1. This composer wrote the introduction to the collaborative piece Hexameron. This composer arranged piano transcriptions of Beethoven's symphonies, and wrote ten Harmonies poétiques et religieuses, including 'Funérailles." This member of the New German School wrote a set of variations on the Dies Irae, Totentanz, as well as the piano piece (*) Liebesträume. The ecstasy this composer inspired as a concert pianist inspired a "mania" in audiences during the 1840s. He composed nineteen pieces based on gypsy melodies from his home country. For 10 points, name this Romantic composer of the Hungarian Rhapsodies.
ANSWER: Franz Liszt [or Ferenc Liszt]
2. In this novel's epilogue, a woman locks a thief in a cellar, where the thief bites the woman's son to death. One character in this novel, the daughter of Amalia Guishar, is kidnapped by the cocaine addict Liberius, the leader of the Forest Brotherhood. Another of its characters adopts the identity of "General Strelnikov" to hide his real name, Pasha (*) Antipov. Its protagonist's half-brother Evgraf publishes his poems after his death. At a Christmas party, one character attempts to shoot Victor Komarovsky; later, while working at a military hospital, the protagonist falls in love with that character, a woman named Lara. For 10 points, name this novel set during the Russian Revolution and written by Boris Pasternak.
ANSWER: Doctor Zhivago
3. One official accused opponents of this proposal of "doubling down" in a speech at Florida Atlantic University. This proposal, introduced in the Senate by Sheldon Whitehouse, contains a section that would replace the phrase "calendar year 1992" in a previous bill in order to calculate COLA. Designed to apply to a group of 450,000 people, it was originally proposed in an editorial in which its namesake stated "my friends and I have been (*) coddled long enough"; that author assembled a table detailing his and his secretaries' income. It was introduced as the Paying a Fair Share Act of 2012. For 10 points, name this proposal to increase the tax rate to thirty percent for millionaires, named for the chairman of Berkshire Hathaway.
ANSWER: Buffett Rule [accept Paying a Fair Share Act until mention, prompt after; prompt on things like "millionaire's tax", "taxing the rich", etc.]
4. Bazilio Olara-Okello overthrew one government in this nation, whose first independent government was headed by Benedicto Kiwanuka. One group in this nation was led by a figure who claimed to receive messages from Lakwena, called the Holy Spirit Movement. David Bahati has recently introduced a draconian Anti-Homosexuality Bill in this country. The former National Resistance Army in this country was led by (*) Yoweri Museveni. Another notable ruler of this country denounced Israel after the Entebbe Raid, overthrew his predecessor Milton Obote, and was probably a cannibal. For 10 points, name this African nation formerly ruled by Idi Amin, the original base of Joseph Kony's Lord's Resistance Army.
ANSWER: Republic of Uganda
5. On vector fields, this relation generalizes to the first Green's identity, and finding the Laplace transform of $f$ prime of $t$ requires using this relation. The tic-tac-toe or tabular method is simply applying this identity repeatedly. The LIATE heuristic is used to determine which function should substitute which variable in this identity, and usually logarithmic functions are preferred to (*) trigonometrics for the first variable. One way of deriving this method is to use the product rule, integrate both sides, and rearrange, and it is commonly used when the function in question is a product of e to the x and a trigonometric function. For 10 points, name this method, which sets the integral $u$ dv equal to uv minus the integral of v du.
ANSWER: integration by parts
6. One often prepares a stew called hamin just before the start of this time period so that it would finish during it. Having marital sex is not melacha during this time period. The song 'l'cha dodi" is sung just prior to this time period and compares it to a bride. Some families hire a goy to extinguish ${ }^{(*)}$ ) lighted candles and light a fire in the oven during this time period in Orthodox communities. At this time period's end, a braided candle is dipped in wine when three stars are in the sky during the havdalah ceremony. The Fourth Jewish Commandment mandates observance of this holiday. Often observed as the "Lord's Day" in Christianity, for 10 points, name this day of rest in the Jewish week.
ANSWER: sabbath [or shabbat; or shabbos]
7. One character in this work receives a scar on his forehead while moving a boulder; that character later gives his father a knife, which is rejected in favor of another character's gift of a stray puppy. In this book, the Chinese servant Lee opines that the "most important word in the world" might be the Hebrew word "timshel", meaning "thou mayest." This work opens with a long description of the (*) Salinas Valley. Another character in this work drops out of Stanford after his twin brother shows him their mother, Cathy Ames, working in a brothel. Those brothers, Aron and Caleb, like their father Adam and his brother Charles, represent the Biblical Abel and Cain. For 10 points, name this John Steinbeck novel about the tragic history of the Trask family.
ANSWER: East of Eden
<Wynne>
8. This man consolidated his power after defeating one opponent at the Battle of Chrysopolis. This man created a cavalry unit called the Scholae Palatinae. After fishing the body of one opponent out of a river and decapitating it, this man disbanded the Praetorian Guard. He poisoned Crispus at the insistence of his mother, (*) Helena. Eusebius of Caesarea wrote a biography of this ruler, who, before one battle, saw the vision of a cross and placed said symbol on his soldiers' shields. He defeated Maxentius at Milvian Bridge and ended the Tetrarchy. For 10 points, name this ruler who issued the Edict of Milan and was the first Roman emperor to convert to Christianity.
ANSWER: Constantine I [or Constantine the Great; prompt on "Constantine"]
9. This man told of a boy who asked him whether to take care of his mother or to avenge his dead brother to show that people only seek the advice they want to hear. This thinker noted that most objects are made to suit a predetermined purpose, like a paper-knife. He believed that authentic people respect both their "facticity" and their "transcendence." He stated that the Self is partly defined by the (*) "gaze of the Other," and contrasted "being-in-itself" with "being-for-itself." He used a man at a café in the role of waiter as an example of limiting self-deception, or "bad faith". For 10 points, name this French atheist who used the maxim "existence precedes essence" in his lecture Existentialism is a Humanism and wrote Being and Nothingness, the lover of Simone de Beauvoir.
ANSWER: Jean-Paul Charles Aymard Sartre
<Jackson>
10. For the folding of the barnase protein at room temperature, this value is negative in accordance with the funnel model. One method of finding this value involves finding the slope of a line when plotting the inverse temperature against the natural logarithm of $k$. This value can be found by locating the saddle points on a potential energy surface. The rate constant is equal to an expression including the exponential of this value divided by RT, all times the (*) pre-exponential factor, which is an expression named for Arrhenius. Catalysts accelerate reactions by lowering this value. For 10 points, name this quantity, which is the energy required to initiate a chemical reaction.
ANSWER: activation energy [or E-a or E-sub-a; prompt on "transition state" or "transition state energy"]
<Mukherjee>
11. This opera's female lead declares her love for a man disguised as the student Gualtier Maldé in the aria "Caro Nome." In this opera's third act, its antagonist attempts to seduce Maddalena at an inn while its main character vows revenge in the quartet "Bella figlia dell'amore." Based on Victor Hugo's play Le Roi s'amuse, this opera ends with its main character opening a sack next to a river, only to discover his dying daughter (*) Gilda, who sacrifices herself to the assassin Sparafucile. Its antagonist compares a woman to a feather in the wind in its aria "La donna è mobile." Focusing on the title character's failed attempt to kill the Duke of Mantua, for 10 points, name this opera about a cursed court jester, composed by Giuseppe Verdi.
ANSWER: Rigoletto
12. At the end of one of this man's novels, the protagonist attempts to write an opera about Teresa Guiccioli, Lord Byron's mistress. Another of his protagonists is forced to work on a railway after being arrested for vagrancy on his way to Port Albert. One of his characters ends his regular appointment with the escort Soraya and grows closer to his daughter Lucy after losing his job as a Professor of Modern Languages due to an (*) affair with his student Melanie Isaacs. Like Peter Carey, this author won two Booker Prizes, the first for his novel about a harelipped gardener's attempt to bury his mother. For 10 points, identify this South African author who wrote about David Lurie in Disgrace and penned Life and Times of Michael K.
ANSWER: John Maxwell Coetzee
13. The Diet of Leipzig countered the alleged bias in an earlier arrangement named after this city, where the world's first social housing project was established in 1521 by Jacob the Rich. This city was home to the banker Bartholomeus Welser and his rivals, the Fuggers. A "grand alliance" named for this city was organized by Emperor Leopold I and fought the (*) Nine Years' War against Louis XIV. Philipp Melanchthon drafted a statement of the Lutheran faith in this city. An agreement signed in this city established the policy of cuius regio, eius religio, which allowed each prince to set whether his state would practice Catholicism or Lutheranism. Home to a namesake "Confession", for 10 points, name this Bavarian city.
ANSWER: Augsburg
14. The weak version of this phenomenon is decomposed into convergence and shear forms, and variation in this phenomenon due to orbital motion is called xallarap. This process was observed in SBS 0957+561 A and B, which are identical. Extrasolar planets are detected through one version of this phenomenon by the OGLE and MOA projects. This phenomenon creates an angle of 4GM over $r$ c squared, and its observation of this phenomenon in the Bullet Cluster is strong evidence for (*) dark matter. This phenomenon results in the creation of Einstein rings, and it results from the curvature of spacetime. For 10 points, name this phenomenon in which beams of light are bent by massive objects. ANSWER: gravitational lensing [accept weak lensing, strong lensing, or microlensing]
15. Karel van Wolfaren's book about the "enigma" of this culture's power describes the controversial "M-Curve" in a discussion on its gender roles. C. Douglas Lummis took "A New Look" at a major study of this culture, emphasizing the unreliability of a subject named Robert. Prominent subjects in the ethnography of this culture include "parasite singles" and "office ladies," as well as the high-profile "deaths from (*) overwork" experienced by its ubiquitous "salary-man." This culture's most famous anthropological treatment, which relied heavily on film clips, explored a value of obligation called giri and labeled it a "shame culture." Burakumin are traditionally ostracized by, for 10 points, what culture studied in The Chrysanthemum and the Sword by Ruth Benedict even though she was unable to visit wartime Tokyo?
ANSWER: Japanese Culture [accept reasonable equivalents]
16. During the Gigantomachia, these figures killed Agrius and Thoas with their pestles. At Mount Nysa, they offered "ephemeral apples" to the doomed Typhon. At Delphi, one fewer than the usual number of these figures is worshipped. With help from Palamedes, these figures invented the alphabet. In order to save Admetus, Apollo gets these figures drunk. Known as the Parcae in Roman myth, these figures appear three nights after a ${ }^{(*)}$ child is born. They own a spindle, a rod, and a pair of shears, which they use to manipulate the thread of life. For 10 points, name this triad, composed of Clotho, Lachesis, and Atropos, the incarnations of Destiny.
ANSWER: The Fates [or The Moirae; or the Fata; accept the Parcae before mentioned]
17. The Lepore form of this protein is linked to silent strokes. This protein is improperly oxidized in children who ingest nitrates. The Bart form of this molecule is present in hydrops fetalis. This protein switches its subunits between the taut form and relaxed form in response to the allosteric regulator 2,3-BPG. In the Bohr effect, this molecule shifts its binding curve to the right in an (*) acidic environment. $\mathrm{CO}_{2}$ can bind to its N -terminus, and a mutation in this tetrameric protein's beta chain causes it to aggregate. That mutation is a glutamate to valine substitution, which causes sickle cell anemia. This protein contains a porphyrin prosthetic group with a central iron atom. For 10 points, name this oxygen-carrying protein that gives blood its color.
ANSWER: hemoglobin [or $\underline{\mathbf{H b}}$ ]
<Mukherjee>
18. One speaker at this meeting echoed a speech by Canassatego at the Lancaster Treaty Council. Participants included the first superintendent of Indian Affairs, William Johnson, as well as his friend, Chief Hendrick, who both argued in favor of the "Covenant Chain." It was convened by James DeLancey. A document drafted here inspired a later work of Joseph Galloway, and suggested the establishment of $\mathbf{a}\left({ }^{*}\right)$ Grand Council and President-General. A cartoon of a snake chopped into pieces was presented here to demonstrate the need for unity. Its main topics were Indian relations and defense against France, and it put forward a namesake "plan" to unite the colonies. For 10 points, Benjamin Franklin produced the "Join or Die" cartoon for what 1754 meeting in New York?
ANSWER: Albany Congress [or Albany Conference or The Conference of Albany or The Conference in Albany]
19. This author wrote his sonnet "Since she whom I lov'd hath paid her last debt" while mourning the death of his wife Anne. One of his poems imagines people worshiping the speaker and his lover after someone digs up his grave and discovers "a bracelet of bright hair about the bone". Another of his poems ends "Thy firmness makes my circle just / And makes me end where I begun," and compares the souls of the speaker and his lover to "stiff twin (*) compasses". His collection Songs and Sonnets includes his poems "The Relic" and "The Canonization". Another of his collections contains "Batter My Heart, Three Person'd God" and "Death, Be Not Proud". For 10 points, name this metaphysical poet of "A Valediction: Forbidding Mourning" and the Holy Sonnets.
ANSWER: John Donne
20. The mountains in the background of this painting merge around a corner with a painting of its central figure preaching. This work is located above The Raising of Theophilus'Son. In the center of this work, a man in an orange tunic has his back to the viewer as two other figures point to the left. Directly to its left, an angel with a sword expels Adam and Eve from paradise. Its central scene has a vanishing point on Jesus' head and shows the (*) twelve apostles surrounding him in a semi-circle. This work accompanies paintings by Masolino in the Brancacci Chapel. On the left-hand side of this work, St. Peter pulls the title objects out of a fish. For 10 points, name this Massacio work that depicts St. Peter paying a tax collector.
ANSWER: The Tribute Money
21. These entities mostly populate the blue cloud of the color-magnitude diagram. When viewed in a non-inertial reference frame rotating at the global pattern speed, quasi-static density waves can be observed in these entities. Vera Rubin noted that the rotation curves of these entities did not drop off with radius as expected. Doppler broadening of the 21 cm line of hydrogen is used to calculate one of their properties in the Tully-Fisher relation. Objects such as Sagittarius A-Star and other (*) supermassive black holes form the characteristic bulges at the centers of these galaxies, which Edwin Hubble plotted on the top of his tuning fork diagram. For 10 points, name this class of galaxy which has a "barred" variety, one example of which is the Milky Way.
ANSWER: spiral galaxy [accept barred spiral galaxy; prompt on "galaxy"]
22. One civil strife in this nation ended with the Convention of Évora-Monte, following the decisive Battle of Asseiceira. The Methuen treaty obstructed industrialization in this nation. One of its leaders claimed that it was "proudly alone" in resisting decolonization. The Battle of Aljubarrota was a decisive victory by John I of this nation. England and this nation formed the Treaty of Windsor, the oldest European treaty still in effect. This country, which overthrew dictator (*) Marcelo Caetano in the Carnation Revolution, spent the mid-twentieth century under the dictatorship of the Estado Novo. For 10 points, what nation, once ruled by the Houses of Aviz and Braganza, split the New World with Spain through the Treaty of Tordesillas?
ANSWER: Portugal
23. One work in this collection asks the reader to "read me, learn to love me" and "pity me, else receive my curses". The speaker of its final entry calls Time the "fatal foe to man" and wishes to find not 'Heaven or Hell" but 'something new" at the end of his titular 'Voyage'". Its preface, which identifies boredom as the worst of all vices and addresses the "hypocrite reader, my likeness, my brother," is "To the (*) Reader". This collection, dedicated to Theophile Gautier, includes such poems as "The Litanies of Satan", "The Albatross", and "A Voyage to Cythera", and is divided into sections like "Wine" and "Revolt". For 10 points, name this symbolist poetry collection that opens with the section "Spleen and Ideal", a work of Charles Baudelaire.
ANSWER: Les Fleurs du mal [accept The Flowers of Evil or other reasonable translations]
<Ueda>
24. One of these pieces forms the first movement of Aram Khachaturian's Masquerade Suite. Emile Waldteufel became famous for composing one of these pieces inspired by ice skaters. Examples of these pieces composed for the piano include Carl Maria von Weber's Invitation to the Dance and Chopin's opus 69, which begins with one nicknamed 'Farewell." Beethoven composed thirty-three variations on one of these pieces written by Anton Diabelli. These pieces are typically in (*) 3/4 (three-four) time and have a characteristic "oom-pa-pa" rhythm. For 10 points, name this kind of piece, such as "Tales from the Vienna Woods" and "The Beautiful Blue Danube," a type of ballroom dance frequently composed by Johann Strauss, Junior.
ANSWER: waltzes

PACE NSC 2012
Round 2
Bonuses

1. This kingdom was ruled by similarly named kings such as Coenwulf, Ceolwulf and Beornwulf. For 10 points each:
[10] Identify this kingdom in the Anglo-Saxon Heptarchy that was also ruled by Penda and Offa. ANSWER: Mercia
[10] Another kingdom in the Heptarchy, Wessex, reached its zenith under this "great" king who won the Battle of Ashdown against the Danes.
ANSWER: Alfred the Great
[10] Kent, the site of another Heptarchic Kingdom, was later home to Thomas Wyatt, who led a rebellion against this English monarch. Hugh Latimer and Thomas Cranmer were executed by this monarch. ANSWER: Mary I [or Bloody Mary; or Mary Tudor; do not accept "Mary, Queen of Scots"; prompt on "Mary"]
2. It states that the divergence of the electric field equals the charge density divided by the permittivity of free space. For 10 points each:
[10] Name this law of electromagnetism that states that the flux through a closed surface is proportional to the enclosed charge.
ANSWER: Gauss's Law
[10] This law is a specific case of Gauss's Law and states that the electrostatic force obeys an inverse square law. It shares its name with the unit for electric charge.
ANSWER: Coulomb's Law
[10] This quantity, symbolized J, was introduced by Maxwell in a correction to Ampere's law to account for the creation of a magnetic field by a changing electric field.
ANSWER: displacement current [prompt on "current"]
<Neithalath>
3. Name these scholars of American society, for 10 points each:
[10] A Book of Prefaces collects biting social commentary by this "Sage of Baltimore," a journalist who celebrated the national vernacular in The American Language.
ANSWER: Henry Louis Mencken
[10] This man used a veil as a metaphor for the "color line" racially dividing America in his landmark The Souls of Black Folk, which challenged the strategies of Booker T. Washington.
ANSWER: William Edward Burghardt Du Bois
[10] This author of a notable letter to the Danbury Baptists synthesized economic and social analysis into a set of "Notes on" his state. He used a razor and some paste to craft his Life and Morals of Jesus of Nazareth.
ANSWER: Thomas Jefferson
4. This author adopted a second-person narrative style in Aura, a novel which centers on the historian Felipe Montero. For 10 points each:
[10] Identify this Mexican author who dedicated his most famous novel, The Death of Artemio Cruz, to the sociologist C. Wright Mills.
ANSWER: Carlos Fuentes Macias
[10] Carlos Fuentes also wrote this novel, in which General Arroyo kills the title character, a writer modeled on Ambrose Bierce, after the latter destroys some documents in an attempt to get the general to leave the Miranda hacienda.
ANSWER: The Old Gringo [or El Gringo Viejo]
[10] Fuentes was one of the foremost members of this Latin American literary movement of the 1960s and 70s. Works that anticipated this movement include Ernesto Sabato's The Tunnel and Augusto Roa Bastos's Hijo de Hombre.
ANSWER: the Latin American Boom [or the Boom; or el Boom]
<Bentley>
5. This piece was written for an instrument that plays alongside the viola and piano in its composer's

Kegelstatt Trio. For 10 points each:
[10] Identify this work composed for Anton Stadler, a virtuoso on a recently invented instrument. Carl Maria von Weber also wrote two compositions of the same type.
ANSWER: Clarinet Concerto in A major
[10] The Clarinet Concerto was the last concerto of this Austrian composer, more widely known for his Symphony No. 41, "Jupiter," and the serenade Eine Kleine Nachtmusik.
ANSWER: Wolfgang Amadeus Mozart
[10] All but two of Mozart's 41 symphonies are in major keys. Those two symphonies, numbers 25 and 40, are both in this key with two flats.
ANSWER: G minor
6. Identify the following about cyclic time in religious cosmology, for 10 points each:
[10] This civilization's base 20 Long Count calendar hinges upon cycles of 144,000 years known as baktun. ANSWER: Mayan
[10] In Hinduism, these are the ages of mankind that span billions of human years, but one day in the life of Brahma. We are currently in the 4th or "Kali" one.
ANSWER: yugas
[10] The earliest concepts of cyclic time were found in religions from this era, which followed the Paleolithic and took its name from "new stone."
ANSWER: Neolithic Era
7. Cytomegalovirus is a member of this family of double-stranded DNA viruses, many of whom are susceptible to acyclovir. For 10 points each:
[10] Name this family of viruses, another notable member of which causes cold sores and genital lesions.
ANSWER: herpesvirus [or herpesviridae]
[10] This member of the herpesvirus family is a cause of Burkitt's lymphoma and nasopharyngeal carcinoma, but it's more commonly known as the causative agent of mononucleosis.
ANSWER: Epstein-Barr virus [or EBV]
[10] This condition, which is caused by human herpesvirus 8 , is most commonly associated with AIDS. It causes red blotches to appear on the skin and mouth.
ANSWER: Kaposi's sarcoma
8. This story concludes with the statement "Romance at short notice was her specialty." For 10 points each: [10] Identify this story in which Framton Nuttel runs away when he sees Mrs. Sappleton's husband and brothers returning from the hunt after hearing a fabricated ghost story from Mrs. Sappleton's niece.
ANSWER: "The Open Window"
[10] This pseudonymous British author of "The Open Window" and The Unbearable Bassington wrote about Conradin's worship of the title polecat-ferret in his story "Sredni Vashtar".

## ANSWER: Saki [or Hector Hugh Munro]

[10] Saki was posted to Burma during his time in the Indian Imperial Police. Another author who had worked as a policeman in Burma wrote this allegorical novel, in which the pigs Napoleon and Snowball adopt the philosophy of Old Major and drive away their former owner, Mr. Jones.
ANSWER: Animal Farm
<Gioia>
9. One of this author's characters describes the Pope as a magician so strong he can convince kings that one equals three. For 10 points each:
[10] Name this French thinker who convincingly took down a hypothetical list of arguments in support for slavery in his major work, The Spirit of the Laws.
ANSWER: Charles de Secondat, Baron Montesquieu [accept either underlined name]
[10] In this work by Montesquieu, the foreigners Rica and Usbek satirically report on the customs of Europe and France in particular.
ANSWER: Persian Letters [or Lettres persanes]
[10] Montesquieu's The Spirit of the Laws argued that liberty is only possible when a government is organized by this principle. He argued specifically for an executive, legislative, and judiciary to this end. ANSWER: separation of powers [or balance of powers; prompt three branches; prompt multiple branch es; prompt checks and balances]
<Jackson>
10. Identify the following about Jay Gould, for 10 points each.
[10] Gould sparked Black Friday when he tried to corner the market for this mineral in 1869. William Jennings Bryan gave a speech about a cross of this material in 1896.
ANSWER: Gold
[10] A vicious price war allowed Gould to take control of this company in 1881, two decades after it completed the first transcontinental telegraph line.
ANSWER: Western Union Telegraph Company [or Western Union Corporation]
[10] Gould, Ulysses Grant, and others were attacked in this man's scathing article "The New York Gold Conspiracy." This author of a nine-volume history of the United States wrote an analysis of medieval society in "Mont Saint Michel and Chartres."
ANSWER: Henry Adams [prompt on "Adams"]
11. This place, which is re-supplied each year by Operation Deep Freeze, is home to its continent's only newspaper, only ATM, and only church--the Chapel of the Snows. For 10 points each:
[10] Name this American research base, the most populous human settlement in Antarctica.
ANSWER: McMurdo Station [accept equivalents for "station"]
[10] McMurdo Station is located on this island, whose four-letter name also identifies an Antarctic sea and that continent's largest ice shelf.
ANSWER: Ross Island [accept Ross Sea or Ross Ice Shelf]
[10] Ross Island is also the location of Erebus, the world's southernmost example of this kind of landform.
ANSWER: active volcano [do not accept or prompt on "mountain"]
<Thompson>
12. This activity may have served as a proxy for warfare and was possibly used in sacrifice rituals. For 10 points each:
[10] Identify this sport played by pre-Columbian civilizations in Mesoamerica.
ANSWER: Mesoamerican Ballgame [or Tlatchtli]
[10] These "rubber people" may have invented the Mesoamerican Ballgame. They're also known for creating colossal heads.
ANSWER: Olmecs
[10] A ball court can be found at Monte Alban, a city in Oaxaca (wah-HAH-kuh) formerly occupied by the Mixtec and this culture, which carved "danzante" images of captured opponents.
ANSWER: Zapotecs
13. For 10 points each, identify these things found at meteorite impact sites.
[10] Impact craters have an unusually high amount of this second-densest element, which is also found in the K-T boundary. It has atomic number 77 and is located just to the right of osmium on the periodic table. ANSWER: iridium [or Ir]
[10] The quartz around well-defined impact sites is this kind of quartz, in which a sudden, large amount of pressure leads to strange changes in the microstructure of the mineral.
ANSWER: shocked quartz [or stishovite]
[10] These glassy pebbles are found in strewn fields and contain very little water. They are thought to be bits of molten rock that broke off during impact and cooled while falling back through the atmosphere.
ANSWER: tektites
<Wynne>
14. The title character of this play is a son of Don Diegue who eventually kills Chimene's father, Don Gomes, and its debut sparked a pamphlet war with Cardinal Richelieu's faction. For 10 points each: [10] Identify this historical drama about Rodrigo Diaz de Vivar, written by Pierre Corneille.
ANSWER: Le Cid [or The $\underline{\text { Cid; }}$; do not accept "El Cid"]
[10] Corneille's first tragedy was about this mythical woman, also the subject of a play by Euripides. Her elaborate revenge, taken after Jason abandons her in Corinth, involves murdering Glauce with a poisoned dress.

## ANSWER: Medea [or Medee]

[10] Corneille also wrote a play about a man of this name, who kills his sister Camille after engaging in battle with the Curiatii. An author with this name wrote to Lollius warning the reader not to postpone self-improvement, and praised country life in a letter to Aristius Fuscus.

## ANSWER: Horace

15. This film was divided into five acts, contained no trained actors, and made heavy use of the director's intellectual montage technique. For 10 points each:
[10] Identify this silent film that contains a scene where a baby in a carriage is sent to its death down the Odessa Steps during an abortive revolution.
ANSWER: The Battleship Potemkin
[10] Sergei Eisenstein's The Battleship Potemkin was commissioned by the government of this no-longer extant country.
ANSWER: The Soviet Union [or the USSR; do not accept "Russia"]
[10] This American director overtly referenced the Odessa Steps scene from Battleship Potemkin in his film, The Untouchables. He also directed Mission: Impossible and Carrie.
ANSWER: Brian Russell De Palma
16. Wholeness and Immortality are two "divine sparks" of this deity. For 10 points each:
[10] Name this figure, the leader of the yazatas and Amesha Spentas, and the enemy of Ahriman.
ANSWER: Ahura Mazda [or Ohrmazd; or Azzandara]
[10] Ahura Mazda is the good god of this dualistic Iranian religion.
ANSWER: Zoroastrianism [or Mazdaism]
[10] Ahura Mazda is praised as the lord of fire in this portion of the Avesta, the central liturgical text of Zoroastrianism. The Gathas make up 17 of its 72 verses.
ANSWER: Yasna
<Gupta>
17. One work by this author features a "chantoosie" named Cherie, who attracted the unwanted attention of Bo when she sang "That Old Black Magic" in a Kansas City nightclub. For 10 points each:
[10] Identify this "Playwright of the Midwest", who wrote the screenplay for Splendor in the Grass as well as plays like Come Back, Little Sheba and the Pulitzer Prize-winning Picnic.
ANSWER: William Motter Inge
[10] This aforementioned Inge play was based on his earlier one-act play, People in the Wind. Grace and Elam are two waitresses working at a diner as a blizzard rages outside in this play.
ANSWER: Bus Stop
[10] Inge's play Natural Affection was based on a newspaper account of a seemingly unmotivated murder, much like the murders of the Clutter family that inspired this author's novel In Cold Blood. This friend of Harper Lee was the basis for Dill in To Kill a Mockingbird.
ANSWER: Truman Capote [or Truman Streckfus Persons]
18. The Thorpe-Ingold effect concerns changing the angles around a central molecule of this geometry, and it shows a weak version of the Jahn-Teller effect. For 10 points each:
[10] Name this molecular geometry in which a central atom has four substituents and no lone pairs. Carbon usually adopts this geometry.
ANSWER: tetrahedral
[10] Tetrahedral carbons form bonds with this hybridization, which disallows the formation of any pi bonds. These bonds have $25 \%$ s character.
ANSWER: sp3
[10] Replacing two of the substituents in a tetrahedral molecule with lone pairs results in this molecular geometry.
ANSWER: bent [or angular]
<Mukherjee>
19. The content of the title object in this painting is revealed through symbols like the lute the woman in yellow is holding and the seascape hanging on the wall in the background. For 10 points each:
[10] Identify this circa 1669 painting where a curtain is pulled back to reveal a black-and-white tiled interior where two women discuss the titular correspondence.
ANSWER: The Love Letter
[10] The Love Letter is a work by this Dutch artist, who also painted a landscape of his native Delft and works like the Girl with a Pearl Earring.
ANSWER: Jan Vermeer [or Johannes Vermeer or Johan Vermeer or Joannis Vermeer]
[10] A basket can be seen in the background as the title woman of this Vermeer painting pours a drink from a jug.
ANSWER: The Milkmaid [or De Melkmeid or Het Melkmeisje or The Kitchen Maid]
20. This country established the colonies of St. Thomas and St. John and sold its control over parts of the Virgin Islands to the United States in 1917. For 10 points each:
[10] Identify this country, once a member of the Kalmar Union, which constantly vied with Germany for control over Schlewsig-Holstein.
ANSWER: Denmark [or Danmark]
[10] This peninsula comprises most of Denmark's land. A German navy under Reinhard Scheer was defeated off of this peninsula in the largest naval battle in World War I.
ANSWER: Jutland [or Cimbria or Jylland]
[10] During a crisis named for this holiday in 1920, the Danish parliament was dismissed by King Christian X. Another conflict named for this holiday included fighting at Ashbourne and the arrest of Roger Casement.
ANSWER: Easter

National Scholastic Championship
21. This neurotransmitter is found in high concentrations in the ventral tegmental area, and like epinephrine and norepinephrine is it a catecholamine synthesized from tyrosine. For 10 points each:
[10] Name this neurotransmitter highly concentrated in the neurons of the substantia nigra, which is involved in voluntary movement and reward pathways.
ANSWER: dopamine [do NOT accept "DOPA"]
[10] The substantia nigra is degraded in this neurological disease, which is characterized by a slowing of motion and eventual dementia. L-DOPA is a common treatment.
ANSWER: Parkinson's disease
[10] Dopamine also inhibits the release of this hormone from the anterior pituitary, which is responsible for milk letdown in pregnant women.
ANSWER: prolactin
<Mukherjee>
22. This owner of Donwell Abbey suspects Frank Churchill of duplicity when the latter hurries to London just to get a haircut. For 10 points each:
[10] Identify this character whose brother is married to Isabella Woodhouse. He criticizes the protagonist of the book he appears in for making fun of Miss Bates, then later marries that protagonist.
ANSWER: George Knightley [accept either underlined portion]
[10] Frank Churchill and George Knightley appears in this Jane Austen novel whose title character is an enthusiastic, though incompetent, matchmaker.

## ANSWER: Emma

[10] Emma unsuccessfully attempts to arrange a marriage between Mr. Elton and this simple-minded girl whose parentage is unknown until the end of the novel, when she marries the farmer Robert Martin.
ANSWER: Harriet Smith [accept either underlined portion]
<Gioia>
23. This dynasty constructed the Forbidden City and repaired the Great Wall. For 10 points each:
[10] Name this Chinese dynasty, whose first leader won the Battle of Lake Poyang and led the Red Turban rebellion against the Yuan dynasty. Fear of being persecuted by the Tianshun Emperor for participating in the Tumu Crisis led Cao Qin to rebel against this dynasty.
ANSWER: Ming dynasty
[10] This waterway, which was first joined together in the Sui Dynasty, was renovated and reopened during the Ming Dynasty. It required around fifty thousand laborers to maintain.
ANSWER: Beijing-Hangzhou Grand Canal [or Jing Hang Da Yunhe]
[10] This man, earlier known as Zhu Yuanshang, was the leader of the Red Turban rebellion and first Ming emperor. This man introduced paper currency to China and was advised by Liu Ji.
ANSWER: Hongwu Emperor [prompt on "Taizu of Ming" or "Taizu"]

