

2019 Terrapin: Come on Angel, Come and Save Us

Packet 4

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Tossups

1. **Antral vascular ectasia in this organ gives it a watermelon-like appearance. This organ is the most common location of MALT lymphomas and carcinomas where mucins push the nucleus to the edge of the cells, giving them a “signet ring” appearance. CCK-B receptors regulate the activity of cells in this organ. Ménétrier’s (“may-nay-tree-AY’s”) disease causes (\*) achlorhydria (“ay-klor-HY-dree-uh”) in the cells of this organ. Intrinsic factor is produced by parietal cells in this organ. The vagus nerve can induce activity in this organ’s zymogen-producing chief cells. *H. pylori* causes ulcers in this organ. Pepsinogen is activated in the lumen of this organ to form pepsin, which is one component of this organ’s namesake juice. For 10 points, name this digestive organ above the small intestine.**

ANSWER: **stomach**

<GR, Biology>

2. **Since 2001, the Canadian Space Agency has shipped seeds of this crop to the ISS to be studied by young students after their return. This is the most common crop for which cultivators distinguish between “determinate” and “indeterminate” manners of growth. Robert Gibbon Johnson supposedly proved that this crop was not (\*) poisonous by eating a whole basket of them. The San Marzano variety of this food, which is grown in volcanic soil near Mount Vesuvius, is sold peeled and canned. Every year in the Valencian town of Buñol (“boon-YOLE”), a festival is held in which revelers throw this food at each other on the streets. For 10 points, name this food that comes in Roma and cherry varieties and that you might find in your pizza sauce.**

ANSWER: **tomatoes** [or tomates; or pomodoro or pomodori; accept La Tomatina]

<AP, Other>

3. **This author tells the title woman, “I bid you find your thrall, though you, to me, do no dalliance” in his ballade “To Rosemounde.” This author bemoaned “I am so sorry now that you’ve been light!” in his final poem, titled “Complaint Unto His Purse.” At the end of one work, he admits that his works have “tended toward sin” in a poem known as his namesake “retraction.” In one poem, he wrote about a poet who (\*) dreams that he encounters Octavian’s hunt and consoles a knight who lost a game of chess to Fortuna. This author of *The Book of the Duchess* wrote a work whose narrator meets a group at the Tabard Inn traveling to the tomb of Thomas à Becket. For 10 points, name this author who included stories from the Knight and the Wife of Bath in *The Canterbury Tales*.**

ANSWER: Geoffrey **Chaucer**

<CK, World/Other Literature>

4. **Elizabeth Anscombe argued that this statement erroneously assumes that speakers use an indexical in this statement to name objects in her paper “The First Person.” Bernard Williams argued that this statement expresses a “relation of presupposition” in a book he wrote about its author’s “project of pure enquiry.” In discussing this statement, which is presented as a paradigm example of an idea that is both “clear and distinct,” its formulator defines (\*) himself as *sum res cogitans*. In one work, shortly after making this statement, its author uses the example of melting wax to argue that we can have knowledge of matter. Its creator described this statement as his first item of knowledge that survives his method of doubt in *Discourse on Method*. For 10 points, name this principle that forms the foundation of René Descartes’s epistemology.**

ANSWER: cogito, ergo sum [or I think, therefore I am; or je pense, donc je suis]  
<CK, Philosophy>

5. **A character in this novel becomes furious at the poster of Snoopy above his typewriter and attempts to get over his writer's block by copying down the opening sentences of *Crime and Punishment*. One section of this novel follows a man who breaks into another person's house to pick up a ringing telephone and discovers that one of his students has been kidnapped. Chapter 8 of this novel is made up of diary entries from the author of the novels (\*) *In a network of lines that enlase* and *In a network of lines that intersect*, Silas Flannery. The main character of this novel goes on a journey to find the translator Ermes Marana after beginning to read a series of books but being unable to continue any of them after the first few pages. For 10 points, name this novel by Italo Calvino starring you, the reader.**

ANSWER: *If on a winter's night a traveler* [or *Se una notte d'inverno un viaggiatore*]  
<JN, European Literature>

6. **During the negotiation of this treaty, a representative who was literally picked up off the street was asked whether he wanted red or white wine and replied, "Which is stronger?" While negotiating this treaty, Adolph Joffe ("YOFF-eh") put forth six points, emphasizing that there would be no annexations and no indemnities. Another negotiator of this treaty stalled talks and advocated a policy of "no (\*) war, no peace." A negotiator of this treaty suggested merging some ceded territories into a United Baltic Duchy containing Latvia and Estonia. This treaty, which was superseded by the Treaty of Rapallo, was largely negotiated by Richard von Kühlmann and Leon Trotsky. For 10 points, name this peace treaty that ended hostilities between Germany and the Soviet Union in World War I.**

ANSWER: Treaty of Brest-Litovsk  
<WC, European History>

7. **Chromaticism abounds in this classical symphony, as its first movement's development begins with a series of sinking half-step modulations with F-sharp minor first, and its finale's development begins with a halting, jagged passage that uses every pitch but the tonic. In the opening of this symphony's finale, which is its third movement to be in sonata form, quick, loud tutti chords on 5–1–5–1–5–1 answer the violins' soft Mannheim rockets. This symphony opens with low strings chugging below the violins' agitated, thrice-repeated sigh E-flat D D. (\*) This symphony is linked to "storm and stress" due to its key and the composer's turmoil, debt, and misfortune as, despite a burst of inspiration, plans to premiere his last 3 symphonies in summer 1788 fell through. Symphony No. 25 is the "Little" counterpart of this second of two minor-key symphonies by its composer, which precedes the Jupiter Symphony. For 10 points, name this second-to-last symphony by Mozart.**

ANSWER: Symphony No. 40 by Wolfgang Amadeus Mozart [or Mozart 40; or Great G minor Symphony; accept Große g-Moll-Sinfonie; accept K. 550 or KV 550; prompt on partial answer, but accept 40 after "Mozart" is read; prompt on Symphony in G minor by Mozart; prompt on Mozart's penultimate symphony]  
<OL, Classical Music>

8. **Atoms of this group are used in optically probed vapors in devices for high-precision magnetic field measurement. Nickel-iron batteries use the hydroxide of an element from this group as an electrolyte. Since normal soap doesn't work with seawater, the salts of another element in this group are used in "sailor's soap." In decay chains useful for mineral dating, elements from this group decay to strontium-87 and the most commonly found isotope of argon. Common (\*) yellow outdoor lamps use the vapor of an element from this group. A cation of one element from this group forms oxidizing agents with permanganate and nitrate ions; the latter compound is called saltpeter. The mineral halite contains the cation of an element of this group. For 10 points, name this group containing the elements potassium and sodium.**

ANSWER: alkali metals [or Group 1; accept Group IA; accept lithium group or lithium family]  
<GR, Chemistry>

9. A member of this movement claims to have stolen a policeman's helmet after being blackmailed with the word "Eulalie." Maurice puts a Beethoven string quartet on the gramophone before suicidally answering the door for members of this movement in the novel *Point Counter Point*. Roderick Spode in the Jeeves novels is a parody of a leader of this movement whose marriage to Diana Mitford is depicted in her sister Jessica's memoir *Hons and Rebels*. Joyce Emily Hammond goes abroad to (\*) fight for this ideology at the behest of a teacher who calls her students the "crème de la crème" in Muriel Spark's *The Prime of Miss Jean Brodie*. Lord Darlington's apparent support for this ideology is a recurring theme in Kazuo Ishiguro's *The Remains of the Day*. For 10 points, name this movement whose British supporters often idolized Benito Mussolini.

ANSWER: British **fascism** [or **Nazism**; or the British Union of **Fascists**; accept the **Black Shorts** or **Falangism**]  
<JH, British Literature>

10. A mortally-wounded one of these creatures wandered about creating place names before his heart burst. A pair of feuding pig-herders named Friuch ("FREE-ukh") and Rucht ("rukht") were reincarnated as worms and various other creatures before eventually becoming these animals. In a poem that begins with the "pillow talk" scene, one of these animals is almost exchanged for one character's "friendly thighs." That (\*) woman attempts to acquire one of these animals in order to make her wealth equal to that of her husband, Ailill ("EYE-lill"), but is turned down when her messenger offends Dáire ("DYE-ruh"). Macha's curse leaves Ulster helpless when the army of Connacht launches an invasion to find Donn Cúailnge ("KOOL-nyuh"), who is one of these animals. For 10 points, what sort of animal is targeted by a raid on Cooley in an Irish epic?

ANSWER: **bulls** [or **cattle** or **cows**]  
<JS, Mythology>

11. After this event, an anonymous police officer identified as "Sniper Two" admitted during an investigation that he was "not a sharpshooter." Prior to this event, the psychologist George Sieber devised "Scenario 21," closely predicting this event. A speech given after this event by Avery Brundage compared this event to losing "the Rhodesian battle against naked political blackmail." This event led to the founding of (\*) GSG-9. In response to this attack, Operation Wrath of God was authorized by Golda Meir. The leader of this attack, who went by the name "Issa," was Luttf Afif, a member of Black September. For 10 points, name this attack by Palestinian terrorists that killed eleven members of the Israeli team during the 1972 Olympics held in West Germany.

ANSWER: **Munich** massacre [or equivalents indicating a terrorist attack in **Munich**; accept **Munich** Summer Olympics; accept **1972** Summer **Olympics** until "1972" is read; prompt on **Black September** attack]  
<WC, European History>

12. Stefan Lucks invented the "wide-pipe" method for constructing these things that makes use of a larger internal state. Andrei Broder invented a "Min" algorithm for estimating the similarity of sets by generating these things from sets that are viewed as columns of a matrix; that is a "locality-sensitive" method for generating these things. Linear and quadratic (\*) probing are open addressing methods that involve repeatedly adding to one of these values. These values are used to track and differentiate Git commits. Separate chaining is a method of resolving "collisions" between these values in a namesake data structure. For 10 points, name these values that are used for constant-time lookup in namesake tables.

ANSWER: **hashes** [or **hash codes**; or **hash values**; or **digests**; accept Git **hashes** or cryptographic **hashes**; accept **hash** function; accept **hash** table or **hash** map]  
<VS, Other Science: Computer Science>

13. A *Life* magazine article on this artist infamously asked "Is He the Worst Artist in the U.S.?" This artist's *Painting With Statue of Liberty*, his Magna on canvas work *Little Big Painting*, and sculptures located outside the Portland Art Museum and the Hirshhorn exemplify one of his later-period motifs. That series by this artist parodies abstract expressionism by depicting darkly-outlined, dripping brushstrokes. This artist of

**Image Duplicator depicted a (\*) woman who decides to sink rather than call Brad for help in a painting that, like his depiction of Donald Duck exclaiming “I’ve hooked a big one!”, exemplifies his use of Ben Day dots and comic book sources. For 10 points, name this American pop artist of *Drowning Girl*, *Look Mickey*, and *Whaam!***

ANSWER: Roy **Lichtenstein**

<GR, Painting & Sculpture>

**14. In the “Testimony of Wesley Norris,” this person ordered Dick Williams to brutally whip Wesley and his cousin Mary, then wash their backs with brine. This person was the subject of a four-volume biography by Douglas Southall Freeman that was criticized by Eric Foner as a “hagiography.” This commander lost the Battle of Malvern Hill, in which his subordinate Lewis (\*) Amistad led a charge against the hill. That subordinate was mortally wounded in another battle at a low stone wall called “the angle,” sometimes called the “high-water mark” of this commander’s cause. This commander won the Seven Days’ Battles in the Peninsular Campaign. For 10 points, name this Confederate commander of the Army of Northern Virginia who was defeated at Gettysburg.**

ANSWER: Robert E. **Lee** [or Robert Edward **Lee**]

<AE, American History>

**15. In a poem set during this type of event, a stranger plays a piano upon arriving at a saloon and enters a fatal duel with Lou’s boyfriend. The protagonist of a novel set during this type of event is called “one in ten t’ousand” by Perrault and is violently beaten by the “man in the red sweater.” In a novel, Beauty Smith gets Grey Beaver drunk so that he can buy the (\*) title character at a low price during this type of event, during which the narrator of a Robert Service poem cremates his “frozen chum” Sam McGee. John Thornton liberates the protagonist of a novel from his job as transportation for panners during this type of event. For 10 points, Jack London’s *White Fang* and *Call of the Wild* are set during what sort of event, in which Buck serves as a sled dog for prospectors in the Yukon?**

ANSWER: **gold rushes** [accept Klondike **gold rush** or Yukon **gold rush**] (The first poem mentioned is “The Shooting of Dan McGrew.”)

<AP, American Literature>

**16. The velocity correlation tensor used to describe this phenomenon is only a function of distance, and its trace is a normalized two-point correlation function that determines the scale of this phenomenon’s largest features. The mean square of the strain-rate tensor defines a characteristic time for this phenomenon, which is also related to the rate of dissipation. A mean field theory of this phenomenon defines universal (\*) scales using viscosity and dissipation parameters and was developed by Kolmogorov (“kull-ma-GOR-off”). This phenomenon is characterized by non-zero vorticity and occurs in mixing layers. This type of flow is dominated by inertial forces and includes vortices and eddies. For 10 points, name this type of chaotic flow characterized by a high Reynolds number and contrasted with laminar flow.**

ANSWER: **turbulence** [or **turbulent** flow; prompt on (fluid) **flow** by asking “what kind of flow?”]

<GR, Physics>

**17. In one work, this thinker argued that politicians must balance their “ethic of moral conviction” with their “ethic of responsibility.” He argued that social stratification is a function of three namesake factors in his paper “Class, Status, Parties.” This thinker ended a lecture by quoting Shakespeare’s Sonnet 102 and grimly predicting that “no summer’s bloom lies ahead of us.” He identified “traditional,” (\*) “charismatic,” and “legal” sources of authority in that essay, which defines the state as an entity with a “monopoly on the legitimate use of force.” Talcott Parsons produced a notoriously poor translation of his best-known work, which argues that Calvinism helped shape market economies. For 10 points, name this German sociologist who wrote “Politics as a Vocation” and *The Protestant Ethic and the Spirit of Capitalism*.**

ANSWER: Max **Weber**

<CK, Social Science>

18. A philosopher from this place coined the phrase “sober intoxication” to describe divine possession in *On Flight and Finding*; that philosopher also allegorically interpreted scripture in *On the Creation*. A king of this place is traditionally credited with commissioning 72 scholars to translate the Septuagint. In a biblical narrative, a man hid a silver cup in his youngest (\*) brother’s sack to frame his brothers for stealing, after they had come to this place to buy grain during a famine. According to that narrative, the “land of Goshen” in this place was settled by the Jews after this place’s ruler was given advice to prevent a famine by Joseph, who had been sold into slavery in this place by his brothers. For 10 points, name this place where, according to the Bible, the Jews lived in captivity prior to the Exodus.

ANSWER: **Egypt** [accept **Alexandria** until “silver” is read, and anti-prompt afterwards; prompt on North **Africa**]  
(The philosopher in the first line is Philo of Alexandria.)

<WC, Religion>

19. The artist of this series imagined it as a project that would “be enlarged to fill the vault of the sky.” The artist used an oak base topped by a circular mirror in a work often paired with this series, *Fish*, while this series itself developed out of a set of works depicting a magical creature from a fairy tale, the *Mãiastra* (“muh-YAHSS-trah”) series. Three works in this series were purchased by the Maharaja of Indore for his never-completed (\*) Temple of Meditation. When Edward Steichen attempted to exhibit one of the works in this series in the US, customs classified it as “Kitchen Utensils and Hospital Supplies.” This series depicts the title creature as a streamline, removing the beak and wings. For 10 points, name these Constantin Brâncuși (“brin-KOOSH”) sculptures depicting the essence of flight.

ANSWER: **Bird in Space** [or **L’Oiseau dans l’espace**]

<CK, Other Arts>

20. This ruler’s life was chronicled in a “Rare and Excellent History” written by his adviser Ibn Shaddad. This ruler faced a rebellion in Aswan led by Kanz al-Dawla, which was put down by his brother Turanshah. After this ruler died, his lands were split between al-Aziz Uthman and al-Afdal, and then reunited by his brother al-Adil. This ruler signed a three-year truce following his defeat at the Battle of (\*) Jaffa. This ruler killed Reginald of Châtillon (“sha-tee-YON”) for breaking a truce after defeating Guy of Lusignan’s (“ghee of LOO-zin-yon’s”) armies in the Battle of the Horns of Hattin. Following that battle, this ruler took Jerusalem in 1187, prompting the Third Crusade. For 10 points, name this Ayyubid sultan, well-regarded by Europeans for his chivalry, who clashed with Richard the Lionheart.

ANSWER: **Saladin** [or An-Nasir **Salah ad-Din** Yusuf ibn Ayyub]

<WC, World History>

## Bonuses

1. People participating in *keriah* (“kree-AH”) during these events either tear their clothes or cut a worn black ribbon in order to allow them to release the pain and anguish that precedes this event. For 10 points each:

[10] Name these events in Judaism in which one’s life is celebrated before a body is interred in the earth. *Hesped* (“hess-PED”) are eulogies that are delivered during these events.

ANSWER: **funeral** [or **burial**]

[10] Mourning in Judaism is divided into *aninut* (“ah-nee-NOOT”), which ends when the body is buried, and *avelut* (“ah-veh-LOOT”), which begins with this seven-day mourning period, sometimes named after the act of sitting on low stools during this period.

ANSWER: **shiva** (“SHIV-uh”) [or sitting **shiva**]

[10] During Jewish funerals, mourners will recite this prayer whose name translates to “God full of compassion.” This prayer is also recited before weddings at the grave of any deceased parents of the bride or the groom.

ANSWER: **El Maleh Rahamim** (“EL ma-LAY RA-khah-meem”) [or **El Malei Rachamim**]

<AE, Religion>

2. The husband of a character with this maiden name becomes enraged when she breaks a fancy doll’s house against a fence. For 10 points each:

[10] Give this surname. A character whom the protagonist calls “W. C. Tuttle” marries a character with this surname after the latter’s mother interprets the note “I love you and I want to talk to you” as a marriage proposal.

ANSWER: **Tulsi** [accept Shama **Tulsi**, Mrs. **Tulsi**, Owad **Tulsi**, Shekhar **Tulsi**, or Padma **Tulsi**]

[10] This eleven-fingered man loathes living with his wife Shama in the Tulsi family’s Hanuman House. He suffers setbacks when he tries to build a house of his own, but finally does buy a house shortly before his death.

ANSWER: **Mohun Biswas** (“BISH-wus”) [or **Mr. Biswas**; accept either underlined answer]

[10] The characters of V. S. Naipaul’s *A House for Mr. Biswas* are Trinidadians descended from migrants from this country. An author born in this country, Salman Rushdie, compared Naipaul’s death to that of a “beloved older brother.”

ANSWER: **India**

<AP, British Literature>

3. Answer the following about works of art that incorporate the written word, for 10 points each.

[10] Xu Bing (“shoo beeng”) created about 4,000 nonsense characters for his installation *Book from the Sky*, which partially consists of three of these objects hanging from the ceiling. The Song dynasty painting *Along the River During the Qingming Festival* was executed on one of these objects.

ANSWER: **scrolls** [or hand**scrolls**; prompt on answers such as parchment or paper]

[10] An artwork by conceptual artist Joseph Kosuth (“kuh-SOOT”) consists of a literal example of one of these objects, a photograph of that object, and the dictionary definition of this sort of object.

ANSWER: **chairs** [accept *One and Three Chairs* **Chairs**]

[10] One member of this art movement, Georges Braque, included the word “bar” in his painting *Fruit Dish and Glass*. Another artist from this movement, Pablo Picasso, painted the bombing of Guernica.

ANSWER: **cubism**

<JH, Painting & Sculpture>

4. Answer the following about the history of the South American drink *mate* (“MAH-tay”). For 10 points each:

[10] The 1767 suppression of the Jesuits by Spain led to a decline in yerba mate (“ZHAIr-ba MAH-tay”) production on Jesuit “reductions,” which were settlements for indigenous people that fell outside of this system that gave grants of forced native labor.

ANSWER: **encomienda** [accept **repartimiento**]

[10] This country was a major producer of yerba mate until it was devastated in the War of the Triple Alliance under its president Francisco Solano López.

ANSWER: **Paraguay** [or **Paraguái**]

[10] The consumption of mate originated with this indigenous group, who inhabited a so-called “Jesuit Utopia” of the reductions. Along with Spanish, their language is an official language of Paraguay.

ANSWER: **Guaraní** (“gwah-ra-NEE”)

<AP, World History>

5. This quantity is constant for a process in which a gas irreversibly expands through a valve. For 10 points each:

[10] Name this thermodynamic quantity that is useful in chemistry because its change equals the heat absorbed by a system in a reversible process at constant pressure.

ANSWER: **enthalpy** [or specific **enthalpy**; prompt on **H**]

[10] According to Hess’s law, enthalpy is a state function, in contrast to this other type of thermodynamic quantity, exemplified by work. Quantities of this type depend on the history of a system and are expressed as an inexact differential.

ANSWER: **path-dependent** variables [or **path** functions]

[10] This state function named for an American chemist equals enthalpy minus  $T$  times entropy. It is minimized in equilibrium with constant pressure and temperature, and it is used to predict whether a reaction is spontaneous.

ANSWER: **Gibbs** free energy [or **Gibbs** function; prompt on **free energy** or **G**]

<GR, Chemistry>

6. In one of this author’s short stories, Zenchi Naigu is a monk who is fixated on the extreme size of the title body part. For 10 points each:

[10] Name this author of short stories such as “The Nose” and “Hell Screen.” This namesake of Japan’s most prestigious literary award had his story “In a Grove” adapted into the film *Rashōmon* by Akira Kurosawa.

ANSWER: Ryūnosuke **Akutagawa**

[10] Another monk with an oversized nose created by Akutagawa is E’in (“EH-een”), who claims that on the third day of the third month, the title creature of this short story will fly into heaven from Sarusawa Pond.

ANSWER: “**Dragon**: the Old Potter’s Tale” [or “**Ryū**”]

[10] The monk Dosen tutors the stuttering protagonist of this novel by Yukio Mishima in which that protagonist, Mizoguchi, decides to burn the title structure down.

ANSWER: **Temple of the Golden Pavilion** [or **Kinkaku-ji**]

<JS, World/Other Literature>

7. This general was accused of deliberately underestimating the strength of the Viet Cong in the Order of Battle Controversy. For 10 points each:

[10] Name this commander of US forces in Vietnam, who was replaced in 1968 by Creighton Abrams. In 1982, he brought a libel suit against CBS for airing a documentary about the Order of Battle Controversy.

ANSWER: William **Westmoreland**

[10] Because of Westmoreland’s incorrect estimates of Viet Cong strength, American forces were caught by surprise during this wave of attacks that occurred during the 1968 Lunar New Year.

ANSWER: **Tet** Offensive

[10] The Tet Offensive may have been orchestrated to divert troops away from this siege of a Marine base by North Vietnamese forces. Lyndon Johnson vetoed Westmoreland’s plan to end this siege using nuclear weapons.

ANSWER: Siege of **Khe Sanh**

<CK, American History>

8. Joel Feinberg imagined people on a public bus performing increasingly depraved acts to argue that one of this thinker’s principles ought to be replaced with a more comprehensive “offense principle.” For 10 points each:

[10] Name this philosopher who formulated the “harm principle” in his magnum opus *On Liberty*.

ANSWER: J. S. **Mill** [or John Stuart **Mill**]

[10] This legal philosopher defended the harm principle, arguing that states ought to maximize the autonomy of their subjects, in *The Morality of Freedom*. He proposed the “sources thesis” in his seminal book *The Authority of Law*.

ANSWER: Joseph **Raz** [do not accept “Rawls”]

[10] Raz, like John Austin and H. L. A. Hart, belongs to this school of legal philosophy which contends that legal facts are grounded in social facts, not morals.

ANSWER: legal **positivism**

<CK, Philosophy>

9. When these geologic features are “unconfined,” they are under permeable materials, allowing them to be recharged by seeping surface water. For 10 points each:

[10] Name these geologic features, characterized by properties like hydraulic conductivity, transmissivity, and storativity. These features are layers of permeable rock that store groundwater.

ANSWER: **aquifers**

[10] To determine the hydraulic properties of an aquifer, one can perform this type of test in which one measures the response after a well’s water level is quickly changed by inserting the namesake solid object or pouring in water.

ANSWER: **slug** test [accept **rising-head** test or **falling-head** test]

[10] These features can be formed by penetrating a confined aquifer that is under greater than atmospheric pressure. These features, which do not require pumping, function because water from the aquifer rises to the level of the potentiometric surface.

ANSWER: **artesian wells** [prompt on **wells**]

<WC, Other Science: Earth Science>

10. Giuseppe Momo was inspired by Renaissance architect Donato Bramante to design two overlapping instances of this type of structure for the Vatican Museums. For 10 points each:

[10] Name this type of structure common in medieval castle towers. One of these structures in Santa Fe’s Loretto Chapel, made of wood and glue, is called “miraculous” for lacking the central pole that these features usually wind around.

ANSWER: **spiral staircases** [or **spiral stairs**; prompt on **staircases** or **stairs**]

[10] A spiral staircase ascends to the body of a water tank in Svaneke (“SVEN-uh-kuh”) designed by this Danish architect. He attempted to instill a feeling of “otherworldliness” with the 100-meter-wide stairs that lead to a building whose roof is a series of sail-like shells.

ANSWER: Jørn **Utzon** (“YUN OOT-sun”)

[10] This designer added a black spiral staircase to his house for Truus Schröder to connect to a private room that was off-limits to visitors. This non-Japanese designer also used a spiral staircase in his half of the Van Gogh museum in Amsterdam.

ANSWER: Gerrit **Rietveld** (“KHAIR-it REET-felt”)

<AP, Other Arts>

11. In this collection, Johnny-One Arm falls in love with a woman who survived an encounter with a serial killer known as the Granola Cruncher. For 10 points each:

[10] Name this collection presented as a series of transcripts with questions omitted and responses starting with “Q.”

ANSWER: ***Brief Interviews with Hideous Men*** (by David Foster Wallace)

[10] A series of killings in Tucson (“TOO-sawn”), Arizona, inspired this author’s story about Connie’s encounter with the sinister Arnold Friend, titled “Where Are You Going, Where Have You Been.” This prolific novelist and tweeter probably has missed her chance at the Nobel Prize thanks to Bob Dylan’s win in 2016.

ANSWER: Joyce Carol **Oates** [or **JCO**]

[10] A serial killer says that a grandmother would have been a good woman if there “had been somebody there to shoot her every minute of her life” after murdering Bailie’s family in this story by Flannery O’Connor.

ANSWER: “A **Good Man is Hard to Find**”

<JH, American Literature>

12. A book about these people was prefaced with the papal bull *Summis desiderantes affectibus*, which had given Johann Sprenger and Heinrich Kraemer authority to persecute these people. For 10 points each:

[10] Name these people who were accused of performing magic with the aid of demons. The *Malleus Maleficarum* was a handbook on finding these people and putting them on trial.

ANSWER: **witches** [accept **sorcerer**s or **sorceress**es]

[10] This English witch hunter called himself the “Witchfinder General” during the English Civil War. He made use of the “swimming test” by tossing the accused witch into water and seeing if they would float.

ANSWER: Matthew **Hopkins**

[10] This Enlightenment-era Austrian monarch curtailed the execution of witches on the advice of court physician Gerard van Swieten, who also disproved the existence of vampires after being asked by this monarch to investigate.

ANSWER: **Maria Theresa** [or **Maria Theresia**]

<JS, European History>

13. The *nosoi* were the personification of this phenomenon that were released from Pandora’s jar. For 10 points each:

[10] Name this phenomenon that affects the Greek camp in Book I of the *Iliad*. The return of Chryseis (“cry-SEE-iss”) ends that instance of this phenomenon.

ANSWER: **plague** [accept equivalents like **disease**, **illness**, or **sickness**]

[10] That plague was caused by the arrows of this god of music, sunlight, and poetry, who also slew the Python and had an oracle at Delphi.

ANSWER: **Apollo**

[10] In Roman myth, the senate responded to a plague that was ravishing Rome by sending a delegation to this location, where a giant snake slithered onto their ship. This Greek town was home to a popular healing sanctuary dedicated to Asclepius.

ANSWER: **Epidaurus**

<JS, Mythology>

14. The ACME collaboration has set an upper limit to the EDM of this particle in an effort to rule out or place constraints on supersymmetric theories. For 10 points each:

[10] Name this spin-one-half lepton. This particle’s magnetic dipole moment is easily written in terms of the Bohr magneton.

ANSWER: **electron**

[10] Fundamental particles with a permanent electric dipole moment indicate a violation of this symmetry that says if you run the clock backwards, then the laws of physics are the same.

ANSWER: **time reversal** symmetry [or **T**-symmetry; prompt on answers including **time**]

[10] Other experiments are currently searching for an electric dipole moment in this composite particle. Werner pioneered interferometric (“IN-ter-FAIR-oh-metric”) experiments with these particles, using them to demonstrate gravitationally induced phase shifts.

ANSWER: **neutron**

<SY, Physics>

15. Following this battle, a soldier from the winning side smashed a looted sacred vase, prompting this battle’s winning commander to smash the offending soldier’s head with an axe a year later. For 10 points each:

[10] Name this 486 CE battle in which a king of the Franks defeated Syagrius, a “king of the Romans” who ruled a rump state of the Western Roman Empire in Gaul.

ANSWER: Battle of **Soissons** (“swah-SAWN”)

[10] This king of the Franks won the Battle of Soissons. This Merovingian king, who issued the Salic Law, supposedly converted to Christianity after calling upon the God of his wife Clotilde at the Battle of Tolbiac.

ANSWER: **Clovis I** [or **Clodovechus**]

[10] In 750, the last Merovingian king of the Franks, Childeric III, was deposed by Pepin the Short, the father of this other Frankish king who was crowned by Leo III as the first Holy Roman Emperor.

ANSWER: **Charlemagne** [or **Charles I** or **Charles the Great**]

<WC, European History>

16. In a novel, a man who fights for the independence of this island murders his former lover Eminé in her sleep, blaming her for causing the death of an abbot and the destruction of a monastery. For 10 points each:

[10] Name this island where a captain is shot in the head while shouting “Freedom or death!” The narrator of a different novel hires a Romanian-born man who he met at a café while reading *The Divine Comedy* to work as a cook on this island.

ANSWER: **Crete**

[10] Captain Michalis and Zorba the Greek were created by Nikos Kazantzakis, who also wrote novels about a village’s “re-crucifixion” of this religious figure and this figure’s struggle against his “last temptation.”

ANSWER: **Jesus Christ** [accept either underlined portion; or **Jesus of Nazareth**]

[10] Zorba cooks for workers in this type of facility. Émile Zola’s novel *Germinal* describes Étienne Lantier’s (“ay-tee-EN lawn-tee-AY’s”) leadership of a strike of workers in this type of facility.

ANSWER: coal **mines** [accept lignite **mines**]

<AP, European Literature>

17. This syntactic phenomenon occurs between two anaphors X and Y if and only if X c-commands Y, and X and Y corefer. For 10 points each:

[10] Name this syntactic phenomenon. In the 1980s, Noam Chomsky developed its Principles A, B, and C in a series of lectures on government and this phenomenon.

ANSWER: **binding** [or government and **binding**; accept word forms like **bind** or **bound**]

[10] These languages, which allow pronouns to be omitted when they are inferable from syntax or pragmatics, are assumed to have phonologically-null noun phrases in subject position in government and binding theory.

ANSWER: **pro-drop** languages

[10] In government and binding theory, verbs and prepositions govern this grammatical feature of nouns and pronouns. In English, this grammatical feature includes the nominative, the accusative, and the genitive.

ANSWER: grammatical **case**

<CK, Social Science>

18. A character in this piece sings in a higher pitch each time to represent his rising fear and the increasing tension. For 10 points each:

[10] Name this song in which the pianist’s right hand repeats G octaves in rapid triplets to represent the galloping of a horse carrying a father and son as they flee from the title character.

ANSWER: *Der **Erlkönig*** [or *The **Erl-king*** or *The **Elf-king***]

[10] *Der Erlkönig* is a *lied* (“leed”) by this composer of the song cycles *Winterreise* (“VIN-tuh-RYE-zuh”) and *Die schöne Müllerin* (“dee SHUR-nuh MYOO-ler-in”).

ANSWER: Franz **Schubert**

[10] *Die schöne Müllerin* begins with this simple strophic song in B-flat major whose five stanzas have 3 four-bar phrases that repeat a static tonic–dominant harmony suggesting the title activity, which “is the Miller’s joy.” The same activity titles a difficult C major fantasy that Schubert based on another lied (“leed”).

ANSWER: “Das **Wandern**” (“doss VON-dun”) [or “**Wandering**”; accept “Der **Wanderer**” or *Wanderer Fantasy*]  
<AE, Classical Music>

19. This city is home to a Bates Smart-designed skyscraper currently under construction that will be 61 stories tall and 12 meters wide at its narrowest point. For 10 points each:

[10] Name this second most-populous city in Australia, where the Australian Open is held. This city’s Southbank neighborhood is home to the 297-meter-tall Eureka Tower.

ANSWER: **Melbourne**

[10] The aforementioned super-slender tower is located on this historic street, also home to the Rialto tower. This street has many Victorian-era buildings, as well as a town hall designed by local architect Joseph Reed.

ANSWER: **Collins** Street [accept **Collins** House, which is the super-slender skyscraper]

[10] You can leave Melbourne from Southern Cross Station on Collins Street, taking the Overland to this capital of South Australia. This city was built on the banks of the River Torrens.

ANSWER: **Adelaide**

<GR, Other>

20. Many samples from this period are well preserved in Burgess shale and Australian Emu Bay shale. For 10 points each:

[10] Name this geologic period when animal life became much more diverse with the appearance of modern body plans.

ANSWER: **Cambrian** period [accept **Cambrian** explosion]

[10] These marine arthropods were the first Cambrian fossils discovered. Gould and Eldridge used different species of these animals as evidence for the theory of punctuated equilibrium.

ANSWER: **trilobites** [or **Trilobita**]

[10] The trilobites that Eldridge studied had 17 or 18 columns of these organs, which first appeared in the Cambrian. Andrew Parker argued that these organs allowed the Cambrian explosion to happen.

ANSWER: **eyes** [accept compound **eyes**; accept **ommatidia**]

<GR, Biology>