

<AE, Classical Music>

20. Answer some questions about groupings of successively decreasing numbers of gods, for 10 points each.

[10] The Ennead was a group of nine deities worshipped by this ancient civilization. This civilization’s deities included Atum, Osiris, and Seth.

ANSWER: **Egypt**

[10] This group of Chinese deities includes one whose apotheosis came about after eating powdered mica, as well as one whose body was cremated by a student while his spirit was wandering, Iron Crutch Li.

ANSWER: **Eight Immortals** [or **bā xiān**]

[10] The Shichi Fukujin are the seven gods of this concept in Japanese mythology. This concept is also represented by Tyche (“TYKE-ee”), as symbolized by her cornucopia and ship’s rudder.

ANSWER: **luck** [or **fortune**]

<JS, Mythology>