



# HSAPQ

High School Academic Pyramid Questions

2008-2009  
Four Quarter Set

Round 2

First Quarter:  
Ten Tossups

1. The magic type of this quantity helps reduce line broadening and dipole interactions in NMR spectroscopy. Phi and psi are letters used to denote one type of these in amino acids, and they are plotted on the Ramachandran plot. One named after Brewster is involved in polarization. Formed by two rays with a common vertex, the one associated with incidence is equal to the one associated with reflection. For 10 points, identify these entities which can be acute, obtuse, or right.

ANSWER: angle

2. During his administration, this man received an offensive letter from Jose Balmaceda as part of the Itata Incident with Chile. He was earlier elected due to the "Blocks of Five" voting scandal. The loser of a gubernatorial election to James Williams, he later wrote *This Country of Ours* and mediated the Venezuela Boundary Dispute after his Presidency. Responsible for the passage of the McKinley Tariff and the Sherman Antitrust Act, for 10 points, name this Indiana native and president between Grover Cleveland's two terms.

ANSWER: Benjamin Harrison [prompt on Harrison]

3. He wrote a story set in a Washington, D.C. apartment, where the friends of Meatball Mulligan throw a party below Callisto and Aubade's room. Another work centers on Prairie and her former-hippie father Zoyd Wheeler. Along with "Entropy" and *Vineland*, he talked of director Randolph Driblette's committing suicide before Randolph can be questioned about Wharfinger's knowledge of the Tristero organization by Oedipa Maas. For 10 points, name this author of *The Crying of Lot 49*, who wrote about Tyrone Slothrop in *Gravity's Rainbow*.

ANSWER: Thomas Ruggles Pynchon

4. He played Marshall Willenholly, who chased a pair that stole a chimp and fell out of Hoover Dam in *Jay and Silent Bob Strike Back*. Another of his characters caused Mr. Bigglesworth to lose his hair. In addition to Mustafa in *Austin Powers*, he portrayed a man who thinks he is paralyzed after a wreck in a NASCAR race, and the son of Nancy Huff, who marries Dr. Doback. The star of a film where he travels from the north pole to meet his father James Caan, for 10 points, name this star of *Elf* who appeared along with John C. Reilly in *Stepbrothers* and *Talladega Nights*.

ANSWER: Will Ferrell

5. This man is the namesake of equations which contain terms for Ricci Tensor and the stress-energy tensor. Along with Podolsky and Rosen, he names a paradox that was solved by assuming locality with Bell's theorem, and he is also the namesake of a mole of photons. He used the kinetic theory of gases to explain a phenomenon observed by a Scottish botanist Robert Brown. For 10 points, identify this scientist who won the 1921 Nobel Prize in Physics for his work on the photoelectric effect.

ANSWER: Albert Einstein

6. This opera's title character sings "I have attained supreme power" before hallucinating that a child covered in blood is approaching him in the "Clock Scene." Its third scene is set in the Chudov Monastery, where the monk Pimen describes the title character's murder of Dmitri. The title character dies after singing "The bell! The funeral bell!" in a scene where Vasili Shusky convinces the Boyars of his guilt. For 10 points, name this opera set during the Time of Troubles, an opera about the first non-Rurikid Tsar of Russia composed by Modest Mussorgsky.

ANSWER: **Boris Godunov**

7. He imprisoned his half-brother Odo, who had put down the Revolt of the Earls, and he was the son of Robert the Magnificent. He spent much of his early years as king fighting rebellions in Northumbria and Mercia under Edar Aethling, and his son Henry I ruled England for thirty-five years. He came to power during a succession crisis, when the death of Edward the Confessor led to a dispute over the throne between him and Harold II. For 10 points, name this Norman duke, who seized the throne of England at the Battle of Hastings.

ANSWER: **William I** of England [or **William the Conqueror**]

8. The Alodai giants imprisoned this deity in a bronze jar. This god killed Halirrhothios for attempting to rape his daughter Alkippe, and gave his belt to Hippolyte, the leader of the Amazons. With the help of Athena, Diomedes used a spear to wound this god during the Trojan War. He was trapped in a net by Hephaestus for having an affair with Aphrodite, and was accompanied by Phobos and Deimos into battle. For 10 points, name this son of Zeus and Hera, the Greek god of war.

ANSWER: **Ares**

9. A structure similar to this one dried up in the Devonian period and today makes up the Napier and Ningbing Ranges in The Kimberly. Cairns, Townsville, and Macay are three cities near this geographic feature. Fringe areas of this region include the Whitsunday Islands and Princess Charlotte Bay. Lizard Island National Park is within this region, which is administered by a namesake Park Act and its country's Biodiversity Action Plan. For 10 points, name this large organic formation, located in the Coral Sea off Queensland in northern Australia.

ANSWER: the **Great Barrier** Reef

10. He wrote about Richard Somers, who meets the Australian lawyer Benjamin Cooley in *Kangaroo*. One of his short stories centers on a child, who can pick horse races correctly. In addition to *Aaron's Rod* and "The Rocking Horse Winner," he wrote a novel in which Annie cares for her mother Gertrude with her brother Paul Morel, and, in another work, Clifford's impotence leads to the title character's affair with the gamekeeper Oliver Mellors. For 10 points, identify this author of *Sons and Lovers* and *Lady Chatterley's Lover*.

ANSWER: David Herbert **Lawrence**



High School Academic Pyramid Questions

2008-2009  
Four Quarter Set

Round 2

Second Quarter:  
Ten Tossups  
with Bonuses

1. Seated and drinking from a glass in this painting is the actress Ellen Andree; in the background, a man in a top hat stares into the distance. The artist's future wife Aline Charigot can be seen playing with a brown dog in this painting, while the painter of *Paris Street; Rainy Day*, Gustave Caillebotte, appears in the foreground in a white sleeveless shirt. It takes place under an orange striped awning at the Maison Fournaise in Chatou along the Seine, and includes many straw hat clad sailors and a table. For 10 points, name this painting by Pierre-Auguste Renoir.

ANSWER: *The Luncheon of the Boating Party* [or *Le déjeuner des canotiers*]

BONUS. During this event, Ludvik Vaculik wrote *The Two Thousand Words* and Jan Palach set himself on fire. For 10 points each:

[10] Name this 1968 period of liberalization in Czechoslovakia, which led to an invasion by Warsaw Pact nations and the Soviet Union.

ANSWER: Prague Spring

[10] This successor to Antonin Novotny attempted to institute "socialism with a human face" and formed the Action Programme, beginning the Prague Spring.

ANSWER: Alexander Dubcek

2. In this novel, parties were once again held at the Mengstrasse mansion following one of the characters' marriage to Gerda, and Herr Weinschenk married Erica but was ultimately sent to prison for business improprieties. The beer merchant Herr Permaneder has an affair after marrying Tony, and the death by typhoid fever of the sickly character Little Hanno marks the end of the line for the title industrialists. For 10 points name this Thomas Mann novel about the decay of a German family.

ANSWER: Buddenbrooks

BONUS. His Secretary of the Interior banned the Beach Boys from performing a July 4th concert on the National Mall. For 10 points each:

[10] Name this president who failed in his efforts to put Robert Bork on the Supreme Court, and whose cabinet included Alexander Haig and Caspar Weinberger.

ANSWER: Ronald Reagan

[10] This Massachusetts Representative served as Speaker of the House for most of the Reagan Administration, during which time he coined the phrase "all politics is local."

ANSWER: Thomas P. "Tip" O'Neill

3. This compound's major industrial use is the oxidation of oleic acid into azelaic acid. It is generally produced by the surface or silent discharge method, and the amount of this compound is usually measured in Dobson units. Manifesting itself as a bluish gas, this compound is produced from electric motors and lightning, and it reacts with atomic chlorine to form a chlorine monoxide radical and diatomic oxygen. For 10 points, name this allotrope of three oxygen atoms found in a namesake layer

of the stratosphere.

ANSWER: ozone [accept O3 until “three oxygen”]

BONUS. He wrote *The Farther Reaches of Human Nature* about primary and secondary creativeness, as well as neurotic needs and “plateau experiences” of healthy college students. For 10 points each:

[10] Name this psychologist, better known for a proposal in his book *A Theory of Human Motivation*.

ANSWER: Abraham Harold Maslow

[10] Identify that proposal, a set of personal requirements ranging from survival factors like food to abstract concepts like self-actualization.

ANSWER: Maslow's hierarchy of needs

4. This term applies to the general's final voyage on the Magdalena River in a novel by Gabriel Garcia Marquez, which follows the mayordomo Jose Palacios during Simon Bolivar's last days and is entitled *The General in His one of these*. Pluralized, it names a collection of essays and stories including *The Library of Babel* and *The Garden of Forking Paths* by Jorge Luis Borges. For 10 points, give the common term that also titles an essay collection including “The Conquest and Colonialism” and “The Mexican Intelligentsia,” one of *Solitude* by Octavio Paz.

ANSWER: labyrinth

BONUS. Name these rules from atomic chemistry, for 10 points each.

[10] This rule states that atoms tend to combine to form compounds with a certain number of electrons in their valence shell.

ANSWER: octet rule

[10] This rule states that no two identical fermions can occupy the same quantum state. It is the reason that electrons in the same orbital must have opposite spin.

ANSWER: Pauli exclusion principle

5. Pierre du Pont originated the idea for this action. Brought about by the failure of Charles Leclerc to suppress the forces of Alexandre Petion and Jean-Jacques Dessalines, this was preceded by an agreement between Mariano Luis de Urquijo and Louis Berthier three years earlier, the Treaty of San Ildefonso. Negotiated by James Monroe and Robert Livingston, for 10 points, name this agreement which transferred land west of the Mississippi River from France to the United States in 1803, including New Orleans.

ANSWER: Louisiana Purchase

BONUS. In its first act, one character sings “Der Vogelfänger bin ich ja.” That character later sings a duet with Pamina, who has just found out that Tamino loves her. For 10 points each:

[10] Identify this opera, which includes such characters as the evil Queen of the Night.

ANSWER: *The Magic Flute* [or *Die Zauberflöte*]

[10] This priest of Isis and Osiris marries Tamino and Pamina at the end of the opera, shortly after defeating the Queen of the Night.

ANSWER: Sarastro

6. One king of this line married Anne of Austria and commissioned Nicolas Poussin. Another king of this house allied with England and the Netherlands in the Triple Alliance and was greatly influenced by his mistress Madame du Pompadour. That king's legendary prediction "après moi, le deluge" proved accurate when his successor was the target of the Estates General and the Tennis Court Oath. For 10 points name this French royal house that included Henry IV and Louis XIV.

ANSWER: House of **Bourbon**

BONUS. Name these U.S. state capitals, for 10 points each.

[10] This largest U.S. capital by population is the seat of Maricopa County and contains Camelback Mountain.

ANSWER: **Phoenix**, Arizona

[10] This home to Embry-Riddle Aeronautical University is located on its state's panhandle, quite a ways north of Lake Okeechobee.

ANSWER: **Tallahassee**, Florida

7. One of his early exploits was being injured in a battle at Uhud against an army led by Abu Sufyan, but he later won the Battle of the Ditch. This man was born into the Banu Hashim branch of the Quraysh tribe, and local opposition to his ideas led to his flight from his hometown, called the *hegira*. Despite several medieval examples to the contrary, most modern sects prohibit any artistic depiction of, for 10 points, what man who was visited by the angel Jibreel to transcribe the Quran, thus founding Islam?

ANSWER: Abu al-Qasim **Muhammad** ibn 'Abd Allah ibn 'Abd al-Muttalib ibn Hashim

BONUS. The speaker describes himself as "pigeon-livered" in one of these which laments, "What a rogue and peasant slave am I!" For 10 points each:

[10] Identify these monologues, the first one of which questions why God has not "fixed his canon 'gainst self-slaughter" after hoping that the speaker's "too too solid flesh would melt."

ANSWER: **Hamlet's Soliloquies** [accept clear knowledge equivalents which indicate that Hamlet is speaking to himself]

[10] Hamlet wonders if it's "nobler to suffer the slings and arrows of outrageous fortunes" in this soliloquy. After it, Hamlet tells Ophelia, "Get thee to a nunnery"

ANSWER: "**To Be Or Not To Be**"

8. It names a form of calorimetry which is used to calculate biological binding affinities, and its zeta potential variety attempts to induce flocculation in a colloid by reaching the isoelectric point. A precipitation form is carried out with silver nitrate and sometimes referred to as Mohr's method, and this process is usually stopped once the experimenter has reached the equivalence point. Often employing indicators like phenolphthalein, for 10 points, name this procedure in which one uses burets to find an unknown concentration through an acid-base neutralization reaction.

ANSWER: **titration**

BONUS. Charles Baudelaire places him in hell. Prosper Merimee is a little nicer, sending him to purgatory. For 10 points each:

[10] Name this notorious Spanish libertine, introduced in *The Trickster of Seville* and *The Stone Guest*.

ANSWER: **Don Juan**

[10] This author of *Cyrano de Bergerac* wrote about the "Last Night of Don Juan".

ANSWER: Edmond **Rostand**

9. One state in this country is led by a man thought to be involved in the 2002 Godhra attacks, and it has recently seen protests organized by the AITC party over a car factory in Singur. Its current president succeeded A. P. J. Abdul Kalam in 2007 and is a member of the United Progressive Alliance coalition. It launched its first mission to the moon in October 2008, and it is also commonly paired along with Brazil, Russia, and China in the BRIC countries. For 10 points, identify this country led by Manmohan Singh, with capital at New Delhi.

ANSWER: Republic of India

BONUS. Name these cell organelles, for 10 points each.

[10] These organelles, named after an Italian scientist, are connected to the endoplasmic reticulum and package proteins and lipids for delivery in the cell.

ANSWER: Golgi body [accept Golgi apparatus or Golgi complex; accept dictyosome]

[10] This sub-region within the cell's control center is the site of ribosome subunit production.

ANSWER: nucleolus

10. He laid the foundation for a later work on fuzzy logic by supposing that a probability represents a truth-value between zero and one in his *Treatise on Probability*, though Milton Friedman preferred his *A Tract on Monetary Reform*, in which he wrote that "in the long run we are all dead." He cast the Treaty of Versailles as "Carthaginian" in *The Economic Consequences of the Peace*. For 10 points, name this author of *The General Theory of Employment, Interest, and Money*, a namesake of a mainstream school of economics concerned with aggregate demand.

ANSWER: John Maynard Keynes

BONUS. It was fully described in the *Voluspa* and after it Lif and Lifthrasir will repopulate the earth. For 10 points each:

[10] Name this Norse "doom of the gods" that will be announced by Heimdall playing Gjallarhorn.

ANSWER: Ragnarok

[10] This snake was pulled up from the bottom of the ocean by Thor, who killed it during Ragnarok. It was large enough to wrap around the earth.

ANSWER: the Midgard Serpent [or Jormungandr]



# HSAPQ

## High School Academic Pyramid Questions

2008-2009  
Four Quarter Set

Round 2

Third Quarter:  
Team Rounds

Choices: COLUMBIA UNIVERSITY  
THE LETTER S

COLUMBIA UNIVERSITY

This round deals with the instructors, alumni, and environment of Columbia University in New York.

[10] This first Treasury Secretary attended Columbia when it was still called King's College. He was later killed in a duel with Aaron Burr.

ANSWER: Alexander Hamilton

[10] This poet, who studied for a time at Columbia, wrote such plays as *Blood Wedding*, *The Butterfly's Evil Spell*, and *The House of Bernarda Alba*.

ANSWER: Federico García Lorca

[10] Robert Millikan earned a doctorate at Columbia before measuring this fundamental physical value with the oil drop experiment.

ANSWER: charge on the electron [prompt on e]

[10] This educational philosopher and author of *Experience and Nature* spent twenty-five years at Columbia, where he taught his pragmatist views.

ANSWER: John Dewey

[10] A statue of this Greek goddess of victory sits in front of the main hall of Barnard College, a women-only school affiliated with Columbia.

ANSWER: Nike

[10] This Harlem Renaissance author of "The Weary Blues" studied at Columbia.

ANSWER: James Mercer Langston Hughes

[10] The current president of this northern neighbor of Latvia attended Columbia. This Baltic state's chief cities include Tartu and Tallinn.

ANSWER: Estonia

[10] This Columbia graduate coined the term "manifest destiny" in 1845.

ANSWER: John O'Sullivan

[10] While working at Columbia, this Hungarian-born composer created his *Concerto for Orchestra*. *Duke Bluebeard's Castle* and *The Miraculous Mandarin* are among his earlier works.

ANSWER: Béla Bartók

[10] Along with Niles Eldredge, Columbia alum Stephen Jay Gould popularized this hypothesis, which states that evolution proceeds by irregular bursts rather than a gradual process of selection.

ANSWER: punctuated equilibrium

## THE LETTER S

This round uses words in the clues that begin with the letter S, or seeks answers that begin with the letter S.

[10] Six-carbon rings arranged in sheets are the structure of this grey-to-black form of carbon, one of the softest substances on the Mohs scale.

ANSWER: **graphite**

[10] This member of a musical family and wrote the symphonic poems *Death and Transfiguration* and *Thus Spake Zarathustra*.

ANSWER: **Richard Georg Strauss** [prompt on **Strauss**]

[10] *Samson Agonistes* is among the works of this blind English poet, who wrote the sonnet "On His Blindness" and the epic *Paradise Lost*.

ANSWER: John **Milton**

[10] This law of trigonometry states that the side of a triangle divided by the namesake function of the opposite angle is equal for all three sides.

ANSWER: law of **sines**

[10] This patron of a Bible translation was the first English monarch of the Stuart Dynasty.

ANSWER: **James I** of England [or **James VI of Scotland**; prompt on **James**]

[10] Samarkand, now in Uzbekistan, was the base of this warrior, who conquered Central Asia, southern Russia, and the Middle East as far as Damascus at the turn of the fifteenth century.

ANSWER: **Timurlane** [or **Timur** Lenk; or **Timur** the **Lame**; or **Tamburlaine**]

[10] This group of Islam, smaller than the Sunnis, follows lines of either seven or twelve imams and is dominant in Iran.

ANSWER: **Shia** [or **Shiites**]

[10] Built under the direction of Joseph B. Strauss, this suspension-style structure painted "International Orange" provides access from San Francisco to Marin County.

ANSWER: **Golden Gate Bridge**

[10] In this novel by Walter Scott, Cedric the Saxon's charge Lady Rowena is rescued by Robin Hood and dismissed by Aethelstane in time to marry the title Crusader.

ANSWER: **Ivanhoe**

[10] Yves Tanguy and Rene Magritte were leading painters in this artistic movement, which showed bizarre, often unsettling images following a "manifesto" by Andre Breton.

ANSWER: **surrealism**



# HSAPQ

## High School Academic Pyramid Questions

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Round 2

Fourth Quarter:  
Ten Tossups

1. He lived with the inventor Antonio Meucci on Staten Island for a few years after he was forced into exile. Earlier, he had allied with the Colorados against the Blancos and the Federales, and he returned to his homeland to help conquer Sicily and Naples before he ceded his gains to Piedmont under Victor Emmanuel II. For 10 points name this leader of the redshirts and military unifier of Italy.

ANSWER: Giuseppe Garibaldi

2. One painting by this man depicts the River Saône and the town of Autun through columns in the background, while the foreground shows a hovering angel crowning the virgin as she presents Jesus to the artist's patron. In addition to *Madonna of Chancellor Rolin*, this man produced a religious work also known as the *Adoration of the Mystic Lamb* and a self-portrait in a red turban. The artist of a scene depicting a merchant and his new wife, for 10 points, name this artist of the Northern Renaissance who created the *Ghent Altarpiece* and the *Arnolfini Wedding*.

ANSWER: Jan van Eyck

3. *Gnetum* is one species which oddly possesses constituent cells of it. That constituent forms from a fusiform initial and its scaliform perforation is arranged in a ladder-like system. *Psilotum* possesses a lobed version of a protostele arrangement of it. Unlike a similar tissue, it stains red for lignin, and it consists of vessel elements and tracheids. For 10 points, name this transport tissue crucial to transpiration, which in vascular plants transports water.

ANSWER: xylem

4. This woman wrote poetry under the pseudonym Anne Singleton, and her first publication was *Adventures in Womanhood*. Although her doctoral dissertation was "The Concept of the Guardian Spirit in North America," this author later wrote a pamphlet for the US military with Gene Weltfish entitled "The Races of Mankind." Noted for writing on the Kwakiutls and Dobu, this anthropologist also wrote about the Pueblo people and the culture of Japan. For 10 points, name this author of *Patterns of Culture* and *The Chrysanthemum and the Sword*.

ANSWER: Ruth Benedict [or Ruth Fulton]

5. Its second emperor was urged to forge his father's will to prevent Fusu from taking the throne, but Huhai was killed by the eunuch, Zhao Gao, who then continued this dynasty by installing Ziyiing. Liu Bang's quickly approaching army, however, ensured this dynasty's end after the death of its third emperor. Its legacies include the spread of legalism and the construction of the Terracotta Army. For 10 points, identify this dynasty, whose founder had an uncomfortable custom of burning books and burying Confucians alive, which preceded the Han.

ANSWER: Chin Dynasty [or Chín Cháo]

6. In this novel, Walter Cunningham is offered a quarter to buy lunch, but his teacher Miss Caroline fails to understand that he'll never be able to pay her back; later, Burris attends his one annual day of school. The narrator sees Link Deas and Mr. Raymond exhibit unusual sympathy, and she finally meets the recluse Boo Radley after an altercation in which, according to the sheriff, Bob Ewell fell on his own knife. For 10 points, identify this novel featuring the lawyer Atticus Finch and the young narrator Scout, a semi-autobiographical work written by Harper Lee.

ANSWER: **To Kill a Mockingbird**

7. This man wrote a "Funeral Hymn" for a five-voice chorus, winds, and timpani based on Weisse's *Begräbnisgesang*. One six-movement work which he wrote for a chamber nonet is his first Serenade, and, like Rachmaninoff, he composed a series of variations on a theme of Paganini. Karl Reinthaler added the aria "I know that my redeemer liveth" to his *German Requiem*, and he balanced a "tragic" work with one thanking the University of Breslau for his degree. For 10 points, name this composer of the *Academic Festival Overture* and a certain lullaby.

ANSWER: Johannes **Brahms**

8. This man defended his Tory political views in his *Passive Obedience*, and he also wrote *Advice to the Tories Who Have Taken Oaths*. He attacked Deism in *Alciphron; or, The Minute Philosopher*, advocated drinking pine tar in *Siris*, and believed that everything except the spiritual exists only if it can be perceived. This author of *An Essay Towards a New Theory of Vision* explained his views in *Three Dialogues between Hylas and Philonus*. For 10 points, name this Irish bishop who wrote the *Treatise Concerning the Principles of Human Knowledge*.

ANSWER: George **Berkeley**

9. The Kobayashi-Maskawa matrix represents properties held by these objects, and Cabibbo lends his name to a parameter describing their mixing. A model of these objects was proposed by George Zweig, who called them "aces," but an independent formulator of a similar model, Murray Gell-Mann, is responsible for their name. Quantum chromodynamics describes the interactions of, for 10 points, what fundamental particles that come in strange, charm, top, bottom, up, and down varieties?

ANSWER: **quarks**

10. The first of his prophetic books concerns an aged king of the west, Tiriël, and he wrote that "Now the sneaking serpent walks / In mild humility, / And the just man rages in the wilds / Where lions roam" in "The Argument," which was published in the second plate of *The Marriage of Heaven and Hell*. "Infant Sorrow" and "A Divine Image" are contained in his *Songs of Experience*, and another poem by him asks "did He who made the lamb make thee?" For 10 points, identify this English poet of "The Lamb" and "The Tyger."

ANSWER: William **Blake**