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

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Fall 2008 ACF-Format Set \#2

Round 1
Tossups

1. Aizwal and Agartala are capitals of the "seven sister" states that lie in this country's east, and Ooty is a tourist spot in its Nilgiri mountains. Mount Abu is located in this country's Aravalli hills, and the Rann of Kach can be found on this country's west. The Palk Strait separates it from the island nation south of it, and its peninsula is bounded by the Eastern and Western Ghats, but is mostly made of the Deccan plateau. It is home to states like Gujarat and Rajasthan. For 10 points, what country, with capital New Delhi, is the namesake of the Indus River?
ANSWER: Republic of India
2. One of this singer's songs claims "sometimes I hear death knocking at my front do'," while another dedicates its album "to all the teachers who told me l'd never amount to nothin'." In addition to "Everyday Struggle" and a song where he claims "It was all a dream," "Juicy," the chorus tells him "I just love your flashy ways" in "Hypnotize," and he helped launch Sean Combs' Bad Boy Records with songs like "Big Poppa" and "Mo Money Mo Problems." For 10 points, name this rapper behind Ready to Die, best known for a feud with Tupac Shakur that may have caused the deaths of both men.
ANSWER: The Notorious B.I.G. [or Biggie Smalls; or Christopher Wallace]
3. One author from this country wrote about a man who murders the families of his employers and converts to Christianity before being hanged in The Chant of Jimmy Blacksmith. Another author from this country wrote about a bet on transporting a glass cathedral made by the two title gambling addicts. Another author details a German immigrant's expedition across the heartland of this country in Voss. For 10 points, name this home of Thomas Keneally, Patrick White, and the author of Oscar and Lucinda and The True History of the Kelly Gang, Peter Carey.
ANSWER: Australia
4. This man depicted two cherubs holding a cross atop a black cloud in his Pesaro Altarpiece. A nude woman embraces a man holding a staff in one hand and the leashes of some dogs in the other in his Venus and Adonis, while two leopards draw a chariot in his Bacchus and Ariadne. Cupid reaches his hand into a white stone pool between two women in his Sacred and Profane Love, and another work shows a maid looking through a chest behind a reclining nude. For 10 points, name this student of Giorgione who painted the Venus of Urbino.
ANSWER: Titian [or Tiziano Vecellio]
5. A history on this man was written by his brother-in-arms Velleius Paterculus, and his reign saw the growth of delation prosecutions. He was smothered to death by the Praetorian commander Macro, and, regarding his successor, he stated that "I am nursing a viper in Rome's bosom." While serving his predecessor, he defeated Arminius. Sejanus was the effective leader for much of his reign, and this man designated Caligula as his successor. For 10 points, name this adopted son of Augustus, the second Roman emperor.
ANSWER: Tiberius Caesar Augustus [or Tiberius Claudius Nero]
6. The Einstein-Debye model divides this quantity into electronic and vibrational types. This quantity is equal to roughly 25 joules per mole kelvin for all metals around room temperature by the Law of Dulong and Petit, and it can be found by dividing the amount of heat added to a substance by that substance's mass and the resulting change in temperature. For 10 points, name this amount of heat needed to raise the temperature of one gram of a substance by one degree Celsius, which is defined as one calorie per gram degree Celsius for water.
ANSWER: specific heat capacity
7. One of this author's works contains a chapter entitled "Of Slavery," which may be a justification for his involvement in writing the pro-slavery Fundamental Constitutions of Carolina. This writer equated subordination to "but the state of war continued" and examined the history of the world since the Bible to find no "heir of Adam," attacking Robert Filmer's Patriarcha. His An Essay Concerning Human Understanding describes the empiricist belief in the "tabula rasa," and his major political work disputes Thomas Hobbes. For 10 points, name this author of Two Treatises on Government.
ANSWER: John Locke
8. Works attributed to this poet as a young man include The Catalepton, which includes a short poem about a mosquito, "Culex." His first major work was inspired by Theocritus and consists of ten parts extolling the virtues of nature. His second major work was inspired by Hesiod and is a sort of manual for farming. His most famous work contains characters like Lavinia and Turnus and links the fall of Troy to the founding of Rome. For 10 points, name this Latin author of The Eclogues, The Georgics, and The Aeneid.
ANSWER: Publius Vergilius Maro
9. With Lance Shotland, this man studied the antisocial effects of television. He also created a method of gaging public opinion through response to addresses in his lost-letter technique. The author of The Individual in a Social World, he tracked packages from Omaha to Boston in his small world experiment, and found that sixty-five percent of "teachers" would continue to operate his machine even after actors feigned great pain from electric shocks. For 10 points, name this Yale researcher, known for his obedience experiment.
ANSWER: Stanley Milgram
10. One man by this name described a law pertaining to the magnetization of a substance being proportional to the applied magnetic field. One quantity known by this name was defined according to the equilibrium concentration of radon; that quantity is equal to thirty-seven billion Becquerel. Another person who adopted this name discovered artificial radioactivity in boron and aluminum, and another person of this name won a Nobel Prize in chemistry for her discovery of radium and polonium. For 10 points, identify this name shared by husband and wife Pierre and Marie.
ANSWER: Curie [accept Frederic-Joliot Curie in the first sentence]
11. In one story, this figure is given gloves and a magical belt by Grid, which he uses to kill Gerriod. In another story, he prevented his daughter from marrying Alvis by allowing that dwarf to be petrified by daylight. In a contest rigged by a giant, this god was unable to lift up the paw of a cat, which turned out to be the Midgard Serpent, the creature that eventually kills him during Ragnarok. For 10 points, name this son of Odin, the Norse god of thunder.
ANSWER: Thor [or Donar]
12. Yahya Khan was forced to give up power in this nation after a war prompted by the electoral success of Mujibar Rahman. That war was fought by the Mukhti Bhini. This nation's creation was originally proposed by Muhammad Iqbal. Later, Ishaq Khan dismissed the government of Nawaz Sharif. This country was created thanks to Mohammed Ali Jinnah's efforts with the All India Muslim League. For 10 points, name this nation that once controlled Bangladesh and that was led by the Bhuttos. ANSWER: Islamic Republic of Pakistan [or Islam-i Jamhuriya-e Pakistan]
13. The "anti-" version of this property can give rise to geometrical frustration and occurs above the Neel temperature. Heusler alloys exhibit this property, which occurs because of namesake "domains." Hysterisis in materials with this property causes domains to resize and creates the popping noises observed in the Barkhausen effect. This property can be modeled with the Ising model, and it occurs below the Curie temperature. For 10 points, name this property possessed by nickel, cobalt, and its namesake metal, iron.
ANSWER: ferromagnetism [or ferromagnets; prompt on magnetism or magnets]
14. Minor characters in this novel include the housekeeper Zillah and the intensely religious servant Joseph. This novel ends with the marriage of Hareton to a girl who teaches him to read. Mostly narrated by Nelly Dean, it focuses on a man who gains control of Thrushcross Grange as part of his revenge on Isabella and Edgar Linton, and it begins with Mr. Lockwood visiting the title location. Published under the pseudonym Ellis Bell, for 10 points, name this book about Heathcliff's love for Catherine Earnshaw, the only novel by Emily Bronte.
ANSWER: Wuthering Heights
15. He created a work where a men's chorus enters for a chorale-like accompaniment of a contralto soloist in his Alto Rhapsody. His last orchestral work is his concerto for violin and cello in A minor, and Joseph Joachim wrote the cadenza to his Violin Concerto. He set "Gaudeamus Igitur" in a work that commemorates his honorary degree from the University of Breslau, The Academic Festival Overture. That work is often contrasted with his Tragic Overture. For 10 points, name this composer of a symphony nicknamed "Beethoven's Tenth," as well as a lullaby.
ANSWER: Johannes Brahms
16. A concrete rectangle bisects a glass dome in this architect's Meyerson Symphony Center, and he utilized a large reflecting pool for the Christian Science Center. With Henry Cobb, he designed Boston's John Hancock Tower. Another of his works features several cars hanging from the ceiling and a blackgridded white building extending above Lake Erie, as well as his signature glass pyramids. For 10 points, name this designer of the Rock and Roll Hall of Fame and the Louvre Pyramid, a Chinese-born architect. ANSWER: leoh Ming Pei
17. Brown numbers are pairs of numbers [ $m, n$ ] such that $m$ squared minus one equals this function of $n$. This function appears in the denominator of the formula used to compute Catalan numbers. It can be defined as the integral of the product of an exponential and a polynomial. It is equivalent to the gamma function for positive integers, and it also appears in the formula for permutations and combinations. For 10 points, name this function, usually denoted with an exclamation point, which for a positive integer $n$ equals the product of all positive integers less than or equal to $n$.
ANSWER: factorial [prompt on exclamation point]
18. In one novel that has this animal in the title, Newt marries a Russian midget named Zinka, and a trip to the island of San Lorenzo, where Bokononism is practiced, finds Papa Monzano swallowing ice-nine. In a play that mentions this animal in the title, the machinations of Gooper and memories of the gay acquaintance Skipper fail to prevent Maggie and Brick Pollitt from inheriting the estate of Big Daddy. For 10 points, name this creature found "on a hot tin roof" in a Tennessee Williams work, which, in a Kurt Vonnegut novel, has a "cradle."
ANSWER: a cat
19. One of the protagonist's only friends in childhood is the gamekeeper Black George, and he is tutored by the constantly arguing pair of Mr. Square and Mr. Thwackum. The protagonist of this novel has an affair with Mrs. Waters, who used to be the servant Jenny Jones, and was paid off by Bridgit Blifil, the title character's true mother. Through his good deeds, the protagonist secures the love of Sophia Western and becomes the heir of his foster father Squire Allworthy, who had discovered him as a foundling. For 10 points, name this novel by Henry Fielding.
ANSWER: The History of Tom Jones, a Foundling
20. One leader of this country established a standing mercenary army under Black John Haugwitz, the so-called Black Army, and was known for his symbol of a raven. In addition to Matthias Corvinus, it was ruled by Ferenc Szalasi and the Arrow Cross Party after Germany's Operation Panzerfaust. It experienced a red terror in 1919 under Bela Kun. Imre Nagy (NAJ) presided over its failed 1956 revolution, crushed by a Soviet invasion. For 10 points, name this nation that was once part of a Dual Monarchy with Austria.

## ANSWER: Hungary

21. One conflict in this state over land frauds in the Neutral Ground was known as the war with the "Modulators," and one leader here issued the disastrous "Redbacks" currency. The Caddo confederacies of Native Americans were found here, and one politician from here signed the Civil Rights Act of 1964 and advocated the "Great Society." The Battle of San Jacinto was won in this state, which later prompted the Mexican-American War by claiming its border was on the Brazos. For 10 points, name this home state of Lyndon Johnson, the site of John F. Kennedy's killing in Dallas.

## ANSWER: Texas

22. This play opens with a watchman spotting a beacon and a herald announcing the return of the title character. This play is set in the city of Argos, where the curse on the House of Atreus flares up. The protagonist's wife is still upset about him sacrificing her daughter Iphigenia, and, with Aegisthus, kills him and his slave Cassandra. This play precedes The Libation Bearers and The Eumenides in the Oresteia trilogy. For 10 points, identify this play, named after a figure who led the Greek forces during the Trojan War.
ANSWER: $\underline{\text { Agamemnon }}$

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Bonuses

1. Name these British authors, for 10 points each.
[10] This author wrote A Dialogue of Comfort of Tribulation after being locked in the Tower of London. He described an ideal society in Utopia.

## ANSWER: Thomas More

[10] This author of The Way of All Flesh parodied Victorian society in his utopian novel Erewhon. ANSWER: Samuel Butler
[10] Flapping Eagle goes to Calf Island to meet the title character of this man's fantasy Grimus. His more controversial works include Midnight's Children and The Satanic Verses.

## ANSWER: Salman Rushdie

2. He argued against universal male suffrage at the Massachusetts Constitutional Convention, and he wrote the Hulsemann letter to explain why the U.S. was involved in Hungary. For 10 points each: [10] Identify this statesman, who names a treaty concluding the Caroline affair along with Ashburton. ANSWER: Daniel Webster
[10] Webster had a series of debates with this other senator, closing with the line "Liberty and Union, Now and Forever, One and Inseparable!"
ANSWER: Robert Young Hayne
[10] Webster argued this case for his alma mater. Its holding suggested that a school's charter is a contract as protected by the Constitution, preventing New Hampshire from deprivatizing a college. ANSWER: Trustees of Dartmouth College $v$. Woodward [accept either, in either order]
3. This author wrote a crazy time-jumping novel that features Philip II of Spain and Elizabeth I. For 10 points each:
[10] Name this novelist of Terra Nostra, who also wrote about a businessman who recounts his life on his deathbed in The Death of Artemio Cruz.

## ANSWER: Carlos Fuentes

[10] Fuentes hails from this country, whose other great writers have included Sor Juana Inez de la Cruz, Pedro Paramo author Juan Rulfo, and The Underdogs author Mariano Azuela.

## ANSWER: Mexico [or United Mexican States]

[10] Fuentes also wrote a novel called The Old Gringo, which imagines the last days of this author of "An Occurrence at Owl Creek Bridge" and The Devil's Dictionary. ANSWER: Ambrose Gwinnett Bierce
4. Einstein equations are used to describe the curvature of space-time in this theory. For 10 points each:
[10] Name this theory, which describes frame-dragging and time dilation, and is distinguished from its "special" counterpart.

## ANSWER: general relativity

[10] This phenomenon occurs when photons passing through a gravitational field lose energy and thus have an increased wavelength.
ANSWER: gravitational redshift
[10] This effect explains the redshift and blueshift of photons. It is exemplified by the change in pitch and intensity of siren as the source moves with respect to the viewer.
ANSWER: Doppler effect
5. Name these Flemish Baroque painters, for 10 points each.
[10] This painter of a Self-Portrait with a Sunflower may be best known for his multiple portraits of Charles I of England, including the "triple portrait" and one "in hunting dress."
ANSWER: Anthony van Dyck
[10] This creator of Peasant Wedding Feast and The Tower of Babel depicted a hundred sayings of his homeland in the Netherlandish Proverbs.
ANSWER: Pieter Brueghel the Elder
[10] The Massacre of the Innocents, Hippopotamus Hunt, and The Disembarkation at Marseilles are among the works of this painter, the namesake of some voluptuous female figures.
ANSWER: Peter Paul Rubens
6. Erich Honecker became leader of this country following the resignation of Walther Ulbricht. For 10 points each:
[10] Name this no-longer-existing country that was the focus of Willy Brandt's Ostpolitik policy in the 1970s.
ANSWER: East Germany [or GDR; or German Democratic Republic; or DDR; or Deutsche Demokratische Republik; or Ostdeutschland]
[10] The people of East Germany were suppressed by this hated secret police force that was modeled after the KGB and boasted as many as two million informants.
ANSWER: Stasi [or Ministerium fur Staatsicherheit; or Ministry for State Security]
[10] This Christian Democrat and chancellor of West Germany became chancellor of a reunified Germany in 1990, and his party lost the 1998 parliamentary elections to Gerhard Schroeder.
ANSWER: Helmut Kohl
7. Name these functions that are not differentiable everywhere, for 10 points each.
[10] This function is either zero, one, or undefined for $x$ equals zero, but it is always negative one for $x$ less than zero and one for $x$ greater than zero.
ANSWER: sgn [accept sign]
[10] This function multiplies $x$ by its sign, so that for $x$ less than zero, the output of this function is negative $x$, but for $x$ greater than or equal to zero, its output is just $x$.
ANSWER: absolute value
[10] This function rounds a real number down to the nearest integer. For instance, this function would take input $x=6.25$ and give an output of 6 .
ANSWER: floor [or greatest integer function; or integer value function; or truncation or its word forms; prompt on "int"]
8. It is home to the Chamizal National Monument. For 10 points each:
[10] Identify this Texas city, which lies on the Rio Grande across from the Mexican city Ciudad Juarez.
ANSWER: El Paso
[10] This Texas panhandle city lies on the Old Route 66 and is home to an installation of ten Cadillacs adorned with graffiti that are half-buried.

## ANSWER: Amarillo

[10] This large city is home to the George H. W. Bush Intercontinental Airport. Among its major places of entertainment are the Astrodome and the Toyota Center.
ANSWER: Houston
9. Name these languages of South America, for 10 points each.
[10] This is the most common first language in South America, due to the immense population of Brazil. ANSWER: Portuguese
[10] Though losing ground to Sranang Tongo and English, this is still the predominant language of Suriname.
ANSWER: Dutch
[10] The most commonly spoken indigenous language of the Western Hemisphere is this tongue with millions of speakers in Bolivia and Peru, the former official language of the Incan Empire.
ANSWER: Quechua
10. Despite once praising Adolf Hitler's employment policies, he led the Alliance for Austria's Future Party and served as Governor of Carinthia. For 10 points each:
[10] Name this far right Austrian politician who was killed in an October 2008 car accident.

## ANSWER: Jorg Haider

[10] Austria, in addition to Uganda, Japan, Mexico, and Turkey, was recently elected to this branch of the United Nations that is involved in maintaining international peace.
ANSWER: Security Council
[10] Austria beat out this other European country, which received eighty-seven votes, for a spot on the UN Security Council. This northern country saw the collapse of its banking system in October 2008.
ANSWER: Iceland
11. In one incarnation, this goddess married Rama. For 10 points each:
[10] Name this Hindu goddess of wealth and prosperity.
ANSWER: Lakshmi [accept Mahalakshmi; accept Sita; accept Radha]
[10] In her incarnation of Radha, Lakshmi was married to this blue-skinned god, slayer of Kamsa and friend of Arjuna.
ANSWER: Krishna
[10] The Vaishnava believe that Krishna is an avatar of this Hindu god, a member of the Trimurti. He is often known as the "preserver."
ANSWER: Vishnu
12. Answer the following related to sex-chromosome aneuploidies, for 10 points each: [10] Often also named for Ullrich, this syndrome affects females who lack part or all of an $X$ chromosome and sees such physical abnormalities as webbed necks and horseshoe kidneys. ANSWER: Ullrich-Turner syndrome
[10] Males with this condition have at least two $X$ chromosomes and small testicles, reducing their fertility. This conditions manifests as hypogonadism, meaning too much FSH and LH.
ANSWER: Klinefelter's syndrome
[10] This term, referring to abnormal separation during meiosis, is the cause of Turner and Kleinfelter's syndromes. One instance of it causes trisomy, which occurs in Down's syndrome.
ANSWER: nondisjunction
13. He was executed during the Thermidorian Reaction after sending many others to the guillotine, including his political rival Georges Danton. For 10 points each:
[10] Name this leader of the Committee of Public Safety during the French Revolution, who presided over the Great Terror.
ANSWER: Maximilien Francois Marie Isidore de Robespierre
[10] As a Deputy of the Third Estate, Robespierre was one of the men to sign this document establishing the National Assembly after being locked out the normal Versailles meeting hall.

## ANSWER: Tennis Court Oath

[10] The move to create the Tennis Court Oath was led by this later supporter of Napoleon and author of the pamphlet What is the Third Estate?
ANSWER: Abbé Emmanuel Joseph Sieyès
14. Members of this denomination believe that Abu Bakr was the true successor of Muhammad, rather than the Prophet's son-in-law Ali. For 10 points each:
[10] Name this sect of Islam, the largest by number of practitioners.

## ANSWER: Sunni Islam

[10] The major collections of these sayings of the prophet Muhammad are only accepted by Sunnis due to being collected by Abu Bakr and his followers.

## ANSWER: Hadith

[10] Followers of this mystical school of Islam are, in general, Sunnis. Whirling dervishes are members of this school, and followers wear namesake wool garments.
ANSWER: Sufism
15. The author of this book wrote that his goal was "to wake my neighbors up" in its section "Where I Lived, and What I Lived For." For 10 points each:
[10] Name this book, subtitled "life in the woods," which asserts that "the mass of men lead lives of quiet desperation," and describes a year the author spent near the title pond.
ANSWER: Walden, or Life in the Woods
[10] This author of the essay "Civil Disobedience" wrote Walden.
ANSWER: Henry David Thoreau
[10] Thoreau wrote "my thoughts are murder to the state" and compared the United States to "the empire of hell" in a speech about "slavery in" this location.
ANSWER: Massachusetts
16. The Moum and Lecce methods are frequently used in this form of analysis. For 10 points each:
[10] Name this calculation of quantitative aspects of chemical reactions, such as moles and masses of substances, which requires balanced chemical equations prior to analysis.
ANSWER: stoichiometry
[10] This chemical determines the progress of a reaction, as it is available in lesser quantities than the full proportion of reacting substances requires.
ANSWER: limiting reagent
[10] This measure of the amount of a reacting substance corrects for valence, as that is the amount per mole of electrons. Oxygen has a value of eight atomic mass units for it, though it weighs sixteen amu.
ANSWER: equivalent weight
17. His short stories include "The Facts in the Case of the Great Beef Contract." For 10 points each: [10] Name this American author of Letters from the Earth, who attacked belief in racial superiority in his novel about Tom Driscoll and Valet de Chambre, Pudd'nhead Wilson. ANSWER: Mark Twain [or Samuel Clemens]
[10] In this Twain novel, the title character gets caught up in a duel between the Shepherdsons and the Grangerfords and helps the escaped slave Jim earn his freedom.
ANSWER: The Adventures of Huckleberry Finn
[10] Nineteen leading citizens of the title location lie to attempt to claim a forty thousand dollar reward offered by a vengeful stranger in this short story by Twain.
ANSWER: "The Man That Corrupted Hadleyburg"
18. This opera features a namesake chord: F, B, D sharp and G sharp. For 10 points each:
[10] Name this opera that includes the "Liebestod" scene and centers on the love between the titular knight and princess from Celtic mythology.

## ANSWER: Tristan and Isolde [or Tristan und Isolde]

[10] Tristan and Isolde was created by this German composer, whose operas, including The Flying Dutchman and Parsifal, often feature numerous leitmotifs.
ANSWER: Richard Wagner
[10] Richard Wagner designed the Festspielhaus in this German city specifically for presenting his own colossal operatic productions.
ANSWER: Bayreuth
19. This cycle begins with nitrogen fixation, catalyzed by rubisco. For 10 points each:
[10] Name this cycle, also known as the dark cycle, that creates G3P.
ANSWER: Calvin cycle [or citric acid cycle]
[10] The Calvin cycle requires the input of nine of this molecule, colloquially known as the "energy currency of the cell."
ANSWER: ATP [or adenosine triphosphate]
[10] The rubisco required for the Calvin cycle can also react with O 2 to undergo the "photo" version of this process. The "cellular" form turns glucose into ATP.
ANSWER: respiration [or cellular respiration; or photorespiration]
20. A drunk Alexander Glazunov directed the disastrous premiere of this man's first symphony, prompting him to take hypnotherapy. For 10 points each:
[10] Name this composer of the Prelude in C Sharp Minor and a piano work based on La Folia, Variations on a Theme of Corelli.
ANSWER: Sergey Vasilyevich Rachmaninoff
[10] Rachmaninoff quoted the "Dies Irae" chant in a rhapsody based on the twenty-fourth violin Caprice by this man, a famously talented Italian violinist.
ANSWER: Niccolo Paganini
[10] Rachmaninoff set this poem about a feature of a church, written by Edgar Allen Poe, into what he called a "choral symphony." In it, Rachmaninoff quotes the "Dies Irae" chant.
ANSWER: The Bells [or Kolokola]
21. Examples include Bernart Marti, Cercamon, and Peire de Valeira. For 10 points each:
[10] Name this class of medieval composers and performers, popular in western Europe during the Middle Ages.
ANSWER: troubadours
[10] This fifteenth-century French poet lived the hobo life of a troubadour, but many of his works like his Ballade des Pendus, The Grand Testament, and The Petit Testaments survive.
ANSWER: Francois Villon
[10] This troubadour work depicts the death of the title knight of Charlemagne, who was ambushed at Roncevaux Pass by some Moors.
ANSWER: The Song of Roland [or La Chanson de Roland]
22. In it, an invading force quickly overcame the British garrison in Stanley. For 10 points each:
[10] Name this war, where Argentina seized South Georgia and the South Sandwich group in the namesake islands before being beaten back by Britain.
ANSWER: Falklands War
[10] This "iron lady" led the British response in the Falklands war, which helped her win re-election as prime minister.
ANSWER: Margaret Thatcher
[10] This man, who had led attacks on dissenters from Jorge Videla's regime, was removed as Argentine president after the failure of the Falklands war and placed under house arrest.
ANSWER: Leopoldo Galtieri

