## 金 HSAPQ <br> High School Academic Pyramid Questions <br> 2008-2009 <br> ACF-Format Set \#4 Round 14 <br> Tossups

1. One current project of this architect is a seventy-six-story glass, steel, and red brick skyscraper called Beekman Tower. He used Fred Astaire and Ginger Rogers as models for a Prague building, Dancing House. Another of this architect's works is an eponymous tower in Hanover, Germany. Jeff Koons' sculpture Puppy stands in front of a titanium-paneled museum this man designed, and Chicago's Millenium Park houses his Pritzker Pavilion. For 10 points, name this architect of the Walt Disney Concert Hall and the Guggenheim at Bilbao. ANSWER: Frank Gehry
2. This empire was weakened by Ahamad al-Mansur's raiding of the salt deposits at Taghaza, and it came to power after its victory over Ntim Gyakari, the leader of the Denkyira, at Feyiase. One of its leaders consolidated his power by defeating the Dogon and Fulani at Bandiagara. That leader, Sonni Ali, evicted the Tuareg from Timbuktu, and the capital of this empire was Gao. For 10 points, name this West African trading state led by Askia Muhammad that was conquered by Mansa Musa and the Mali Empire.
ANSWER: Songhai
3. This work's title may derive from Chesterton's Napoleon of Notting Hill. In this work, the protagonist describes a pyramidal structure with no clocks, no windows, and perfectly clean walls as being "where there is no darkness," and in the Chestnut Tree Café, the main character drinks clove-flavored gin. That first location is called "Miniluv" and espouses the Party's doctrines, like "Ignorance is Strength." Featuring Emmanuel Goldstein as the target of the "Two Minutes Hate," for 10 points, name this work about Julia and Winston Smith by George Orwell. ANSWER: 1984
4. The "ion" form of this quantity opposes electrostatic forces in plasmas containing dust particles. For small objects, this quantity is directly proportional to the radius and the velocity by Stokes' Law; however, for larger objects, it is proportional to the square of the velocity. When this force equals the force of gravity, an object reaches terminal velocity, and in aerodynamics, it opposes thrust. For 10 points, name this force that retards the motion of an object through a fluid, colloquially referred to as "wind resistance."
ANSWER: drag [prompt on wind resistance; prompt on air resistance]
5. Eugen von Bohm-Bawerk theorized that this quantity's value was determined by the amount of a community's capital, the possibility of increasing productivity, and the size of the labor force. Friedrich von Hayek claimed that business cycles were a result of a divergence between its natural and market value, and Irving Fisher modeled it as an interaction between the investment opportunity principle and people's time preference for money now versus money later. For 10 points, name this term for the price paid for the use of money, such as when taking a loan.
ANSWER: interest [or interest rates]
6. The second movement of this composer's Sonata for Solo Violin is a fugue that mixes arco and pizzicato. The title character is brought to life by a fairy in his ballet The Wooden Prince, and he wrote a tone poem about a national figure called Kossuth. Along with Music for Strings, Percussion, and Celeste, he wrote an opera in which Judith convinces her future husband to open seven doors, and this composer wrote a six-volume set of piano études called Mikrokosmos. For 10 points, name this ethnomusicologist and Hungarian composer of Duke Bluebeard's Castle.
ANSWER:Béla Bartók
7. The opening skirmish of this war was a raid on the Flemish island of Cadsand, and much of the fleet under Nicholas Behuchet was demolished at the early Battle of Sluys. One side in this conflict broke the Truce of Malestroit at the Battle of Neville's Cross, and this war saw sieges at Calais and Orleans. Edward the Black Prince was victorious at Crecy and Poitiers. For 10 points, name this conflict whose combatants included Joan of Arc, a fourteenth- to fifteenth-century war between the British and the French.

## ANSWER: Hundred Years' War

8. At one point in this novel, the main character notices in a crowd a woman he saw marking off radio programs in a magazine. That character lives near a pimp and anticipates "cries of hate" at the end of his life. Other characters in this novel include Thomas and Salamano, who repeatedly loses his dog. The title character visits the Home for Aged Persons in Marengo before he goes to the beach with Raymond Sintès and later shoots an Arab "because of the sun." Beginning "Maman died today," for 10 points, name this novel about Meursault, a work by Albert Camus.

## ANSWER: The Stranger [or L'Étranger]

9. Polychaete marine worms can form epitokes through a process of this type. This process can occur through the aggregation of archaeocytes and subsequent gemmulation in Porifera, and many phyla are capable of it via parthenogenesis. Other examples of this type of process include fragmentation, budding, and binary fission. For 10 points, name this type of process that does not involve meiosis or the fusion of gametes following fertilization.
ANSWER: asexual reproduction [prompt on budding before "aggregation"; do not accept "sexual reproduction"]
10. In one story, this figure takes two small sticks to brace his eyelids open, and he earlier bragged to his wife that he would be taking other men's wives. This figure desperately wanted to see the contents of two boxes in one story, finally letting out the sun and moon after doing so. The hunting partner of Eagle, he once forced an old woman and her cousin into freeing all of the buffalo, and he created humans by kicking a ball of dirt. For 10 points, name this lupine figure in Native American mythology, a trickster god.

## ANSWER: Coyote

11. In the foreground of this work, a man dressed all in white, including a top hat, converses with a man wearing a frilly white collar and a red sash. A yellow- and black-striped flag is raised in the background of this painting, and an illuminated little girl holds a chicken under it. A man beats a drum on the right of this painting, and the area above the people depicted is crowded with the spears, muskets and pikes of the Shooting Company of Frans Banning Cocq. For 10 points, name this Rembrandt painting that originally depicted a daytime scene. ANSWER: The Night Watch [or De Nachtwacht; or The Shooting Company of Captain Frans. Banning Cocq and Willem van Ruytenburch before mention]
12. This man dispatched troops during the Malayan Emergency, and he jointly instigated a coup d'état against Mohammed Mosaddegh as part of the "Special Relationship" with the United States. He was succeeded by Anthony Eden in his second term after he was relegated to leader of the opposition following a surprising loss to Clement Atlee. During his first term, he attended meetings at Casablanca, Potsdam, and Yalta. For 10 points, name this Conservative prime minister of Great Britain who served during World War II.
ANSWER: Sir Winston Leonard Spencer-Churchill
13. This poet wrote about the titular Venetian music in "A Toccata of Galuppi's," and he wrote a work in which "God has not said a word!" about a liaison and one in which the speaker says "Grow old along with me! The best is yet to be." In addition to "Porphyria's Lover" and "Rabbi Ben Ezra" he wrote a poem in which the title figure had had a heart "too soon made glad" and was painted by Fra Pandolf. For 10 points, name this poet of The Ring and the Book and "My Last Duchess," the husband of Elizabeth Barrett.
ANSWER: Robert Browning [prompt on Browning]
14. Colloids can be analyzed with this technique's zeta potential variant, and disodium EDTA is used with metal ions in the complexometric type. lodine and starch may track the redox type of this procedure, which commonly employs an indicator and buret and is used to determine the pH of a solution. When equal volumes of two solutions have been combined, this process has reached the "equivalence point." For 10 points, name this technique in which a solution of known concentration is used to determine the concentration of an unknown solution. ANSWER: titration
15. Followers of this religion believe in the Rectification of Names, as outlined by the Five Great Relationships. This religion's texts include The Great Learning and The Doctrine of the Mean, while its "superior person," or junzi, is one who lives according to virtues such as shu, li, and ren. This religion's "second sage" was the third century B.C.E. thinker Mencius, whose namesake book is counted as one of its Four Books, alongside the Analects. For 10 points, name this primary belief system of China, founded by a man also known as Master Kong. ANSWER: Confucianism
16. In G. I. Joe, Dr. Mindbender is a former member of this profession, and a widespread misconception is that Olympian swimmer Mark Spitz became a member of this profession. In Little Shop of Horrors, the sadistic Orin Scrivello joined this profession to make his "natural tendencies pay." Bernard Nadler on Lost is a member of this profession, as is Tim Whatley, a character on Seinfeld who Jerry thought was an insincere convert to Judaism. For 10 points, name this profession that involves filling cavities and conducting root canals.
ANSWER: dentist [or dentistry or other equivalents]
17. Piers extending into interstate waters allow gambling in this state's "Poor Man's Las Vegas," Colonial Beach. Cedar Creek, a tributary of the river that flows through this state's capital, has carved a natural bridge in the aptly named Rockbridge County. The Rappahannock River forms the southern border of this state's Northern Neck, which has the Potomac to its north, both of which flow into the Chesapeake Bay. For 10 points, name this Mid-Atlantic commonwealth known as the "Old Dominion," with cities such as Norfolk and capital Richmond. ANSWER: Virginia
18. In one play by this author, Carlotta orders Fidelio to play her a dirge, since "merry music/ Is sure to make me sad." Besides The Lamp and the Bell, she wrote of a woman who "used to watch the swallows/ Go down across the sky," "When the Year Grows Old." This author of Second April wrote of a Greek mathematician who "looked on Beauty bare" and wrote that her "candle burns at both ends" in "First Fig." For 10 points, name this poet who wrote "All could see from where I stood/ Was three long mountains and a wood" in "Renascence."
ANSWER: Edna St. Vincent Millay
19. The object that these bodies orbit has the largest Hill Sphere in the solar system. The first one of these objects to be discovered was spotted by William Lassell seventeen days after Johann Galle discovered the body it orbits, and the second one to be discovered was sighted by Gerard Kuiper and is called Nereid. The largest of these bodies has an inclined orbit and is the only object of its kind in the solar system to have a retrograde orbit. For 10 points, name these bodies that include Triton, objects that orbit the outermost planet of the solar system.
ANSWER: Neptune's moons [accept equivalents like Neptune's satellites]
20. This figure's decisions and instructions were the basis of the Two Whatevers policy, and one of his initiatives led to locust plagues after he included sparrows in his Four Pests campaign. Another of his programs led to the creation of backyard furnaces as a way to increase steel production, and he briefly asked for dissent with the Hundred Flowers Bloom movement before his wife Jiang Qing and the Gang of Four led an anti-Rightist crackdown with the Cultural Revolution. For 10 points, name this leader of the Long March and early Chinese Communist. ANSWER: Mao Zedong
21. This city saw a riot over George Pullman cutting wages but not rent for his workers, and its mayor, Anton Cermak, was killed during an assassination attempt on Franklin Roosevelt. This city, founded by Du Sable at the site of Fort Dearborn, was home to a convention nominating Pigasus for president, and riots here were put down violently by Mayor Richard Daley when it held the 1968 Democratic Convention. This city was home to the Haymarket Square riot, and it was destroyed in a fire that started in Mrs. O'Leary's barn. For 10 points, name this Illinois city. ANSWER: Chicago
22. Abscisic acid induces their deactivation and cytokinins promote the activation of these structures. Proton pump activity causes the potassium uptake that activates these structures, which are parallel to the leaf axis in monocotyledons. CAM plants take up carbon dioxide at night through the opening of these structures, which are formed by two chloroplast-dense guard cells. For 10 points, name these gaps in the leaf and stem epidermis through which transpiration occurs.
ANSWER: stomata [prompt on guard cells before mention]
23. One of this writer's poems notes that "the soul should always stand ajar" so that heaven "will not be obliged to wait" for it. This author of "Exultation is the going" wrote a poem in which the speaker "dreaded that first robin so" and "dared not meet the daffodils." She also wrote a poem in which the sound of the titular creature is "blue, uncertain, stumbling" and another in which a carriage "held but just ourselves/ And Immortality." For 10 points, name this reclusive American poet of "Because I Could Not Stop for Death" and "I Heard a Fly Buzz When I Died."
ANSWER: Emily Dickinson

## 三 HSAPQ <br> High School Academic Pyramid Questions

1. He never finished an epic poem set on the titular continent, Africa. For 10 points each: [10] Name this Italian poet and humanist who wrote sonnet after sonnet to Laura. ANSWER: Petrarch [or Francesco Petrarca]
[10] This other Italian author penned a collection of stories narrated by Qwfwq, Cosmicomics, and wrote about a quest to finish a mysterious novel in If on a winter's night a traveler. ANSWER: Italo Calvino
[10] Calvino wrote a work titled Invisible [these] in which Marco Polo describes the titular entities to Kublai Khan. Charles Dickens wrote a work about a tale of two of them.
ANSWER: cities [or city]
2. Name these Spanish explorers for 10 points each:
[10] This first governor of Puerto Rico explored Florida in search of the Fountain of Youth. ANSWER: Juan Ponce de Leon
[10] This conquistador also explored Florida, but he is best known for "discovering" the Mississippi.
ANSWER: Hernando de Soto
[10] This explorer became the first European to visit the Grand Canyon during his exploration of the Colorado River.
ANSWER: Francisco Vázquez de Coronado y Luján
3. It begins at flavin mononucleotide and uses carriers called cytochromes. For 10 points each: [10] Name this carrier mechanism that uses NADH and FADH ${ }_{2}$ as sources of the namesake particle.
ANSWER: electron transport chain [accept ETC]
[10] The ETC ends when cyctochrome a3 transfers electrons to this final electron acceptor. It also picks up two hydrogen ions to form a water molecule.
ANSWER: oxygen [accept $\underline{\mathbf{O}}_{2}$ ]
[10] The ETC pumps $\mathrm{H}^{+}$ions through the inner mitochondrial membrane, releasing enough energy to create these molecules, the cell's main source of stored energy.
ANSWER: Adenosine triphosphate [or ATP]
4. This psychological concept was discussed in the book Toward a Psychology of Being. For 10 points each:
[10] Name this concept in which self-actualization is viewed as the pinnacle of human satisfaction after love, esteem, and physiological necessities have been fulfilled.
ANSWER: hierarchy of needs
[10] This author of Toward a Psychology of Being and The Farther Reaches of Human Nature developed the theory of the hierarchy of needs.
ANSWER: Abraham Maslow
[10] Maslow, like Carl Rogers, is part of this movement, in contrast to behaviorism and psychoanalysis. This movement emphasizes a holistic approach and the patient's personhood.
ANSWER: humanism
5. This art form is exemplified in the series Fifty-three Stations of the Tokaido. For 10 points each:
[10] Name this genre of Japanese art meaning "pictures of the floating world" whose masters include Ando Hiroshige and Katsushika Hokusai.
ANSWER: ukiyo-e
[10] Hiroshige is regarded for his depiction of this phenomenon at Kambara and Kameyama. Henri depicted it "in New York," and Brueghel depicted some hunters in it.

## ANSWER: snow

[10] Ukiyo-e artists work in this medium, which involves carving images onto a certain surface. Albrecht Dürer is best known for his work with this medium.
ANSWER: woodcut [or woodblock printing]
6. One character tells Peter about his sordid affair with a fifteen-year-old Greek boy. For 10 points each:
[10] Name this play in which Jerry impales himself on his own knife.
ANSWER: Zoo Story
[10] This man wrote Zoo Story, along with The Sandbox and a work in which Martha calls George "a big fat flop" during their party.
ANSWER: Edward Albee
[10] Name that work, in which George and Martha play vicious party games with their guests Honey and Nick.
ANSWER: Who's Afraid of Virginia Woolf
7. It used tanks, aircraft, and highly mobile infantry and was effective in Poland and Russia . For 10 points each:
[10] Name this term meaning "lightning war" often used to describe the Nazi war machine. ANSWER: blitzkrieg
[10] This 1941 blitzkrieg of Russia was a betrayal of the Molotov-Ribbentrop pact.
ANSWER: Operation Barbarossa
[10] Operation Barbarossa stalled because of stiff Soviet resistance during the two-year siege of this city, now known as St. Petersburg.
ANSWER: Leningrad
8. Name these geographical features at the southern reaches of the Americas, for 10 points each.
[10] Separated from the mainland by the Strait of Magellan, this archipelago includes Monte Sarmiento and Monte Darwin, as well as the Beagle Channel.
ANSWER: Tierra del Fuego
[10] For all or nothing, Tierra del Fuego is shared between these two South American nations. ANSWER: Argentina and Chile
[10] Directly north of Tierra del Fuego is this semiarid region of southern Argentina, which is typically said to stretch from the Strait of Magellan to the Rio Colorado.
ANSWER: Patagonia
9. It is often measured in joules per kilogram per Kelvin. For 10 points each:
[10] Name this quantity, the amount of energy required to raise the temperature of a given amount of mass by one degree.
ANSWER: specific heat capacity [prompt on heat capacity]
[10] This scientist incorporated phonons into his model for determining heat capacity. He worked with Hückel on ionic activity, and he names a unit of molecular dipole moment.
ANSWER: Peter Debye
[10] This other thermodynamic quantity is the enthalpy change when one mole of a substance is created.
ANSWER: standard enthalpy of formation [or standard heat of formation]
10. The prelude to this work is known as "The Concert of Angels" and features elements of Gregorian chant and German folk song. For 10 points each:
[10] Name this somewhat lengthy opera that changes keys chromatically as quickly as the titular artist and lover of Ursula loses his mind.
ANSWER: Mathis Der Maler [or Mathis the Painter]
[10] This composer of the earlier opera Sancta Susanna and the ballet The Four Temperaments also wrote Mathis Der Maler.
ANSWER: Paul Hindemith
[10] The opera Turandot shares its name with the second movement of Hindemith's Symphonic Metamorphoses based on the works of this composer of the operas Euryanthe and Oberon.
ANSWER: Carl Maria Weber
11. Many legends concern Vishnu, the preserver, and his interactions with human affairs. For 10 points each:
[10] Vishnu appeared as a fish called Matsya to this first man while he was washing his hands in a river. This man was instructed to build a huge boat and wait out a great deluge.
ANSWER: Manu
[10] This avatar of Vishnu, his ninth, was once a mischievous butter thief born to Devaki and Vasudeva who later served as Arjuna's charioteer.
ANSWER: Krishna
[10] Krishna is also known for cavorting with the gopis, maids who tended after this animal sacred in Hinduism.
ANSWER: cow
12. Name some twentieth-century British authors for 10 points each.
[10] This man wrote about the Brangwen family in The Rainbow and Women in Love, though he is better known for Sons and Lovers and Lady Chatterley's Lover.
ANSWER: David Herbert Richards Lawrence
[10] This writer drew on his time serving in Sierra Leone during World War II for The Heart of the Matter and used a whiskey priest to chronicle Catholic persecution in Mexico in The Power and the Glory.
ANSWER: Graham Greene
[10] This satirist wrote about Tony Last being held captive and forced to read the works of Dickens in A Handful of Dust. He is also known for Decline and Fall and Brideshead Revisited. ANSWER: Evelyn Waugh
13. Name these leaders of the Reformation for 10 points each:
[10] This French author of Institutes of the Christian Religion set up shop in Geneva, which he turned into a heavily Protestant city.
ANSWER: John Calvin
[10] This Swiss reformer met Luther at the Marbug Colloquy and was killed during a Catholic attack on Zurich in 1531.
ANSWER: Huldrych Zwingli
[10] This Scottish reformer founded the Presbyterian Church.
ANSWER: John Knox
14. The axiom of choice is equivalent to showing that every one of these can be well-ordered.

For 10 points each:
[10] Name these objects, consisting of an unordered collection of elements without repeats. ANSWER: set
[10] This mathematician is responsible for the origination of set theory. He proved the set of real numbers was uncountable using a diagonalization argument.
ANSWER: Georg Cantor
[10] With Bernstein, Cantor names a theorem that states when an injective function exists from set $A$ to $B$ and one from $B$ to $A$, then there exists this kind of function between the sets. ANSWER: invertible [or bijective]
15. It is located in the Cornaro Chapel and includes golden rays behind the main marble figures.

For 10 points each:
[10] Name this sculpture that features the title saint writhing in pleasure as an angel prepares to stab her with an arrow.
ANSWER: The Ecstasy of St. Theresa
[10] This sculptor of The Ecstasy of St. Theresa also depicted the title nymph in the midst of turning into a tree in his Apollo and Daphne.
ANSWER: Giovanni Lorenzo Bernini
[10] Bernini's sculpture of this figure shows him clothed and in the midst of throwing a stone. Other famous depictions include Donatello's and a colossal nude one by Michelangelo.
ANSWER: David
16. This man considered ethical knowledge to be general knowledge in his Magna Moralia. For 10 points each:
[10] Name this philosopher who wrote about the same subject in his Nichomachaen Ethics, tutored Alexander the Great, and wrote Poetics, Politics, and Metaphysics.
ANSWER: Aristotle
[10] This ancient Greek philosophy held that ethics were needed to minimize harm and maximize happiness. It sought to reach an ideal state of tranquility known as ataraxia.
ANSWER: Epicureanism [accept word forms]
[10] Epicureanism was opposed to this other form of Greek philosophy that sought to stifle emotions. This school was founded by Zeno and revived by Marcus Aurelius.
ANSWER: Stoicism [accept word forms]
17. Brabantio attempts to prevent his daughter from marrying the title character in this play, and a dropped handkerchief is used to frame Cassio. For 10 points each:
[10] Name this Shakespeare tragedy about a "moor of Venice."
ANSWER: Othello
[10] Jealousy due to being passed over for promotion causes this husband of Emilia to orchestrate the events in Othello that lead to Desdemona's murder.
ANSWER: lago
[10] lago is assisted by this man, who secretly loves Desdemona. lago stabs him to death at the same time as he attempts to kill Cassio.
ANSWER: Roderigo
18. He calls himself "conservative, but not a zombie" and "an opinion person." For 10 points each:
[10] Name this conservative TV and radio commentator, the author of The Real America:
Messages from the Heart and Heartland.
ANSWER: Glenn Beck
[10] In an interview with this Minnesota representative, the first Muslim ever elected to Congress, Beck implied that he might be working against the United States.
ANSWER: Keith Ellison
[10] Beck titled his latest publication An Inconvenient Book as a parody of this failed presidential candidate’s An Inconvenient Truth.
ANSWER: AI Gore
19. When he was elected to the Second Continental Congress, he was suspected of being a British spy, and he was sent as a representative to France. For 10 points each:
[10] Name this Philadelphian statesman during the American Revolution who published Poor Richard's Almanack.
ANSWER: Benjamin Franklin
[10] Franklin proposed an early plan for all of the American colonies to unite at the conference named for this city in New York in 1754.
ANSWER: Albany Congress
[10] The Albany Congress focused on allying with this confederacy of tribes, which included the Onandaga and Mohawk.
ANSWER: Iroquois
20. An accumulation of gangliosides results from a deficiency in hexosaminidase-A, leading to early death for individuals with this disorder. For 10 points each:
[10] Identify this disease, indicated by a red spot in the retina and most common among Ashkenazi Jews.
ANSWER: Tay-Sachs disease
[10] Hexosaminidase A deficiency causes ganglioside buildup in these organelles.
ANSWER: Iysosome
[10] Release of lysosomal contents was once thought to cause cell death, but now it is known that programmed cell death occurs through this process.
ANSWER: apoptosis
21. His work on the book Profiles in Courage won him a Pulitzer prize, although it was revealed that much of it was written by an assistant. For 10 points each:
[10] Name this president who created the "New Frontier" program and who was assassinated by Lee Harvey Oswald.
ANSWER: Johnathan Fitzgerald Kennedy [prompt on Kennedy; prompt on JFK]
[10] This fiasco occurred during Kennedy's presidency. In it, a group of Cubans were sent to the namesake location to try and overthrow Castro, but they were abandoned by their American help.
ANSWER: Bay of Pigs Invasion
[10] This man was made the first head of the Peace Corps during Kennedy's presidency. He ran for vice president in 1972 and later headed the committee for the Special Olympics.
ANSWER: Sargent Shriver
22. One incident in this work sees the protagonist kill and eat his ox during a drought and famine. For 10 points each:
[10] Name this novel in which Wang Lung struggles to survive while the House of Hwang declines.
ANSWER: The Good Earth
[10] This author wrote The House of Earth trilogy, which includes Sons and A House Divided in addition to The Good Earth.
ANSWER: Pearl S. Buck
[10] This is the name of Wang Lung's wife, who stoops to begging in the Southern City so the family can survive.
ANSWER: O-Lan
23. Its moment for a hollow sphere is two-thirds the product of the mass and radius squared. For 10 points each:
[10] Name this quantity, the resistance of a mass to change in motion.
ANSWER: inertia
[10]] This "principle of inertia" states, simply, that "objects in motion tend to stay in motion."
ANSWER: Newton's first law [accept word equivalents]
[10] This quantity described in Newton's second law is defined as the time integral of force. ANSWER: momentum

