



HSAPQ

High School Academic Pyramid Questions

Fall 2008
ACF-Format Set #2

Round 12

Tossups

1. In an Evans-Pritchard work that is set "Among the Nuer," this principle is contrasted with political associations. This word is the last in the title of a 1949 book that developed the alliance theory, and was written by Lévi-Strauss. Its terminology was developed by Lewis Henry Morgan, who included Iroquois and Crow as examples of bifurcate merging. Godparents are often an example of the fictive type, and it can be shown with a genealogy diagram. For 10 points, name this relation between persons that is often based on marriage or common ancestry.

ANSWER: **kinship** [accept "**family relationships**" or other equivalents only before the end of the question]

2. This author's only play opens with a conversation between a bunch of drowned people and Captain Cat, and is titled *Under Milk Wood*. This poet wrote "After the first death, there is no other" in his collection *Deaths and Entrances*, which contains the poem "Refusal to Mourn the Death by Fire of a Child in London." He also wrote a poem about being "green and carefree," "Fern Hill," as well as one that claims that "old men should burn and rave at close of day." For 10 points, name this poet who wrote "Do Not Go Gentle into that Good Night."

ANSWER: Dylan Marlais **Thomas**

3. The "symmetric" types of these interactions seem to violate the duet rule, and occur in high-pressure ice known as "Ice X." This is the main mechanism by which R-groups in DNA interact, and the spacing of them results in the alpha helix and beta pleated sheet. Water's high boiling point is due to the high ratio of these bonds to the low molecular mass. For 10 points, name this type of bond resulting from the dipole-dipole force between an electronegative atom and the namesake element bonded to nitrogen, oxygen, or fluorine.

ANSWER: **hydrogen** bonds [prompt on **H**; prompt on **dipole-dipole** bonds/forces]

4. Adopted from an Henri Murger novel by Giacosa and Illica, this opera sees one character discuss his motivations in the aria "Donde lieta usci" and confess his love in "Che gelida manina." At the end, Schaunard pronounces the death of one character, shortly after Colline sets out to pawn an overcoat. In the first act, the characters go to Café Momus after dodging the landlord Benoit, but soon Mimi's tuberculosis is revealed, and both Rodolfo and Marcello are newly single. For 10 points, name this opera by Puccini about some poor Parisian artists.

ANSWER: *La* **Bohème**

5. The Naab River is a tributary of this river, and the Belene Island forms where it bifurcates. The Iron Gate dam was built along this river, which lies to the west of a bridge built on it by Trajan. The Tisza and Nava Rivers join this river after it flows through a national capital, and it originates in the Black Forest. Flowing through cities such as Belgrade and Bratislava is, for 10 points, what river which empties into the Black Sea and is the subject of a waltz by Johann Strauss?

ANSWER: **Danube** River [or **Donau** River]

6. In one section of this work, Rousillon cooks the heart of Cabestanh and feeds it to his wife. In another section, the monk Rustico sleeps with Alibech on the pretext of “putting the Devil in Hell.” Its first section begins with a story about the evil machinations of Ser Ciappelletto, and is told by Panfilo. Its narrators include Emilia, Pampinea, and Fiammetta, who wait out the Black Death in Fiesole. For 10 points, name this fourteenth-century work narrated by seven women and three men, a collection of one hundred stories by Giovanni Boccaccio.

ANSWER: *The Decameron*

7. The rotation of plane-polarized light traveling along the direction of one of these can be calculated using the Verdet constant. This quantity is equal to the curl of the vector potential, and a potential difference is created across a metal plate when it is applied perpendicular to the current; that phenomenon is known as the Hall effect. For a solenoid it is equal to the permeability constant times the number of turns times the current, which can be derived from Ampere’s law. For 10 points, identify this counterpart of the electric field.

ANSWER: magnetic field

8. The author of this work asserts that the world lies before us “like a land of dreams,” but quashes such thoughts by claiming that it lacks joy, love, light, certitude, peace, and help for pain. The “turbid ebb and flow / Of human misery” posited in this poem stems from an “eternal note of sadness” heard under the “naked shingles of the world” and also by “Sophocles long ago.” For 10 points, name this poem that imagines a “darkling plain... / Where ignorant armies clash by night,” a work of Matthew Arnold.

ANSWER: “Dover Beach”

9. This man worked as an explainer for David Lloyd George, in which role he toured Britain to educate people on the National Insurance Act. His political philosophy was set out in his book *The Social Worker*. He appointed Louis Mountbatten as the last Viceroy of India, and as prime minister, he oversaw the implementation of nationalized healthcare. He also attended the Potsdam Conference with Truman and Stalin. For 10 points, name this man who became prime minister of Great Britain in 1945 after ousting Winston Churchill.

ANSWER: Clement Attlee

10. It was recently discovered that the F-box protein from the complex SCFTIR1 is a receptor for them. PIN proteins regulate their efflux, and they cause miscarriages and leukemia, as evinced by 2,4-D and 2,4,5-T, two of them in Agent Orange. Also responsible for parthenocarpy, they activate expansins in one of their main functions. In low concentrations, they can delay flower senescence. Featuring prominently in the acid growth hypothesis, and competing with cytokinins in apical dominance, for 10 points, name this class of plant growth hormones.

ANSWER: auxins

11. This entity requires proper functioning of the protein frataxin, which, when mutated, causes Friedrich’s ataxia. Another disease of these bodies limits eye movement and is known as Kearns-Sayre syndrome. Lynn Margulis popularized the idea that these bodies are proteobacteria that underwent endosymbiosis. This organelle’s inner folds are called cristae, and it contains its own DNA that is inherited exclusively from an organism’s mother. For 10 points, name this powerhouse of eukaryotic cells.

ANSWER: mitochondria [or mitochondrion]

12. He painted a white angel on a hill behind a man in pink robes in *St. John on Patmos*. In another of his works, a nun has a Bible on her head and observes a man with a funnel on his head extracting a stone of madness, in *The Cure of Folly*. He painted a triptych where peasants carry pitchforks while a man playing a lute rides the title *Haywain* that chases creatures like a fish with legs. He painted the creation of the world on the outside of a work that shows monstrous birds eating humans. For 10 points, name this Dutch painter of *The Garden of Earthly Delights*.

ANSWER: Heironymous **Bosch** [or Jerome van **Aeken**]

13. One of them is a feather-god and a husband of Hina. Another owns a peacock mount, is married to Valli and Deivayanai, and is known as Murugan. The figure better known for serving this role in Hindu mythology receives the kamandalu and vajra and is the mother of Kartikeya and Ganesha. In addition to Morrigan and Durga, they include one who sprang from his mother Coatlicue fully grown as well as one who gets his arm bitten off by Fenrir. Huitzilopotchli and Tyr were, for 10 points, what this type of deity serving the same role as Ares?

ANSWER: **gods** of **war** [or **goddesses** of **war**; accept "**Polynesian gods**" or equivalents before "peacock" is read]

14. In one episode of this show, a character finds his ex-girlfriend Penelope in order to thwart Sandy Rivers's plan to take a vacation by staging a rain dance. One character believes he is the illegitimate son of Bob Barker, and another is frustrated by an attempt to use Love Solutions, a matchmaking service, and ends up dating Robin again. For 10 points, name this show starring Josh Radnor, Alyson Hannigan, Neil Patrick Harris, and the voice of Bob Saget, which chronicles the romantic pursuits of Ted from a future perspective.

ANSWER: **How I Met Your Mother**

15. Polly Ochiltree is murdered by a character with this first name in *The Marrow of Tradition*. A character with this first name is nicknamed "The Innocent" and plays the accordion in "The Outcasts of Poker Flat." A character of this first name incorrectly identifies David and Goliath as the first two disciples, and another character of this first name is bought by Augustine St. Clare and whipped to death by Simon Legree. For 10 points, identify this first name shared by a boy who pursues Becky Thatcher and a slave whose "cabin" titles a novel by Harriet Beecher Stowe.

ANSWER: **Tom**

16. One character in this play turns down a job as a banker in order to eat candy and play billiards. In addition to Gaev, one servant in this work hopes to marry Yasha but is threatened to be pawned off to Simple Simon. Charlotte does magic tricks at a ball in this work, which sees Trofimov fall in love with Madame Ranevskaya's daughter. Lopakhin crashes a party in this work to announce that he has bought the title estate. For 10 points, name this Chekhov play, whose title fruit trees are eventually cut down.

ANSWER: *The* **Cherry Orchard** [or **Vishnyovy sad**]

17. The *First Symphony* of Sibelius was influenced by this composer, who wrote the tone-poem *Francesca da Rimini*. One opera by this man contains the "Letter Scene," in which Tatyana writes a letter to the title character. In addition to *Eugene Onegin*, this composer wrote music for a ballet that features the characters Odette and Von Rothbart, and another that contains a "Chinese Dance" and a "Dance of the Sugar-Plum Fairy." For 10 points, name this Russian composer whose music appears in *Swan Lake* and *The Nutcracker*.

ANSWER: Peter Ilich **Tchaikovsky**

18. Acyl carbons may achieve umpolung reactivity using a compound of this element in the Corey-Seebach reaction. Along with chromic trioxide, an acid containing this element comprises the Jones reagent, and it features in ethyl and grapefruit mercaptans. The Claus process can produce its elemental form from natural gas, and it forms the most stable and best-known hexafluoride. One functional group containing it is thiol, and its most common allotrope is yellow and orthorhombic. For 10 points, name this element with atomic number 16 and symbol S.

ANSWER: **sulfur**

19. He wrote twenty books on Etruscan history, possibly inspired by his wife Plautia Urgulanilla. Early in his rule, forty-two senators supported the revolt of Dalmatia's governor. His rule was fought by Prasutagus of the Iceni and Boudicca, and he allowed Armenia's collapse to prevent war with Parthia. Thought to have been murdered by his fourth wife and niece Agrippina, this successor to Caligula expanded the Roman empire into Britain. For 10 points, name this lame emperor who was succeeded by Nero.

ANSWER: **Claudius** [or Tiberius **Claudius** Caesar Augustus Germanicus; or Tiberius **Claudius** Nero Germanicus]

20. One member of this family lost to Dale Bumpers in his 1970 re-election bid as governor of Arkansas, and earlier succeeded Orval Faubus. Another member of this family faced the Attica prison riots during his tenure as governor, and was replaced by Bob Dole as a Vice-Presidential candidate due to pressure from the conservative wing of the Republicans. A third member of this family served as president of Wesleyan College before being elected governor and later a Senator for West Virginia. For 10 points, Winthrop, Nelson, and Jay are all members of what prominent family associated with Standard Oil?

ANSWER: **Rockefeller**

21. One condition with this name caused the destruction of the Flight 501 of the Ariane 5 launch system. In the x86 processor, the TEST instruction clears its namesake flag, and the DieHard allocator prevents the "heap" form of this from happening. "Trampolining" is a notable method of exploiting the stack buffer form of this phenomenon, and the arithmetic form of it excludes division by zero. Infinite recursion is a common cause of the stack form of this condition. For 10 points, name this term referring to crashes caused by an inundation of information or data.

ANSWER: **overflows**

22. One of them attests to the veracity of a Cretan stating that all Cretans are liars, containing the stated Epimenides paradox. Another's kenosis passage is the only exception to a universal agreement of authorship, and references "quiet cattle brow[sing] among the ruins" marking the site of its title location. In addition to Titus, Philemon, and Philippians, another includes the quotations "through a glass, darkly" and "when I was a child, I spoke as a child, I felt as a child, I thought as a child." For 10 points, name these writings sent by a certain Christian convert.

ANSWER: **Pauline epistles** [or **Paul's letters**; accept **Saul** for Paul; accept **Pastoral Epistles** until "kenosis passage" is read]



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Bonuses

1. In the center of this work an oil lamp hangs from the ceiling, barely illuminating the inside of the shack. For 10 points each:

[10] Name this painting which depicts some really ugly peasants seated around a table.

ANSWER: *The **Potato Eaters***

[10] *Potato Eaters* was painted by this Dutch artist of *Café Terrace at Night*, *Starry Night*, and a bunch of works involving sunflowers.

ANSWER: Vincent **van Gogh**

[10] A van Gogh portrait of this friend of his shows him leaning on his right arm, which rests on a table with a foxglove. The portrait is worth a large amount of money.

ANSWER: Dr. Paul-Ferdinand **Gachet**

2. One theory of this force gives rise to asymptotic freedom. For 10 points each:

[10] Identify this force, named for its ability to overcome the repulsion between certain charged particles, which binds the nucleus together.

ANSWER: **strong** nuclear force [or **strong interaction**; or **color** force]

[10] The strong force overcomes the repulsion between these positively charged baryons found in the nucleus.

ANSWER: **protons**

[10] This theory of the strong nuclear force predicts asymptotic freedom and confinement, and is named for the fact that it uses the analogy of colors.

ANSWER: **quantum chromodynamics** [or **QCD**]

3. Name some European figures important in colonial Africa, for 10 points each.

[10] This king of Belgium established the Congo Free State as his one private colony, where the “rubber atrocities” were committed by his agents like Henry Morton Stanley.

ANSWER: **Leopold II** [prompt on **Leopold**]

[10] This British entrepreneur founded De Beers and was instrumental in expanding British control around South Africa. Zambia and Zimbabwe used to be named for him.

ANSWER: Cecil John **Rhodes**

[10] This man led a namesake raid on the Transvaal planned by Rhodes. It failed, resulting in escalating tensions that eventually led to the Second Boer War.

ANSWER: Leander Starr **Jameson**

4. He will be killed by Fenrir at Ragnarok but avenged by his son Vidar. For 10 points each:

[10] Name this chief god of Norse mythology.

ANSWER: **Odin**

[10] Odin is served by Hugin and Munin, two of this type of bird.

ANSWER: **Ravens**

[10] Odin gets his wisdom from carrying around this figure's severed head.

ANSWER: **Mimir**

5. The first one of these to be produced consisted of alternating silver and zinc discs. For 10 points each:

[10] Identify this device, named for either of two Italians, that contains two electrodes immersed in electrolytes, and thus sees the generation of current.

ANSWER: **voltaic** cell [or **voltaic** pile; or **galvanic** cell]

[10] This structure facilitates the passage of electrons between the electrolytes in a cell.

ANSWER: **salt bridge**

[10] In several cases, the potentials for half reactions in Voltaic cells must be mathematically determined using this equation, which factors in temperature, number of electrons, and activity.

ANSWER: **Nernst** equation

6. This building's namesake school was last directed by Mies van der Rohe. For 10 points each:

[10] Name this Dessau-based, Walter Gropius-designed structure, which housed an artistic school.

ANSWER: the **Bauhaus** Building

[10] Another notable building is this Spring Green, Wisconsin home of Frank Lloyd Wright, named after a Welsh bard. The "West" version is located in Scottsdale, Arizona.

ANSWER: **Taliesin**

[10] Frank Lloyd Wright may be best-known for this Pennsylvania house designed for Edgar J. Kaufmann, a many-cantilevered structure that sits atop a running creek.

ANSWER: **Fallingwater**

7. There are sixty-four combinations of these, and the AUG is known as the "start" type. For 10 points each:

[10] Identify this arrangement of three nucleotides found in mRNA, which is read during translation of mRNA.

ANSWER: **codon**

[10] This is the name given to the U nucleotide found only in RNA. Its DNA complement is thymine.

ANSWER: **uracil**

[10] Nirenberg and Matthaei demonstrated that a poly-uracil sequence coded for this amino acid, whose four-hydroxylated form is tyrosine. People who suffer from PKU cannot metabolize it.

ANSWER: **phenylalanine** [or **F** or **Phe**]

8. His father Esarhaddon made him crown prince of the country led from Nineveh, while his brother Shamash-shum-ukin was made crown prince of another country. For 10 points each:

[10] Name this king of Assyria who sponsored the creation of the first organized library in Mesopotamia.

ANSWER: **Ashurbanipal**

[10] This other Mesopotamian king promulgated his legal decisions, like the “lex talionis” and trial by ordeal, on a stele in the temple of Marduk.

ANSWER: **Hammurabi**

[10] Hammurabi and Shamash-shum-ukin were both leaders of this city. Nebuchadnezzar later built its hanging gardens.

ANSWER: **Babylon**

9. It ends by noting a statue of Neptune taming a sea horse cast by Claus of Innsbruck. For 10 points each:

[10] Name this poem in which a painting by Fra Pandolf of the title character on the wall prompts a duke to tell how she “had a heart too soon made glad.”

ANSWER: **“My Last Duchess”**

[10] “My Last Duchess” was penned by this British poet of “The Pied Piper of Hamelin” and other dramatic monologues.

ANSWER: **Robert Browning** [prompt on **Browning**]

[10] Based on a real trial, this long twelve part work by Browning tells of the trial of Guido Franceschini, who is suspected of killing his wife Pompilia.

ANSWER: **The Ring and the Book**

10. Theodor Adorno and Max Horkheimer wrote about one of *Enlightenment*. For 10 points each:

[10] Name this concept from philosophy which involves a combination of thesis and antithesis to create a synthesis.

ANSWER: **dialectic**

[10] The Communist metaphysic of “dialectical materialism” was put forth in this man’s *Das Kapital*. He collaborated with Friedrich Engels on *The Communist Manifesto*.

ANSWER: Karl **Marx**

[10] Immanuel Kant wrote about a “transcendental dialectic” in this work, which distinguishes “a priori” from “a posteriori” knowledge and was the first of three similarly-titled treatises.

ANSWER: **Critique of Pure Reason** [or **Kritik der reinen Vernunft**]

11. This force is in equilibrium with gravity in a star, so changes in it cause a star to expand or contract. For 10 points each:

[10] Name this concept that is behind the “solar sail” principle, the force per unit area exerted by a certain particle.

ANSWER: **radiation pressure**

[10] Radiation pressure is the force exerted by this type of particle, the elementary particle of all electromagnetic radiation, like visible light.

ANSWER: **photons**

[10] Radiation pressure scales to the fourth power of temperature by a law partly named for this man. He also names a constant equal to 1.38 times ten to the negative twenty-three joules per Kelvin.

ANSWER: Ludwig Eduard **Boltzmann**

12. This man wrote a paper titled “The Theory of Interstellar Trade” and also developed a model concerning monopolistic competition. For 10 points each:

[10] Identify this frequent New York Times columnist, who was awarded the Nobel Prize in Economics in 2008.

ANSWER: Paul Robin **Krugman**

[10] Krugman is a member of the faculty at this Ivy League school, whose Institute for Advanced Study sported Albert Einstein and Kurt Godel among its scholars.

ANSWER: **Princeton** University

[10] “The Theory of Interstellar Trade” references this situation described by Einstein, where a person traveling at the speed of light ages less than a person on the Earth.

ANSWER: **twin** paradox

13. This general class of celestial bodies can be found in the Pallas group. For 10 points each:

[10] Name these stony solar system objects, a large band of which is found between Mars and Jupiter.

ANSWER: **asteroids**

[10] This group of asteroids is found at the Lagrangian points in Jupiter’s orbit, and are split into the “Greeks” and a namesake subgroup.

ANSWER: the **Trojans** [or **Trojan asteroids**]

[10] This is the only dwarf planet in the asteroid belt, and was the first dwarf planet found.

ANSWER: 1 **Ceres**

14. Due to its wording, white men bought up two thirds of the land that had once been held by the Indians. For 10 points each:

[10] Name this 1887 law that redistributed land on a reservation to try to turn Indians into farmers.

ANSWER: **Dawes** Severalty Act [or **Dawes** General Allotment Act]

[10] This representative of goodwill to the Indians surprised chief Black Kettle’s village on the Washita River. He was killed at the Battle of the Little Bighorn, known as his “last stand.”

ANSWER: George Armstrong **Custer**

[10] This Native American tribe was chased around Idaho by General O. O. Howard, before their Chief Joseph surrendered to Nelson A. Miles.

ANSWER: **Nez Perce**

15. Some of this author’s short works include “The Maypole of Merrymount” and “The Minister’s Black Veil.” For 10 points each:

[10] Identify this writer, who also wrote “The Celestial Railroad,” and “My Kinsman Major Molineaux,” among others works collected in *Mosses from an Old Manse* and *Twice-Told Tales*.

ANSWER: Nathaniel **Hawthorne**

[10] Nathaniel Hawthorne may be better known for this short story, about the title character, who visits a witch’s Sabbath and meets the Devil in the woods.

ANSWER: “**Young Goodman Brown**”

[10] Hawthorne also wrote this story, about the title woman, who is the child of a poisoner.

ANSWER: “**Rappaccini’s Daughter**”

16. The protagonist of this novel goes on a car trip while adjusting to his new employer Mr. Faraday. For 10 points each:

[10] Name this novel in which the butler Stevens reminisces about his Nazi-sympathizing boss Lord Darlington.

ANSWER: *The Remains of the Day*

[10] This Japanese-born British author of *A Pale View of Hills* and *When We Were Orphans* wrote *The Remains of the Day*.

ANSWER: Kazuo Ishiguro

[10] In this Ishiguro novel, the human organ bank Kathy reflects on her childhood at Hailsham Boarding School with other donors.

ANSWER: *Never Let Me Go*

17. For 10 points each, name these economists.

[10] This Chicago School leader revived monetarism in books like *Capitalism and Freedom* and *Free to Choose*.

ANSWER: Milton Friedman

[10] This game theorist postulated a namesake “equilibrium.”

ANSWER: John Forbes Nash, Jr

[10] This formulator of the “liberal paradox” and practitioner of “welfare economics” posited that democracy prevents famines in his book *Collective Choice and Social Welfare*.

ANSWER: Amartya Sen

18. The title condition arises when the protagonist stares at the roots of a chestnut tree. For 10 points each:

[10] Name this philosophical novel about Antoine Roquentin.

ANSWER: *Nausea* [or *La Nausee*]

[10] In this play, Garcin, Inès, and Estelle are trapped in a room with Second Empire furniture, where their conversation leads Garcin to exclaim “Hell is other people!”

ANSWER: *No Exit* [or *Huis Clos*]

[10] Both *Nausea* and *No Exit* were written by this French author, who also wrote about the concept of “bad faith” in *Being and Nothingness*.

ANSWER: Jean-Paul Sartre

19. An opponent of the policies of Pasquale Paoli, this man was forced to leave for France for his involvement with the Corsican Jacobins. For 10 points each:

[10] Name this man who used a “whiff of grapeshot” to shoot down rebels in the coup of 13 Vendemiaire and who concluded the Treaty of Campo Formio with Austria.

ANSWER: *Napoleon I* [or Napoleon Bonaparte; prompt on *Napoleon*]

[10] Napoleon defeated the combined Austrian and Russian forces in this December 2, 1805 battle that forced Austria to sign the Treaty of Pressburg.

ANSWER: *Austerlitz* [or Battle of the *Three Emperors*]

[10] In this climactic battle of September 7, 1812, Napoleon defeated the forces of General Kutuzov west of Moscow.

ANSWER: *Borodino*

20. It was written by the sage Valmiki. For 10 points each:

[10] Name this Hindu epic that tells of a prince of Ayodhya. The title character's brother Bharata is allowed to rule as a regent in his stead when he gets his sandals.

ANSWER: the **Ramayana**

[10] Rama is aided by this monkey-god, an incarnation of Shiva who helps him find Sita.

ANSWER: **Hanuman** [or **Hanumat**; or **Anjaneya**]

[10] This rakshasa and king of Lanka is a demon that Rama must fight. Rama battles him atop Hanuman's shoulders.

ANSWER: **Ravana** [or **Ravan**; or **Rawana**; or **Dasamukha**]

21. This river's largest tributary is the Vaal. For 10 points each:

[10] Name this river that empties into Alexander Bay after running along the entire southern border of Namibia.

ANSWER: **Orange** River

[10] The Orange River runs for the majority of its length through this country, which includes the large city of Johannesburg as well as the capitals Cape Town and Pretoria.

ANSWER: **South Africa**

[10] The Orange River forms in the highlands of this country that is completely surrounded by South Africa.

ANSWER: **Lesotho**

22. In this concerto, thunder is depicted by a tremolo in the orchestra, and lightning is depicted by the violins playing a fast ascending scale. For 10 points each:

[10] Name this concerto that also includes some violins playing ornaments in a high range, which is meant to depict various birdsongs.

ANSWER: "**Spring**" [or "**La Primavera**"; or **Concerto No. 1** in E major]

[10] The "Spring" Concerto is a part of this Baroque composition that was first published in *The Contest between Harmony and Invention*. Each concerto in it is prefaced with a sonnet.

ANSWER: *The* **Four Seasons** [or *Le* **quattro stagioni**]

[10] *The Four Seasons* was composed by this man who was nicknamed the Red Priest.

ANSWER: Antonio **Vivaldi**