

**LOGIC (Lots of Good Interesting Content)**  
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**Packet 4**

**Tossups**

1. These molecules can interconvert between anomeric forms through the process of mutarotation. When these molecules possess a free hemiacetal or aldehyde group, they can act as reducing agents. These molecules can be detected using Benedict's reagent. The stereochemistry of these molecules can be visualized using Haworth or Fischer projections. Polymeric forms of these molecules are connected by (\*) glycosidic bonds and include cellulose, glycogen, and starch. These molecules often contain carbon, hydrogen, and oxygen in a 1 to 2 to 1 ratio. The names of these molecules end in the suffix "-ose." For 10 points, name these molecules which include fructose and glucose.

ANSWER: sugars [or carbohydrates; or reducing sugars; or monosaccharides; or disaccharides; or polysaccharides; or aldoses; or ketoses; or pentoses; or hexoses; or glycans; accept specific sugars like glucose or mannose] <GC, Chemistry>

2. In response to this novel, William Gilmore Simms wrote a novel set during the Revolutionary War called *The Sword and the Distaff*. James Baldwin wrote that this novel ignores humanity's "beauty, dread, and power" and compared it to *Native Son* in the essay "Everybody's Protest Novel." In 1933, Disney released a film titled *Mickey's Mellerdrummer* that was inspired by (\*) "shows" named after this novel that were popular in the late-19th century. Abraham Lincoln supposedly called the author of this novel "the little lady who started this great war." For 10 points, name this abolitionist novel written by Harriet Beecher Stowe.

ANSWER: Uncle Tom's Cabin; or, *Life Among the Lowly* <EA, Short Fiction/Other>

3. This philosopher was criticized by Immanuel Kant for basing his ten categories of classification on no derivation. In one work, this man theorized that the nature of a thing, also known as its essence, is what gives a primary entity, or substance, its existence. A book by this man on the science of "being qua being" proposed the material, formal, efficient, and final (\*) causes. This man proposed his theory of hylomorphism to oppose his teacher's theory of forms. This author of *Metaphysics* founded the Lyceum school. For 10 points, name this student of Plato and teacher of Alexander the Great.

ANSWER: Aristotle <EA, Philosophy>

4. This national park is home to the Mount Le Conte lodge, which can only be reached by hiking. In 2001, a population of elk was relocated to this national park's Cataloochee Valley. Remains of an early settlement in this national park are preserved in Cades Cove, while visitors can access an observatory on its highest point of Clingman's Dome. This national park received its name from the (\*) Cherokee tribe due to the blue mist that coalesced in its peaks and valleys. The southern terminus of the Blue Ridge Parkway is located in this national park, which was devastated by a fire in the fall of 2016. For 10 points, name this national park which straddles the border between Tennessee and North Carolina along its namesake mountain range.

ANSWER: Great Smoky Mountains National Park <JL, Geography>

5. This empire's namesake "polish" was employed on sculptures such as those at the Barabar Caves. A ruler of this empire killed 99 of his brothers to seize the throne. A different ruler of this empire was visited by the Greek diplomat Megasthenes. A monarch from this empire abandoned violence following the devastation of the (\*) Kalinga War, as proclaimed on several rock edicts. Chanakya served as an advisor to this empire's founder, whose grandson converted to Buddhism and promoted its spread. For 10 points, name this ancient empire centered at Pataliputra, which united most of the Indian subcontinent under rulers such as Chandragupta and Ashoka.

ANSWER: Mauryan Empire <GP, Ancient/Other History>

6. The inside-out style of Bowleism characterizes an insurance building in this city designed by Richard Rogers. Norman Foster designed a distinctive ellipsoid skyscraper at 30 St Mary Axe in this city. Another building in this city, whose curved shape reflected deadly light rays, is known as the Walkie-Talkie. Renzo Piano designed a 95-story tower in this home of The (\*) Gherkin. Height restrictions preserve the view of one building in this city that was designed by Christopher Wren after an earlier one was destroyed in a 1666 fire. For 10 points, name this city home to The Shard and St. Paul's Cathedral, as well as the royal residence at Buckingham Palace.

ANSWER: London <JG, Other Visual Fine Arts>

7. This nation lost American support and gained Soviet support during a war that began with an invasion by its eastern neighbor and led to the downfall of Mengistu Haile Mariam's government. This country's final monarch appealed to the League of Nations after it was invaded by a European power that this nation had earlier defeated at the Battle of (\*) Adwa under Menelik II. The Derg regime governed this country after the fall of its Solomonic Dynasty. In 1936, this country was invaded by Benito Mussolini's Italy, forcing its monarch Haile Selassie into exile. For 10 points, name this African country with capital at Addis Ababa.

ANSWER: Federal Democratic Republic of Ethiopia <GP, World History>

8. Synapsid reptiles, an ancestor to mammals, were dominant during this period. The Emeishan and Siberian flood basalts formed during this period. The carnivorous reptile *Dimetrodon* from this time period possessed a spinal sail which is thought to have aided it in thermoregulation and courtship. Trilobites went (\*) extinct at the end of this period. This period, occurred between 299 Mya [M-y-a] and 252 Mya, was the last period of the Paleozoic, and was followed by the Triassic. For 10 points, name this period that ended with the "Great Dying," the largest extinction event in Earth's history.

ANSWER: Permian Period <JL, Paleontology/Earth Science>

9. Rudy Tomjanovich is credited as the first player to use this equipment in an NBA game, and an early plastic version of this equipment was molded for Bill Laimbeer. Garo Yepremian was the last NFL player to forego the use of this equipment. Gerry Cheevers decorated this piece of sports equipment with hand-drawn stitches. The C-Flap is a version of this technology commonly used by baseball players, including Giancarlo Stanton. Elena Della Donne has worn this equipment since (\*) breaking her nose in July 2019. For 10 points, name this piece of safety equipment, the grabbing of which in the NFL is a 15-yard penalty, that protects the nose and jaw.

ANSWER: face mask <DD, Trash>

10. In one novella by this author, a female character is advised by her friends to stain her sheets with Mercurochrome on her wedding night so her husband will think she is a virgin. That woman, Angela Vicario, reveals to her brothers that Santiago Nasar deflowered her. In another of this author's novels, a Sanskrit manuscript reveals that the last member of a familial line is "being eaten by (\*) ants." This author created the character Melquiades [mel-kai-uh-dees], who introduces novelties such as ice to the village of Macondo in this man's most famous novel. For 10 points, name this Colombian author of *Chronicle of a Death Foretold* and *One Hundred Years of Solitude*.

ANSWER: Gabriel García Márquez <TB, Long Fiction>

11. A chain of putti fly up in the cloudy background of one depiction of this scene, where a few men blow into conch shells while two putti lay on a dolphin at the bottom. In addition to that depiction by William-Adolphe Bouguereau, another painting of this scene features a grove of orange trees yet to blossom at its right. In one depiction of this scene, (\*) Zephyrus blows wind towards a woman while the Hora of Spring attempts to cover her with a pink cloth. In that painting, the central figure stands on top of a seashell and uses her orange hair to cover up her nudity. For 10 points, name this scene painted by Botticelli that shows the origin of a Roman love goddess.

ANSWER: *The* Birth of Venus [accept *La Nascita de Venere*] <DB, Visual Fine Arts>

12. A complication in the passage of this legislation featured the resignation of Governor John Quitman for aiding Narciso Lopez's efforts to liberate Cuba. During debate over this legislation, Henry Foote pulled a pistol on Thomas Hart Benton. The Seventh of March Speech by Daniel (\*) Webster supported this legislation, and one of its components upheld so-called "Bloodhound Laws." This legislation simultaneously strengthened the Fugitive Slave Act and allowed California to enter as a free state. For 10 points, name this legislation devised by Stephen Douglas and Henry Clay, which only managed to avoid Civil War for a decade.

ANSWER: Compromise of 1850 <AN, American History>

13. Ballistic transport occurs when the mean free path of these particles is far larger than macroscopic dimension. The Drude-Sommerfeld model is a quantum mechanical treatment of these particles as an ideal gas, in which they are "free." These particles cannot exist in the band gap. These particles are the majority carrier in n-type materials. These particles travel at the (\*) drift velocity. Interactions between phonons and these particles, along with impurities and these particles, are responsible for a material's resistivity. The motion of these particles is opposite the direction of conventional current. For 10 points, name these negatively charged particles which can carry current.

ANSWER: electrons [prompt on charge carriers] <GC, Physics>

14. In one story, this figure makes a series of trades involving an ear of corn that ultimately result in him obtaining one hundred slaves. This figure gains his most well-known form as punishment for killing a ram. In another story, this figure captures a fairy using mashed yams and a doll. After being taunted by his son, Ntikuma, this figure dropped a (\*) pot containing wisdom. This figure exchanged Osebo the leopard, Onini the python, and the Mmboro hornets for all of the world's stories from the sky god Nyame. For 10 points, name this West African trickster god, who is the inspiration for Brer Rabbit and commonly takes the form of a spider.

ANSWER: Kwaku Anansi [or Kweku Anansi] <WG, Mythology>

15. This author founded a publishing house that garnered success with the publishing of *The Edwardians*, a novel by this author's lover. In one novel by this author, a plane spells the word "Toffee" in the sky after a loud car crash near a flower store. Another novel by this author describes the deaths of the children Andrew and Prue in the section (\*) "Time Passes." This author, who founded the Hogarth Press with her husband, wrote a novel whose protagonist remembers kissing Sally Seton as a child after hearing about the suicide of Septimus Smith. For 10 points, name this author, who wrote about the Briscoes in *To the Lighthouse* and an upper-class housewife in *Mrs. Dalloway*.

ANSWER: Virginia Woolf [accept Leonard Woolf before "lover" is read] <EA, Long Fiction>

16. When produced from mice, these proteins must be humanized to avoid the HAMA response. These proteins can trigger the classical complement pathway by acting as opsonins. These proteins contain an Fc region which allows them to bind to Fc receptors. When these proteins can only bind to a single epitope, they are called (\*) monoclonal. These proteins, which are comprised of two heavy chains and two light chains, are produced by plasma B cells. For 10 points, name these Y-shaped proteins which mediate the immune response by binding to antigens.

ANSWER: antibodies [or antibody; or Abs; or immunoglobulins; or Ig; accept monoclonal antibodies; accept mAbs] <GC, Biology>

17. A work titled for one of these features is traditionally the 2nd encore of the Vienna Philharmonic's New Year's Concert. The prelude to an opera partially titled for one of these features consists of a 136-measure E-flat drone. The "Feierlich" fourth movement of a work titled for one of these objects was inspired by a ceremony for the new Archbishop of Cologne. In the first opera in the (\*) Ring Cycle, the dwarf Alberich is teased by a group of "maidens" titled for one of these features. One of these features titles Schumann's third symphony. The most famous waltz by Johann Strauss II depicts, for 10 points, what bodies of water such as the Rhine and the Danube?

ANSWER: river <DB, Auditory Fine Arts>

18. A storm surge on this body of water in 1304 killed nearly 300 people in the All Saints' Day Flood. The *MV Wilhelm Gustoff* was sunk in this body of water, resulting in the largest maritime disaster in history. An order of pirates known as the Victual Brothers constantly opposed a military alliance of cities on this body of water. The (\*) Livonian Brothers of the sword established a crusader state at the eastern end of this sea. In 1920, Poland gained access to this sea via a corridor that separated East Prussia from the rest of Germany. For 10 points, name this Northern European body of water, whose trade was dominated by the Hanseatic League.

ANSWER: Baltic Sea <JL, European History>

19. In this novel, Mrs. Merriweather mentions how the Mruna tribe lives in “sin and squalor” while praising the missionary J. Grimes Everett. Aunt Alexandra chastises the protagonist of this novel for wearing breeches instead of dresses. After sneaking out of the house, the narrator of this novel discusses bartering hickory nuts with the leader of a (\*) lynch mob, Mr. Cunningham, while Dill and her brother watch on. That lynch mob in this novel is after Tom Robinson, who is found guilty of raping Mayella Ewell despite being defended by Atticus Finch. For 10 points, name this novel narrated by Scout, the best-known work of Harper Lee.

ANSWER: To Kill a Mockingbird <TB, Long Fiction>

20. A lamb shank bone called the *zeroah* [zeh-roh-AH] is prepared for this holiday, along with foods such as *beitzah* and *karpas*. A ritual hand washing called the Urchatz [oor-KHATZ] is part of an event for this holiday that takes 15 steps and involves drinking four cups of wine. The youngest child asks “Why is this night different from all other nights?” as part of the four questions tradition of this holiday, after which a small piece of (\*) bread called the afikoman is hidden. Instead of marking their doors with lamb’s blood as they did in the Bible, participants of this holiday remove the chametz, or unleavened bread, from their house. For 10 points, name this Jewish holiday celebrating the Exodus from Egypt.

ANSWER: Passover [or Pesach; anti-prompt on Seder by asking “What holiday is the Seder a part of?”] <EA, Religion>

## Bonuses

1. At a party at this operatic character's Parisian home, Alfredo proposes a toast with the *brindisi* drinking song, *Libiamo ne'lieti calici* [li-bee-ah-moh neh-lee-eh-tee kah-lee-chee]. For 10 points each.

[10] Name this character, a courtesan who sings a *cabaletta* aria stating her resolve to remain "always free." When this character lies and tells Alfredo she loves the Baron Douphol, Alfredo throws his casino winnings at her feet.

ANSWER: **Violetta Valery** [accept either underlined portion; accept *La traviata*; prompt on "The Fallen Woman"]

[10] *La Traviata* is by this famed Italian operatic composer, who also wrote *Aida* and *Otello*.

ANSWER: Giuseppe **Verdi**

[10] Violetta is considered the first operatic character to die of this disease, which probably affected Antonia in Offenbach's *Tales of Hoffman*. This disease kills Mimi in *La Boheme*.

ANSWER: **tuberculosis** [or **TB**: or **consumption**] <DB, Other Fine Arts>

2. The last short story in this collection ends by describing the faintly falling snow. For 10 points each:

[10] That story, "The Dead" appears in this short story collection about residents of the title city.

ANSWER: **Dubliners**

[10] This Irish author of *Dubliners* paralleled the *Odyssey* in a novel in which Leopold Bloom wanders around Dublin on June 16, 1904. That novel is *Ulysses*.

ANSWER: James **Joyce** [or James Augustine Aloysius **Joyce**]

[10] In this short story from *Dubliners*, one character reads the poem "The Death of Parnell," and political canvassers discuss National Party mayoral candidate Richard Tierney.

ANSWER: "**Ivy Day in the Committee Room**" <WG, Short Fiction/Other>

3. A growth factor derived from these objects helps regulate angiogenesis. For 10 points each:

[10] Name these fragments of megakaryocytes that activate when their GVPI receptors bind with collagen. They aggregate into clumps to aid in blood clotting.

ANSWER: **thrombocytes** [or **platelets**]

[10] The release of alpha-granules from thrombocytes can be stimulated by attachment of serotonin to residues of this amino acid. It is synthesized by its namesake synthetase enzyme from glutamic acid and ammonia.

ANSWER: **glutamine** [or **Q**]

[10] This neurodegenerative disease is caused by an expanding repeat of glutamine codons in its namesake protein. Sufferers of this disease often experience shaky movements known as chorea, and its effects can be temporarily slowed by tetrabenazine.

ANSWER: **Huntington's** Disease <JL, Biology>

4. Answer the following about planned communities in the United States. For 10 points each:

[10] In 1943, the U.S. government designed towns at several top-secret sites, including Richland, Washington and Los Alamos, New Mexico, to house workers associated with this project.

ANSWER: **Manhattan** Project [accept **Manhattan** District; or **Development of Substitute Materials**]

[10] Seven planned communities with this name were built after World War II to house veterans. The first of these communities, located in Nassau County, New York, is considered the first mass-produced suburb.

ANSWER: **Levittown(s)** [accept William **Levitt**, Alfred **Levitt**, or **Levitt & Sons**]

[10] The Villages, a planned retirement town in this state, is often designated one of America's fastest-growing cities. This state is also home to Coral Gables and Opa-locka, two 1920s-era planned suburbs of Miami.

ANSWER: **Florida** <TB, American History>

5. In this religion's afterlife, souls are said to cross the Chinvat Bridge, which widens or narrows based on worthiness. For 10 points each:

[10] Name this Middle Eastern religion. In this religion's *Navjote* initiation ceremony, adherents receive the *kushti*, or sacred belt, and *sedreh*, an undershirt.

ANSWER: **Zoroastrianism** [or **Mazdayasna**]

[10] Zoroastrians dispose of their dead by placing bodies atop these specific structures, where they are disposed of by birds and other natural forces.

ANSWER: **Towers of Silence** [or **Dakhma**; prompt on **towers**]

[10] In this country, Towers of Silence are rarely used, since diclofenac poisoning has dramatically decreased the vulture population in cities like Mumbai.

ANSWER: Republic of **India** [or **Bharat**; or **Bharatavarsha**] <TB, Religion>

6. An Australian man named Peter Scott maintains an online ranking and reviews of, so far, 83 recordings of this suite, with the version conducted by the composer only ranking #5. For 10 points each:

[10] Name this astrologically-inspired suite by Gustav Holst, whose movements include "Saturn, the Bringer of Old Age" and "Neptune, the Mystic."

ANSWER: *The **Planets***, Op. 32

[10] In this 5/4 time march from *The Planets*, the horns play over an ostinato that is played *col legno*. Sir Adrian Boult stated that Holst most wanted to express the "stupidity" of this first movement's subject.

ANSWER: "**Mars, the Bringer of War**" [accept either underlined portion; prompt on "first movement"]

[10] Holst later set the chorale from the movement "Jupiter, Bringer of Jollity" as a patriotic hymn based on this poem by Sir Cecil Spring Rice.

ANSWER: "**I Vow to Thee, My Country**" [accept "**Thaxted**"] <JG, Auditory Fine Arts>

7. One of these facilities named ICARUS is filled with liquid argon and is headed by Carlo Rubbia. For 10 points each:

[10] Name these facilities. Super-Kamiokande is another one of these facilities that uses a stainless steel tank containing ultrapure water.

ANSWER: **neutrino detectors**

[10] Super-Kamiokande uses phototubes to detect this phenomenon. When neutrinos interact with the water, it can emit electrons that move faster than the speed of light in water, causing this radiation named for a Russian physicist.

ANSWER: **Cherenkov** radiation

[10] Cherenkov radiation emits light that is mostly in this part of the electromagnetic spectrum. It has shorter wavelength than visible light and can cause skin cancer if you don't wear sunscreen.

ANSWER: **ultraviolet** [or **UV**] <DB, Physics>

8. This anthropologist observed a four-year "war" between the Kahama and Kasakela, which resulted in the deaths of Goliath and Godi. For 10 points each:

[10] Name this anthropologist, who conducted extensive fieldwork with subjects like "David Greybeard," "Flo," and "Mr. McGregor."

ANSWER: Jane **Goodall** [or Dame Jane Morris **Goodall**; or Valerie Jane **Morris-Goodall**; or Baroness Jane **van Lawick-Goodall**]

[10] Goodall is best known for studying these primates. She witnessed these primates using tools to fish for termites and discovered that these primates eat colobus monkeys, refuting the notion that these primates were vegetarian.

ANSWER: **chimpanzees** [or **Pan troglodytes**]

[10] Efforts have been made to teach chimpanzees, including Washoe and Nim Chimpsky, to use these constructs with middling success. Koko, a gorilla, was famous for learning to use these constructs.

ANSWER: **sign language** [or American **Sign Language**; or **ASL**] <TB, Social Science>

9. This character tells his master “You taught me language, and my profit on it is, I know how to curse.” For 10 points each:

[10] Name this character, a son of Sycorax who is forced to serve the sorcerer Prospero. This character describes the “noises, sounds, and sweet airs” of his native island in a notably tender speech.

ANSWER: **Caliban**

[10] Caliban appears in this William Shakespeare play, in which Ferdinand falls in love with Prospero’s daughter Miranda after a shipwreck.

ANSWER: **The Tempest**

[10] In this author’s play *A Tempest*, Caliban is reimagined as a rebellious black slave who demands to be called X, since his true name has been stolen. This Martinican author was a co-founder of the *negritude* movement.

ANSWER: Aimé **Césaire** [or Aimé Fernand David **Césaire**] <TB, Drama>

10. Answer the following about some of the Revolutions of 1848. For 10 points each:

[10] This French monarch from the House of Orléans was forced to abdicate and flee the country in February of 1848. This monarch himself came to power in the July Revolution of 1830 and was dubbed the “Citizen-King.”

ANSWER: **Louis-Philippe** I [Do NOT accept or prompt on “Louis” or “Philippe”]

[10] The 13 Martyrs of Arad were executed during this country’s 1848 revolution against Austrian rule. Lajos Kossuth was declared leader of this country, which united with Austria in a dual monarchy in 1867.

ANSWER: Kingdom of **Hungary** [or **Magyarország**; or the Austro-**Hungarian** Empire]

[10] The Revolutions of 1848 shattered the delicate Concert of Europe established by this Austrian statesman to restore the European balance of power at the Congress of Vienna, which this leader hosted.

ANSWER: Klemens von **Metternich** <GP, European/British History>

11. This empire had two elite military units called the Jaguar and Eagle warriors. For 10 points each:

[10] Name this empire centered on the city of Tenochtitlan that controlled much of the Valley of Mexico. This empire’s people were organized into *calpulli* and they cultivated food in gardens called *chinampas*.

ANSWER: **Aztec** Empire

[10] The Aztecs fought rivals such as Tlaxcala and Cholulain in these ritual wars. The prisoners procured during these wars were used for human sacrifices.

ANSWER: **Flower** Wars [accept **Flowery** Wars]

[10] An Aztec emperor of this name carried out expeditions against the Mixtecs and began the Flower Wars. The second emperor of this name was taken prisoner and killed by the Spanish under Hernán Cortes.

ANSWER: **Moctezuma** [accept **Moctezuma I**, **Moctezuma II**, **Montezuma**, **Montezuma I**, or **Montezuma II**] <GP, World History>

12. A 2019 prank saw impersonators of this leader and Kim Jong-un meeting in Hong Kong and enjoying a dinner of Jollibee’s fried chicken. For 10 points each.

[10] Name this former Davao City mayor and current Philippine president. This advocate for the “Build, Build, Build Program” has gained international attention for his harsh War on Drugs.

ANSWER: Rodrigo **Duterte**

[10] China rejected a 2016 Philippine arbitration victory concerning territorial claims in this body of water. China’s continued presence in this sea, amid promises of investment in the Philippines, is seen by Duterte’s opponents as him being “duped.”

ANSWER: **South China** Sea [accept **West Philippine** Sea]

[10] Chinese claims in the South China Sea center on the “Nine Dash Line,” a border originally created in 1947 by this island nation with capital Taipei. China added a 10th line to incorporate this island into its claim in 2013.

ANSWER: **Taiwan** [or **Republic of China** or **ROC**; or **Formosa**; or **Zhōnghuá Mínguó**; do NOT accept nor prompt on “China” or “People’s Republic of China”] <DB, Current Events>

13. Euler used his totient function to generalize this theorem to non-prime moduli. For 10 points each:

[10] Name this theorem, which states that a number  $a$  raised to a prime power  $p$  is equal to  $a$  modulo  $p$ .

ANSWER: **Fermat's little** theorem [prompt on **FLT**]

[10] Fermat's "last theorem," which states that  $a$  to the  $n$  plus  $b$  to the  $n$  equals  $c$  to the  $n$ , can only be true when  $n$  is this integer. The variables in the Pythagorean theorem are also raised to this integer power.

ANSWER: **2** [or **second**, or **squared**]

[10] Fermat's last theorem was proved by Andrew Wiles' proof of the Taniyama-Shimura conjecture. That conjecture states that these plane algebraic curves have modular forms.

ANSWER: **elliptic** curves [do NOT accept "ellipses"] <DB, Mathematics>

14. One character in this short story sees "strange" and "unfamiliar" constellations and compares the sound of a watch to a "blacksmith's hammer upon the anvil." For 10 points each:

[10] Name this short story, in which Peyton Farquhar imagines escaping execution at the title location and returning to his plantation.

ANSWER: "An **Occurrence at Owl Creek Bridge**"

[10] This author of "An Occurrence at Owl Creek Bridge" wrote about a deaf, mute boy learning that his house has been set on fire in the short story "Chickamauga."

ANSWER: Ambrose Gwinnett **Bierce**

[10] In this other short story by Bierce, the title chess playing robot kills its creator.

ANSWER: "**Moxon's Master**" <WG, Short Fiction/Other>

15. For 10 points each, answer the following about myths involving the huntress Atalanta:

[10] Atalanta is most notable for being the first to strike during the hunt for one of these animals from Calydonia.

After this animal was killed, Meleager awarded Atalanta its hide.

ANSWER: **boar** [accept the **Calydonian Boar**]

[10] In another myth, Atalanta loses a footrace to Hippomenes after he distracts her with these objects. In the Garden of the Hesperides, these magical fruits are guarded by the dragon Ladon.

ANSWER: **golden apples** [prompt on **apples**]

[10] After Prince Iasus left Atalanta to die on a mountaintop as a baby, she was suckled by one of these animals. In another myth, the nymph Callisto is transformed into one of these animals by Hera.

ANSWER: **bear** <WG, Mythology>

16. Answer the following about geographic locations that have recently changed names. For 10 points each:

[10] This planned capital city of Kazakhstan changed its name in March of 2019 following a unanimous vote. It now shares its name with one of its former presidents, who resigned just four days before the name change. The current and former names are both acceptable.

ANSWER: **Nursultan** [or **Astana**]

[10] In 2018, Macedonia agreed to change its name to North Macedonia at the Prespa Agreement, ending a 27-year naming dispute with this country that borders Macedonia to the south.

ANSWER: **Greece** [or the **Hellenic Republic**; accept **Hellas**]

[10] In 2018, this city was renamed by the BJP party, which has undertaken a recent campaign to rename Indian cities with names of Muslim origin. This city, which is located at the confluence of the Ganges and Yamuna Rivers, is one of four main sites for the Kumbh Mela pilgrimage. The current and former names are both acceptable.

ANSWER: **Allahabad** [or **Prayagraj**; or **Illahabad**] <JL, Geography>



17. In “Tangled Up in Blue,” this author describes a book by “an Italian poet from the 13th century,” in which “every one of them words rang true / and glowed like burning coal.” For 10 points each:

[10] Name this poet who wrote “Tangled Up in Blue” for his album *Blood on the Tracks*. This man, who won the 2016 Nobel Prize in Literature, also wrote the songs “Like a Rolling Stone” and “The Times They Are A-Changin’.”

ANSWER: Bob **Dylan** [or Robert Allen **Zimmerman**]

[10] In a 1978 interview, Dylan implied that the 13th century Italian poet from “Tangled Up in Blue” is this author known for writing love sonnets to Laura in *Il Canzoniere*, even though this man wasn’t born until 1304.

ANSWER: **Petrarch** [or Francesco **Petrarca**]

[10] In another *Blood on the Tracks* song, Dylan alludes to the romantic relationship between Paul Verlaine and this other French Symbolist poet. This poet of “The Drunken Boat” wrote *A Season in Hell*.

ANSWER: Arthur **Rimbaud** [or Jean Nicolas Arthur **Rimbaud**] <TB, Non-Epic Poetry>

18. William Brydon was the sole survivor of a retreat made from this city to Jalalabad. For 10 points each:

[10] Name this city ruled by leaders such as Shah Shujah Durrani. William Elphinstone’s forces were massacred while retreating from this city in 1842.

ANSWER: **Kabul**

[10] Elphinstone’s retreat from Kabul occurred during the first of the wars between Britain and this nation.

Geopolitical tensions between the British and Russian Empires over this nation were known as the Great Game.

ANSWER: **Afghanistan** [or Da **Afghanestan** Jamhawriyat; or Dowlat-e Eslami-ye **Afghanestan**; or the Islamic Emirate of **Afghanistan**; or the Islamic State of **Afghanistan**; or Jomhuri-ye **Afghanestan**; or Republic of **Afghanistan**]

[10] During the Great Game, the British Empire tried to strengthen relations with this empire, led by Ranjit Singh. This empire’s Dal Khalsa Army fought a series of wars against the Durrani Empire.

ANSWER: **Sikh** Empire <AN, World History>

19. Certain isotopes are radioactive due to an unstable neutron to proton ratio, resulting in various types of nuclear decay. For 10 points each:

[10] Alpha decay involves the decay of a heavier isotope, such as Uranium-238, into Thorium-234 and the nucleus of this element.

ANSWER: **Helium** [or **He**]

[10] In beta-minus decay, an atom emits an antineutrino, along with one of these negatively-charged particles that surround the nucleus in orbitals.

ANSWER: **electrons**

[10] This method of radioactive dating measures the amount of electron capture decay of one isotope of atomic mass 40 to another of the same mass in order to date objects between 20,000 and 4.5 billion years old.

ANSWER: **K-Ar dating** [or **potassium-argon dating**] <LZ, Chemistry>

20. As a vice president once said, there’s nothing better for the inside of a man than the outside of a horse. Answer the following about charging horsemen in art, for 10 points each.

[10] This artist, who created portraits of patients such as *The Woman with a Gambling Mania* and *Portrait of a Kleptomaniac* for his psychiatrist, depicted a Napoleonic officer on horseback mid-battle in *The Charging Chasseur*.

ANSWER: Theodore **Gericault** [or Jean-Louis André Théodore **Géricault**]

[10] Eugène Delacroix painted a charging horseman in *The Massacre at Chios*, which takes place during this country’s war of independence. He also depicted a representation of this country on the ruins of Missolonghi.

ANSWER: **Greece** [or **Ellas**; or **Elliniki** Dhimokratia; or **Hellenic** Republic]

[10] This man painted Napoleonic soldiers putting down an uprising during the Peninsular War in *The Charge of the Mamelukes*. An execution taking place the following day is the setting of his *The Third of May, 1808*.

ANSWER: Francisco **Goya** [or Francisco José de **Goya** y Lucientes] <JG, Visual Fine Arts>