

LIMIT 2015: A Limit to Learning is a Dangerous Thing

Written by Lexington High School (Colin Cantwell, Kyle Doney, Reggie Luo, Gavin Mak, Duncan McCallum, Arjun Sarathy, Devin Shang), Hinsdale Central High School (Ankush Bajaj, Sunny Chen, Harrison Wang, James Zhou), and Victor Pavao

Edited by Rohan Nag and Jarret Greene

Packet 2

Tossups

1) **This man titled a song cycle based on nine poems by Heinrich Heine *Liederkreis*. This composer spelled out the name of the town of Asch with notes in a composition for solo piano, meant to evoke the title festival. This man wrote an F major 7th movement evoking dreaming in a set of piano pieces. This composer of (*) *Carnaval* used the timpani a lot in his first symphony, which was first conducted by Felix Mendelssohn. His third and final symphony was inspired by a trip to a namesake river with his wife, pianist Clara Wieck. For 10 points, name this Romantic composer of *Scenes from Childhood* as well as the *Spring* and *Rhenish* symphonies.**

ANSWER: Robert Schumann <JG>

2) **Eisenhower's religious doctrine de-emphasizing dogma was termed 'Piety on' this river. Abel Upshur died on this river when the "Peacemaker" exploded. John G. Barnard fortified parts of this river, where the Battle of Fort Stevens took place. In 1826, Henry Clay and John Randolph fought a winless duel on this river. The Annapolis Convention occurred (*) because of conflicts about the navigation of this river. A 1632 charter gave the Calvert family land north of this river, and the town of St. Mary's was founded in that colony, Maryland, where this river meets the Chesapeake Bay. For 10 points, name this river cutting through Washington, D.C.**

ANSWER: the Potomac River

3) **This character sees scientists attempting to soften marble to make pillows and extract sunlight from cucumbers at the Grand Academy, and he becomes "thoroughly disgusted with modern history" after discussions with the ghosts of figures including Socrates. He sees people who continue to age despite being immortal during a visit to the nation of (*) Luggnag, and this character also visits the land of Balnibarbi [ball-ni-BAR-bie], ruled from the flying island of Laputa. For 10 points, name this character who discovers tiny people on the island of Lilliput in a Jonathan Swift novel about his "travels."**

ANSWER: Lemuel Gulliver; accept Gulliver's Travels <CC>

4) **This artist features Kelly Price on a song which states "I don't know what they want from me." On another song, he asks "If you've got a gun up in your waist, please don't shoot up the place," and he "loves it when you (*) call" him the title phrase. This rapper of "Mo Money Mo Problems" samples Mtume on a song which claims that his rise to fame "was all a dream." He included "Juicy" and "Big Poppa" on his album *Ready to Die*. For 10 points, name this rapper assassinated in Los Angeles in 1997, likely due to his feud with Tupac Shakur.**

ANSWER: The Notorious B.I.G. or Biggie Smalls; or Christopher (George Latore) Wallace <CC>

5) **During a meeting in this novel, one character's glass eye falls into a cup. Following a sermon glorifying a college's founder by the blind Homer Barbee, this novel's narrator is expelled from that college by Dr. Bledsoe. One character in this novel is killed after selling Sambo Dolls, and the narrator meets that man while working as an orator for the (*) Brotherhood. This novel's title character throws a spear at Ras the Destroyer during a riot, and had earlier participated in a "Battle Royale." For 10 points, name this novel about an unnamed African-American protagonist, written by Ralph Ellison.**

ANSWER: Invisible Man; do not accept or prompt on **The Invisible Man** <DS>

6) In ANOVA, variance and this quantity are constant in “compound symmetry”. In this quantity’s model, variables vary together in a bivariate normal distribution or joint distribution. This quantity’s coefficient rho equals the covariance divided by the square root of the product of standard deviations. In a model named for this quantity, random samples are taken from units of (*) association. Pearson names one coefficient for this value. Scatterplots show points, which can have a positive or negative version of this property. For 10 points, name this quantity, which is not causation, but relates two variables.

ANSWER: correlation or R

7) This figure plants a silver cup in his brother’s bag and accuses him of stealing the cup. He had two sons named Manasseh and Ephraim. This man is accused of sexual assault by Potiphar’s wife. His father worked fourteen years for Laban in exchange for the hand in marriage of Laban’s two daughters, (*) Leah and this character’s mother, Rachel. This man is imprisoned with a cupbearer and a baker, but becomes a grand vizier after interpreting the Pharaoh’s dreams. For 10 points, name Jacob’s favorite son, the owner of a multicolored coat.

ANSWER: Joseph or Yosef <CC>

8) This nation’s Theater King was opposed by its Anjala League. A UN Secretary-General from this nation practiced “quiet diplomacy”. The Folkhemmet was this nation’s “Middle Way”, and one of its kings wrote a *Norma Futurarum Actionum*. The “1812 policy” was this nation’s neutrality (*) in the Napoleonic Wars. The Age of Liberty was this empire’s history until the Great Northern War. In 1904, Norway became independent from this nation, whose namesake phase of the Thirty Years’ War saw Gustavus Adolphus die at Lutzen. For 10 points, name this Scandinavian country with a capital at Stockholm.

ANSWER: Sweden or Swedish Empire

9) Hydrogen darkening affects fibers of this substance, and rotary evaporators are made of this material. Short-head distillation apparatuses and ampoules are made of this material. NMR uses capillary tubes often made of this material, and its “ground” variety is used around its joints. Dewars have an inner layer (*) of this material, and some is made with lead oxide. The borosilicate type of this material can hold strong acids and has the brand name Pyrex. Its soda-lime variety is most common, and it uses silicon dioxide, the major component of sand. For 10 points, name this material that comprises labware like Erlenmeyer flasks and beakers.

ANSWER: glass

10) One section of this ballet features loud and irregular drumbeats while some men try to capture a girl. Much of this ballet’s second section consists of the strings and horns playing an F-flat-major triad with an E-flat dominant seventh chord. New choreography by Leonide Massine replaced (*) Nijinsky’s original choreography for this ballet, which was the third commissioned by Sergei Diaghilev from its composer. This ballet ends with the sacrifice of a virgin in a “Sacrificial Dance” and begins with a very high bassoon solo. For 10 points, name this Igor Stravinsky ballet that sparked a riot at its 1913 premiere.

ANSWER: *The* Rite of Spring or *Le* Sacre du printemps

11) In one short story by this author, a banker decides to kill a lawyer who has willingly spent fifteen years in solitary confinement for money, only to find that that lawyer had escaped. In addition to “The Bet,” this man wrote a short story in which Anna runs away from a performance of *The Geisha* after seeing (*) Dmitri, with whom she has had an affair. In a play by this author, Firs is forgotten by Madame Ranevskaya, who departs for Paris after her estate is purchased by Lopakhin. For 10 points, name this Russian author of “The Lady with the Lapdog” and *The Cherry Orchard*.

ANSWER: Anton (Pavlovich) Chekhov <CC>

12) Gallium is an alternative to this class of drugs, and they include one ionophore that sequesters potassium ions. They were originally called “magic bullets” and “wonder drugs”, and aminoglycosides and quinolones are types of them. Some of these drugs break beta-1-4 glycosidic bonds between *N*-acetyl-glucosamine and *N*-acetyl-muramic acid. (*) Resistance to these drugs can occur by lateral gene transfer via mobile elements called transposons. Viral bacteriophages are used instead of them in Eastern Europe. MRSA is resistant to one of these drugs, which include ampicillin and penicillin. For 10 points, name these drugs that break bacterial cell walls.

ANSWER: antibiotic or antimicrobial or antibacterial drugs; accept word forms

13) This god told Egli to put two animals' bones back into their skin when Egli finished eating those animals, which were Tanngniost [tan-yoast-er] and Tanngnisnir [tan-gris-nir]. The hazel tree was sacred to this god, whose wife was Ironstone. This god owned Járngreipr, a pair of iron gloves for him to handle his main weapon. Before this god killed Hrungrnir, his (*) weapon was destroyed and partly lodged into his own forehead. At Ragnarök, this son of Jord defeats Jörmungandr [YOR-mun-gander], but is only takes nine steps before dying. For 10 points, name this electric son of Odin who fought with the hammer Mjölnir.

ANSWER: Thor <KD>

14) Both this man and his first wife Isabella Brant are in his painting *Honeysuckle Bower*. 24 allegorical paintings, including *The Triumph of Truth* and *The Birth of the Princess*, make up his Marie de Medici Cycle. In another of this man's works, a man lies on the ground next to a (*) crocodile while looking up at the title animal, which is being speared by three men in turbans. This artist of *The Hippopotamus Hunt* often used his second wife Helena Fourment as a model, making her the archetype for his famous “fleshy nudes.” For 10 points, name this Flemish artist who depicted Mary Magdalene holding Jesus' feet in his *The Descent From the Cross*.

ANSWER: Peter Paul Rubens <CC>

15) One tribe of this religion conducted the ‘Hilalian invasions’. One emperor sent an ambassador to the King of Yatenga asking him to convert to this religion, and that King replied that he would consult his ancestors. The Wangara or Dyala traders of this religion traded gold from the Bambuk and Bure goldfields for (*) salt. *Madrasas* are schools teaching the study of this faith. The Sonni dynasty was overthrown by a ruler of this faith named Askia Muhammad. Two *Ta'rikhs* written by scholars of this religion chronicled the Songhai Empire. For 10 points, name this faith of Mansa Musa, who went on a *hajj* to Mecca.

ANSWER: Islam; accept Sunni or Shi'a Islam

16) The Ouray share a reservation with the Uintah people in the northeast of this state. The mild southwest of this state is called Dixie because settlers failed to grow cotton around Saint George in Washington County. Part of its growing Hispanic population works in its affluent Park City. The long, narrow Wasatch Front in this state is bookended by (*) Ogden and Provo. This state's town of Promontory was where the Transcontinental Railroad was finished. Brigham Young initially proposed this state as Deseret. For 10 points, name this American state where most Mormons live in Salt Lake City.

ANSWER: Utah <DM>

17) Envelopes are three-phase versions of this phenomenon. Special materials can absorb this phenomenon, creating free-field conditions. The dynamic range measures the relative levels of this phenomenon made by a point or line source. Open, half-open, and stopped pipes can produce fundamental (*) modes or higher harmonics of this phenomenon. Differences in the frequency of this phenomenon result in beats. This phenomenon is a longitudinal wave with varying pressure amplitudes. The Doppler effect measures changes in its pitch. For 10 points, name these vibrations noticed by listeners and used in SONAR.

ANSWER: sound

18) Scribes from this civilization first used reed styluses before its Early Dynastic Period. “Big Men” of this culture were warlords free of divine influence, and some stone tablets from it show seed drills. This civilization created the first twelve-month calendar and was preceded by the Ubaid culture. The White Temple (*) was built in the first city-state part of this empire, Uruk. This civilization initially used pictograms, but later invented cuneiform. Sargon of Akkad’s first campaign was against this region near the mouths of the Tigris and Euphrates. For 10 points, name this earliest civilization, which made the Epic of Gilgamesh in Mesopotamia.

ANSWER: Sumerian civilization

19) John Dryden’s adaptation of a play about this man added the character of Adrastus. In one play that he appears in, this man tortures a shepherd who had earlier brought this character to Polybus and Merope. This character’s rise to power begins when he solves the riddle of the (*) Sphinx. Following this character’s death, his two sons fight over the throne, and his daughter Antigone commits suicide in a cave. This character rips out his eyes with a brooch from Jocasta’s dress after he realized that he had killed his father Laius and slept with his mother. For 10 points, name this figure who names two plays of Sophocles’ Theban Trilogy.

ANSWER: Oedipus <RL/JG>

20) These institutions at Carlisle were modelled after Fort Marion prison. “Old-field” types in the South were often small cabins. The Chautauqua and Lancaster systems reformed these institutions, which the “ye olde deluder Satan” act created. Every 16th township sold by the Northwest Ordinance funded these institutions. Josiah Holbrook began the (*) Lyceum Movement to create these places, whose “normal” variety Horace Mann built in Massachusetts. They used blue-backed spellers by Daniel Webster and taught the three R’s. For 10 points, name these places integrated by *Brown v. Board of Education*.

ANSWER: schools; accept specific types of schools like Indian schools, high schools, etc. but do not accept colleges or universities

Bonuses

1) In an early episode of this novel, the title character attacks several men with a lance for trying to remove his armor from a trough of water to water their mules. For 10 points each:

[10] Name this novel about a man who hunts boars with the Duke and Duchess, and is told to whip himself 3300 times to disenchant a fictional woman. It also has a chapter in which the main character tilts at windmills.

ANSWER: Don Quixote or The Ingenious Gentleman Don Quixote of La Mancha; also accept *El ingenioso hidalgo don Quijote de la Mancha*

[10] *Don Quixote* was written by this Spanish author who lost the use of his left arm in the Battle of Lepanto.

ANSWER: Miguel de Cervantes Saavedra

[10] This work by Cervantes is a collection of 12 novellas, which the author claims are the first ever to be written in Spanish. Works in this collection include *The Lawyer of Glass* and *The Conversation of the Dogs*.

ANSWER: Exemplary Novels or Novelas ejemplares <JG>

2) Khnum stopped a seven-year-long one of these events. For 10 points each:

[10] Name these events, which Imhotep helped stop in the Temple of Life, and which often occurred when the Nile River stopped flowing. They are often caused by droughts destroying crops.

ANSWER: famine or starvation; accept word forms

[10] This other god, who was the patron of craftsmen, saved Egypt from a disaster before the seven-year famine. Imhotep was this Memphian god's son, and he created the universe with either his heart or his voice.

ANSWER: Ptah

[10] This Egyptian god of the underworld was represented by the crook and flail. He threatened famines over his son Horus's appointment to the divine council.

ANSWER: Osiris <KD>

3) An arrangement of two of these defines the electrostatic unit, and the absolute potential assumes a zero value infinitely far away from one of these. For 10 points each:

[10] Name these infinitely small objects that comprise continuous charge distributions like sheets, rings, spheres, and cubes in large numbers or dipoles in pairs.

ANSWER: point charges or test charges; prompt on "charges"

[10] Sharks have ampullae that can detect the "electric" types of these constructs, which radiate outwards from positive point charges. They also come in "magnetic" types with lines that run from north to south.

ANSWER: fields; accept electric or magnetic field

[10] This quantity is the integral of the electric or magnetic field perpendicular to a set area, and Gauss' law has two forms setting the electric and magnetic versions of this quantity equal to zero.

ANSWER: flux; accept electric or magnetic flux

4) This man called his own energy bill the "moral equivalent of war", which critics nicknamed MEOW. For 10 points each:

[10] Name this President, who blamed everything on the public's "crisis of spirit" in the Malaise speech. His failed Operation Eagle Claw led to the formation of the JSOC and the resignation of Cyrus Vance.

ANSWER: Jimmy Carter

[10] President Carter was a peanut farmer from this state, and was its governor from 1971 to 1975. It was founded as a debtors' haven by James Oglethorpe.

ANSWER: Georgia

[10] Carter began the second of these talks in 1969, and they limited missiles, warheads, and anti-missile systems for both superpowers, but became moot during the Afghanistan invasion.

ANSWER: SALT or Strategic Arms Limitation Talks <CC>

5) Twenty of this man's collages known as "cut-outs" were included in the collection *Jazz*. For 10 points each:

[10] Name this French artist whose painting *Blue Nude* was once burned in effigy. This man painted his wife in *The Green Stripe* and painted *The Red Room* and *The Dance*.

ANSWER: Henri Matisse

[10] Henri Matisse was at the forefront of this art movement, which took its name from a critic's remark about "Donatello among the wild beasts." Other members of this color-emphasizing group included Andre Derain.

ANSWER: Fauvism

[10] One version of Matisse's *The Dance* was painted as a mural for the Barnes Foundation, located in this American city. This city's attempts to take over the Barnes' collection of modern art is in the film *Art of the Steal*.

ANSWER: Philadelphia, Pennsylvania <JG>

6) This composer's third symphony and *Hebrides* overture were both influenced by visits to Scotland. For 10 points each:

[10] Identify this composer who included a "Wedding March" in his incidental music to *A Midsummer Night's Dream*.

ANSWER: Felix Mendelssohn or Jakob Ludwig Felix Mendelssohn-Bartholdy

[10] Mendelssohn was a composer from this country, also home to the composer of the hymn "A Mighty Fortress is Our God", which was written by Martin Luther.

ANSWER: Germany or Deutschland

[10] A rendition of "A Mighty Fortress is Our God" opens the finale of this Mendelssohn work commemorating the 300th anniversary of the Augsburg Confession.

ANSWER: Reformation Symphony or Mendelssohn Symphony no. 5 <DS>

7) The winning candidate in this election advised voters not to "change horses in the middle of the stream." For 10 points each:

[10] Name this presidential election during the Civil War in which Abraham Lincoln won re-election on the National Union Party ticket with Andrew Johnson.

ANSWER: Election of 1864

[10] Lincoln defeated this former Union general in the election of 1864. This leader of the failed Peninsula Campaign was removed from command after the Battle of Antietam.

ANSWER: George Brinton McClellan

[10] McClellan's running mate was this Ohio congressman, the namesake of a civil service reform act under the Arthur administration and a plan to pay federal bonds off with greenbacks during Grant's Presidency.

ANSWER: George Hunt Pendleton <CC>

8) Coleoptile phototropism first demonstrated this compound's effects in 1926. For 10 points each:

[10] Name these compounds that assist stem elongation and control photo- and gravitropism in plants. One of them is IAA, or 3-indoleacetic acid.

ANSWER: auxins

[10] Auxins and gibberellins are these types of compounds, which target different parts of plants than where they were made. Testosterone and estrogen are human examples of these substances.

ANSWER: hormones

[10] Auxins promote apical dominance, which is the dominance of the growth of "leaders" in this relative direction. Branchlets on branches or species like fir trees will also grow in this direction.

ANSWER: vertically or up or toward the Sun; accept word forms and be lenient

9) Name some novelists who wrote about their own homosexuality. For 10 points each:

[10] This author of the *Sea of Fertility* tetralogy wrote about Kochan in his novel *Confessions of a Mask*. He committed seppuku on live television after a failed coup attempt.

ANSWER: **Yukio Mishima**; accept either or both names in any order

[10] This author described David, who is left alone in Paris by his girlfriend Hella and begins a relationship with the title Italian bartender in his novel *Giovanni's Room*.

ANSWER: James (Arthur) **Baldwin**

[10] Olivier and his uncle Edouard have an affair in this author's novel *The Counterfeiters*. Michel becomes attracted to Arab boys while on honeymoon in Tunis in his work *The Immoralist*.

ANSWER: André (Paul Guillaume) **Gide** <CC>

10) This philosopher formulated the concept of *geist*. For 10 points each:

[10] Name this German philosopher, the author of *The Phenomenology of Spirit*.

ANSWER: Georg Wilhelm Friedrich **Hegel** [HAY-gul]

[10] Hegel's form of this philosophical method resolves a thesis-antithesis pair with a synthesis, which inspired Karl Marx when he formulated a type of materialism influenced by this method of reasoning.

ANSWER: **dialectical**

[10] This philosopher used dialectic as the means to achieving the highest form of knowledge in his *Analogy of the Divided Line*. Ralph Cudworth and Henry More led a group who studied the work of this man at Cambridge.

ANSWER: **Plato** <SC>

11) Although he chronicled a story in which Arion is saved by a dolphin after being thrown overboard by Corinthians, this man's writings are generally accurate. For 10 points each:

[10] Name this Greek author whose *Histories* were the first example of historiography in the Western world, giving him the moniker "Father of History."

ANSWER: **Herodotus**

[10] This Greek history by Thucydides was partly written during his exile after the Battle of Amphipolis. It includes a famous Funeral Oration given by Pericles.

ANSWER: **History of the Peloponnesian War**

[10] This man began his *Hellenica* almost exactly where Thucydides left off his *History*. He is better known for his *Anabasis*, which details the return of the Ten Thousand to Greece after they were stranded in Persia.

ANSWER: **Xenophon** <DM>

12) In a novel by this author set at the fictional boarding school Hailsham, Kathy is a clone created to donate organs. For 10 points each:

[10] Name this Japanese-British author of *Never Let Me Go* and a novel in which Stevens has an affair with Miss Kenton, *The Remains of the Day*.

ANSWER: Kazuo **Ishiguro**

[10] In Ishiguro's *The Remains of the Day*, Stevens is a member of this profession. In *The Strange Case of Dr. Jekyll and Mr. Hyde*, Poole serves Jekyll as a member of this profession, which also includes Alfred Pennyworth.

ANSWER: **butler**; prompt on answers such as "servant"

[10] Another famous literary butler is Jeeves, who served Bertie Wooster in a number of stories and novels written by this English humorist.

ANSWER: P(elham) G(renville) **Wodehouse** <JG>

13) Name some Alfred Hitchcock movies, for 10 points each:

[10] Anthony Perkins and Janet Leigh star in this Hitchcock thriller set mostly in the Bates Motel, where, in a famous scene, the Perkins-played Norman Bates kills Leigh's character while she showers.

ANSWER: **Psycho**

[10] Cary Grant plays Roger O. Thornhill, an ad executive mistaken for a spy, in this 1959 Hitchcock film. Famous scenes from this film include Grant being chased by a crop-duster and a climactic fight on top of Mt. Rushmore.

ANSWER: **North by Northwest**

[10] In this film from Hitchcock's British period, Richard Hannay repeatedly escapes from agents of the title spy ring, who are finally outed after Mr. Memory is shot by Professor Jordan and reveals their plan.

ANSWER: **The 39 Steps**

14) Their occluded varieties can have TROWALs. For 10 points each:

[10] Name these high-pressure or low-pressure systems that can create various types of weather when near each other. Stationary, warm, and cold are their other types.

ANSWER: weather **fronts**

[10] The orographic type of this phenomenon is caused by mountains, while its convective and frontal types are more common. This general phenomenon affects air masses moving in fronts, and creates rain shadows.

ANSWER: **lift**; prompt on synonyms

[10] This phenomenon occurs in the center of low pressure systems when air is lifted, creating clouds and precipitation.

ANSWER: **convergence**; accept word forms

15) Hol' up! For 10 points each:

[10] This rapper and member of the supergroup Black Hippy included such songs as "Swimming Pools (Drank)" on his debut full-length album *good kid, m.A.A.d. city*.

ANSWER: Kendrick **Lamar Duckworth**; accept either underlined name; accept **Kendrick Lamar**; prompt on "**Kendrick**"

[10] Kendrick Lamar claimed he would "lyrically murder" many other rappers during his verse on this Big Sean track on which he is featured.

ANSWER: **"Control"**

[10] This rapper of "The Show Goes On" recorded a response to *Control*. His most recent album, *Tetsuo and Youth*, contains a single which states that the "pizza man don't come here no more," "Deliver."

ANSWER: **Lupe Fiasco** or Wasalu Muhammad **Jaco**; prompt on "**Lupe**" <CC>

16) Edward the Black Prince won victories at Poitiers [pwah-TYEH] and Crécy during this war. For 10 points each:

[10] Name this war, in which longbowmen under Henry V helped English forces win the Battle of Agincourt.

ANSWER: **Hundred Years'** War

[10] After the siege of Orleans in the Hundred Years' War, Joan of Arc was convicted of witchcraft and was executed by this method. Victims of this execution method often died of carbon monoxide poisoning.

ANSWER: **burning** at the **stake** or being **burnt** at the **stake**; prompt on "**burning**" and less specific answers

[10] These primitive smoothbore guns made their debuts during the later phases of the Hundred Years' War. They were replaced by flintlock and later matchlock muskets.

ANSWER: **harquebuses** <CC>

17) When this religious sect came to predominate in one country, Noh drama flourished. For 10 points each:

[10] Name this primarily Japanese sect of Buddhism, which focuses on meditative acts, like reciting *koans* and tending rock gardens.

ANSWER: Zen Buddhism

[10] Like followers of zen, practitioners of this activity meditate for self-cultivation, but the goal of this activity is to balance qi, or “life energy”. In China, this activity experienced a namesake “boom” in the late 20th century.

ANSWER: Qigong

[10] Adherents of this nonviolent “cult” perform qigong exercises to improve their *xinxing*. Practitioners of this system most heavily persecuted by the Chinese government “send forth righteous thoughts” four times every day.

ANSWER: Falun Gong or Falun Dafa <DS>

18) The narrator of one of this man’s poems notes that the title character “died i guess / and noone stooped to kiss his face.” For 10 points each:

[10] Name this poet of “anyone lived in a pretty how town,” known for his unorthodox use of capitalization.

ANSWER: (Edward Estlin) e.e. cummings

[10] This e.e. cummings poem describes a man who could “break onetwothreefourfive pigeonsjustlikethat” and asks “how do you like your blueeyed boy/ Mister Death.”

ANSWER: “Buffalo Bill’s”

[10] In cummings’s “i sing of Olaf glad and big,” Olaf says that he will not kiss this object. Francis Scott Key wrote a poem about one of these objects with 15 stars at Fort McHenry that was later set to music.

ANSWER: a flag; accept American flag or logical equivalents; **do not accept Star-Spangled Banner** <CC>

19) The channelization of rivers prevents the formation of these islands, which include the Golden Isles off Georgia, and the Sea Islands. For 10 points each:

[10] Name these often sandy or wetland islands that absorb the impacts of hurricanes and tornadoes. They’re often built up by rivers depositing sediment at their mouths.

ANSWER: barrier islands

[10] The Sea Islands grew this crop, which comes in long- and short-staple varieties, and was cultivated in a namesake “belt” that was damaged by the boll weevil.

ANSWER: cotton

[10] These geographic features were poor cotton-growing regions and hindered agriculture for colonists. These small, rounded features are at the base of the Appalachians and inland from cotton growing regions.

ANSWER: foothills or Piedmont; prompt on “hills”

20) Silver chloride is ‘sparingly’ this property, and this property is reduced by the common-ion effect. For 10 points each:

[10] Name this property, measured in moles per cubic centimeter, that defines the amount of excess solid that can dissolve in a given amount of solvent.

ANSWER: solubility

[10] These coordinated solutions have insoluble crystals grown in and named after their water solvent. Gaseous types of these solutions are called clathrates, and they have dots in their empirical formulae.

ANSWER: hydrates; accept waters of hydration or crystallization

[10] When the activity or “effective concentration” of a solute is proportional to its mole fraction in a solution, this law is accurate for that solution. Azeotropes deviate from this law.

ANSWER: Raoult’s law