

LOGIC (Lots of Good Interesting Content)
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Packet 11

Tossups

1. **This process is necessary to explain the existence of ring systems, such as in *Larus* gulls. In plants, this process is often driven by polyploidy. Alfred Wallace proposed that this phenomenon could be caused by reinforcement. Whether this process occurs at a uniform rate or in short bursts differentiates the models of phyletic gradualism and (*) punctuated equilibrium. The allopatric form of this process requires geographic isolation to occur. This process generates a new branch on a phylogenetic tree. Reproductive isolation is necessary for this process to occur. For 10 points, identify this process, in which new species are formed.**

ANSWER: **speciation** [accept specific forms of **speciation** like allopatric **speciation**; prompt on descriptions like “forming new species”; prompt on evolution] <GC, Biology>

2. **Paul Bogle led the Morant Bay Rebellion against colonial rule on this island. Henry Morgan served as lieutenant governor of this island, where former slaves in this country, led by Cudjoe and Nanny, fought against colonial rule during its Maroon Wars. Simon Bolivar advocated for a united Latin America in a (*) letter from this island, where he was exiled to in 1815. After this formerly Spanish island was captured by England in 1655, it was used as a hideout for many pirates at its city of Port Royal. For 10 points, name this formerly British colony in the Caribbean, which is now an independent country with capital at Kingston.**

ANSWER: **Jamaica** [or “Letter from **Jamaica**”] <GP, World History>

3. **A gigantic marble statue of a man with a chipped bronze shield dominates the right side of one painting from this art movement, which shows burning ships and bridges as a city is besieged. Fitz Lane was a member of an offshoot of this movement, called Luminism. A series of five paintings from this movement shows the progress of civilization from *The Savage State* to *Desolation* and is entitled *The (*) Course of Empire*. Paintings like *The Oxbow* exemplify the romantic landscapes championed by this movement. Frederic Edwin Church and Thomas Cole were members of, for 10 points, what movement originally based in eastern New York?**

ANSWER: **Hudson River** School <DB, Visual Fine Arts>

4. **Robert Gordon’s triangle model for this phenomenon was based on an earlier Keynesian model, which relates this phenomenon to unemployment. This phenomenon is represented by pi in an equation which states that this phenomenon changes the real interest rate to the nominal interest rate; that equation is the Fisher equation. The Wholesale (*) Price Index measures the rate of this phenomenon before goods hit the market, at which point the Consumer Price Index may be used. This phenomenon comes in built-in, cost-push, and demand-pull varieties. For 10 points, give this phenomenon, the increase of prices over time.**

ANSWER; **inflation** [accept **inflation** rate; accept specific forms of **inflation** like cost-push **inflation**; prompt on descriptions such as prices increase before mention; do not accept or prompt on “deflation”] <EA, Social Science>

5. **In a play, a woman using one of these things interrupts an interrogation scene in which a man is asked questions like whether the number 846 is “possible or necessary” and whether the chicken or the egg came first. In that play, Stanley is given one of these objects by Lulu for his birthday. Poems like “Pioneers! O Pioneers!” and “1861” appear in a (*) Walt Whitman collection named after the “Taps” of these objects. A boy who owns one of these objects witnesses the death of his “father” Alfred as he chokes on a Nazi party pin, and decides to stop growing when he is three years old. For 10 points, name these percussion instruments, a *Tin* one of which titles a Gunter Grass novel about Oskar Matzerath.**

ANSWER: **drums** [or toy **drums**; accept **Drum-Taps** or *The Tin Drum*] <EA, Short Fiction/Other>

6. **These people are the subject of the exiled singer Şivan Perwer's song "Who are we?" These people are served by the Asayish intelligence agency and a military group meaning "Those who face death." A political party led by this ethnicity dominates the government of Rojava. Recep Tayyip Erdogan claimed that "even" these people are human, despite the fact that these people's (*) Workers Party is seen as a terrorist organization in Turkey. These people's Peshmerga army has been utilized by coalition forces in the war against the Islamic State. For 10 points, name these people, an ethnic minority who seek to form a nation in Iraq and Syria.**

ANSWER: **Kurdish** people [accept **Kurds** or **Kurdistan**] <AN, Current Events>

7. **A square matrix can be transformed by a change of basis operation into one described by this term if and only if the sum of the dimensions of its eigenspaces is equal to its dimension. Matrices with the property described by this term are both upper triangular and lower triangular, and their only nonzero elements form a line between the upper left and lower right (*) corners. Given a regular polygon with n sides, the number of segments described by this term is equal to half the product of n and "n minus three." A square has two of these things, and their length is equal to the side length times root 2. For 10 points, give this term for lines which are neither horizontal nor vertical.**

ANSWER: **diagonal** <CT, Mathematics>

8. **In an attempt to halve the royal debt, this king demanded a 249,000-pound dowry for a marriage between his son and the French princess Christine. This king's religious views were attacked by the Millenary Petition, and he dissolved the Addled Parliament after nine weeks. This monarch commissioned John Norton and Robert Barker to create an (*) Authorized Version of the Bible. This king was nearly blown up in the House of Lords in a conspiracy led by Robert Catesby; that conspiracy was the Gunpowder Plot. For 10 points, name this son of Mary, Queen of Scots, the first English monarch from the House of Stuart, who succeeded Elizabeth I.**

ANSWER: **James I** of England [accept **James VI** of Scotland] <JL, European History>

9. **One figure from this country's mythology was beheaded by Balor and had a silver arm, making him unfit to be high king of this country. A hero from this country instantaneously ages 300 years after dismounting the horse Enbarr, and was born to a woman who was turned into a deer. This country was the home of Nuada, as well as a hero who gains the ability to (*) recall all of the knowledge in the world by sucking his thumb after burning it with oil from the Salmon of Knowledge. The bard Oisín [oh-SHEEN] is from, for 10 points, what country, whose mythological hero Finn MacCool is said to have built the Giant's Causeway?**

ANSWER: Republic of **Ireland** [or **Éire**] <EA, Mythology>

10. **In one poem written in this language, the speaker describes dying as a mineral to become a vegetable, then dying as a vegetable to become an animal. That poet working in this language began his best-known work with the "Song of the Reed." The *Masnavi*, or (*) "Spiritual Couplets," is written in this language, as is a work that describes how "the moving finger writes, and having writ, moves on." That poem in this language describes the "paradise" of "a jug of wine, a loaf of bread, and thou." *The Rubaiyat* is written in, for 10 points, what language used by Rumi and Omar Khayyam?**

ANSWER: **Persian** [or **Farsi**] <TB, Non-Epic Poetry>

11. **This war's declaration was sparked by the capture of William J. Hardee and Seth Thornton in an ambush south of the Nueces River. A more lenient than expected treaty signed after this war led to the firing of diplomat Nicholas Trist. One side in this war was aided by the deserting Saint Patrick's Battalion. A young (*) Abraham Lincoln gave the Spots Resolution in opposition to this war, in which Winfield Scott and Zachary Taylor won battles at Veracruz and Buena Vista. For 10 points, name this war, whose Treaty of Guadalupe Hidalgo ceded territories such as California and Nevada to James Polk's nation from its southern neighbor.**

ANSWER: **Mexican**-American War <AN, American History>

12. **The synthesis of an iodine-doped conductive one of these molecules won Heeger, MacDiarmid, and Shirakawa the 2000 Nobel prize in Chemistry. The heterogeneity of atoms in these molecules is given by a quantity called the dispersivity. Mechanisms of producing these molecules include (*) “chain-growth” and “step-growth.” Free radical based methods of producing these molecules involve initiation, elongation, and termination steps. Nylon is a synthetically produced one of these molecules, while rubber and proteins are natural examples. For 10 points, name these macromolecules comprised of individual monomers.**

ANSWER: polymers [accept conductive polymers; accept polyacetylenes] <GC, Chemistry>

13. **The finale to Felix Mendelssohn’s String Octet quotes one portion of this work. The librettist of this work wrote that he made the composer “correct some of the grossest faults.” Three arias in this work were rewritten for the castrato Gaetano Guadagni, including the bass aria “But who may abide.” The fourth scene of this work’s first act depicts shepherd bagpipers from ancient Rome, and is titled (*) *Pifa*. King George II supposedly stood up during a passage from this piece featuring the line “he shall reign for ever and ever.” For 10 points, name this oratorio by Georg Frideric Handel that features the “Hallelujah” chorus.**

ANSWER: Messiah <DB, Auditory Fine Arts>

14. **The Holmenkollen neighborhood in this country’s capital contains a manmade ski jump ramp. This country’s Rogaland County is home to a 2000-meter-high cliff known as the “Preacher’s Chair.” A powerful system of eddies and whirlpools, commonly known as “the maelstrom,” is found in this country’s (*) Lofoten Archipelago, which is also home to the world’s largest deep-water coral reef. A vault housing nearly one million samples of seeds can be found in this nation’s island territory of Svalbard. This country’s north includes borders with both Finland and Russia. For 10 points, name this Scandanavian country home to many fjords, with capital at Oslo.**

ANSWER: Kingdom of Norway <JL, Geography>

15. **In one play by this author, Adam and Eve realize their own mortality after finding a fawn with a broken neck. That play appears in a series of five plays by this man, whose last one ends with one set in the year 31920 AD. In another play by this author of *Back to Methuselah*, the protagonist gets kidnapped by Mendoza in a section titled “Don (*) Juan in Hell.” In addition to writing about the anarchist Jack Tanner, this author wrote a play in which one character impresses Clara with her “new small talk.” In that play by this author, phonetics professor Henry Higgin tries to get rid of Eliza Doolittle’s cockney accent. For 10 points, name this author of *Man and Superman* and *Pygmalion*.**

ANSWER: George Bernard Shaw <WG, Drama>

16. **During this war, the French Count of Eu led veteran troops to victory against mostly underage soldiers in beards at the Battle of Acosta Nu. One side’s strategy of ramming led to a major naval victory at the Battle of Riachuelo in this war. The leader of one side in this war was killed during the Battle of Cerro Cora. The Duke of Caxias led the military of a country whose province of (*) Mato Grosso was invaded at the start of this war. This war saw the defeated country lose 70% of its male population, including its president, Francisco Solano Lopez. For 10 points, name this war that saw a coalition of Brazil, Argentina, and Uruguay defeat Paraguay.**

ANSWER: War of the Triple Alliance [Accept Paraguayan War before “Paraguay” is read] <GP, World History>

17. **This poet wrote that “men eat of” the title concept “and die” in the poem “Fame is fickle food.” One poem by this author describes a “Plank in Reason” breaking, causing the speaker to “hit a world, at every plunge” and earlier describes “A Service, like a Drum” that causes the speaker’s mind to go (*) numb. Another poem by this author describes passing a “House that seemed/A Swelling of the Ground” while in a carriage, which held Immortality and a figure who “kindly stopped for me.” For 10 points, name this reclusive poet of “I felt a funeral, in my brain” and “Because I could not stop for Death.”**

ANSWER: Emily Elizabeth Dickinson <WG, Non-Epic Poetry>

18. One religious tradition from this country centers on the tenets of truthfulness, compassion, and forbearance. Buddhism was introduced to this present-day country by Bodhidharma. A text from this country discusses how rulers should govern via the principle of “action without action.” A symbol from this country contrasts the (*) dark, feminine side of nature with the bright, masculine side. This country continues to persecute the Falun Gong religion. For 10 points, name this country where the ancient master Laozi [low-tzuh] explained a concept called the Way, or Tao, which is represented with the yin-yang symbol.

ANSWER: People’s Republic of China [or Zhongguo] <EA, Religion>

19. An ethereal solo for this instrument, entitled *Portrait of Tracy*, was written by a musician who played one of these instruments “of Doom.” This instrument plays a call-and-response with the piano at the beginning of *So What*. The song *Goodbye Pork Pie Hat* was written by a player of this instrument for an album titled [himself] *Ah Um*. Jaco Pastorius was a pioneer of the electric type of this instrument, while its (*) upright type was played by Paul Chambers and Charles Mingus. This instrument forms a classic jazz trio with drums and piano. For 10 points, name this low-pitched instrument, which is played by plucking or slapping its strings.

ANSWER: bass [accept upright bass; or electric bass; or double bass; or string bass; or “Bass of Doom;” or bass guitar] <DB, Other Fine Arts>

20. This quantity can be expressed as a complex number, the imaginary part of which is called the extinction coefficient. An applied electric field may induce a change in this quantity in the Kerr effect. Similarly, calcite experiences birefringence, in which this property for a material depends on polarization. The angle equal to the arctangent of the ratio of two of these quantities is named for (*) Brewster. The ratio of this quantity for two different materials is equal to the ratio of the sines of the angles of incidence by Snell’s Law. For 10 points, identify this material property, defined as the ratio of the speed of light in a vacuum to that in the material.

ANSWER: index of refraction [or refractive index; prompt on n] <LZ, Physics>

Bonuses

1. While this character's wife is away, he invites another woman over to have dinner, where they accidentally break a pickle dish. For 10 points each:

[10] Name this character, who falls in love with Mattie Silver, but is unable to act on it due to his wife, Zeena. This character attempts suicide by crashing a sled into a tree.

ANSWER: **Ethan Frome** [accept either]

[10] *Ethan Frome* is a novel by this author, who often wrote about high society during the American Gilded Age, such as in the novel *The Age of Innocence*.

ANSWER: Edith **Wharton** [or Edith Newbold **Jones**]

[10] In this other novel by Wharton, the protagonist is exiled from high society after not giving romantic favors to Gus Trenor in exchange for money. This novel ends with the protagonist, Lily Bart, overdosing on chloral.

ANSWER: *The **House of Mirth*** <EA, Long Fiction>

2. As Chancellor of the Exchequer under H. H. Asquith, this man introduced the People's Budget. For 10 points each:

[10] Name this British Prime Minister, who insisted at the Paris Peace Conference that Germany pay full reparations. He later supported Germany in the years preceding World War II.

ANSWER: David **Lloyd George**, 1st Earl Lloyd-George of Dwyfor

[10] Along with Orlando, Clemenceau, and Wilson, Lloyd George was one of the Big Four at the Paris Peace Conference, which drafted this treaty that ended World War I and mandated reparations for Germany.

ANSWER: Treaty of **Versailles** [ver-sigh]

[10] This largely anti-Semitic myth, the excuse of many Germans for losing the war, was partially inspired by Germany's signing of the Treaty of Versailles. This myth said that the country was internally betrayed by republicans that it referred to as the "November criminals."

ANSWER: **stab-in-the-back** legend [or **Dolchstoßlegende**] <JG, European/British History>

3. Name these significant numbers from the Book of Revelation. For 10 points each:

[10] Revelation has many instances of this number occurring, such as beginning by addressing this many churches in Asia and depicting the opening of this many seals.

ANSWER: **seven**

[10] The Beast of the Earth encourages people to follow the Beast of the Sea by bearing this number on their foreheads, which is known as the Mark of the Beast.

ANSWER: **six-hundred-sixty-six** [or **666**; or **six six six**]

[10] During the opening of the seals, this many people from the Twelve Tribes of Israel are sealed as servants of God. Jehovah's Witnesses have interpreted this passage to literally mean that only this many people will make it to Heaven.

ANSWER: **one-hundred-forty-four thousand** [or **144,000**] <EA, Religion>

4. Name some video games that feature mountain climbing. For 10 points each:

[10] The main character climbs Mt. Silver to face Red at the end of *Gold* and *Silver*, two entries in this video game series about catching creatures like Pikachu.

ANSWER: **Pokémon**

[10] In this rage-inducing game, a man in a flowerpot uses nothing except a sledgehammer to climb to the top of a mountain.

ANSWER: **Getting Over It with Bennett Foddy**

[10] In this game, Madeline uses her dark other half to help her collect berries and scale the title mountain. This game includes fan remixes of its songs on the difficult "B-sides" of its levels.

ANSWER: **Celeste** <EA, Trash>

5. The bond angle for this molecular geometry is equal to the inverse cosine of negative one third, or approximately 109.5 degrees. For 10 points each:

[10] Identify this molecular geometry possessed by a molecule containing a central atom attached to four substituents with no lone pairs.

ANSWER: **tetrahedral** geometry

[10] The prototypical example of a molecule with tetrahedral geometry is this simplest alkane and greenhouse gas, with formula CH₄.

ANSWER: **methane**

[10] This element unusually exists in a tetrahedral form consisting of four atoms of this element. A molecule called this element's pentoxide contains four atoms of this element and 10 atoms of oxygen.

ANSWER: **phosphorus** [or **P**] <GC, Chemistry>

6. Muhammad Ahmad claimed this title in 1881. For 10 points each:

[10] Name this redeeming figure in Islam, who will supposedly come and destroy the world's evil before the Day of Judgment. Ahmad claimed to be this figure and led a namesake war against the Anglo-Egyptian rulers of Sudan.

ANSWER: **Mahdi**

[10] Another person claiming to be the Mahdi was Ibn Tumart, who founded the Almohad Caliphate centered in this modern-day country. The Almohads reigned from this country's city of Marrakesh.

ANSWER: Kingdom of **Morocco**

[10] Mirza Ghulam Ahmad was another claimant to being the Mahdi, and founded the Ahmadiyya movement in this British colony. This largest British colonial possession was directly ruled by Britain during its "Raj" period.

ANSWER: British **India** <GP, World History>

7. The leader of this school, Johann Stamitz, was the first composer to consistently use the four-movement form for his symphonies. For 10 points each:

[10] Name this influential school of German composers. Melodic devices made by members of a school include a namesake "sigh" and a namesake "rocket," which consists of an arpeggio.

ANSWER: **Mannheim** school

[10] The Mannheim school was active during this era of music between the Baroque and the Romantic, which utilized the elegant and light *galant* style. Composers from this era included Muzio Clementi and Wolfgang Amadeus Mozart.

ANSWER: **Classical** period

[10] Mozart used a Mannheim rocket in the last movement of his "Great" symphony in this minor key, also used in Remo Giazotto's *Adagio* based on a manuscript by Tomaso Albinoni. This key is the relative minor of B-flat major.

ANSWER: **G minor** [or Great **G Minor** Symphony] <JG, Auditory Fine Arts>

8. This statement can be defined for any pair of conjugate variables, such as energy and time. For 10 points each:

[10] Identify this statement, most commonly stated as "you can't simultaneously determine both the position and momentum of a particle."

ANSWER: **Heisenberg uncertainty** principle [accept either underlined answer]

[10] More specifically, the uncertainty principle states that the product in the uncertainties of a pair of conjugate variables that satisfy the canonical commutation relation is at least equal to Planck's constant divided by this numerical value.

ANSWER: **4pi**

[10] The uncertainty principle invalidates this model of the atom, in which the nucleus is surrounded by orbiting electrons existing at definite energy levels.

ANSWER: the Rutherford-**Bohr** model <GC, Physics>

9. At the end of this story within a story, Jesus kisses the title figure on the lips instead of offering a reply. For 10 points each:

[10] Name this story that the cynical Ivan tells his brother Alyosha, a novice monk. In this story, the title figure argues that Christ was wrong not to succumb to Satan's temptations in the desert.

ANSWER: the Parable of the **Grand Inquisitor** [or any answer regarding a story about the **Grand Inquisitor**]

[10] The Parable of the Grand Inquisitor appears in this novel by Fyodor Dostoyevsky. Ivan, Alyosha, and Dmitri are the three title siblings of this novel.

ANSWER: *The **Brothers Karamazov*** [or ***Bratya Karamazovy***]

[10] This Dostoyevsky novel begins with the unnamed narrator declaring "I am a sick man...I am a spiteful man." He also points out that he is "unattractive" and has a "diseased" liver.

ANSWER: ***Notes from the Underground*** [or ***Zapiski iz podpol'ya***; accept alternate synonymous translations] <TB, Long Fiction>

10. This photo was taken at a pea-pickers' camp in Nipomo, California, after its subject supposedly sold the tires of her car to buy food, a story she denied. For 10 points each:

[10] Name this iconic photograph for the Farm Security Administration, which depicts Florence Owens Thompson and her children.

ANSWER: ***Migrant Mother***

[10] This woman captured a homeless man at the *White Angel Breadline*, in addition to *Migrant Mother* and other photos set during the Great Depression. She later documented Japanese internment in a series taken at Manzanar.

ANSWER: Dorothea **Lange** [or Dorothea Margareta **Nutzhorn**]

[10] This other FSA photographer's portrait of Allie May Burroughs is among his portrayals of life in Alabama during the Dustbowl, many of which are collected in the book *Let Us Now Praise Famous Men*.

ANSWER: Walker **Evans** <JG, Other Visual Fine Arts>

11. William Lane Craig defended this position using the *kalam* argument. For 10 points each:

[10] Identify this belief, which is the subject of the cosmological argument. Some of Thomas Aquinas' five arguments in favor of this belief include the "unmoved mover" and the "first cause."

ANSWER: existence of **God** [do NOT accept or prompt on "God does not exist" or anything similar]

[10] In his namesake "wager," this 17th-century philosopher wrote that whether or not there is a God, humans should believe in him, as they're risking only finite losses against infinite gains.

ANSWER: Blaise **Pascal**

[10] This theologian proposed the first ontological argument for God's existence, arguing that if the idea of God exists in people's minds, then God must exist in reality. This Archbishop of Canterbury wrote the *Proslogian*.

ANSWER: Saint **Anselm** of Canterbury [accept **Anselm** of Aosta and **Anselm** of Bec] <EA, Philosophy>

12. Ronald Reagan gave the "A Time for Choosing" speech in support of this politician. For 10 points each:

[10] Name this Arizona ultra-conservative, who claimed that "extremism in the defense of liberty is no vice." This man lost the 1964 presidential election to Lyndon Johnson.

ANSWER: Barry **Goldwater** [or Barry Morris **Goldwater**]

[10] This conservative thinker used his magazine *The National Review* to mobilize support for Goldwater. This man appeared alongside Gore Vidal in a series of televised debates in 1968.

ANSWER: William **Buckley** [or Bill **Buckley**; or William Francis **Buckley Jr.**]

[10] This politician succeeded Goldwater in his Arizona senate seat. This "Maverick" lost the 2008 presidential election to Barack Obama and died in 2018.

ANSWER: John **McCain** [or John Sidney **McCain III**] <WG, American History>

13. When a red giant sheds its outer layers to form a planetary nebula, its carbon-oxygen core can form one of these objects. For 10 points each:

[10] Name these dense objects in the bottom left of the Hertzsprung-Russell diagram. In these objects, fusion does not occur.

ANSWER: **white dwarfs** [or **degenerate dwarfs**]

[10] White dwarves can undergo the one-a type of these stellar explosions, which are a commonly used standard candle. Type II examples are caused by the collapse of massive stars once nickel is produced in the core.

ANSWER: **supernovae** [or type Ia **supernovae**; or type II **supernovas**]

[10] Type one-a supernovae occur when a white dwarf exceeds this mass limit, which is equal to about 1.4 solar masses. At this mass, electron degeneracy pressure is not strong enough to counteract gravity.

ANSWER: **Chandrasekhar** limit <JG, Other Science>

14. Books are full of bad drivers. Answer these questions about car accidents in literature. For 10 points each:

[10] In this novel, Charlotte Haze is run over by a Packard motor car after discovering her new husband is in love with her daughter, the “nymphet” Dolores.

ANSWER: **Lolita**

[10] In this novel by F. Scott Fitzgerald, Daisy Buchanan kills Myrtle Wilson in a car accident, although Myrtle’s husband blames the title character and shoots him in a swimming pool.

ANSWER: **The Great Gatsby**

[10] This author wrote about car accidents in several of his books, including one in which the title character hits his wife’s car and causes his son to lose an eye. This man also wrote *The Cider House Rules*.

ANSWER: John (Winslow) **Irving** [or John Wallace **Blunt**, Jr.] <TB, Long Fiction>

15. This artist’s sculpture *Zuccone* is thought to depict the prophet Habakkuk, although the nickname translates to “pumpkin-head.” For 10 points each:

[10] Name this early Renaissance artist, who sculpted a bronze *David* clad only in a hat and boots.

ANSWER: **Donatello** [or **Donato** di Niccolò di Betto Bardi]

[10] Donatello created this bronze equestrian statue of Erasmo da Narni, which stands in the Piazza del Santo in Padua.

ANSWER: *Equestrian Statue of* **Gattamelata**

[10] Donatello used bronze to sculpt *David* and *Gattamelata*, but he used this medium to depict a haggard *Penitent Magdalene*, as well as *John the Baptist*. The ancient Palladium was also made of this material.

ANSWER: **wood** <TB, Visual Fine Arts>

16. A man used this creature’s claws in order to skin it and get its pelt, which he ended up wearing for a long time. For 10 points each:

[10] Name this mythical creature, which had to be strangled to death by a hero, as its skin is impenetrable by regular weapons like arrows.

ANSWER: **Nemean Lion** [prompt on **lion**]

[10] Killing the Nemean Lion was the first of twelve labors that this Greek hero underwent. Other labors that this man went through included killing the Lernean Hydra and bringing Cerberus out of Hades.

ANSWER: **Heracles** [or **Hercules**]

[10] Heracles was given his twelve labors by this cousin of his, who hid in a wine jar when Heracles brought him Cerberus for his twelfth and final labor.

ANSWER: **Eurystheus** <EA, Mythology>

17. Gangwon Province was split in two by the creation of this area, whose persistent lack of population has made it an important wildlife reserve. For 10 points each:

[10] Identify this strip of land along the border between North and South Korea, named for the fact that permanent armed presence in it is disallowed.

ANSWER: the Korean **DMZ** [or **Demilitarized Zone**]

[10] This city in North Korea, located near the western end of the DMZ, is home to a namesake “Industrial Region,” which is jointly run by both Koreas.

ANSWER: **Kaesong** [or **Gaeseong**]

[10] North Korea’s border with this other country is entirely defined by the last portion of the Tumen River before it flows into the ocean.

ANSWER: **Russia** [or the **Russian Federation**; or **Rossija**; or **Rossiya**; or **Rossiyskaya Federatsiya**; or **Russian S.F.S.R.**; or **Russian Soviet Federated Socialist Republic**] <JL, Geography>

18. The CYP2R1 gene encodes the enzyme that hydroxylates this molecule in the liver to produce calcifediol. For 10 points each:

[10] Name this antioxidant, whose biologically inactive form can be synthesized when a ring of 7-dehydrocholesterol undergoes photolysis by UV light.

ANSWER: **Vitamin D₃** [or **cholecalciferol**]

[10] Although Vitamin D can be obtained through certain foods, the bulk of it is synthesized in the stratum basale and stratum spinosum in this organ. The outermost layer of this organ is the epidermis.

ANSWER: **skin**

[10] Vitamin D is produced in these cells, which, along with melanocytes, make up the majority of the epithelial tissue in skin. These cells are produced through cornification and lost through desquamation.

ANSWER: **keratinocytes** <JL, Biology>

19. Madame Forestier’s shock makes up the twist ending of this short story. For 10 points each:

[10] Name this short story. In this story, Mathilde Loisel replaces an expensive possession lost at the Minister of Education’s ball, only to find out the original was merely a five-hundred-franc imitation.

ANSWER: “The **Necklace**”

[10] This French short story author wrote “The Necklace.” Many of his stories, including “Boule de Suif,” take place during the Franco-Prussian War.

ANSWER: Guy de **Maupassant** [or Henri-Rene-Albert-Guy de **Maupassant**]

[10] This Russian author wrote a preface for a Maupassant collection, in which he criticized Maupassant for his lack of Christian morality. In one of this writer’s stories, Pahom discovers that the only land he needs is a six-foot grave.

ANSWER: Leo **Tolstoy** [or Leo Nikolayevich **Tolstoy**] <TB, Short Fiction/Other>

20. This man was a member of the powerful Alcmaeonid family, and some of his policy decisions were influenced by his mistress, Aspasia of Miletus. For 10 points each:

[10] Name this statesman of the Golden Age of Athens, who coined the phrase “equal justice under law” in a Funeral Oration that claimed “famous men have the whole earth as their memorial.”

ANSWER: **Pericles**

[10] Pericles gave that eulogy for the soldiers who died in the first of these wars. The first of these wars was ended by the Peace of Nicias after the Athenian fleet was destroyed by the Spartans at Aegospotami.

ANSWER: **Peloponnesian Wars** [accept First **Peloponnesian War**]

[10] The Alcmaeonid family also included this politician, who switched sides several times during the Peloponnesian War. He mutilated hermai statues during a disastrous expedition to Sicily.

ANSWER: **Alcibiades** <JG, Ancient/Other History>