# LOGIC (Lots of Good Interesting Content) <br> Edited by Jacob O'Rourke, Will Alston, Geoffrey Chen, David Dennis, Olivia Lamberti, Ethan Strombeck and Conor Thompson <br> Written by the teams at Miami Valley, Stevenson and University Lab 

## Packet 9

## Tossups

1. A holder of this position engendered controversy following the Regensburg lecture. A holder of this position condemned Nazi ideology in a work titled Mit brennender Sorge. A later holder of this position was nearly assassinated by a member of the Grey Wolves, Mehmet Ali Ağca. This position gained authority over an independent country with the $(*)$ Lateran Treaty signed with Mussolini. Following the resignation of Joseph Ratzinger in 2013, Jorge Bergoglio became the first holder of this position from the Southern Hemisphere. For 10 points, name this position formerly held in the Vatican City by John Paul II, the head of the Catholic Church. ANSWER: Pope [Accept Bishop of Rome] <GP, European History>
2. This language family's future and conditional tense forms are derived from a concatenation of the infinitive with a verb meaning "to have." The La Spezia-Rimini line divides languages in this family which form plurals by changing the final vowel from those which append -s ["s"]. This language family was descended from a (*) "vulgar" variety of its ancestor. Sardinian is the most conservative member of this language family, whose less spoken languages also include Occitan and Catalan. French and Italian are part of, for 10 points, what language family of Western Europe descended from Latin?
ANSWER: Romance languages [prompt on Italic; do not accept or prompt on "Latin" as that's not a language family] <CT, Social Science>
3. In one poem by this writer, the speaker compares the title entity to "some fierce Maenad," and later asks the title concept to "Make me thy lyre, even as the forest is." Another poem by this author, written in response to the Peterloo massacre, describes seeing murder with "a mask like Castlereagh." This man wrote of a "traveler in an $(*)$ antique land" in a poem which describes "the sneer of cold command" of a statue, which commands its viewers to "Look on my Works, ye Mighty, and despair." For 10 points, name this poet of "The Masque of Anarchy," "Ode to the West Wind," and "Ozymandias."
ANSWER: Percy Bysshe Shelley <WG, Non-Epic Poetry>
4. This practice is known as ta'anit [tah-ah-NEET] in Jewish tradition and is performed on such days as Asara B'Tevet and Tisha B'Av. Pentecostalists undergo an extreme "black" form of this practice, which is performed on the first Sunday of the month by many Mormons. During another period, this practice is begun at the time of $(*)$ suhur [soo-HOOR]. That period of this practice is brought to an end by Eid al-Adha and is broken every day by the iftar. In Islam, the holy "pillar" of sawm involves, for 10 points, what practice performed during the day during Ramadan, which involves not eating or drinking?
ANSWER: fasting [accept equivalents such as not eating until mention] <EA, Religion>
5. An equation named for this quantity sets the differential of the flow velocity field equal to the curl of the stress tensor, divided by density. That equation is named for Augustin-Louis Cauchy and is a restatement of this quantity's conservation. This quantity is the conjugate variable of position. Kinetic energy can be given as this quantity (*) squared over two times mass. Impulse is the change in this quantity. This quantity is equal to the time derivative of force by Newton's second law and it is conserved in both inelastic and elastic collisions. For 10 points, name this quantity symbolized $p$, the product of mass and velocity.
ANSWER: momentum [or Cauchy momentum equation; or conservation of momentum; prompt on $p$ ] < DB, Physics>
6. Animals in this clade possess a sebaceous gland called the uropygial gland. In members of this class, $B$ cells mature in the Bursa of Fabricius, which is why $B$ cells are named $B$ cells. The $\mathbf{Z W}$ sex determination system is primarily used by these animals. While not pigs, these animals are the natural carriers of the H7N9 and H5N1 (*) influenza viruses. These animals are believed to have evolved from Archaeopteryx, a dinosaur common during the Jurassic. For 10 points, name these feathered, egg-laying vertebrates that are typically, but not always, capable of flight.
ANSWER: birds [or avians; or Aves] <GC, Biology>
7. This colony's Royal Charter uniquely allowed its citizens to elect their own governor, the first of whom was a non-traitorous Benedict Arnold. A native group of this colony had its language chronicled in $A$ Key to the Language of America by this colony's founder; that group would later lose at the Great Swamp Fight in this state. The (*) Portsmouth Compact for a location in this colony was set up by people who were exiled from another colony due to the Antinomian Controversy. Religious dissenters such as Anne Hutchinson moved to this home of the Narragansett. For 10 points, name this New England colony, where Roger Williams founded Providence Plantations.
ANSWER: Colony of Rhode Island and Providence Plantations <AN, American History>
8. Smoky angels hover at the top of one painting with this title, which features an aureola surrounding a figure clad in red and blue. A long-haired boy swoons toward an old man with a knife behind his back at the left of one depiction of this scene. A door was cut through the bottom of that depiction of this scene, blocking the view of the central figure's feet. A lamp in the top left illuminates a diagonal version of this scene by $\left({ }^{*}\right)$ Tintoretto. Judas knocks over a salt cellar in reaction to the central figure in one painting of this scene. Leonardo da Vinci showed twelve apostles eating in, for 10 points, what scene depicting the final meal of Jesus?
ANSWER: The Last Supper <DB, Visual Fine Arts>
9. The epigraph to one of this writer's plays calls "an instant in the wind" not "long to hold each desperate choice," an excerpt from Hart Crane's "The Broken Tower." A character in another of this author's plays calls her nephews and nieces "no neck monsters." In that play by this author, (*) Skipper commits suicide after confessing his love for his football buddy Brick. In this author's most famous play, one character leaves Belle Reve to stay at her sister's house, where she is raped by Stanley Kowalski. For 10 points, name this author of Cat on a Hot Tin Roof and A Streetcar Named Desire.
ANSWER: Tennessee Williams [or Thomas Lanier Williams, III] <TB, Drama>
10. This country's Bocas del Toro district is home to the port of Almirante and a namesake patois dialect known as guari-guari. This country's island of Coiba is home to a namesake endemic species of howler monkeys. The Sierra de Talamanca contains much of this country's highest peaks and extends into its western neighbor, and the San Blas Archipelago runs along its northern coast. An island administered by the Smithsonian Institution lies in this country's Lake (*) Gatún. The Darién Gap is an area of inhospitable jungle in this country and its neighbor to the southeast, and creates a discontinuity in the Pan-American Highway. For 10 points, name this Central American country on a namesake isthmus, which is bisected by a namesake canal.
ANSWER: Republic of Panama [or Republica de Panama] <JL, Geography>
11. In one novel from this country, the Paradise Pickles factory is busted for selling illegal banana jam. In that novel from this country, Rahel imagines "Pappachi's moth" snapping its wings over her heart when she realizes her cousin Sophie Mol has drowned. In another novel, two immigrants from this country name their son (*) Gogol. A novel from this country, The God of Small Things, describes the forbidden affair between Ammu and Velutha, who is an Untouchable. For 10 points, name this native country of many characters created by Jhumpa Lahiri, which is the home nation of author Arundhati Roy.
ANSWER: Republic of India [or Bharat; or Bharatavarsha] <TB, Long Fiction>
12. Protestors against this country's monarch alleged that its secret police carried out the Cinema Rex fire, killing 420 civilians. The SAVAK secret police operated in this country, whose monarch launched the reformminded White Revolution a decade after Operation $\left(^{*}\right.$ ) Ajax overthrew this country's prime minister Mohammed Mossadegh. After this country's former monarch Mohammed Reza Pahlavi was allowed into the U.S. for medical treatment, students in this country took 52 Americans hostage for 444 days. For 10 points, name this country, which became an Islamic republic under Ayatollah Khomeini in 1979.
ANSWER: Islamic Republic of Iran <GP, World History>
13. In this musical, an example of counting in "The Indian Tongue" is interrupted by a firecracker set by Tommy Djilas. Teenagers in this musical interrupt a rehearsal for a contemplation on the Grecian Urn in order to sing "Shipoopi." The Wells Fargo wagon arrives at the end of Act I in this musical, whose main character is being tracked down by the anvil salesman Charlie Cowell. This musical ends with a band poorly playing Beethoven's Minuet in G, with the young (*) Winthrop playing the cornet. The song "Seventy-Six Trombones" comes from, for 10 points, what musical about Harold Hill, a con artist who starts a kid's band in River City, Iowa?
ANSWER: The Music Man <EA, Other Fine Arts>
14. Adiabatic warming of air as a result of one of these objects causes Foehn [fain] winds. These objects induce standing wave formations that can drive the formation of lenticular clouds. These objects cause air masses to undergo orographic lift, which can increase their relative humidity to $100 \%$, causing precipitation. The fact that regions on the leeward side of these objects are dry is called the $\mathbf{*}^{*}$ ) rain shadow effect. These objects are common example of an alpine climate, since trees cannot grow above the tree line on them. For 10 points, name these objects which comprise the Cascade and Appalachian ranges.
ANSWER: mountains [or mountain ranges] <GC, Earth Science>
15. An F-A-flat harmonic third is played, then repeated an octave higher to open a $9 / 8$ piano piece by this composer marked "Andante très expressif." [ahn-dan-tay trace ex-press-eef] The first movement of a piano suite by this composer is inspired by Javanese gamelan music. This composer parodied the Tristan chord in a piece that depicts the dance of a black stuffed doll. This composer of "Pagodas" included pieces like "Doctor Gradus ad Parnassum" and (*) "Golliwog's cake walk" in his Children's Corner. A famous piece by this composer is the third movement of his Suite Bergamasque and depicts moonlight. For 10 points, name this French composer of "Clair de lune."
ANSWER: Claude Debussy [or Achille-Claude Debussy] <DB, Auditory Fine Arts>
16. In the aftermath of one of these events in 2017, the plight of a girl named Frida Sofia was determined to be a hoax, prompting outrage at the Mexican government. One of these events on the island of Luzon in April 2019 caused the destruction of a supermarket. After failing to warn people about two of these events in July 2019 near Ridgecrest, the tolerances of a publicly-funded phone app were lowered by the City of (*) Los Angeles. A massive one of these events is predicted to occur in California before 2045 due to the San Andreas fault. For 10 points, name these natural disasters that cause the ground to shift.
ANSWER: earthquakes [prompt on structural collapse by asking "What caused the collapse?"] <EA, Current Events>
17. Water gas is a mixture of hydrogen and this gas, which can be produced through the method of steam reforming. Impure nickel forms a complex with this molecule in the Mond process. Reacting chlorine with this molecule produces phosgene. This neutral molecule possesses a triple bond and is isoelectronic to the (*) cyanide ion. Along with water, this molecule is produced in incomplete combustion reactions. This molecule has approximately 200 times the binding affinity to hemoglobin compared to oxygen. For 10 points, name this diatomic molecule with the formula CO.
ANSWER: carbon monoxide [accept $\underline{\mathbf{C O}}$ until "CO" is read; accept carbonyl ligand] <GC, Chemistry>
18. This poet wrote that "if you've got no passport you're officially dead" in his "Refugee Blues." Another of this writer's poems tells "aeroplanes" to "circle" overhead, "scribbling on the sky the message 'He is Dead." The speaker of that poem by this man claims that a character was "my North, my South, my East and West" and tells the reader to (*) "stop all the clocks, cut off the telephone." The speaker of this author's most famous poem sits "in one of the dives on Fifty-Second Street" and asserts "we must love one another or die." For 10 points, name this poet of "Funeral Blues" and "September 1, 1939."
ANSWER: W. H. Auden [or Wystan Hugh Auden] <WG, Non-Epic Poetry>
19. In Acts, one of these animals hangs on Paul's hand after he starts a fire, making the people believe he is a murderer. In the Book of Numbers, Moses creates the Nehushtan, a brazen example of these animals, in order to cure the wounds caused by flying "fiery" versions of them. In Exodus, the magicians of Pharaoh are stunned when Aaron's (*) rod and Moses's staff turn into these animals when placed on the ground. The actions of another of these creatures led to a man being cursed to work the land and a woman having painful childbirths. For 10 points, name these creatures, one of which tempted Eve to eat the Forbidden Fruit.
ANSWER: snakes [or serpents] <EA, Mythology>
20. This man received the town of Sines from the king as a reward for his most notable accomplishment. This man cut off the lips and stitched dog ears on the head of a priest who was sent to speak with him concerning the expulsion of Muslims from a certain city. On his second voyage, this man burned a ship carrying hundreds of $(*)$ Arab pilgrims despite them offering to give him all the valuables on board. Upon arriving in Malindi, this man and his crew were aided by a navigator who used his knowledge of the monsoon winds to guide them to Calicut. For 10 points, name this Portuguese explorer who became the first European to reach India by sea. ANSWER: Vasco da Gama [or Vasco da Gama, 1er conda da Vidigueira] <JL, World History>

## Bonuses

1. For 10 points each, answer the following about high performance liquid chromatography, or HPLC.
[10] The mobile phase in reverse-phase HPLC has this molecular property. Asymmetric molecules always have this property, since the charge distribution is also asymmetric.
ANSWER: polarity
[10] In HPLC, the "gradient" type of this process is employed to speed up the analyte's movement. In general, this process uses a solvent to wash a product out of a material.
ANSWER: elution [accept gradient elution]
[10] The column used in HPLC has a very high value for this quantity, up to 400 atmospheres. This quantity is equal to force per unit area, and its atmospheric type can be measured with a barometer.
ANSWER: pressure [or atmospheric pressure] <DB, Chemistry>
2. Lots of geography questions are about places that actually exist. For a change, answer some questions about places that don't exist. For 10 points each:
[10] In 2012, Sandy Island, part of this country’s overseas territory of New Caledonia, was discovered to not actually exist. This country's other overseas territories include Tahiti and Réunion.
ANSWER: France
[10] The 1978-79 highway map of this state contained two nonexistent towns named "Goblu" and "Beatosu," a reference to the football rivalry between Ohio State and the flagship university of this state, Ohio's northern neighbor.
ANSWER: Michigan
[10] This nonexistent New York village also appeared on a highway map, in this case to detect copyright violation. In a stunning twist, however, a general store opened at its purported location and took its name, rendering this village actually real.
ANSWER: Agloe, New York <CT, Geography>
3. After enduring a disastrous first day at this battle, Ulysses Grant supposedly quipped "Lick 'em tomorrow, though." For 10 points each:
[10] Name this two-day Civil War battle, which began with a surprise attack from Corinth by Albert Sidney
Johnston and P.G.T. Beauregard. This battle saw heavy fighting at a sunken road called the Hornet's Nest.
ANSWER: Battle of Shiloh [or Pittsburg Landing]
[10] This Union officer sent reinforcements to the wrong location on the first day of Shiloh, leading to him being removed from Grant's army. This officer later governed New Mexico and wrote Ben-Hur.

## ANSWER: Lew Wallace

[10] The Battle of Shiloh was fought in this state, where Grant fought the Chattanooga Campaign.
ANSWER: Tennessee <TB, American History>
4. The artist behind this album released the song "The Archer" as a promotional single a month before the album's release. For 10 points each:
[10] Name this album released in August of 2019, which includes hits such as "Paper Rings" and "You Need to Calm Down."

## ANSWER: Lover

[10] This artist released the album Lover as a light contrast to some of the darker tones and subjects of her 2017 album Reputation, which featured songs such as "Delicate" and "Look What You Made Me Do."
ANSWER: Taylor Swift [or Taylor Allison Swift; accept Tay-Tay]
[10] Lover's version of its featured track, "ME!," notably removed this line from the original song. In the original, this line is followed by Swift and Brendon Urie singing "Girl, there ain't no 'I' in 'team'."
ANSWER: "Hey kids! Spelling is fun!" <EA, Trash>
5. This poet described "creatures of the moon" as they "prowl about their cabins" in his poem "City That Does Not Sleep." For 10 points each:
[10] Name this Spanish poet and playwright, who wrote poems like "Romance Sonambulo" and "Ballad of the Moon," which appear in his collection Gypsy Ballads.
ANSWER: Federico García Lorca [prompt on a partial answer; accept Federico del Sagrado Corazón de Jesús García Lorca]
[10] García Lorca wrote a poem titled for the "Lament for the Death of" a man of this profession. In the poem, the narrator describes the "Spilled Blood" of a man of this profession after he is gored by the horns of a certain animal.
ANSWER: bullfighting [accept matadors; accept "Lament for the Death of a Bullfighter"]
[10] In "Lament for the Death of a Bullfighter," every other line of the first section refers to this time. At this specific time of day, "death laid eggs in the wound" as the "coffin on wheels" carries away the dead bullfighter. ANSWER: "five in the afternoon" [accept any answer indicating that it is $\mathbf{5}$ P.M.] <EA, Non-Epic Poetry>
6. This god used a fish trap to recover the hands of Osiris and used a net to catch the sons of Horus after they were born. For 10 points each:
[10] Name this Egyptian fertility god, who had the head of a crocodile.
ANSWER: Sobek [accept Sebek; or Sochet; or Sobk; or Sobki]
[10] Sobek was closely associated with this Egyptian river, where he lived. The annual flooding of this river was believed to be controlled from two caves underneath Elephantine Island.
ANSWER: Nile River
[10] In one story, Sobek saves this many sons of Horus from drowning using a net. Those sons of Horus, who are this many in number, are depicted on Egyptian canopic jars.
ANSWER: four <WG, Mythology>
7. Microscopically, this phenomenon is explained by the presence of asperities on objects subject to this phenomenon. For 10 points each:
[10] Identify this resistive force experienced by objects in contact.
ANSWER: friction [or the frictional force]
[10] For an object in motion, the magnitude of friction is equal to the product of the coefficient of friction and the magnitude of this force perpendicular to the surface of contact of that object.
ANSWER: normal force
[10] The field of science concerned with the study of friction is given this name. This field of science names a phenomenon in which charges are transferred between objects by rubbing them together.
ANSWER: tribology [accept triboelectric effect] <GC, Physics>
8. In this book, the title figure undergoes "the process" at the hands of his friend Shorty and describes the origins of his prison nickname, "Satan." For 10 points each:
[10] Name this book that, despite its title, was written by Alex Haley after a series of interviews with the title figure, who describes his street-hustling days as "Detroit Red" before starting a correspondence with Elijah Muhammad.
ANSWER: The Autobiography of Malcolm $X$ [prompt on partial answer]
[10] When Shorty gives Malcolm "the process," he is performing this action, which is accomplished with a concoction of potatoes and lye. Malcolm calls this action "my first really big step toward self-degradation."
ANSWER: straightening hair [or relaxing hair; or conking hair; or applying a conk; accept word forms]
[10] Malcolm conks his hair while living in this Massachusetts city. In another episode from the Autobiography, Malcolm discovers a Crispus Attucks monument in this city's Common.
ANSWER: Boston [or Boston Common] <TB, Short Fiction/Other>
9. NOTE TO MODERATOR: Please do not reveal alternate answers to the first part of the bonus, as that will spoil the second part. Thanks!
Magolwane served as the court poet for this ruler. For 10 points each:
[10] Name this ruler of whom Nathaniel Issacs wrote an account. Henry Francis Fynn's diary discusses his interactions with this ruler, who he gave medical treatment following an assassination attempt.
ANSWER: Shaka [accept, but do NOT reveal, Shaka Zulu]
[10] Shaka created this kingdom in modern-day South Africa. This kingdom fought the British Empire in the 1870s, defeating them at the Battle of Isandlwana before ultimately being subjugated.
ANSWER: Zulu kingdom
[10] Shaka reformed the Zulu military by introducing this troop formation to his forces. This formation included a "chest" force, which directly fought the enemy, and a reserve force in the "loins."
ANSWER: buffalo horns [accept bull horns or impondo zenkomo] <GP, World History>
10. Steve Reich used this technique developed by Pierre Schaffer in his piece Different Trains, which uses recordings of Holocaust victims. For 10 points each:
[10] Schaeffer is considered the "godfather" of this compositional technique, where recorded elements are inserted into music and manipulated using studio effects, including looping. These effects would later form the foundation of hip-hop and electronic music.
ANSWER: sampling [or sample, or musique concrète, or concrete music]
[10] Schaeffer broadcast many of his pieces using this medium at the RTF, where he worked as an engineer in his "Studio d'Essai." Due to better sound quality, the FM type of this medium is more often used to broadcast music.
ANSWER: radio
[10] One of Schaeffer's guests on the RTF station was this modernist French composer of the Quartet for the End of Time. The first full recording of this composer's Turangalila-Symphonie was with the RTF's orchestra.
ANSWER: Olivier Messiaen <DB, Auditory Fine Arts>
11. Though not Daoism, this philosophy applied the concept of Wu wei to rulers, along with the "Two Handles" of punishment and reward. For 10 points each:
[10] Name this member of the Hundred Schools of Thought that survived the burning of books and burying of scholars.
ANSWER: Legalism [or Fǎjiā]
[10] This prominent Legalist philosopher worked in the court of Qin Shi Huangdi and has been compared to Machiavelli. He wrote an eponymous book that borrowed from predecessors like Shang Yang and Shen Buhai. ANSWER: Hán Fēi [or Hán Fēi Zi]
[10] Under Legalism, those who committed minor offenses could be sentenced to hard labor building this large defensive structure, which terminates at Jiayu Pass. It was built to protect China's northern border from the Xiongnu.
ANSWER: Great Wall of China [or Wànlǐ Chángchéng] <JG, Ancient/Other History>
12. Minoru Yamasaki's infamous Pruitt-Igoe was one of these complexes, whose demolition in 1972 symbolized the failure of urban renewal. For 10 points each:
[10] Name these structures, which include Ernö Goldfinger's brutalist Trellick Tower and many Unités by Le Corbusier. Moshe Safdie designed a concrete one of these buildings for Expo 67 in Montreal.
ANSWER: housing complexes [accept public housing projects or apartment buildings or equivalents]
[10] Pruitt-Igoe was in this city, for which Yamasaki also designed the main terminal of Lambert International Airport. Louis Sullivan and Dankmar Adler designed this city's Wainwright Building, one of the first skyscrapers. ANSWER: St. Louis
[10] St. Louis is also home to this weighted catenary monument at the Jefferson National Expansion Memorial. This curved structure was designed by Finnish-American architect Eero Saarinen.
ANSWER: Gateway Arch <JG, Other Visual Fine Arts>
13. Hyperbolic trig functions are defined as sums of factors of this function and its reciprocal. For 10 points each: [10] Name this function, whose derivative is equal to itself.
ANSWER: exponential function [or e to the $\mathbf{x}$, or obvious equivalents]
[10] The inverse of the exponential function is the "natural" form of this function, usually written "ln" [" 1 " " $n$ "]. ANSWER: logarithm (base e) [or natural log]
[10] The exponential function can be generalized to matrices, a function which is useful in solving systems of these types of equations, which require solving for a function in an equation, given some expression involving its derivative.
ANSWER: differential equations < CT, Mathematics>
14. One painting by this artist showing an open door that appears to lead directly to the ocean is titled Rooms By The Sea. For 10 points each:
[10] Name this artist whose various scenes of isolation in New York include a woman sitting alone in Automat and a deserted street in Early Sunday Morning.
ANSWER: Edward Hopper
[10] This Hopper painting depicts the lonely patrons of a starkly lit diner that advertises five-cent Phillies cigars. A woman in red looking at her hand in this painting is based on Hopper's wife, Jo.

## ANSWER: Nighthawks

[10] In this other painting by Hopper, a bald man works at a red machine at dusk next to a deserted road. A sign with a winged horse advertises the title commodity in this painting.
ANSWER: $\underline{G a s}$ <JG, Visual Fine Arts>
15. This author, the subject of the 2016 documentary I Am Not Your Negro, included a letter to his 14-year-old nephew in his book The Fire Next Time. For 10 points each:
[10] Name this author, who described John Grimes's coming-of-age as a member of a Harlem Pentecostal church called the Temple of the Fire Baptized.
ANSWER: James Baldwin [or James Arthur Baldwin]
[10] This Baldwin novel is narrated by David, an American expatriate living in France. In the novel, David recalls his first gay experience at a Brooklyn sleepover and ponders the title character's impending execution.
ANSWER: Giovanni’s Room
[10] In Giovanni's Room, Giovanni is executed with this machine. In A Tale of Two Cities, Sydney Carton switches places with Charles Darnay and is killed by this apparatus in Paris during the Reign of Terror.
ANSWER: guillotine <TB, Long Fiction>
16. Pearl, an early allegorical poem of this type in English, is thought to be dedicated to the poet's daughter, and describes how the title gem "slipped from me through grass to ground." For 10 points each:
[10] Name this genre of poem, a lament for someone who has died. Thomas Gray wrote one of these poems "in a country churchyard."
ANSWER: elegy [or "Elegy Written in a Country Churchyard"]
[10] This elegy by John Milton was written for his friend Edward King. Most of this poem is spoken by an "uncouth swain" who comes to pluck berries "harsh and crude" and instructs the title figure to "Look homeward, Angel." ANSWER: "Lycidas"
[10] This poet wrote "tis better to have loved and lost than never to have loved at all" in his elegy "In Memoriam A.H.H." He described the title king's desire "to strive, to seek, to find, and not to yield" in a more famous poem. ANSWER: Alfred, Lord Tennyson [or Alfred, Lord Tennyson, 1st Baron Tennyson] <TB, Non-Epic Poetry>
17. The "architecture" of this substance is modified in a process catalyzed by the SWI/SNF complex, called the "remodeling" of this substance. For 10 points each:
[10] Identify this substance, which exists in a tightly packed "hetero" form and a lightly packed "eu" form. ANSWER: chromatin [or chromatin remodeling; or heterochromatin; or euchromatin; prompt on DNA] [19] Chromatin is found wound around these positively charged, bead-shaped proteins.

## ANSWER: histones

[10] Histones and chromatin are found in this organelle, the so-called "control center" of the cell. Eukaryotes by definition possess this organelle, unlike prokaryotes.
ANSWER: cell nucleus <GC, Biology>
18. One section of this work details the ways a new ruler can attain conquest by virtue, someone else's virtue, criminal virtue, or democratic elections. For 10 points each:
[10] Name this political treatise dedicated to Lorenzo de Medici, which concludes that it is better for a ruler to be feared than loved.
ANSWER: The Prince [or Il Principe]
[10] The Prince is one of the most famous works by this Italian Renaissance thinker, who discussed the history of the Roman Empire in his Discourses on Livy.
ANSWER: Niccolo Machiavelli [or Niccolo di Bernardo dei Machiavelli]
[10] In The Prince, Machiavelli says to minimize the impact of this concept, which controls half of the actions of humans. Machiavelli likened this concept to a flooding river whose damage can be minimized with dams.
ANSWER: fortuna [or fortune; prompt on luck] <EA, Philosophy>
19. This man was killed by the Yorkist army of Edward IV at the Battle of Barnet after switching sides in one conflict to command the Lancastrian army. For 10 points each:
[10] Name this earl, who had earlier installed Edward IV to the throne, earning him the epithet "Kingmaker." ANSWER: Richard Neville, 16th Earl of Warwick [accept either underlined portion; accept Warwick the Kingmaker]
[10] This final king from the house of York was killed at the Battle of Bosworth Field during the Wars of the Roses. In a play by Shakespeare, he shouts, "A horse! A horse! My kingdom for a horse!" during that battle.

## ANSWER: Richard III

[10] The extinction of the Lancastrians led this Tudor to take up their cause against the Yorkists. This monarch was crowned following his victory at the Battle of Bosworth Field, establishing the Tudor dynasty.
ANSWER: Henry VII Tudor <JG, European/British History>
20. Answer the following about the hajj, one of the Five Pillars of Islam. For 10 points each:
[10] The hajj is a pilgrimage to this city, the birthplace of the Prophet Muhammad.
ANSWER: Mecca
[10] One of the rituals associated with the hajj is circling this structure seven times. According to Muslim tradition, this cube-shaped structure was built by Abraham and his son Ishmael.
ANSWER: al-Kaaba
[10] During the hajj, pilgrims run between the hills of Safah and Marwah, commemorating this woman's search for water. This woman, Ishmael's mother, was a slave owned by Abraham's wife, according to Judeo-Christian tradition.
ANSWER: Hagar [ $\mathrm{H} \underline{\text { Hajar; }}$ or Hajirah] <TB, Religion>

