



# HSAPQ

High School Academic Pyramid Questions

Fall 2008  
ACF-Format Set #2

Round 9

Tossups

1. Misconceptions about this phenomenon were widely spread by Wilson Bryan Key. The author of the first study that demonstrated this phenomenon, James Vicary, claimed it was a hoax. A follow-up experiment on this subject by the Canadian Broadcasting Company showed that people reported being hungry and thirsty despite the CBC flashing the words "Call Now" 352 times, instead of anything to do with eating or drinking. For 10 points, name this mostly discredited theory, which says that below-threshold stimuli will influence a person's behavior.

ANSWER: subliminal advertising [or subliminal messaging; or subliminal persuasion]

2. The protagonist spends three months in Italy and upon her return she is shunned at the opera. She has a son named Sergei and a daughter named Annie, and the book opens as she is visiting her brother Stiva to settle a dispute between him and his wife Dolly. Dolly's younger sister Kitty eventually marries the farmer Levin and the protagonist's repeated requests for a divorce are denied by her husband who resents her affair with Vronsky. For 10 points, name this novel in which the title protagonist throws herself under a train, a work of Leo Tolstoy.

ANSWER: Anna Karenina

3. One opera by this composer includes the "Frost Scene," in which Osmond demonstrates some magical powers. The music this composer wrote for the play *Abdelazar* was used by Benjamin Britten as the theme of *The Young Person's Guide to the Orchestra*. His most famous work was written for performance by a girls' boarding school, features a libretto by Nahum Tate, and contains the aria "When I am laid in earth." For 10 points, name this late seventeenth century English composer of the opera *Dido and Aeneas*.

ANSWER: Henry Purcell

4. One character in this play owns a cigarette case with the inscription "And if God choose, / I shall love thee better after death." That character warns her sister "Don't hang back with the brutes!", and dreams of marrying Shep Huntleigh. In its third act, "The Poker Night," the protagonist begins a relationship with Mitch. In its final act, the protagonist declares "I have always depended on the kindness of strangers." Set in the New Orleans home of Stella and Stanley Kowalski, for 10 points, name this play about Blanche DuBois by Tennessee Williams.

ANSWER: A Streetcar Named Desire

5. This holiday starts four days later in the Ambrosian Rite as practiced by the Archdiocese of Milan. Though it is not Advent, the *Gloria in Excelsis Deo* hymn is not sung during this holiday, and the "Funken" bonfire occurs during its First Sunday. Purple veiling of statues used to occur during a time period observed prior to 1970, Passiontide, which corresponded to its last two weeks. It is preceded by the lavish Carnival and concludes on Holy Saturday. For 10 points, name this forty-day holiday celebrating Jesus' endurance of Satan's temptation in the wilderness.

ANSWER: Lent

6. This term describes the portal of Colditz Castle, often called the “Antwerp” form of it. A figure in one painting of this style is being groped by one man positioned under her left breast. In addition to *Susanna and the Elders* by Allori, one sculpture of this style is a noted salt cellar and another features personifications of Folly and Time along with Venus and Cupid. Shown in works from Agnolo Bronzino and El Greco, it describes the *Madonna of the Long Neck*. For 10 points, name this art period known for its elongated figures and other physical impossibilities.

ANSWER: **Mannerism**

7. This man served as a scout for George Washington at the Battle of Monmouth, and he suffered a near fatal wound to his shoulder at the Battle of Trenton. His pamphlet *A View of the Conduct of the Executive, in the Foreign Affairs of the United States* created a rift between himself and Washington, and he defeated Rufus King, who was the last Federalist candidate for president. Presiding over the Era of Good Feelings, for 10 points, name this man, who vowed to resist European encroachments in the internal affairs of the Americas with his namesake doctrine.

ANSWER: James **Monroe**

8. The Pamlico Sound lies off this state's eastern shore, and the Neuse River flows past New Bern in this state. The Pisgah National Forest contains the Black Mountains in this state, and the French Broad River rises here. The Cape Hatteras National Seashore lies in the Outer Banks of this state, and this state's Mount Mitchell is the highest point east of the Mississippi River. For 10 points, name this state that includes cities such as Wilmington and Greensboro with its capital at Raleigh.

ANSWER: **North Carolina**

9. In one story this figure saved Arion from murderous sailors, and out of anger this figure turned the raven's feathers black. This figure flayed alive the satyr Marsyas, and a son of this figure and Coronis created the god Virbius when he raised Hippolytus from the dead, for which Zeus struck him down. In addition to fathering Asclepius, this figure granted Cassandra the gift of prophecy and killed the Python to establish his oracle at Delphi. For 10 points, name this god, a son of Leto and twin brother of Artemis.

ANSWER: Phoebus **Apollo**

10. Indium catalyzes a reaction involving alkyl halides and carbonyl groups producing them, and they take part in the Chugaev elimination with carbon disulfide. Two of them are required for production of ethers via the Williamson synthesis, and along with water, these are notably not compatible with Grignard reagents. A reaction named for Fischer produces esters from a reflux of them and carboxylic acid, and ketones result from oxidation of the secondary type of them. Containing the hydroxyl group, for 10 points, name this class of compounds including ethanol.

ANSWER: **alcohols**

11. He patronized scholars like Grimbold and John the Saxon. He also won an unlikely victory ending in the siege of Chippenham, which he concluded by signing the Treaty of Wedmore with Guthrum, allotting the Danish invaders the region of East Anglia. The legal code he promulgated suggests that a just government ought to doom everyone equally and was called the Dome Book. For 10 points, identify this king of Wessex, the first to consider himself king of all the English.

ANSWER: **Alfred the Great**

12. This author wrote about a policeman named Pieter who violates the Immorality Act in having an affair with Stephanie in one of his novels. Maxwell Anderson and Kurt Weill collaborated on the musical *Lost in the Stars*, an adaptation of his best-known novel. In addition to writing *Too Late the Phalarope* and *Ah, But Your Land is Beautiful*, he wrote a novel in which Gertrude is a prostitute and Absalom kills Mr. Jarvis's son. For 10 points, name this author of a novel about Stephen Kumalo, *Cry, the Beloved Country*.

ANSWER: Alan Stewart **Paton**

13. Ibrahim ibn Ya'kub claimed this state ruled by the Piast dynasty was the most powerful of a particular Eastern European ethnic group. The first bishopric here was at Poznan, and Boleslaw the Second fought with bishop Stanislaus, who developed a cult here. Its union with Lithuania occurred during the Jagiellonian dynasty that ruled here, and their combined forces defeated the Teutonic Knights at Tannenburg. Partitioned by Catherine the Great, for 10 points, name this nation that was invaded by the Nazis to spark World War Two, home to the Warsaw Ghetto.

ANSWER: Republic of **Poland** [or Rzeczpospolita **Polska**]

14. He rapped "that us kids / Are going to make some mistakes" in "Parents Just Don't Understand," and won the first rap Grammy with DJ Jazzy Jeff. A character he played lives with his uncle Philip Banks after being sent from "west Philadelphia" where he was "born and raised" for getting "in one little fight." This man played the scourge of his cousin Carleton in that series, and later portrayed James Edwards, who fights aliens in *Men In Black*. For 10 points, name this actor who played Chris Garder in *The Pursuit of Happyness* as well as the namesake character of *The Fresh Prince of Bel-Air*.

ANSWER: Willard Christopher **Smith**, Jr. [prompt on "The **Fresh Prince**"]

15. The "rebound" variety of this property is measured using a scleroscope, and can be ordered on a scale named for Bennett. Impression area is an important measure in the Knoop method of testing for this property. The "indentation" type is tested for by the Brinell and Rockwell methods, which produce dimensionless numbers of this property. A number generally between two and four measures this property on the Vickers scale. For 10 points, name this property, whose "scratch" variety can be measured using the Mohs scale.

ANSWER: **hardness**

16. This author wrote the screenplay for a short movie in which Buster Keaton tries to escape the gaze of a giant eyeball, *Film*. A man flung onstage is frustrated at his attempts to reach a bottle of water in this author's play *Act Without Words*. This author wrote about a man who eats bananas while listening to recordings of his past life in *Krapp's Last Tape*. In another of his plays, Lucky delivers a bizarre monologue to two tramps who expect the arrival of the title character. For 10 points, name this author who wrote about Vladimir and Estragon in *Waiting for Godot*.

ANSWER: Samuel **Beckett**

17. In the salivary glands of drosophila, these entities can be characterized by a staining pattern involving dark band separated by light integrands wherein they are elongated. In addition to being enlarged in polytene cells, their shorter arms and longer arms are denoted p and q respectively. The inactive one described by the letter X is called a Barr body, and forty four of them are called autosomal, which do not possess any information about sex. For 10 points, identify these structures made of chromatin material, of which there are forty six in humans.

ANSWER: **chromosomes** [accept **polytene** or **polyteny** until "these entities"]

18. Though they are not hydrogen bonds, the presence of these cause alkyl halides to have higher boiling points than regular alkanes, and a vector quantity associated with these is proportional to their separation distance. Homonuclear diatomics cannot be used in infrared spectroscopy since they do not have a permanent one of these, and ones induced instantaneously account for a weak form of intermolecular forces named for London. For 10 points, identify these pairs of oppositely charged particles, which exist permanently in polar molecules such as water.

ANSWER: **dipole** [accept **dipole moment** until "separation distance;" prompt thereafter]

19. Flora seduces a seller of matches in one of this man's plays, while in another, Rose Hudd becomes blind. In addition to *A Slight Ache* and *The Room*, this author wrote about Mick and Aston evicting a tramp named Davies in *The Caretaker*. Another of his plays sees Goldberg and McCann take Stanley Webber to "Monty" for "special treatment," while another features Gus and Ben, who are fed increasingly ridiculous information via a small elevator. For 10 points, name this British absurdist who wrote *The Birthday Party* and *The Dumb Waiter*.

ANSWER: Harold **Pinter**

20. The first movement of this work takes its theme from the composer's cantata *Herminie*. Chimes represent the toll of church bells in the final movement of this work, which also features the strings playing with the wood of the bow, which represents skeletons dancing. That movement, "Dream of a Witches Sabbath," features an E-flat clarinet playing the *idée fixe*. This work was based on its composer's love for Harriet Smithson, and includes the "March to the Scaffold." For 10 points, name this work by Hector Berlioz.

ANSWER: ***Symphonie Fantastique***

21. One statement of it is applicable to the measurement of a quantum state of a particle, and has an energy-time formulation. The Bohr model violates this statement since it assigns a definite radius to the electron. The Cauchy-Schwartz inequality is used to derive this statement, which relates the standard deviation of two conjugate variables to Planck's constant over 4 pi. For 10 points, identify this statement which implies that one cannot simultaneously know both the position and velocity of a particle, named for a German physicist.

ANSWER: Heisenberg **Uncertainty** principle



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Bonuses

1. He issued a 1910 edict annexing Korea, and during his reign the Diet opened in 1890. For 10 points each:

[10] Name this emperor, who took the “Charter Oath of Five Principles” which led to westernization. He is the namesake of a constitution.

ANSWER: Meiji Tenno [or Mutsuhito]

[10] The Meiji emperor took control from Yoshinobu, the last leader of this shogunate. It had gained influence among the daimyo class under its leader Ieyasu.

ANSWER: Tokugawa Shogunate [or the Edo shogunate]

[10] In the Meiji restoration, the imperial family moved from Kyoto to Edo, which was renamed this.

ANSWER: Tokyo

2. Name these works of John Steinbeck, for 10 points each.

[10] In this novel, the Joads and other Okie families travel west to California.

ANSWER: *Grapes of Wrath*

[10] George shoots Lenny at the end of this novel after Lenny accidentally kills Curley’s wife.

ANSWER: *Of Mice and Men*

[10] A poor fisherman’s baby is stung by a scorpion and eventually shot after the discovery of the valuable title object.

ANSWER: *The Pearl*

3. At the beginning of his career, he did fieldwork on Baffin Island and the Kwakiutl. For 10 points each:

[10] Name this author of *Race, Language, and Culture*, who taught a generation of American anthropologists from his post at Columbia University.

ANSWER: Franz Boas

[10] One of Boas’s students was this author who analyzed “Apollonian” and “Dionysian” societies in *Patterns of Culture* and described Japan in *The Chrysanthemum and the Sword*.

ANSWER: Ruth Benedict

[10] Boas analyzed the titular mental state in this 1911 book, which turned the tide on academic acceptance of scientific racism.

ANSWER: *The Mind of Primitive Man*

4. The title character of this poem sends John Alden in his stead. For 10 points each:

[10] Name this poem in which Alden confesses his love for Priscilla Mullins, much to the historically based title character's chagrin.

ANSWER: "The **Courtship of Miles Standish**"

[10] This American author who wrote about some migrating Canadians in *Evangeline* and the collection *Tales of a Wayside Inn* in addition to "The Courtship of Miles Standish."

ANSWER: Henry Wadsworth **Longfellow**

[10] This Longfellow work was written in the meter of the Kalevala and related Ojibwa lore such as the title character's love for Minnehaha.

ANSWER: *The **Song of Hiawatha***

5. Answer the following about some greats in pop art. For 10 points each:

[10] No pop art bonus can be complete without a part on this guy, who liked repetitive images of Madonna, Jacqueline Kennedy, and Campbell's Soup cans.

ANSWER: Andrew **Warhola**

[10] Containing the caption "I pressed the fire control... and ahead of me rockets blazed through the sky..." this cool Roy Lichtenstein work shows the aftermath of blowing up an enemy plane.

ANSWER: **Whaam!**

[10] This late artist once submitted a telegram with a work stating "This is a portrait of Iris Clert if I say so." Painter of *Caffeine Headache*, he produced a notable series of "Combines".

ANSWER: Robert Milton Ernst **Rauschenberg**

6. All of these instruments are struck to produce sound. For 10 points each, name these percussion instruments.

[10] This metallophone is played by Pappeno in Mozart's *The Magic Flute*. They occasionally have tube resonators, and consist of 2 rows of high pitched bars.

ANSWER: **glockenspiel** [prompt on "glock" or "bells"]

[10] The "machine" kind of this kettle drum often has a foot pedal that allows it to be tuned to particular pitches, unlike the majority of drums.

ANSWER: **timpani**

[10] This instrument has a flat surface and a curved rim, and is the standard orchestral gong.

ANSWER: **tam-tam**

7. This man claimed that he was "scared for America" when he met Senator Barack Obama. For 10 points each:

[10] Identify this man, an Ohio native whose fear of the proposed economic policies by Senator Obama brought him to the spotlight in the third presidential debate.

ANSWER: **Joe the plumber** [or Samuel Joseph **Wurzelbacher**]

[10] McCain also accused this organization, which focuses on voter registration for low income families in Ohio, of committing "one of the biggest frauds in voter history."

ANSWER: **ACORN** [or **Association of Community Organizations for Reform Now**]

[10] Sarah Palin has been criticized for using this epithet for a "normal American" "who needs to be represented by the vice president."

ANSWER: **Joe six-pack**

8. For light microscopes, its limit is approximately 200 nm. For 10 points each:

[10] Name this term for the ability to distinguish between two objects that are close to each other, often given in terms of the Rayleigh criterion.

ANSWER: **resolution**

[10] The minimum distance between two resolvable objects is directly proportional to this property of light, which is measured in length units and is the inverse of frequency.

ANSWER: **wavelength** [prompt on "lambda"]

[10] The Rayleigh criterion states that two objects can be resolved if their separation is less than the radius of this "disk" produced by diffraction of light passing through a circular aperture.

ANSWER: **Airy's** disk

9. This man believed in an everlasting Word, or *logos*, as a principle of the world order, or *kosmos*. For 10 points each:

[10] Name this pre-Socratic philosopher that is also notable for his doctrine of flux.

ANSWER: **Heraclitus**

[10] Heraclitus believed this one of the four Aristotelian elements to be the origin of all things, noting that "all things are an exchange for [this], and [this] for all things."

ANSWER: **fire**

[10] This man's *Cratylus* is the source of the common summary of Heraclitus' philosophy, which is one cannot "step twice into the same river."

ANSWER: **Plato**

10. For 10 points each, identify the following mixtures:

[10] This kind of mixture sees a dispersed phase scattered evenly throughout a continuous medium.

ANSWER: **colloid**

[10] In this kind of colloid, both the dispersed and continuous phases are liquids. The popular example of this kind of colloid is mayonnaise.

ANSWER: **emulsion**

[10] This other kind of colloid sees liquid or solid phases dispersed in a gas. It includes smoke and fog.

ANSWER: **aerosol** [do not prompt on or accept "sol"]

11. His plays include *St. Patrick's Day* and *The Critic*. For 10 points each:

[10] Name this British playwright who wrote about Mrs. Malaprop's attempt to separate Jack Absolute and Lydia Languish in *The Rivals*.

ANSWER: Richard Brinsley **Sheridan**

[10] In this play by Sheridan, Lady Sneerwell's malicious gossip threatens to divide Charles Surface and Maria.

ANSWER: *The* **School for Scandal**

[10] This other 18th century author wrote about Charles Marlow's courtship of Kate Hardcastle in his play *She Stoops to Conquer*.

ANSWER: Oliver **Goldsmith**

12. A radius OA that bisects one of these is also perpendicular to it. For 10 points each:

[10] Identify these segments formed by connecting two distinct points on the circumference of a circle.

ANSWER: **chord**

[10] These are segments that connect a vertex of a triangle to any point on the opposite side of the triangle. Medians and angle bisectors are special cases of them.

ANSWER: **Cevian**

[10] This is the point of intersection of angle bisectors of a triangle. A circle with radius  $r$ , which when drawn from this point, is tangent to all three sides of the triangle.

ANSWER: **incenter**

13. Several Russian historical figures were featured in movies by Sergei Eisenstein. For 10 points each:

[10] This man founded a secret police force called the oprichnina, and he abdicated his throne in favor of Simeon Bekbulatovich in 1575. He also murdered his son in 1581.

ANSWER: **Ivan IV** [or **Ivan the Terrible**; prompt on **Ivan**]

[10] Ramon Mercader was sentenced to 20 years in prison for murdering this man who had earlier coordinated the building of the Red Army during the Russian Civil War.

ANSWER: Leon **Trotsky**

[10] This prince of Novgorod pushed back Swedish invaders in 1240 and defeated the Teutonic Knights in the "massacre on the ice" in 1242.

ANSWER: Alexandr **Nevsky**

14. This man's standards include "So What" and "Freddie Freeloader." For 10 points each:

[10] Name this jazz musician whose albums include *Sketches of Spain* and *Kind of Blue*.

ANSWER: Miles Dewey **Davis** III

[10] Miles Davis was a virtuoso on this instrument. Other noted jazz musicians who played this instrument include Louis Armstrong and Dizzie Gillespie.

ANSWER: the **trumpet**

[10] This Miles Davis post-bebop album includes such classics as "Boplicity," "Godchild," and "Darn that Dream."

ANSWER: **Birth of the Cool**

15. Name these proteins that are abundant in the human body, for 10 points each:

[10] The DNA for this most abundant protein in the human body contains telopeptides, which prevent its final assembly into a triple helix until it is part of the extracellular matrix.

ANSWER: **collagen**

[10] Since collagen cannot exist inside the cell, this protein that couples with myosin to drive muscle movement is the most abundant intracellular protein in the human body.

ANSWER: **actin**

[10] This protein comprises fifty percent of the dry weight of the aorta. It uses entropy-driven crosslinks and hydrophobic interactions to generate its namesake stretchiness.

ANSWER: **elastin**

16. He rallied against the rule of Antonin Novotny, who was forced to resign. For 10 points each:

[10] Name this Czechoslovakian leader who proposed the creation of “Socialism with a Human Face.”

ANSWER: Alexander **Dubcek**

[10] Dubcek’s leadership saw the increasing liberalization of the “spring” named for this city, prompting a Soviet invasion where Dubcek was forced out of office.

ANSWER: **Prague**

[10] This man replaced Dubcek, ridding the reforms of the Prague Spring in his policy of “normalization.” The Charter 77 opposed his rule, and he was replaced by Vaclav Havel.

ANSWER: Gustav **Husak**

17. Formed in May of 1860 in Baltimore, this party took no position on slavery. For 10 points each:

[10] With support mainly in the border states, name this political party that tried to stave off secession and civil war. Their vice-presidential candidate was Edward Everett.

ANSWER: **Constitutional Union** Party

[10] This Tennessee senator and slaveholder was the first, last, and only presidential candidate for the Constitutional Union Party. He carried Tennessee, Kentucky, and Virginia.

ANSWER: John **Bell**

[10] After Lincoln's election victory, this member of the Constitutional Union Party from Kentucky proposed a namesake last-ditch compromise to stave off the Civil War.

ANSWER: John **Crittenden**

18. According to one legend, mankind was a result of this god’s incestuous union with his daughter Vak. For 10 points each:

[10] Name this creator god in Hindu mythology.

ANSWER: **Brahma**

[10] Brahma is said to have been born from the hiranya-garbha, one of these objects.

ANSWER: Cosmic **egg** [accept golden **egg**]

[10] This god has a third eye that burned off Brahma’s fifth head. Brahma got off lucky – that eye also burned Kama to a crisp after he interrupted this god’s meditation.

ANSWER: **Shiva**

19. Name these German authors, for 10 points each.

[10] This author wrote such plays as *The Robbers* and *William Tell* around the turn of the nineteenth century.

ANSWER: Johann Christoph Friedrich von **Schiller**

[10] This twentieth-century author of *Crabwalk* began his Danzig trilogy with *The Tin Drum*.

ANSWER: Gunter Wilhelm **Grass**

[10] The temperaments of an artist and a monk are contrasted in *Narcissus and Goldmund*, a novel by this author of *Demian*, *Steppenwolf*, and *Siddhartha*.

ANSWER: Herman **Hesse**

20. Moose Jaw is located in this province. For 10 points each:

[10] Identify this province whose largest city is Saskatoon. Like Alberta, it is a landlocked province of Canada.

ANSWER: **Saskatchewan**

[10] The Saskatchewan River empties into this lake. It is drained by the Nelson River, which empties into the Hudson Bay.

ANSWER: Lake **Winnipeg**

[10] One can visit the Diefenbaker homestead in the Wascana Park area in this capital of Saskatchewan.

ANSWER: **Regina**

21. This story was continued in a T. Coraghessan Boyle story, which updated it to Soviet times. For 10 points each:

[10] Name this story in which Akaky Akakievich's ghost haunts the Kalinkin Bridge, stealing warm clothing.

ANSWER: "The **Overcoat**" [or "**Shinel**"]

[10] This Russian author, whose wife is a life-size balloon in a Tommaso Landolfi short story, wrote "The Overcoat" as well as "The Inspector-General."

ANSWER: Nikolai Vasilievich **Gogol**

[10] This Gogol story is the first-person account of a Russian bureaucrat who comes to believe that he is Ferdinand VIII of Spain.

ANSWER: "**Diary of a Madman**" [or "**Zapiski sumasshedshego**"]

22. Scales for measuring this property include ones named for Sanderson and Mulliken. For 10 points each:

[10] Name this property, the propensity of an atom to attract electrons in a covalent bond.

ANSWER: **electronegativity** [prompt on **X**]

[10] This most commonly used scale for electronegativity is named after this chemist, who wrote *The Nature of the Chemical Bond* and also really liked vitamin C.

ANSWER: Linus Carl **Pauling**

[10] This other scale for measuring electronegativity uses the arithmetic mean between first ionization energy and electron affinity and has units electronvolts or kilojoules per mole.

ANSWER: **Mulliken** electronegativity [accept **absolute** electronegativity]