



# HSAPQ

## High School Academic Pyramid Questions

Fall 2008  
ACF-Format Set #2

Round 8

Tossups

1. This figure attacked Oechalia due to being cheated out of the prize in an archery competition, killing Eurystus and his sons. It was for the murder of Iphitus that he was forced to serve Omphale for three years. Philoctetes got his bow after his death and he killed Hippolyta while serving Eurystheus. Eurystheus also asked him to trick Atlas into getting him some golden apples and to kill the Stymphalian Birds and the Nemean Lion. For 10 points, name this son of Zeus and Alcmene who completed twelve labors and was really strong.

ANSWER: Heracles [or Hercules]

2. A girl is exposed as a man in drag at the end of one of his plays, which sees Sir Dauphine Eugenie tolerate his uncle Morose's hatred of noise. In addition to *Epicoene*, one of his plays sees Subtle and Face dupe Pertinax Surly and Sir Epicure Mammon, and another features a man named Sir Politic Would-Be. His best-known poem begins "Drink to me only with thine eyes," and is titled "To Celia." For 10 points, name this playwright of *The Alchemist* and *Volpone*.

ANSWER: Ben Jonson

3. He composed a violin concerto that ends with a capriccio after a toccata and two arias are played, and one of his atonal works is a setting of *The Owl and the Pussycat*. One of his early orchestral works depicts *Fireworks*, and this composer of the *Dumbarton Oaks* concerto used a high register bassoon to open one work that is divided into *The Dance of the Earth* and *The Sacrifice*. Along with that work, he scored a ballet about Ivan Tsarevich and the evil Katschei. For 10 points, name this composer of *The Firebird* and *The Rite of Spring*.

ANSWER: Igor Feodorovich Stravinsky

4. The Prandtl number is the ratio of this quantity to thermal diffusivity. Euler's equation is used if this quantity is assumed to be negligible, and it can be measured in either stokes or poise. The Reynolds number is equal to the ratio of inertial forces to forces attributable to it. The kinetic type is equal to the dynamic type divided by the density, and this quantity is constant in Newtonian fluids. For 10 points, give this term for a fluid's resistance to flow.

ANSWER: viscosity [accept kinetic viscosity before "poise"]

5. It arises from the McNeil River in the Pelly Mountains, and its main headwaters are located in Atlin Lake and Tagish Lake. Some of its tributaries include the Tanana and Porcupine, and it empties into the Norton Sound. It is dammed south of Whitehorse, and one of its tributaries is the Klondike River. For 10 points, name this river that flows through its namesake Canadian territory that served as a major route during the gold rush of 1897 to 1898.

ANSWER: Yukon River

6. He was ordered by Le Duan to make his interests subordinate to Duan's, and he created the "Office 100" as an insurgency base. Declaring year zero after overthrowing Lon Nol, he attempted to triple his nation's agricultural production despite having no fertilizer or modern equipment as part of his four year plan. Arrested by Ta Mok after hiding in rebel bases in Thailand, he is perhaps most notorious for his killing fields. For 10 points, name this man who overthrew Norodom Sihanouk and created the Khmer Rouge, a dictator of Cambodia.

ANSWER: **Pol Pot** [or **Saloth Sar**]

7. Lack of anger, extreme tallness, and wish fulfillment by kalpa trees were experienced by people born in the Suṣāma-suṣamā era prophesized by this faith. Its underworld is the Adho Loka, and a mirror and a fish couple are two of its Eight Auspicious Symbols. The aim of one of its rituals is to transcend the jiva to experience Atman; this meditation is known as Samayika. The Digambara sect of this faith is notorious for its nudity, but preaches ahimsa and venerates the 24<sup>th</sup> tirthankara. For 10 points, name this Indian religion whose tenets were laid out by Mahavira.

ANSWER: **Jainism**

8. This author's sketches for *Harper's* include "The Paradise of Bachelors and the Tartarus of Maids." He wrote about an aspiring New York writer paralyzed by a vision of Enceladus in his novel *Pierre*, and memorialized his friend Jack Chase in *White-Jacket*. He wrote about a slave rebellion aboard the *San Dominick* which is put down by Amasa Delano in his story "Benito Cereno." Another of his novels includes characters like Starbuck and Queequeg, as well as the chapter "The Whiteness of the Whale." For 10 points, name this American author of *Moby-Dick*.

ANSWER: Herman **Melville**

9. She recorded the single that broke a world record for most downloads in 30 minutes, a cover of "A Moment Like This," and a bonus track on her debut album is "Footprints in the Sand." She discusses "his love not pass[ing] the test" in the Akon-produced "Forgive Me," and this winner of X-Factor sings "I couldn't turn on the TV" in one single. Known for singing "my heart's crippled by the vein that I keep on closing," for 10 points, name this singer of "Better in Time," whose album *Spirit* includes the song about how "you cut me open," "Bleeding Love."

ANSWER: Leona **Lewis**

10. Patients with Balint Syndrome give insight into the neurological origins of this process. Donald Broadbent introduced the first information theory-based theory of it, and for a time dichotic speech was one stimulus used to quantify it. A "blindness" caused by lack of it was shown in a 1999 study, in which participants failed to see a person in a gorilla suit because they had been instructed to count the number of passes made during a video. For 10 points, name this term for the cognitive process that allows humans to selectively concentrate on specific objects.

ANSWER: **attention**

11. A small, obscured dog veers off to the right in this painting, taking note of a scarecrow or plowman positioned next to an abandoned wooden boat. The artist of this work reflected on his earlier *Wivenhoe Park* to divide the complexion of the cloudy sky, with the stormier half above a set of tall trees. Across from those trees is a turning water wheel, providing energy for the mill which prominently occupies its western part. Two black horses pull the title object, in which one man has his whip raised. For 10 points, identify this painting of a cart by John Constable.

ANSWER: *The* **Hay Wain**

12. In 1967, Roman Herzog apologized for this event, whose casualties were exacerbated by the fact that Mondays are typically market days for the city in question. Incidentally sparing the Casa de Jontas and an ancient oak stump and carried out by Junker and Heikel bombers, it was a joint operation by the Italian air force and the Luftwaffe. For 10 points, name this Franco-endorsed attack on a Basque town, commemorated by a Picasso painting.

ANSWER: **bombing of Guernica** [or obvious equivalents]

13. The title character of this work learns that an old friend is visiting when she reads a card on a bouquet of flowers that Bertha places on the piano. One death in this work occurs in Madame Diana's boudoir. The title character's jealousy of Thea leads her to burn a manuscript, and she commits suicide after Judge Brack threatens to reveal why Eilert Lovborg committed suicide. For 10 points, name this play whose title character is George Tesman's wife, written by Henrik Ibsen.

ANSWER: **Hedda Gabbler**

14. One analog of this concept is named after Tolman, Oppenheimer, and Volkov. Its namesake solved three cases of the Lane-Emden equation. The denominator of the formula used to calculate it includes the square of the number of nucleons per electron, and Schonberg's name is sometimes appended to it. Equal to approximately 1.4 solar masses, for 10 points, name this theoretical maximum mass a white dwarf can obtain before collapsing in on itself and forming a black hole, a limit named after an Indian physicist.

ANSWER: **Chandrasekhar** Limit

15. Along with his commander, General Dumouriez, this man defected to Austria. Louis Blanc and Pierre-Joseph Proudhon were among those to lead the opposition against this man, which culminated in a working class revolution. This member of the House of Orleans didn't declare for Henry V, allowing the Chamber of Deputies to make him monarch instead, and he established the title "King of the French." For 10 points, name this man who ruled France in the July Monarchy until the 1848 Revolution.

ANSWER: **Louis-Philippe** of France

16. This term refers to a property whose extension causes the UV absorption wavelength of an organic compound to decrease by 30 nanometers according to the Woodward Feiser rules. Only dienes which exhibit this property can participate in the Diels Alder reaction, and it is associated with delocalization of electrons. This word also describes the species in the numerator of the logarithm function in the Henderson Hasselbalch equation. For 10 points, identify this word which describes the type of base that results from the deprotonation of an acid.

ANSWER: **conjugate** [accept word forms; prompt on "electron delocalization" until mentioned]

17. Two earlier versions of this work were composed by Ferdinand Herold, and Marius Petipa was this work's librettist. Late in this work, Bluebird, Princess Florine, the White Cat, and Puss in Boots all arrive with the intention to party. Carabosse hides a needle in a bouquet of flowers, but the Lilac Fairy causes the title character not to die, and she is eventually saved by Florimund. Based on a Charles Perrault fairy tale, for 10 points, name this Peter Tchaikovsky ballet about Aurora, a dormant princess.

ANSWER: *The* **Sleeping Beauty** [or *Spashchaya Krasavitsa*; or *La Belle au bois dormant*]

18. After failing as a banker, this man became superintendent of a Louisiana military academy with the help of his friends Braxton Bragg and P.G.T. Beauregard, and his former adversary Joseph Johnston was a pallbearer at his funeral. Regarding running for president, he stated that he would not run if nominated or serve if elected, and he presented Savannah as a Christmas present to Abraham Lincoln in 1865. For 10 points, name this Civil War general who decided to "make Georgia howl" in his March to the Sea.

ANSWER: William Tecumseh **Sherman**

19. Their function is inhibited by the ABA hormone, and Zeaxanthin is involved in the activation of these structures. Transport of protons from the cytoplasm causes their activation with the uptake of potassium ions. They are inactive during the day in organisms that use malic acid in their metabolism, and they involve the opening and closing of two guard cells to allow for the diffusion of gases, called transpiration. For 10 points, identify these structures, which are involved in the exchange of carbon dioxide and water vapor in plants.

ANSWER: **stomata** [or **guard** cells]

20. For many years, this author lived with Mr. and Mrs. Henry Thrale. This author of *The False Alarm* coined the term "metaphysical poetry" in his *Lives of the Most Eminent English Poets*. He attacked rebellious American colonists in *Taxation no Tyranny*, and wrote the essays collected in *The Idler* and *The Rambler*. Another work describes how he refuted Bishop Berkeley's idealism by kicking a stone. For 10 points, name this eighteenth century British author whose life was chronicled by James Boswell and who compiled a dictionary of the English language.

ANSWER: Samuel **Johnson**

21. A limit to the best lossless compression is titled after this concept and is named for Shannon, who published it in "A Mathematical Theory of Communication." Schrödinger expounded the idea that its "negative" form feeds life in *What is Life?* and a metaphor for its mechanism is the "arrow of time." Boltzmann's constant is multiplied with the logarithm of multiplicity to obtain it, and Clausius defined a precursor to it, disgregation. Described as constant or increasing by the Second Law of Thermodynamics, for 10 points, name this measure of disorder in a system.

ANSWER: **entropy**



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Bonuses

1. Name some more Japanese authors, for 10 points each.

[10] This author wrote about his country's aesthetics in "In Praise of Shadows," and also wrote novels like *The Makioka Sisters* and *Some Prefer Nettles*.

ANSWER: Junichiro **Tanizaki** [accept in either order]

[10] This modern author has written such novels as *Pinball, 1973*, *Kafka on the Shore*, and *The Wind-Up Bird Chronicle*.

ANSWER: Haruki **Murakami** [accept in either order]

[10] This Heian Period author wrote a book that contains many lists, *The Pillow Book*.

ANSWER: Sei **Shonagon**

2. This man's nickname was the "Fighting Quaker." For 10 points each:

[10] Name this attorney general for Woodrow Wilson who rounded up thousands of suspected subversives in his namesake 1920 raids.

ANSWER: Alexander Mitchell **Palmer**

[10] Among those deported during the Palmer Raids was this Lithuanian-born anarchist who was the lover of Alexander Berkman, the man who shot Henry Clay Frick in the Homestead Strike.

ANSWER: Emma **Goldman**

[10] This radical labor union had already been decimated by federal crackdowns by the time the Palmer Raids took place. Led by "Big Bill" Heywood, its members were called "Wobblies."

ANSWER: **Industrial Workers of the World** [accept **IWW**]

3. In the laboratory, the most useful ones are usually denoted by the letter lambda. For 10 points each:

[10] Name this type of virus that infects bacteria.

ANSWER: bacteri**ophage**

[10] This cycle of viral reproduction does not involve incorporation of the viral genome into the host DNA, and usually results in the rapid destruction of an infected cell.

ANSWER: **lytic** cycle

[10] This term for a region in which all the cells have been lysed and phage particles released shares its name with the hardened substance on the surface of teeth and blood vessels.

ANSWER: **plaque**

4. His time conducting a zarzuela company influenced the creation of his works like *El canto de salvacion* and *Catalanes de Gracia*. For 10 points each:

[10] name this composer of 12 “impressions” for piano including “Triana” and “Jerez,” *Iberia*.

ANSWER: Isaac Manuel Francisco **Albeniz**

[10] Ida Rubinstein commissioned this work, which was written after its composer was unable to orchestrate *Iberia*. It involves a snare ostinato while the instruments repeat two melodies.

ANSWER: **Bolero**

[10] This composer of a Piano Concerto for the Left Hand wrote the Spanish-inspired *Rapsodie Espagnole* as well as *Bolero*.

ANSWER: Maurice **Ravel**

5. Name these civilizations from their mythologies, for 10 points each.

[10] Huitzilopochtli was their war god, Tlaloc their storm god, and Tlazolteotl was their goddess of filth. They also borrowed stories about a plumed serpent from an earlier civilization.

ANSWER: **Aztecs**

[10] The Aztecs borrowed the Quetzalcoatl myths from this civilization, whose mythology holds that he abandoned their city of Tollan and sailed east on a raft of serpents, to one day return.

ANSWER: **Toltecs**

[10] While much of their mythology was shared with their eastern neighbors, these people worshipped such unique figures as Quirinus and Janus, and used indigenous names like Minerva.

ANSWER: **Romans**

6. They can be distinguished from aldehydes using Tollens’ reagent. For 10 points each:

[10] Name this functional group consisting of a non-terminal carbonyl group.

ANSWER: **ketones**

[10] The most fundamental ketone is this chemical, with formula C-H-3-C-O-C-H-3.

ANSWER: **acetone** [or **propanone**; or **dimethyl ketone**; or **2-propanone**; or **beta-keto propane**]

[10] Aromatic ketones are a frequent end product of this reaction, which has namesake arylations and acylations. It’s named for the French and American scientists who first performed it.

ANSWER: **Friedel-Crafts** reaction

7. Its 208 isotope is the heaviest known stable nuclide. For 10 points each:

[10] Name this element with atomic number 82 and symbol Pb.

ANSWER: **lead**

[10] A chamber made of lead is used in one process to make this acid, though the contact process makes more of it.

ANSWER: **sulfuric** acid [accept **H<sub>2</sub>SO<sub>4</sub>**; prompt on “oil of **vitriol**”]

[10] The main ore of lead is galena, which contains the Pb<sup>+2</sup> ion bonded to this other monoatomic ion.

ANSWER: **sulfide**

8. It is marked by an almost zero resistance below the critical temperature. For 10 points each:

[10] Identify this property, which was first observed in liquid mercury by Kammerling Onnes.

ANSWER: **superconductivity**

[10] This theory, formulated by three American physicists attributes superconductivity to the formation of Bose-Einstein condensate like pairs of electrons called Cooper pairs.

ANSWER: **BCS** theory [or **Bardeen-Cooper-Schrieffer Theory**]

[10] So called “high temperature” superconductors are able exhibit superconductivity at or above the boiling point of this substance, around 77 Kelvin.

ANSWER: **liquid nitrogen** [prompt on **nitrogen**]

9. Name these Jewish ceremonies, for 10 points each.

[10] Male infants are circumcized on the eighth day of life in this ritual.

ANSWER: **bris** [or **brit**]

[10] At age thirteen, a practicing Jew becomes a “son” or “daughter of the commandments” in this ceremony.

ANSWER: **bar mitzvah** [or **bat mitzvah**]

[10] For a week after the death of a close relative, adult Jews will “sit” this prescribed time of mourning, which shares its name with a Hindu god who ends the universe by dancing.

ANSWER: **shiva**

10. It was countered by the speech “On the Correct Handling of Contradictions Among the People.” For 10 points each:

[10] Name this period where the Chinese government actively encouraged intellectuals to criticize the government, before they became flooded with attacks and cracked down.

ANSWER: The “Let One **Hundred Flowers** Bloom” campaign

[10] The Hundred Flowers campaign was called for by this Chairman of the Chinese Communist Party. He had led the long march, and wrote the Little Red Book.

ANSWER: **Mao** Tse-Tung or **Mao** Zedong

[10] This other plan led to the creation of communes where workers often melted their implements for steel. It disrupted agriculture so that twenty million died of starvation.

ANSWER: **Great Leap Forward**

11. This capital’s namesake “bloodbath” of 1520 led to its country leaving the Kalmar Union. For 10 points each:

[10] Built by Birger Jarl, name this city that was liberated from Danish rule by Gustav I Vasa in 1523.

ANSWER: **Stockholm**

[10] Another member of the Vasa dynasty was this king of Sweden from 1697 to 1718 who invaded Russia for some reason in 1707, which resulted in Sweden’s loss of status as a great power.

ANSWER: **Charles XII** [prompt on **Charles**]

[10] This Swedish queen studied philosophy under Descartes and her patronage of the arts and learning earned her the title “Minerva of the North.”

ANSWER: **Christina**

12. Stars of spectral class O inhabit the upper-left portion of this diagram. For 10 points each:

[10] Name this plot of temperature vs. luminosity.

ANSWER: **Hertzsprung-Russell** diagram [accept **H-R** diagram]

[10] The Sun is located along this band stretching from the upper left to the lower right.

ANSWER: **main sequence**

[10] Stars in the main sequence produce energy through this process, in which two smaller nuclei are joined to make a larger one.

ANSWER: nuclear **fusion**

13. One of this poet's sonnets begins "Batter my heart, three person'd God." For 10 points each:

[10] Name this author whose collection *Songs and Sonnets* includes "The Canonization" and "A Valediction: Forbidding Mourning."

ANSWER: John **Donne**

[10] In this poem, the title insect "suck'd me first, and now sucks thee," causing Donne to compare it to "a marriage bed, and marriage temple."

ANSWER: "The **Flea**"

[10] In this sonnet by Donne, he argues that the title entity is "slave to Fate, Chance, kings, and desperate men," even though "some have called" it "mighty and dreadful."

ANSWER: "**Death, be not proud**" [or **6** or **10**]

14. He translated Lucan's *Pharsalia* and wrote a play in which a man sells his soul to the devil. For 10 points each:

[10] Name this Elizabethan playwright of *Doctor Faustus*.

ANSWER: Christopher **Marlowe**

[10] In this Marlowe play, the scheming title misanthrope Barabas dies in a pot of boiling liquid that he set as a trap for Turkish invaders.

ANSWER: *The **Jew of Malta***

[10] Marlowe wrote a play in two parts about this lame Asian conqueror who burns a Koran and claims to be greater than god.

ANSWER: **Tamburlaine** the Great [or **Timur** the Lame; or **Tamerlane**]

15. The title structure claims the lives of La Perichole and Uncle Pio. For 10 points each:

[10] Name this novel, in which Brother Juniper details some plunging deaths in South America.

ANSWER: *The **Bridge of San Luis Rey***

[10] This American author, who wrote about an incoming "wall of ice" in *The Skin of Our Teeth*, wrote *The Bridge of San Luis Rey*.

ANSWER: Thornton Niven **Wilder**

[10] This Wilder play sees Emily Webb die after marrying George Gibbs, while the Stage Manager talks about Grover's Corners.

ANSWER: **Our Town**

16. Its government appointed several “Kumaris,” a job previously in the hands of priests appointed by its royalty. For 10 points each:

[10] Identify this nation which elected the Maoist leader Prachandra in an April 2008 election. In 2001, its Crown Prince Dipendra shot members of the Royal family in 2001.

ANSWER: Republic of **Nepal**

[10] Until the April election, Nepal was led by this man, who dissolved the Nepalese Parliament in 2002 and assumed emergency rule in February 2005.

ANSWER: King **Gyanendra** [or **Gyanendra** Bir Bikram Shah Dev]

[10] Prachandra held bilateral talks with this Indian Prime Minister, whose party faced a vote of no-confidence over a US-India bilateral nuclear trade deal.

ANSWER: Manmohan **Singh**

17. After being part of the “antiparty group,” he was made ambassador to Mongolia. For 10 points each:

[10] Name this replacement of Maksim Litvinov as Commissar of foreign affairs, who negotiated the German-Soviet Non-aggression pact with Ribbentrop.

ANSWER: Vyacheslav Mikhailovich **Molotov** [or Vyacheslav Mikhaylovich **Skryabin**]

[10] Molotov was removed as foreign minister by this successor to Stalin who claimed “we will bury you” and banged his shoe. Molotov later tried to depose him.

ANSWER: Nikita **Kruschev**

[10] Molotov ordered the production of his namesake cocktails for this war, where the Mannerheim line served as a defensive border. As a result, the Russians got western Karelia.

ANSWER: **Winter** War [or **Russo-Finnish** War]

18. His literary works include “The Nutcracker and the Mouse King” and “The Sandman.” For 10 points each:

[10] Name this German writer whose “Tales” were adapted into an opera.

ANSWER: Ernst Theodor Wilhelm **Hoffmann** [or E.T.A. **Hoffmann**]

[10] This composer of countless operettas like *La Belle Helene* wrote *The Tales of Hoffman*.

ANSWER: Jacques **Offenbach**

[10] Jacques Offenbach wrote an operetta about this figure in the underworld. He is also the subject of a Gluck opera about him and Eurydice.

ANSWER: **Orpheus** [or **Orfeo**; or **Orphee**]

19. Advocating a similar thesis to that of R.H. Tawney, this book posits that a certain group did not experience the ascetic withdrawal usually common to religious devotion. For 10 points each:

[10] Name these work of German sociology which noted that Calvinist Puritan ethics created a certain economic system.

ANSWER: *The **Protestant Ethic** and the Spirit of Capitalism* [or *Die **protestantische Ethik** und der Geist des Kapitalismus*]

[10] This sociologist, who later advocated German imperial expansion in his Freiburg Address, wrote *The Protestant Ethic and the Spirit of Capitalism*.

ANSWER: Max **Weber**

[10] Weber's book *On Law in Economy and Society* addressed the role of this concept in authority. In common use, it refers to the personal magnetism of a speaker, leader, or performer.

ANSWER: **charisma**

20. This play begins with the title characters interrupting a performance of *Mixing it Up*. For 10 points each:

[10] Name this play whose title characters include the Father, the Mother, the Daughter, and the Boy.

ANSWER: **Six Characters in Search of an Author**

[10] This Italian author of *The Late Mattia Pascal* and *Henry IV* wrote *Six Characters in Search of an Author*.

ANSWER: Luigi **Pirandello**

[10] Pirandello translated this author's *Roman Elegies* into Italian. He also wrote the poem "Der Erlkönig," novels about Wilhelm Meister, and the play *Gotz von Berlichingen*.

ANSWER: Johann Wolfgang von **Goethe**

21. Pictures of cells in this painting represent sexually transmitted diseases. For 10 points each:

[10] Name this mural which features women drinking alcohol as well as Lenin and Trotsky, and which was the center of a controversy with Nelson Rockefeller. The wings look like surfboards.

ANSWER: **Man at the Crossroads** [prompt on **Man, Controller of the Universe**]

[10] *Man at the Crossroads* is one of the best-known of this man's paintings. His other works, which include *En el Arsenal*, influenced and were influenced by his wife Frida Kahlo.

ANSWER: Diego María de la Concepción Juan Nepomuceno Estanislao de la **Rivera** y Barrientos Acosta y Rodríguez

[10] Around 1917, Rivera took after this man and was influenced by his post-impressionism. This man's works include *Card Players* as well as several views of *Mont Sainte-Victoire*.

ANSWER: Paul **Cézanne**

22. Several species of lemur are endemic to this island. For 10 points each:

[10] Identify this island nation with its capital at Antananarivo.

ANSWER: Republic of **Madagascar** [or **Malagasy** Republic]

[10] This body of water, named for the country with capital Maputo, separates Madagascar from mainland Africa.

ANSWER: **Mozambique** Channel

[10] This river empties into the Mozambique Channel, after forming the Victoria Falls near the border of Zambia and Zimbabwe.

ANSWER: **Zambezi** River