



High School Academic Pyramid Questions

Fall 2008
ACF-Format Set #2

Round 6

Tossups

1. While hunting for the killer of Johnny Viti and the “Irish gang,” this character ties up a family and steals their Christmas presents in *The Long Halloween*. In one film, he holds a parade where a balloon emits poison and is named Jack Napier, killing his boss after falling in a chemical vat. In another, he claims that either his wife got cut up by gambling sharks or his father cut a smile onto his face, which happens before he blows up Rachel Dawes and burns Harvey Dent’s face. For 10 points, name this Gotham criminal played by Jack Nicholson and Heath Ledger, a clown-dressed enemy of Batman.

ANSWER: The Joker

2. One person working in this artistic form depicted a boy with one suspender strap dropped, clutching a toy hand grenade. One artist in this medium rankled N.E.A. brass with his lewd art featuring depictions of bullwhips in naughty places. Another man who worked in this medium created *The Pond-Moonlight*. In addition to Diane Arbus, Robert Mapplethorpe and Edward Steichen, others who worked in this medium include Annie Lebovitz and Dorothy Lange. For 10 points, name this form employed to depict Yosemite Valley by Ansel Adams.

ANSWER: photography [accept word forms and equivalents]

3. Strangely, her epithets include “Tymborychos,” or gravedigger, and “Anosia,” or unholy, and the Athenians considered her a fourth Fate. One of her lovers was allegedly blinded by bees, while another was killed by a boar and spent one-third of the year with her and one-third of the year with Persephone. Those lovers were Anchises and Adonis. Harmonia, Deimos, and Phobos resulted from her affairs with Ares, who was trapped in bed with her by her husband Hephaestus. For 10 points, name this mother of Aeneas and Eros, a Greek goddess of love and beauty.

ANSWER: Aphrodite

4. In this author's first novel, Paul Proteus leads a rebellion of the Ghost Shirt Society against the Ilium Works. This author wrote about Howard Campbell, who poses as a Nazi to spy for the United States, in *Mother Night*, and recounted Malachi Constant's journey to a moon of Saturn in *The Sirens of Titan*. Another of his novels ends with a bird saying “Po-tee-weet,” repeats the phrase “so it goes,” and focuses on a optometrist unstuck in time, Billy Pilgrim. For 10 points, name this author who wrote about the firebombing of Dresden in *Slaughterhouse-Five*.

ANSWER: Kurt Vonnegut, Jr.

5. Two of these which contain aromatic groups are characterized by a strong UV absorption peak at 280 nanometers, while two other ones sometimes see their central sulfur atom replaced by selenium. The dihedral angles between them can be shown on a Ramachandran Plot. The simplest one of the does not show optical activity, and is called glycine. The bond between these objects’ COOH group and NH₂ group are known as peptide bonds. For 10 points, identify these molecules which are the basic building blocks of proteins.

ANSWER: amino acids

6. This author wrote a work in which a Carbonari member named Pietro Missirilli scorns the title character after she inadvertently reveals his revolutionary leanings, and in his first novel, Octave loves the title character but suffers from embarrassing bouts of impotence. In addition to *Vanina Vanini* and *Armance*, this author wrote about a man who is caught in between Clelia and Gina, while in another work, he wrote about the protagonist's affair with Madame de Renal. For 10 points, name this French author of *The Charter House of Parma* and *The Red and the Black*.

ANSWER: **Stendahl** [or Henri-Marie **Beyle**]

7. This religion uses three calendars, with the Fasli the most widely accepted. The fire altar is an important symbol in this religion, which does not accept converts, and an important concept is Asha, or righteous law. This religion focuses partially on the conflict between the Daevas and the Amesha Spentas, who serve Angra Mainyu and Ahura Mazda, respectively. Its holy books include the Gathas and the Avesta. For 10 points, name this indigenous Persian religion founded by Zarathustra.

ANSWER: **Zoroastrianism**

8. An empire centered in this city was established by Theodore Lascaris and along with Trebizond and Epirus was one of the Byzantine successor states. A church council here during the reign of Pope Adrian I ended a controversy started by Patriarch Leo III, the ban on icons. Another council here dealt with the Meletian schism, set the date of Easter, and condemned Arianism. For 10 points, name this city home to a church council called by Constantine that established a namesake creed.

ANSWER: **Nicaea** [accept **Iznik** before "namesake creed"]

9. Scharnhorst calculated that this phenomenon occurs as a result of the Casimir effect. The EPR Paradox noted that this must happen in an entangled system, and for larger systems it would require the presence of either negative energy or tachyons. Cerenkov radiation is emitted when this occurs in a medium with a high index of refraction, and in special relativity it is equivalent to traveling backwards in time. For 10 points, name this phenomenon in which a particle travels faster than three times ten to the eighth meters per second.

ANSWER: **faster-than-light** travel [accept **FTL**; accept **supraluminal** travel; accept other reasonable equivalents]

10. Friedrich von Holstein made unofficial diplomatic overtures to it, and Edouard-Marie Vaillant was exiled for his role in it. Its factions included the Blanquistes and the Proudhonists, and it resulted in the burning of the Hotel de Ville and the Tuileries Palace. Georges Clemenceau tried to mediate between its leaders and the National Assembly, and it was ended during the Bloody Week. For 10 points, name this 1871 radical uprising in Paris that occurred following the defeat of France in the Franco-Prussian War and the fall of Napoleon III.

ANSWER: **Paris Commune**

11. Most lenses with a negative index of refraction are made from the oxides of this element, and the satellites known as LAGEOS are covered with this element. The earliest Ziegler-Natta catalyst was a combination of titanium chloride and alkyl halides consisting of this element, whose chloride is often used in the Friedel-Crafts reaction. Found in feldspars along with silicates, this element is also found in corundum along with oxygen. For 10 points, name this element whose chief ore is bauxite, and which is produced in the Hall-Héroult process.

ANSWER: **aluminum** [or **aluminium**]

12. Antoine Weerts's version of this work features a mob with outstretched arms on the right, while a Munch painting of it shows a red-headed nude standing beside the title figure lying on a bed. In the most famous depiction of this scene, the title figure's left hand rests on a green sheet and holds a piece of paper, while his right hand holds a quill and hangs down to the floor. The figure's head leans to the right and is wrapped in white bandages. For 10 points, name this painting of a dead man in a bathtub, by Jacques-Louis David.

ANSWER: *The **Death of Marat** [or *Le **Mort de Marat**; or *The **Assassination of Marat**]***

13. The existence of this phenomenon is measured using a TAO array, and corresponds to a temperature change. Gilbert Walker made the first study of this component of the Southern Oscillation by noting that droughts in India and sub-Saharan Africa corresponded to mild winters in Canada. Jakob Bjerknes hypothesized that the monsoon rains of the Indian Ocean were "stolen" to provide rainstorms along the Pacific Coast of North and South America. For 10 points, name this weather pattern that is often contrasted with La Nina.

ANSWER: **El Nino** [accept **La Nina** before "India"]

14. The eastern part of this sea includes a basin containing the Reed and Tizard banks. Also within this sea are the Paracel Islands, and the Sunda Platform is found at the bottom of its southwestern section. Rivers draining into it include the Xi, Red, and Mekong, and its chief embayments include the Gulf of Thailand and the Gulf of Tonkin. For 10 points identify this sea that borders the mainland of Southeast Asia which the Taiwan Strait connects to the East China Sea.

ANSWER: **South China** Sea

15. The protagonist of this work is taken in at the House of the Interpreter and House Beautiful after passing through the Wicket Gate. In this work, a faithful man is sentenced to death by Judge Hate-Good in the town of Vanity Fair, after the protagonist battles Apollyon in the Valley of Humiliation. The protagonist sinks into the Slough of Despond after leaving the City of Destruction, but eventually he reaches the Celestial City. For 10 points, name this religious allegory about the journey of Christian, written by John Bunyan.

ANSWER: *The **Pilgrim's Progress** from This World to That Which Is to Come*

16. This work uses mistuned violins in its eighth movement to depict "People With Long Ears," and this work includes a xylophone to parody a work that depicts dancing dead people, "Danse Macabre." A double bass plays a waltz in movement five, while badly played scales depict "Pianists." Along with "Fossils," a cello plays the part of a swan. Opening with a piano tremolo in the movement "Introduction and Royal March of the Lion," for 10 points, name this Grand Zoological Fantasy by Camille Saint-Saens.

ANSWER: *The **Carnival of the Animals** [or *Le **Carnaval des Animaux**]**

17. This man gave the televised pro-Goldwater speech "A Time For Choosing," and one man campaigning against him coined the phrase "voodoo economics" to attack him. During a strike of Air Traffic Controllers, he fired all that did not return to the job in 48 hours. Oliver North had his hearings for the Iran-Contra affair during this man's presidency, where he proposed the Strategic Defense Initiative, or "Star Wars." For 10 points, name this president who told Gorbachev to tear down the Berlin wall, whose vice president was George H.W. Bush.

ANSWER: Ronald **Reagan**

18. Along with Piola, this man names two stress tensors. He theorized that hot gases produce discrete spectral lines, and that hot solid objects surrounded by cool gases produce spectra with gaps in his namesake laws of spectroscopy. This man's namesake law of thermal radiation states that at thermal equilibrium, the emissivity of a surface equals its absorptivity. For 10 points, name this German physicist who coined the term "black body" and has a namesake "loop rule" and "junction rule" for circuits.

ANSWER: Gustav Robert **Kirchoff**

19. In one of this writer's novels, the wolf Homo helps Gwynplaine find the blind girl Dea. In addition to *The Man Who Laughs*, this author wrote a novel in which Griffenfield imprisons the pure maiden Ethel and is defeated by Ordener Guldenlew, *Hans of Iceland*. One of this author's books focuses on the escaped convict and caretaker of Collette, Jean Valjean, while another features the character Esmeralda and is about the bellringer Quasimodo. For ten points, identify this author of *Les Miserables* and *The Hunchback of Notre Dame*.

ANSWER: Victor **Hugo**

20. One character in this novel eventually marries a vulgar Bristol actress named Augusta Hawkins. A character assents to marry Robert Martin in this novel, which also contains a secret affair between Jane Fairfax and Frank Churchill. The title character attempts to play matchmaker for Harriet Smith, and ends up married to Mr. Knightley. For 10 points, name this novel whose title character is the meddling Ms. Woodhouse, written by Jane Austen.

ANSWER: **Emma**

21. This man published two articles on "learning by doing," and with Pratt, this man names a measure of risk aversion. Independently of Gerard Debreu, he proved the First and Second Welfare Theorems of general equilibrium theory, and with Debreu, he proved the existence of a competitive equilibrium. For 10 points, name this 1972 Nobel Laureate in Economics, who showed that no voting system can accurately reflect the ranking preferences of the voters in his "Impossibility Theorem".

ANSWER: Kenneth Joseph **Arrow**

22. These peoples participated in the First Taranaki War following Te Teira's sale of his land, and the Ratana Church was founded by a Methodist member of this group. Sir Apirana Turupa Ngata was a key leader of them in the early 20th century who served as minister of native affairs, and Te Wherowhero was crowned Potatau I as a result of the King Movement among these peoples. Abel Tasman was the first European to contact them, and some of them agreed to the 1840 Treaty of Waitangi with Great Britain. For 10 points, name these native peoples of New Zealand.

ANSWER: **Maori**



HSAPQ

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Bonuses

1. Jim Conklin comforts the protagonist of this novel, who becomes scared in battle. For 10 points each:

[10] Name this novel about Henry Fleming's Civil War experience.

ANSWER: The **Red Badge of Courage**

[10] This American author who wrote the poetry collection *The Black Riders* and the short story "The Open Boat" wrote *The Red Badge of Courage*.

ANSWER: Stephen Crane

[10] The gambler kills the Swede in this short Crane work named after a colorful structure.

ANSWER: "The Blue Hotel"

2. Name these novelists who wrote about war, for 10 points each.

[10] Septimus Smith kills himself after World War I in this author's novel *Mrs. Dalloway*. This Bloomsbury Group author also wrote *To the Lighthouse* and *A Room of One's Own*.

ANSWER: Virginia Woolf

[10] This author described his experiences fighting in World War I in *Goodbye to All That*. His novels set in Rome include *I, Claudius*.

ANSWER: Robert Graves

[10] The world is plunged into a third global war at the end of *The Four-Gated City*, the final book in this author's *Children of Violence* series. She also wrote *The Golden Notebook*.

ANSWER: Doris Lessing

3. It was ended by the Treaty of Paris of 1854. For 10 points each:

[10] Name this war in which Russia fought Britain, France, and the Ottoman Empire over a namesake peninsula.

ANSWER: Crimean War

[10] In the Crimean War, this naval base of the Russian Black Sea Fleet was besieged from 1854 to 1855 by the forces of Lord Raglan and Francois Canrobert.

ANSWER: Sevastopol

[10] This man led the Charge of the Light Brigade at the Battle of Balaklava, and he became the namesake of a type of jacket.

ANSWER: James Thomas Brudenell, 7th earl of Cardigan [accept either]

4. In this religion, Papa Legba serves as an intermediary between humans and the spirits. For 10 points each:

[10] Name this Haitian religion derived from Yoruban culture that is only loosely related to the practice of cursing individuals by sticking pins into dolls.

ANSWER: **Voodoo**

[10] These are the spirits of Voodoo, who serve the god Bondye. Their ranks include the aforementioned Papa Legba as well as Baron Samedi, Ayizan, and Ogoun.

ANSWER: **loas**

[10] This other Caribbean religion is also derived from Yoruban culture. It believes in Orishas, spirits that serve the god Olodumare, and is notable for its animal sacrifices.

ANSWER: **Santeria**

5. The Federal Reserve manipulates the general level of this quantity through such factors as the federal funds rate and the discount rate. For 10 points each:

[10] Name this economic ratio, which is found along with "employment" and "money" in the title Keynes's *General Theory*.

ANSWER: **interest**

[10] Interest rates are inverse to the levels of this phenomenon. Along with consumption, government spending, and net exports, it is one of the four components of GDP.

ANSWER: net **investment**

[10] In this situation, interest rates are so close to zero that the rate can no longer be lowered in order to stimulate investment. It affected Japan in the 1990s.

ANSWER: **liquidity trap**

6. At the beginning of this story, a barber finds the title object in his bread. For 10 points each:

[10] Name this short story whose title object disappears from Major Kovalyov's face.

ANSWER: "The **Nose**" [or "**Nos**"]

[10] This Russian author of *Dead Souls* wrote "The Nose."

ANSWER: Nikolai **Gogol**

[10] This Japanese author also wrote a short story titled "The Nose," as well as "Hell Screen," "In a Grove," and "Rashomon."

ANSWER: Ryunosuke **Akutagawa** [accept in either order]

7. The following battles of the American Revolution led directly to Cornwallis' surrender at Yorktown. For 10 points each:

[10] In this October 7, 1780 battle in South Carolina, the "Over Mountain Men" defeated a force of Tory militia led by Patrick Ferguson, who died in this battle.

ANSWER: **King's Mountain**

[10] In this January 17, 1781 battle that also took place in South Carolina, Morgan's forces got revenge for the American defeat at Camden by defeating the forces of Banastre Tarleton.

ANSWER: **Cowpens**

[10] After Cowpens, Cornwallis' forces won this battle in North Carolina named for a governmental structure. Cornwallis' losses were so great that he was forced to retreat.

ANSWER: **Guilford** Courthouse

8. The aufbau principle holds that these elements add electrons to their 5f subshells. For 10 points each:

[10] Name this series that encompasses elements 89-103.

ANSWER: **actinides** [or **actinide series**; or **actinoids**; prompt on **An**]

[10] One of the two actinides found in the earth's crust is this metal, whose 235 and 238 isotopes are important in nuclear fission.

ANSWER: **uranium** [or **U**]

[10] This inventor of the cyclotron got element 103, an actinide, named after him.

ANSWER: Ernest Orlando **Lawrence** [accept **lawrencium**]

9. Its second largest city is Launceston. For 10 points each:

[10] Name this Australian state that includes King Island, Bruny Island, the Furneaux Group, and the Hunter Islands, as well as Great Lake and Mount Wellington.

ANSWER: **Tasmania**

[10] Tasmania is separated from the state of Victoria by this strait.

ANSWER: **Davis** Strait

[10] Located on the west bank of the Derwent River, this city is the capital of Tasmania.

ANSWER: **Hobart**

10. John Bright and Richard Cobden led a group opposed to them, and David Ricardo was famously against them. For 10 points each:

[10] Name these British laws that established tariffs on the import of grain.

ANSWER: **Corn** Laws

[10] The Corn Laws were officially repealed by this prime minister from 1841 to 1846 who founded the modern Conservative Party with the Tamworth Manifesto.

ANSWER: Robert **Peel**

[10] Dissatisfaction with the corn laws led to this massacre in Manchester that occurred at a demonstration featuring a speech by Henry Hunt.

ANSWER: **Peterloo** Massacre

11. He used the octatonic mode in his "symphonic suite" *Antar*. For 10 points each:

[10] Name this composer who used orthodox hymns in his *Russian Easter Overture* as well as extensive triplets in the violin solos of his *Scheherezade*.

ANSWER: Nikolai Andreyevich **Rimsky-Korsakov**

[10] Rimsky-Korsakov may be best known for an interlude in *The Tale of Tsar Saltan* where a violin plays chromatic scales up and down to represent "The Flight of" this kind of animal.

ANSWER: **bumblebee** [prompt on partial answer]

[10] This Rimsky-Korsakov work uses the same Alborada in its first and third movement, although one uses a clarinet solo and another uses a violin. It ends with a Fandango, where part of the Alborada is recapitulated.

ANSWER: **Capriccio Español**

12. Possibly originating as a goddess of the night, this daughter of Agenor was carried off by Zeus in the form of a bull. For 10 points each:

[10] Name this Phoenician princess later wed to Asterius, the king of Crete.

ANSWER: **Europa**

[10] Among the sons of Europa and Zeus was this legendary Cretan king who judges the dead along with his brother Rhadamanthys and Aeacus.

ANSWER: **Minos**

[10] At the wedding of Europa and Asterius, Zeus presented the couple with this bronze robot that hurled stones and fire at unwanted visitors to the island.

ANSWER: **Talos**

13. It is the language of the Mahabharata and the Vedas. For 10 points each:

[10] Name this ancient Indian language.

ANSWER: **Sanskrit**

[10] This section of the *Mahabharata* consists of Krishna allaying Arjuna's fears about going into battle.

ANSWER: **Bhagavad Gita**

[10] This Sanskrit playwright and poet wrote of a king who has a curse cast on him that makes him only able to remember the title character from her ring, in *The Recognition of Shakuntala*.

ANSWER: **Kalidasa**

14. The narrator of this poem hears "one clear call" at "sunset and evening star." For 10 points each:

[10] Name this poem whose narrator says "I hope to see my Pilot face to face" after completing the title action.

ANSWER: **"Crossing the Bar"**

[10] This British poet who wrote of the Crimean War in "Charge of the Light Brigade" and a series about King Arthur in *Idylls of the King* penned "Crossing the Bar."

ANSWER: Alfred Lord **Tennyson**

[10] Tennyson returned to Authurian legend in this poem whose title weaver has her "mirror crack'd from side to side" after seeing Sir Lancelot.

ANSWER: "The **Lady of Shalott**"

15. This entity voted on the 2009 draft budget in October 2008. For 10 points each:

[10] Name this legislative body, whose president is Hans-Gert Pottering.

ANSWER: the **European Parliament** [or **Europarl**]; or **EP**; prompt on **Common Assembly**]

[10] Pottering hails from this country whose current Chancellor is Angela Merkel.

ANSWER: Federal Republic of **Germany** [or Bundesrepublik **Deutschland**]

[10] Previous to Pottering, the last President of the Europarl was a Socialist Workers' Party head honcho and aeronautical engineer named Josep Borrell, who hails from this country.

ANSWER: Kingdom of **Spain** [or Reino de **España**]

16. His nickname was “the Hammer.” For 10 points each:

[10] Name this father of Carloman who was the mayor of the palace of Austrasia and who supported the efforts of Saint Boniface to convert German tribes.

ANSWER: Charles **Martel**

[10] This son of Charles Martel went on to become the first King of the Franks and was the father of Charlemagne.

ANSWER: **Pippin III** [or **Peppin III**; or **Pepin the Short**; or **Pippin the Short**]

[10] Charles Martel was victorious in this 732 battle against Moorish raiders from Spain that ended the expansion of Islam into Western Europe.

ANSWER: **Tours** [or **Poitiers**]

17. Name these parts of a neuron, for 10 points each:

[10] Action potentials are passed along this part of the neuron, which synapses with dendrites.

ANSWER: **axon**

[10] A “sheath” of this fatty molecule produced by Schwann cells and oligodendrocytes surrounds the axon, improving conduction velocity.

ANSWER: **myelin**

[10] These are places along the membrane of the axon that are unmyelinated, resulting in saltatory conduction.

ANSWER: **nodes** of **Ranvier**

18. This man sure did love painting bowler hats. For 10 points each:

[10] Name this surrealist painter whose *Golconda* has a lot of people wearing those hats falling from the sky and who showed a dude with his face obscured by an apple in another work.

ANSWER: René François Ghislain **Magritte**

[10] Magritte may be best known for his *Treachery of Images*, a depiction of this object with the caption “Ceci n'est pas une” it, which means that “this is not” this implement.

ANSWER: a **pipe** [only accept exact wording]

[10] A clock reflected by a mirror is flanked evenly by two candlestick holders in this Magritte work, where a locomotive juts out of the fireplace parallel to the wooden boards on the ground.

ANSWER: **Time Transfixed** [or *La Durée poignardée*]

19. It used an interferometer developed by one of its namesakes. For 10 points each:

[10] Identify this experiment which showed that lack of a luminiferous aether.

ANSWER: **Michelson-Morley** experiment

[10] The Trouton-Noble experiment, which also showed a null result for the aether, used one of these devices made of two parallel plates which store charge between them.

ANSWER: **capacitor**

[10] The Michelson-Morley experiment ultimately showed that this quantity is independent of the observer.

ANSWER: **speed** of **light** [prompt on **c**]

20. "Machine code" is one term for the string of zeroes and ones used at the core of any computing language. For 10 points each:

[10] This type of low-level language uses symbolic representation of machine code to instruct a computer what to do.

ANSWER: **assembly** language

[10] Many higher-level programming languages, such as Pascal and C, use this program instead of an assembler. It parses the programming language and converts it into machine code.

ANSWER: **compiler**

[10] The "Hex" version of this command displays the machine code of a program in hexadecimal. Generally this term refers to any such printout of the machine code.

ANSWER: **dump**

21. For a monoatomic ion, this value is exactly equal to the charge on that ion. For 10 points each:

[10] Give this term which is defined as zero for an element bound only to itself, for instance in diatomic oxygen.

ANSWER: **oxidation** number [accept **oxidation state**]

[10] While oxidation numbers are usually integers, nitrogen has an oxidation number of negative one-third in this anion which consists of two nitrogens each double-bonded to a central nitrogen.

ANSWER: **azide**

[10] An atom both increases and decreases its oxidation number in this kind of redox reaction, in which the same atom is both oxidized and reduced.

ANSWER: **disproportionation**