NASAT 2013
Round 10
Tossups

1. The Swiss folk hero Heinrich von Winkelried died from exposure to this substance. Dobrynya Nikitich is stuck in this substance for three days until he sticks his spear into the ground, a remnant of the myth that Mother Earth will not absorb this stuff because it's so vile. In Norse legend, a series of trenches were dug to store this substance by a hero who hid in a pit to kill its owner. A hero who bathed in this substance had a leaf covering his shoulder, leaving that shoulder vulnerable. After consuming this substance, that man killed Regin, having gained the ability to understand birds. For 10 points, name this substance which Sigurd consumed after he slew Fafnir, and which presumably flowed out of a wound inflicted by St. George. ANSWER: dragon blood [or a serpent's blood; or a zmey's blood; or any other kind of dragon's blood; prompt on blood; prompt on bodily fluids; prompt on poison]
2. Celso Furtado was in charge of an agency for developing this country's poor northeast region, SUDENE. Lampião was a famous cangaceiro, or bandit, from this country's hinterlands in the 1920s. In the northeast of this country, the "polygon of drought" is the driest part of its sertão region. "Cidade Maravilhosa" is the anthem and nickname of this country's second-largest city, which lies near Corcovado, the site of a "Christ the Redeemer" statue. Shantytowns around cities like Salvator here have been destroyed in preparation for the 2016 Olympics. For 10 points, name this country, home to São Paulo.
ANSWER: Federative Republic of Brazil
121-13-83-10102
3. One of this author's books notes that "empty nest syndrome" is tougher for men to handle than for women, while another book by her analyzes how World War II developed an American desire for a warm home environment. This author of The Fountain of Age proposed daycares administered by firms in The Second Stage. This thinker was instrumental in the dismissal of G. Harrold Carswell as a candidate for the Supreme Court. One of her works begins by describing the "problem that has no name" and argues that women have been shown as happiest when they are housewives. For 10 points, name this woman who set off second-wave feminism with her book The Feminine Mystique.
ANSWER: Betty Friedan
4. Characters in this novel include a Traction Street Company executive whose daughter elopes with the protagonist's son and a failed poet who writes advertisement jingles. This novel's protagonist, who is friends with Chum Frink and Howard Littlefield, gives an acclaimed speech in Monarch and declares his support for Lucas Prout. The protagonist's best friend, who gave up his dreams of becoming a violinist to join the tar-roofing business, takes a liberating trip to Maine and shoots his wife Zilla. The title character ultimately returns to his ill wife Myra and realizes he will never escape his bourgeois lifestyle. For 10 points, name this novel about a real estate salesman from Zenith, written by Sinclair Lewis.
ANSWER: Babbitt
5. An effect named for this physicist is non-perturbative since the virtual particles involved tunnel out of the Dirac sea. A correction due to this physicist was derived to explain the measurement of hyperfine splitting in gallium by Kusch and Foley. That effect results in pair production when a vacuum is subjected to an electric field on the order of ten to the sixteen volts per centimeter. That correction gives the anomalous magnetic moment of the electron as the fine structure constant divided by two pi. He developed the method of renormalization. For 10 points, identify this physicist who was awarded a Nobel, with Feynman and Tomonaga, for his work on QED.
ANSWER: Julian Seymour Schwinger
6. Julian Bell has remarked that one of these works was subject to improper casting, making it seem as if an arm is trapped in stone. Francesco Rustici sculpted a statue of John the Baptist which stands above one of these works. Andrea Pisano used rosettes and lions' heads to frame 28 quatrefoil panels for the southernmost of these works. A precursor to one of these works shows a ram on a mountain while a foreshortened angel approaches a draped Abraham. The Cloth Importers Guild sponsored a contest to depict the Sacrifice of Isaac on these structures, which was won by a then-unknown goldsmith. For 10 points, identify these entryways to a Florence building, one of which is decorated by Lorenzo Ghiberti's The Gates of Paradise.
ANSWER: doors of/in the Florence Baptistery [or doors of/in the Battistero di San Giovanni; or doors of/in the Baptistery of St. John; accept gates instead of doors; prompt on the Florence Baptistry; prompt on the Battistero di San Giovanni]
7. This ruler was opposed in his attempt to tax the clergy by Robert Winchelsey's publishing of the papal bull, Clericis laicos. This king outlawed the practice of mortmain and undermined the structure of feudalism with the Quia Emptores, or Third Statute of Westminster. This man won the Battle of Evesham against Simon de Montfort. This king replaced the Treaty of Shrewsbury with the Treaty of Aberconwy after subduing a neighboring region. The Jews were expelled from England by this ruler, who was victorious at the Battle of Falkirk after being defeated at Stirling Bridge by William Wallace. For 10 points, name this English king who conquered Wales but failed to subdue Scotland.
ANSWER: Edward I of England [or Edward Longshanks; prompt on Edward]
8. Stephen Barlow changed the setting of this opera to the 1970s in his current production of it. Foreboding ensues after one character offers to stay behind to groom a donkey. Another character in this opera, which takes place on the Feast of the Assumption, picks up a bullwhip to ward off the advances of a lovestruck man and joins in with a singing bird in the aria "Stridono lassu." That character is stabbed to death in this opera's second act, after which her killer declares that "the comedy is over." Canio laments having to act jovial despite being tormented by Nedda's infidelity in this opera's aria "Vesti la Giubba." For 10 points, name this opera that dramatizes the love affairs within a group of circus performers, by Ruggero Leoncavallo.
ANSWER: I Pagliacci [or Clowns]
9. This food is the basis for a new bacon cheeseburger that Wendy's has announced plans to launch later in 2013. Its not noodles, but a popular recipe for this food dips the dough in lye. According to one common story, this food's name comes from the Latin for "little reward" as they were invented by a monk to give to children. This food is sometimes served with weisswurst. This food has a Bavarian version. One can buy at Auntie Anne's the soft type of this snack. For 10 points, name these twisted snacks that can be covered in butter, salt, or cinnamon.
ANSWER: pretzel [or pretiola; or bretzel; or brezn]
10. This man set up the National Movement in order to concentrate regional power at the hands of political "families." This man ordered the construction of a monument called "The Valley of the Fallen" to honor his deceased supporters, forcing political prisoners who were affiliated with the Popular Front to help construct it. The Council of the Realm was set up to assist this man by the Law of Succession, which let him choose the next king. This man was opposed by Manuel Azana, made a name for himself during the Rif Wars, and co-opted the Falange. This man led the Nationalists to victory during a 1936 to 1939 civil war. For 10 points, name this dictator of Spain succeeded by Juan Carlos I.
ANSWER: Francisco Paulino Hermenegildo Teodulo Franco Bahamonde
11. This value is the first derivative of the moment generating function at zero. In linear regression, this value of the dependent variable conditioned on the independent variable is the linear equation, assuming this value for the error terms is zero. It is not multiplicative unless two random variables are uncorrelated. For a continuous density function $f$, this value is the integral of $x$ times $f$ of $x d x$. For a normally distributed population, the sum of all sample values divided by the sample size provides a good estimate of this value. For 10 points, name this expected value of a random variable.
ANSWER: population mean [or expected value until it is read; prompt on average]
121-13-83-10111
12. One of this author's protagonists goes into rehab at Remobilization Farm after being afflicted with paralyzing indecisiveness called "cosmopsis." This man included a story about a sperm cell, "Night-Sea Journey," in one collection, and he wrote about Jacob Horner in The End of the Road. This man also wrote a novel whose title character works to become "Grand Tutor" in a nation based on the United States, New Tammany Hall, after he is raised as an animal. Another of his novels centers on a "Poet Laureate of Maryland" named Ebenezer Cooke. For 10 points, name this postmodern American author of Lost in the Funhouse, Giles Goat-Boy, and The Sot-Weed Factor.
ANSWER: John Barth
192-13-83-10112
13. This process is governed by a mathematical expression setting mass fraction proportional to partial pressure raised to the power of one over a constant. A mechanism involving this process explains why metal-catalyzed hydrogenation reactions occur with syn stereochemistry. This phenomenon commonly occurs to activated carbon. This process occurs due to the stationary phase in thin-layer chromatography, where components which allow this to happen can be used as molecular sieves. This phenomenon occurs best when surface energy and surface area are high, and unlike a similar phenomenon, results in a film, not complete dissolution. For 10 points, name this phenomenon in which molecules adhere to a solid surface. ANSWER: adsorption [or word forms; do not accept or prompt on "absorption"]
14. During this conflict, the Moon sisters got away with spying by seducing an enemy general. A woman who disguised herself as "Albert Cashier" to fight in this war wasn't found out until a vehicular accident fifty years later. Drew Gilpin Faust's book Mothers of Invention studied the home front of this war. The dumping of urine buckets from home windows during a city's occupation in this conflict led to orders to treat any woman who insulted a soldier like a prostitute. During this war, women worked for the Christian Commission and Sanitary Commission. At its onset, mothers set up picnics to watch its first land battle, a defeat for Irvin McDowell. For 10 points, name this war whose women's history includes nurse Clara Barton.
ANSWER: American Civil War [or War Between the States, etc.]
15. The use of these compounds can lead to the HAMA or HACA response, and one method of growing these compounds involves collecting ascites fluid from mice. Medarex developed the UltiMab platform for creating fully humanized ones. Using the substem -zu- indicates that these compounds are humanized. These compounds are created using cells that can't express HGPRT, making them susceptible to the aminopterin present in HAT medium; those cells are immortalized myeloma cells fused to candidate B-cells to create a hybridoma. These drugs include Rituximab, which targets B-cells, and Herceptin, which targets the HER2/neu receptor responsible for some breast cancers. For 10 points, name these artificially-created antibodies that target a single epitope.
ANSWER: monoclonal antibodies [prompt on "antibodies"]
048-13-83-10115
16. This author created serial tire-slasher Professor Avenarius in a novel featuring a celestial trial in which Paul Eluard, Rainer Maria Rilke, and Romain Rolland rule against the ghost of Goethe. In one of this author's novels, a woman spits in the face of an engineer with whom she tries to have illicit sex after being reminded of an article comparing the Communists to Oedipus. This author of Immortality described a Swiss professor named Franz who has a failed love affair with Sabina in a novel in which Tereza struggles with her marriage to the womanizer Tomas. For 10 points, name this Czech author of The Unbearable Lightness of Being.
ANSWER: Milan Kundera
17. A method of performing this action which is popular in West Africa is known as warsh, whereas in the U.S., the majority of practitioners of this action use hafs. Qalqalah, Idghaam and ikhfaa can be used when performing this action, which is governed by the rules of tajweed. This action is only performed aloud in salaat if the imaam is praying in a group, and someone proficient in this action is termed a qari, which literally means "reader." For 10 points, name this action carried out to share the principal Muslim holy text. ANSWER: reciting the Qur'an [or reading the Qur'an; accept qiraa'ah or qirat or tilawah]

189-13-83-10117
18. At the end of this play, a man proposes after finding out that his beloved is twenty-three years old, not seventeen. In this play, Nicola is concerned about being polite to his masters so that they can be good customers when he opens up shop. This play ends with the military commander Sergius asking, "Is he a man?" about a character who fought for the Serbian army but put chocolate in his pockets instead of ammunition. At the beginning of this play, that Swiss mercenary is hidden by a Bulgarian family served by Louka. For 10 points, name this play about Raina Petkoff's relationship with Captain Bluntschli that takes its title from the Aeneid and was written by George Bernard Shaw.
ANSWER: Arms and the Man
19. For the Bliss family's fiftieth anniversary, this composer wrote a Nonet for Strings on the commission of Dumbarton Oaks. One of this composer's symphonies was later adapted into a sextet for piano, clarinet, and string quartet, but received its premiere under the baton of Carlos Chavez. This composer wrote a concerto whose two movements are linked by a cadenza played by a woodwind soloist. A Henry Wallace speech provides the title for a piece he composed for Eugene Goossens and incorporated into the finale of his third symphony. This composer of a Short Symphony and a clarinet concerto for Benny Goodman wrote a patriotic piece often played at presidential inaugurations. For 10 points, name this composer of Fanfare for the Common Man.
ANSWER: Aaron Copland
190-13-83-10119
20. This man's mistress, Clementina Walkinshaw, fled with his child to a convent. He challenges the title character in the song "Hey, Johnnie Cope, Are Ye Waking Yet?", and the "Skye Boat Song" describes him fleeing disguised as a maid with Flora MacDonald. This man fled after a disastrous battle in which he ignored his commander, Lord George Murray, leading to a loss to a man nicknamed the "Butcher." He escaped to the Hebrides and then France after his forces were defeated by the Duke of Cumberland at the Battle of Culloden, ending his aborted uprising against the House of Hanover. For 10 points, name this man known as the "Young Pretender" who was the grandson of James II and led the Jacobite uprising of 1745. ANSWER: Bonnie Prince Charlie [or Charles Edward Louis Philip Casimir Stuart; accept Young Pretender until read; prompt on Charles]

052-13-83-10120
21. The individual with the most distinctive object of this kind was an African-American who was classified as "Haplogroup 00." A unique version of this object belonging to Albert Perry proves that it predates the emergence of Homo Sapiens. The "shrinking theory" holds that this object has lost the vast majority of the material that it once had. Two isoforms of ribosomal protein S4 exist on this structure, whose most important region is denoted the SRY. Individuals with an extra copy of it grow taller, but have an otherwise normal phenotype. The first human to have it is known as its namesake "Adam." For 10 points, name this sex chromosome, one of which is possessed by men.
ANSWER: $\mathbf{Y}$ chromosome
22. This group's female members were encouraged by Emmeline Wells' magazine, the Woman's Exponent. It was the target of the Poland Act and a non-land-grant-related Morrill Act. The Senate threatened to expel Reed Smoot because of his membership in this group. Members of this group slaughtered most of the Baker-Fancher wagon train from Arkansas in a September 11, 1857 attack. It carried out the Mountain Meadows Massacre and proposed to create the State of Deseret. This group moved west after having a headquarters at Nauvoo, Illinois, although its founder was killed by a mob before reaching Utah. For 10 points, name this religious group led by Joseph Smith and Brigham Young.
ANSWER: Mormons [or Church of Jesus Christ of Latter-day Saints; or LDS Church]
23. The narration of this event includes a tangential description of the washing of robes in the pools near the hot and cold wellsprings of the Scamander. During this event, one man claims that there can never be love between lambs and wolves in his rejection of a pact. At the beginning of this event, one participant is chased three times around the walls of his city until Athena impersonates Deiphobus. In the aftermath of this event, that participant is tied to a chariot and dragged to the funeral pyre of Patroclus. For 10 points, name this climactic event in the Iliad in which the greatest Trojan is slain by the best of the Achaeans. ANSWER: the fight between Hector and Achilles [or obvious equivalents; prompt on the Trojan War until "chased" is read]

1. Women generally did not suffer this fate and were instead burned. For 10 points each:
[10] Name this three-step, gruesome process in which English criminals convicted of high treason were executed. Samuel Pepys watched this be done to Thomas Harrison.
ANSWER: hanged, drawn, and quartered [accept word forms; prompt on partial answer]
[10] This man avoided the last two parts by simply jumping from the scaffold, breaking his neck. A leader in the failed Gunpowder Plot, his namesake day in Britain is November 5.
ANSWER: Guy Fawkes
[10] The prosecutor in the Gunpowder Plot case was this man. As a judge, his ruling in Bonham's Case attempted to void a law of Parliament. He may be best known for writing Institutes of the Laws of England. ANSWER: Edward Coke (COOK)

052-13-83-10201
2. This man argued that linguistic phrases like "he did a poor job" survive from an era where poor people were seen as worthless by purveyors of a "master morality" who praised strength and success. For 10 points each:
[10] Name this German author of On the Genealogy of Morals, who went insane in 1889. ANSWER: Friedrich Wilhelm Nietzsche
[10] According to Genealogy of Morals, this pair of binary opposites underpins the master morality. Through ressentiment, the slave morality inverted the meaning of term in this binary and replaced the other with "evil."
ANSWER: good and bad [or Gut und Schlecht]
[10] Nietzsche's Genealogy argues that the repression of this human trait results in "bad conscience." It titles a posthumous collection of notes which was stitched together and made more anti-Semitic by Nietzsche's sister.
ANSWER: the will to power [or der Wille zur Macht]
3. John Lydgate's Fall of Princes and William Langland's Piers Plowman were both written in this language. For 10 points each:
[10] Name this language in which The Parlement of Fowles and Troilus and Criseyde were written by Geoffrey Chaucer.
ANSWER: Middle English [prompt on English]
[10] Troilus and Criseyde was dedicated to this contemporary of Chaucer, who is depicted firing an arrow at the world in a page set in front of his Vox Clamantis. He also wrote Confessio Amantis.
ANSWER: John Gower
[10] This woman's Middle English autobiography recounts how she stopped sleeping with her husband John after having a vision of Jesus. She claimed that she had lain in bed with Jesus and taken him as her "wedded husband."
ANSWER: Margery Kempe
4. The entity-relationship model is used to describe these things. For 10 points each:
[10] Identify this structure that stores an organized collection of data and metadata.
ANSWER: database
[10] This set of criteria, which include atomicity and isolation, guarantees that database transactions are processed reliably.
ANSWER: ACID [or atomicity, consistency, isolation, and durability in any order or word forms]
[10] These things, which give a user exclusive access to a record, are used when databases need to be accessed and updated by multiple users.
ANSWER: locks
066-13-83-10204
5. A character in this play laments, "The gods have robbed me of an innocent life," before being dragged by his horses' reins to a watery death. For 10 points each:
[10] Name this play about a manipulative queen of Athens who lusts after her stepson Hippolytus. ANSWER: Phèdre
[10] Jean Racine, the author of Phèdre, strictly observed the unities of action, time, and place rather dubiously derived from this Greek author's Poetics.
ANSWER: Aristotle
[10] Voltaire and Flaubert lauded this final tragedy by Racine, in which the Baal-worshipping widow of the King of Judah is thwarted by the high priest Joad and her grandson Joash.
ANSWER: $\underline{\text { Athalie }}$
020-13-83-10205
6. Mstislav Rostropovich compared the Sarabande in one of this man's pieces to "white-hot solitude," while another, written in scordatura, contains a Sarabande with no chords. For 10 points each:
[10] Name this composer of a set of six suites for solo cello popularized by Pablo Casals.
ANSWER: Johann Sebastian Bach [prompt on Bach]
[10] The cello suites all begin with one of these movements, which Bach paired with fugues in The
Well-Tempered Clavier. Debussy wrote several, including "The Girl with the Flaxen Hair" and one to the Afternoon of a Faun.
ANSWER: preludes
[10] A classical suite typically ends with one of these Baroque dances, which are often in $3 / 8$ time and follow the allemande, courant, and sarabande.
ANSWER: gigues [or jigs]
7. The tools used in this experiment were painted like cartoon clowns and weighted at the bottom so that they would return to an upright position after being knocked down. For 10 points each:
[10] Name this experiment conducted by Albert Bandura in which children mimicked the behavior of adults who attacked the namesake figures.
ANSWER: Bobo Doll experiment
[10] Another experiment involving dolls was conducted by this husband-wife team who showed that black children in the segregated South preferred white dolls to black dolls, with many children viewing the black doll as "bad." This couple's research was a key component of the plaintiffs' arguments in Brown v. Board of Education.
ANSWER: Kenneth and Mamie Clark
[10] Iowa schoolteacher Jane Elliott conducted an experiment on her third grade class in response to the Martin Luther King assassination in which she segregated her class based on this factor.
ANSWER: eye color [or having blue or brown eyes]
8. The width of atomic transitions limits the effectiveness of this technique to h-bar times linewidth over two times Boltzmann's constant. For 10 points each:
[10] Name this method in which atoms travelling in a direction opposed to a beam of photons see an increase in frequency and consequently lose momentum and energy.
ANSWER: laser cooling [or Doppler cooling]
[10] Laser cooling of atoms can be used to construct extremely precise examples of this device, which often rely on the electronic transition of cesium. NIST-F1 is the one used by the federal government.
ANSWER: atomic clocks [prompt on clocks]
[10] Along with velocity selective coherent population trapping, the method of cooling named for this physicist is used to surpass the recoil limit. Photons are inelastically scattering by electronic excitations or optical phonons in his namesake scattering.
ANSWER: Chandrasekhara Venkata Raman
9. Shiver me timbers matey and answer the following about Caribbean piracy, for 10 points each.
[10] The most famous pirate was Edward Teach, captain of the Queen Anne's Revenge. Teach was better known by this nickname referring to his facial hair.
ANSWER: Blackbeard
[10] This city in Jamaica was a major base for privateers until it was destroyed in a 1692 earthquake. Many pirates were later executed here at Gallows Point.

## ANSWER: Port Royal

[10] Another privateer of the period, Henry Morgan, was arrested after violating a 1670 peace treaty by raiding this city in 1671, at the time the richest in New Spain. He found very little wealth, although his men did torture most of the residents.
ANSWER: Panama City [or Ciudad de Panama; or Panama Viejo]
052-13-83-10209
10. Examples include HindII and EcoRI. For 10 points each:
[10] Name these enzymes which cut DNA at specific sequences. They are used in a digest before electrophoresis.
ANSWER: restriction enzymes [or restriction endonucleases]
[10] Restriction enzymes can cut both strand at the same nucleotide, forming "blunt" ends, or a few nucleotides down on one strand, forming this kind of ends.
ANSWER: sticky ends
[10] At non-optimal conditions or in the presence of some ions, restriction digests lose their specificity, a phenomenon given this name.
ANSWER: star activity
11. This characters spots his future love interest coming out of the Benedick in the first chapter of the novel in which he appears. For 10 points each:
[10] Name this greedy Jewish investor whose proposal of marriage is refused by a social climber who soon loses her stature and overdoses on chloral.
ANSWER: Simon Rosedale [or Simon Rosedale]
[10] Simon Rosedale proposes marriage to this woman, the protagonist of The House of Mirth. She is ostracized due to a rumor she is having an affair with George Dorset.
ANSWER: Lily Bart [or Lily Bart]
[10] The House of Mirth was written by this American novelist of Ethan Frome.
ANSWER: Edith Wharton
12. In the upper-left hand corner of this painting, an observer from the East is perched precariously along the railing of a balcony. For 10 points each:
[10] Name this painting in which several instruments of torture lie broken as a religious figure swoops down to rescue a follower who is being persecuted by his master for his devotion.
ANSWER: The Miracle of the Slave [or The Miracle of St. Mark]
[10] This Venetian painter created The Miracle of the Slave for the Scuola Grande di San Marco, but is better known for a version of the Last Supper with a diagonal table. His nickname means "little dyer."
ANSWER: Tintoretto [or Jacopo Comin; or Jacopo Robusti]
[10] A muscular red-clad figure in the painting is incredibly similar to the 20 "ignudi" painted by this artist, who painted a self-portrait as St. Bartholomew holding his flayed skin.
ANSWER: Michelangelo [or Michelangelo di Lodovico Buonarroti Simoni]
020-13-83-10212
13. The protagonist of this novel intends to marry the osu Clara Okeke. For 10 points each:
[10] Name this novel in which Obi is caught accepting what he had decided was his last bribe.
ANSWER: No Longer at Ease
[10] Chinua Achebe wrote No Longer at Ease as a sequel to this novel about Okonkwo's life in Umuofia.
ANSWER: Things Fall Apart
[10] John Pepper Clark called Achebe a prophet because of this novel of his about Odili, who leads a coup against the Minister of Culture Chief Nanga.
ANSWER: A Man of the People
020-13-83-10213
14. This son of Athamas and Nephele was one target of a conspiracy by his stepmother Ino to cause his death by burning all the seed corn around Thebes. For 10 points each:
[10] Name this mythical boy who was saved from a sacrifice by the arrival of a flying ram, which carried him eastward.

## ANSWER: Phrixus

[10] Phrixus's sister fell into this body of water, which is now named for her, as the ram flew over it. Leander swam across this strait north of Troy each night to see his lover Hero.
ANSWER: the Hellespont [or Dardenelles]
[10] This king of Colchis received Phrixus and gave his daughter Chalciope to Phrixus in marriage. In return, Phrixus cut the ram's wool off to give this man the Golden Fleece. The Argonauts later squared off against this king.
ANSWER: Aeetes
104-13-83-10214
15. The speaker of this poem wishes that "some Pow'r" would grant the gift "to see oursels as others see us" after contemplating how the title "creepin, blastit wonner" has latched onto a lady's bonnet. For 10 points each:
[10] Name this poem.
ANSWER: "To a Louse" [do not accept or prompt on "To a Mouse"]
[10] "To a Louse" was written by this Scottish bard of "Tam o' Shanter" and the song "Auld Lang Syne." ANSWER: Robert Burns
[10] In "To a Mouse," Burns used this adverb, meaning "awry," to describe how "the best laid schemes o' mice an' men" often go.
ANSWER: agley
16. Two pairs of royal diadems for an ancient king and queen have been found in a tumulus in this region that was unearthed during water drainage work. For 10 points each:
[10] Name this region, home to a "fan dance" performed by women imitating images from nature and a form of blue-green "kingfisher" celadon pottery from the 11th to the 13th centuries.
ANSWER: Korean peninsula [or Hanguk; or Joseon]
[10] Later Korean ceramics were made from this material, heavily used in the pottery of the neighboring Ming Dynasty.
ANSWER: porcelain
[10] In both Chinese and Korean art, the "viewing" types of these objects were highly prized. These objects formed the "islands" in many Japanese zen gardens.
ANSWER: rocks [or stones; or synonyms]
020-13-83-10216
17. This man was the first president of Antioch College. For 10 points each:
[10] Name this Massachusetts education reformer. His strenuous support of public schools has led him to be named the "father of the common school movement."
ANSWER: Horace Mann
[10] Mann succeeded this former president and son of another president in Congress. This man had died in 1848.

ANSWER: John Quincy Adams [prompt on Adams; do not accept "John Adams"]
[10] Mann, along with other Whigs like Charles Francis Adams, were part of this anti-slavery Whig faction that left the party in 1848 to mostly become members of the new Free Soil Party.
ANSWER: Conscience Whigs
18. A rich reservoir of this element is gypsum and pyrite. For 10 points each:
[10] Identify this element whose dioxide is a primary contributor to acid rain and which is incorporated in amino acids like cysteine and methionine.
ANSWER: sulfur
[10] This device typically consists of mud from the bottom of a lake, mixed with newspaper, sodium sulphate and calcium carbonate, and topped with water from the lake. Often used to illustrate nutrient cycling, green and purple sulfur bacteria mark the transition from anaerobic water to anaerobic sediment. ANSWER: Winogradsky column
[10] While doing research with the Beggiatoa bacteria genus, Sergei Winogradsky discovered the first example of lithotrophy when he reported that they oxidized this sulfur compound for energy.
ANSWER: hydrogen sulfide [or $\underline{\mathbf{H}}_{2} \underline{\mathbf{S}}$ ]
066-13-83-10218
19. This phrase was possibly created by Suetonius for his work On the Life of the Caesars. For 10 points each:
[10] Name this phrase directed against Quintilius Varus by a Roman ruler after the disastrous Battle of Teutoburg Forest.
ANSWER: "give me back my legions" [or "legiones redde"; or "give me back my eagles"]
[10] That ruler was this man, an adopted nephew of Julius Caesar who became the first Roman emperor. ANSWER: Augustus Caesar [or Octavian; or Gaius Octavius]
[10] Augustus's forces had more luck during the Battle of Naulochus against this man, who was later captured and executed by Marcus Titus.
ANSWER: Sextus Pompeius Magnus Pius
20. This quantity equals around 25 for alkynes, which allows them to be deprotonated by strong bases. For 10 points each:
[10] Name this quantity which is equal to the pH halfway to the equivalence point in a titration. It measures the strength of an acid; a higher value of this quantity means a weaker acid.
ANSWER: pKa [do not accept or prompt on "Ka"]
[10] According to the leveling effect, this is the strongest acid which can exist in water. This cation consists of a proton bonded to water.
ANSWER: hydronium ion [prompt on "H3O+"]
[10] Strong acids are defined to have a pKa less than hydronium's. Between what two integers is the pKa of hydronium?
ANSWER: $\underline{-2}$ and $\mathbf{- 1}$ [or $\mathbf{- 1}$ and $\mathbf{- 2}$ ]
190-13-83-10220
21. Answer the following regarding the creation of new national parks and monuments, for 10 points each. [10] In January 2013, this former National Monument, located in central California, became the newest National Park in the United States. It is named for spire-like features that resulted from erosion of an extinct volcano.
ANSWER: Pinnacles National Park
[10] In March, land in this state was taken to form the Rio Grande del Norte National Monument. This state is also home to White Sands National Monument and Carlsbad Caverns.
ANSWER: New Mexico
[10] These islands, lying north of the Strait of Juan de Fuca, were also incorporated into a namesake National Monument. Home to Orcas Island and Lopez Island, they are part of the state of Washington.
ANSWER: San Juan Islands

