



High School Academic Pyramid Questions

Fall 2008
ACF-Format Set #2

Round 15

Tossups

1. One character in this novel reveals that his roommate planted a one hundred ruble note in a prostitute's jacket in an attempt to frame her for theft. The protagonist's sister Dunya breaks her engagement to Luzhin and later marries Razumikhin. Near the end of this novel, Svidrigailov commits suicide, and the protagonist confesses to Sonya and the police detective Porfiry Petrovich. Focusing on a student in St. Petersburg who kills an old pawnbroker with an axe, for 10 points, name this novel about Raskolnikov by Fyodor Dostoyevsky.

ANSWER: **Crime and Punishment** [or **Prestupleniye i nakazaniye**]

2. In a sequel to this painting, several dozen bricks form an orderly three-dimensional pattern. It was also recreated as the sculpture *Profile of Time*, in addition to that followup painting, which showed its "disintegration." This painting originally was inspired by a piece of Camembert cheese left in the sun. A self-representation of the artist emerges from the ground in the middle of the painting, while ants swarm over an object on the left. In the background are quite normal cliffs, in contrast to the three melting watches in, for 10 points, what work of Salvador Dalí?

ANSWER: **The Persistence of Memory** [or **La persistencia de la memoria**]

3. One predecessor to it produced "resinous solids" that were noted by William MacNevin as being "too complex for analysis." The lack of precipitation of uranium in it is commonly cited by opponents of it, and the electricity it produced is often thought to be an overestimation. Joan Oró developed a similar experiment to this one, which tested Oparin and Haldane's hypothesis. Apparently, nitrites destroy the fruits of this experiment at the same speed as those compounds form. For 10 points, name this experiment modeling the early Earth's atmosphere.

ANSWER: **Miller-Urey** experiment

4. Consonants in this language are referred to using a word meaning "child sounds," and most of its formal speech includes use of the copula verb. Noted for an extensive use of frozen registers, honorifics such as "o" are often added to nouns in this language, which feature no difference between singular and plural. It is written using a pair of syllabaries known as "kana;" the "kata" syllabary is mostly used to write borrowed foreign words. For 10 points, what is this probably Altaic language, written in hiragana and katakana scripts and widely spoken on Shikoku and Honshu?

ANSWER: **Japanese**

5. A potassium-mercury reagent used to detect this compound in solution is named for Nessler. The presence of aldehydes in an organic mixture is indicated by a reagent containing a silver atom complexed to this molecule's derivatives. It is converted to an oxidized product via the Ostwald process. Iron oxide is currently used as a catalyst in the industrial synthesis of this compound, in a modification proposed by Bosch. This weak base is produced by the Haber process. For 10 points, identify this compound with formula NH_3 .

ANSWER: **ammonia** [accept **NH₃** until mentioned]

6. The mythological tradition of this country contains many stories of *immrama*, which are tales of voyages, such as the one of Ui Chorra. One story in this mythology deals with Bricriu's beheading challenge. According to this country's mythos, it was once ruled by the Fir Bolg, who were conquered by the Tuatha de Danann. The two main texts of this country's mythology are the Fenian and Ulster Cycles. For 10 points, name this mythological tradition that contains such figures as Finn MacCool and Deirdre.
ANSWER: **Ireland** [or **Irish**; or **Celtic**; do not accept "Welsh" or "Wales"]

7. One specific type of this process is dependent on spherical particles. In addition to that type named for Mie, another type of this process occurs when there are time-dependent density variations in a material, and is named for Brillouin. If x-rays undergo this process and speed up, this process is named after Sunyaev and Zeldovich, and if the x-rays slow, it is named after Compton. When this happens to a photon inelastically, it is named after Raman. For 10 points, name this process, the Rayleigh type of which explains why the sky is blue.
ANSWER: **scattering** [do not accept any specific form of scattering]

8. One of them develops the homologs Pif1p and Rrm3p and was developed as an experimental model by Murdoch Mitchison. In addition to that one with a Swahili species name, pombe, another is used to counteract acute diarrhea symptoms in children and is known as Boulardii. Their presence is tested with methylene blue, and several of the *Candida* genus cause namesake vaginal infections. Cycloheximide inhibits growth of the *Saccharomyces* genus, of which *cerevisiae* ferments beers. For 10 points, name this class of fungi which are used to make bread.
ANSWER: **yeasts**

9. During a revolt in the Netherlands that became a part of the Thirty Years War, this family lost their Dutch lands. The Dutch did support them in the War of the Spanish Succession, where Louis the Fourteenth worked to put Philip of Anjou, a Bourbon, on the throne in their place. This family produced Holy Roman Emperor Charles V, and a woman who was the focus of the Pragmatic Sanction and lost Silesia in the Seven Years War, Maria Theresa. For 10 points, name this family that ruled Austria until the end of World War I.
ANSWER: **Hapsburg** [prompt on **House of Austria**]

10. This is the first name of a Latin singer who hit it big with the songs "Tu Sonrisa" and "Suavamente." Another singer of this first name played the first few seconds of "Less than Zero" during a *Saturday Night Live* appearance before abruptly switching to his protest song about the homogeneity of broadcast music, "Radio Radio." In addition to that leader of The Attractions, a man with this first name sang "I don't want no other love/Baby it's just you I'm thinking of" in his song "Don't Be Cruel." For 10 points, give this first name of performers Crespo, Costello, and Presley.
ANSWER: **Elvis**

11. In one of this author's novels, Gail Hightower has a vision of an enormous wheel, and Percy Grimm shoots a man who killed Joanna Burden. Rosa Coldfield narrates another of this author's novels, which focuses on the father of Charles Bon, Thomas Sutpen. In one of his novels, Cash loses his leg and Darl is taken to an insane asylum during a journey to Jefferson to bury Addie Bundren. For 10 points, name this American author, who set many of his novels in Yoknapatawpha County, including *Light in August*, *As I Lay Dying*, and *The Sound and the Fury*.
ANSWER: William **Faulkner**

12. One author from this country wrote *Marco Bruto*, and had a lifelong rivalry with Gongora. A playwright from this country wrote *The Stupid Lady*, *The Dog in the Manger*, and *The Sheep Well*, while a literary movement in this country included Ramon Valle-Inclan, Pio Baroja, and Antonio Machado, the Generation of '98. For 10 points, name this European country, home to the authors Calderon de la Barca and Lope de Vega.

ANSWER: Spain

13. This man wrote a short story in which a short man desires to hack out the narrator's eyes to make a bouquet of blue eyeballs for his girlfriend. In addition to that story, "Blue Bouquet," found in his *Eagle or Sun?*, he also wrote the collection *The Bow and the Lyre*. One of his poems is divided like an Aztec calendar, and he wrote about his country's traditions of "siesta" and "machismo" in a critical essay. For 10 points, name this author who wrote "Sun Stone" and *The Labyrinth of Solitude*, a Mexican poet.

ANSWER: Octavio Paz

14. McClellan fought a battle called Philippi Races in this state to defend the B and O railroad, and the Battle of Rich Mountain here led to McClellan's promotion. The senior Senator from this state chairs the Appropriations Committee and was part of the Gang of Fourteen in 2005, opposing the "nuclear option." For 10 points, identify this state whose senior Senator is Robert Byrd, and which joined the Union on the last day of 1862 by seceding from its Eastern neighbor.

ANSWER: West Virginia

15. Individuals who lack the Duffy antigens are immune to the *vivax* form of this disease. This disease is sometimes diagnosed through Wolbach's tissue stain, though the Giemsa stain is more commonly used. A canonical example of the heterozygote advantage occurs because sickle-cell heterozygotes are resistant to this disease. For 10 points, name this disease, treatable by quinine, which is caused by the plasmodium parasite and transmitted by the Anopheles mosquito.

ANSWER: malaria

16. Paul Zukofsky considered this man's *Freeman Etudes* unplayable. Merce Cunningham choreographed his ballet *The Seasons*, and he collaborated with his teacher Henry Cowell on *Marriage at the Eiffel Tower*. Several works by this man feature pieces of metal and glass positioned between the strings of a "prepared" piano. This composer's *Imaginary Landscape* series is an example of aleatoric music, and another work involves a pianist sitting quietly for the titular amount of time. For 10 points, name this composer of *4'33"* (four minutes and thirty-three seconds).

ANSWER: John Cage

17. This state's Niobrara County sees the origin of the Niobrara River, and the Flaming Gorge dam lies along the Green River, which originates in its Wind River mountains. Boysen Reservoir is formed by a dam on this state's Wind River. The Gannett peak is the highest point in this state, closely followed by the Grand Teton peak, and another of its cities is home to Vice-President Dick Cheney, Jackson Hole. Also home to Yellowstone National Park, for 10 points, identify this state with capital Cheyenne.

ANSWER: Wyoming

18. Berlinite is a phosphate mineral which has a structure similar to this mineral, and crystals of this mineral which are green are known as prasiolite or vermarine. A variant of it, which usually forms in large, concentric layers, is known as agate. Amethyst and citrine are variants of this mineral, which is the bottom-most mineral on the Bowen's reaction series. It also has a value of seven on the Mohs hardness scale. For 10 points, identify this mineral which is less common than feldspar, and is made of crystallized silica.

ANSWER: quartz [prompt on silica or silicon dioxide]

19. In the 1960s, this man wrote church parables whose performances were intended for the Orford Church. Those works include *Curlew River* and *The Burning Fiery Furnace*. Many of this man's operas contained a part for the tenor Peter Pears, including *Owen Wingrave*, *The Turn of the Screw*, and *Albert Herring*. His first major opera was based on George Crabbe's poem "The Borough," and centers on a fisherman who commits suicide after the accidental death of two of his apprentices. For 10 points, name this English composer of *Peter Grimes*.

ANSWER: Benjamin Britten

20. Philip Wharton's song "Lili Burlero" was a ballad that played a part in this event, and the Nonjurors refused to take an oath of allegiance to the victors in this event. It resulted in the Edict of Toleration and the Bill of Rights, and it was instigated in part by Charles Talbot's invitation to a certain royal couple. Resulting in the ouster of James II, for 10 points, name this 1688 to 1689 event in which William and Mary came to the throne of England.

ANSWER: the Glorious Revolution

21. The Papal Bull *Omne Datum Optimum* exempted this group from taxation, and they were executed en masse after the Battle of Hattin. They were condemned at the Council of Vienne by Clement V, and Phillip IV persecuted them and had Jacques de Molay, their last grandmaster, burned at the stake. They were established with the help of Bernard of Clairvaux with the purpose of guarding pilgrims to the Holy Land. For 10 points, name this military order named for their base, which was above the ruins of the Temple of Solomon.

ANSWER: Knights Templar [or Poor Knights of Christ and of the Temple of Solomon; or Knights of the Temple]



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Bonuses

1. Deryck Cooke may be best known for "completing" a performable version of this man's tenth symphony. For 10 points each:

[10] Name this Austrian composer of symphonies nicknamed "Tragic" and "Titan," whose socialite wife went on to marry Walter Gropius and Franz Werfel after this man's death.

ANSWER: Gustav **Mahler**

[10] This Mahler symphony, partly based on Goethe's *Faust*, earned its popular nickname from its use of a 171-member orchestra and 850-member chorus.

ANSWER: Symphony No. **8** [or **Symphony of a Thousand**; or **Eighth** symphony]

[10] "Youth" and "The Drunkard in Spring" are two of the four songs based on Li Po poems in this six-song Mahler song cycle.

ANSWER: *Das **Lied von der Erde*** [or *The **Song of the Earth***]

2. His work led to the concept of "scaffolding." For 10 points each:

[10] Name this Soviet psychologist who named the difference between a child's ability to do a task without help and its need to do a task with help "zones of proximal development."

ANSWER: Lev **Vygotsky**

[10] This other developmental psychologist believed in "genetic epistemology" and proposed four stages of development, including sensorimotor, preoperational, and concrete operational.

ANSWER: Jean **Piaget**

[10] "Oral" and "genital" stages are among the five-part model developed by this author of *Civilization and its Discontents*.

ANSWER: Sigmund **Freud**

3. Lee, Osheroff, and Richardson won the 1996 Nobel Prize in Physics for discovering it in a certain isotope. For 10 points each:

[10] Name this property exhibited by fluids that experience frictionless flow.

ANSWER: **superfluidity**

[10] Superfluidity is exhibited at temperatures of less than 2.17 Kelvin in one isotope of this element, whose atomic mass is approximately 4 amu (A-M-U).

ANSWER: **helium**

[10] The critical temperature of 2.7 Kelvin is also known as this point. This letter of the Greek alphabet is also the namesake of a phage that infects *E. coli*.

ANSWER: **lambda**

4. The Empire of Japan committed numerous atrocities during World War II. For 10 points each:
[10] General Matsui Iwane ordered hundreds of thousands of rapes and killings in this city, which included the infamous contest between two officers to kill one hundred people with their swords.

ANSWER: **Nanking**

[10] About ten thousand American and Filipino soldiers died in this infamous ordeal in which Allied POWs were forced to march from Mariveles to Camp O'Donnell.

ANSWER: **Bataan** Death March

[10] This prime minister of Japan during most of World War II was executed for war crimes.

ANSWER: Hideki **Tojo**

5. Identify the following from Mendelian genetics, for 10 points each.

[10] This law implies that an offspring inherits two alleles for a gene, one from each parent.

ANSWER: Law of **Segregation**

[10] This other law implies that when several different traits are considered, the passing of one trait from a parent to offspring does not influence which other traits are passed on.

ANSWER: law of **independent assortment**

[10] Named for an Englishman, these entities are used to represent the possible genotypes for each offspring given the genotype of each parent.

ANSWER: **Punnett** squares

6. If this star becomes a supernova, it'll be far brighter than the Moon in our night sky. For 10 points each:

[10] Name this variable star, the second-brightest star in its constellation but considered the alpha, which has a chromosphere extending seven times its actual diameter.

ANSWER: **Betelgeuse**

[10] This brightest star in Orion is the sixth brightest in the sky, as well as the most luminous in the Orion arm until Deneb.

ANSWER: **Rigel**

[10] Polaris is a member of this class of variable stars, which the Hubble space telescope identified in the Virgo cluster. Its namesake was discovered in 1784 by John Goodricke.

ANSWER: **Cepheid** variable stars

7. He wrote that "the world is too much with us late and soon; late and soon," and exclaimed "Milton! thou should'st be living at this hour" in "London 1802." For 10 points each:

[10] Name this Lake Poet and author of "Tintern Abbey."

ANSWER: William **Wordsworth**

[10] This friend of Wordsworth wrote about Xanadu in "Kubla Kahn" and the shooting of an albatross in *The Rime of the Ancient Mariner*.

ANSWER: Samuel Taylor **Coleridge**

[10] This collaboration between Wordsworth and Coleridge included both "Tintern Abbey" and *The Rime of the Ancient Mariner*.

ANSWER: **Lyrical Ballads**

8. It called for Germany to focus most of its troops on the Western Front to knock out France, allowing Germany to shift its troops against the Russians. For 10 points each:

[10] Named for the chief of the German general staff, identify this military plan which was used by Germany in the early years of World War II.

ANSWER: **Schlieffen** Plan

[10] In this 1914 battle, French infantrymen were transported to the front by taxis, and as a result of this battle, the German army was unable to take Paris, thwarting the Schlieffen Plan.

ANSWER: Battle of the **Marne**

[10] This man served as commander in chief of French forces on the Western Front from 1914 to 1916 and became known as the "Victor of the Marne."

ANSWER: Joseph **Joffre**

9. Name these novels by Thomas Hardy, for 10 points each.

[10] Clym Yeobright's marriage to Eustacia Vye ends tragically when she drowns herself.

ANSWER: *The **Return of the Native***

[10] The title politician, Michael Henchard, is ruined when it is revealed that he sold his wife and child to the highest bidder while drunk.

ANSWER: *The **Mayor of Casterbridge***

[10] The protagonist only spends a few days with Angel Clare before being hanged for stabbing Alec.

ANSWER: ***Tess of the D'Urbervilles***

10. In it Socrates argues that using an immoral act to respond to injustice is wrong. For 10 points each:

[10] Name this dialogue in which the namesake figure offers to bribe Socrates' way out of jail.

ANSWER: **Crito**

[10] Along with *Euthyphro* and *Protagoras*, *Crito* is one of the many dialogues containing Socrates written by this student of Socrates.

ANSWER: **Plato**

[10] This other Platonic dialogue contains the argument that a man cannot harm one of his betters, one of the arguments presented by Socrates in his defense at his trial.

ANSWER: **Apology** [or **Apologia**]

11. An advertisement for Phillies cigars can be seen above the window in this painting, through which a man in a suit and a woman in a red dress can be seen sitting at a counter. For 10 points each:

[10] Name this painting which depicts a sparsely populated diner at the title time of day.

ANSWER: **Nighthawks**

[10] *Nighthawks* was painted by this member of the Ashcan School, who also depicted some storefronts in *Early Sunday Morning*.

ANSWER: Edward **Hopper**

[10] This other member of the Ashcan School contributed artwork to *The Masses*, and he's known for boxing scenes like *Dempsey and Firpo* and *Stag at Sharkey's*.

ANSWER: George Wesley **Bellows**

12. The silver salt of this element's anion is sometimes used to seed clouds. For 10 points each:

[10] Identify this element with chemical symbol I.

ANSWER: **Iodine**

[10] Iodine belongs to this class of elements whose other members include Bromine and chlorine. Their name literally means salt-forming.

ANSWER: **halogens**

[10] A reaction named after some German and Russian chemists sees the alpha halogenation of these compounds which feature a terminal COOH group.

ANSWER: **carboxylic acids**

13. He dissolved Parliament in October 2008 and called for an election in hopes of gaining a majority. For 10 points each:

[10] Identify this leader of the Conservative party and current prime minister of Canada.

ANSWER: Stephen **Harper**

[10] Jack Layton currently leads this party with a progressive agenda, and which received eighteen percent of the popular vote in 2008, which gave it thirty-seven seats in the parliament.

ANSWER: **NDP** [or **NPD**; or New **Democratic Party**; or **Nouveau Parti Democratique**]

[10] This third largest party won forty-nine seats in the elections. It is currently led by Giles Duceppe, and calls for the recognition of its namesake province as a "separate nation" within Canada.

ANSWER: **Bloc Québécois**

14. For 10 points each, name these mythological trickster gods.

[10] This devious Norse god convinced Hodr to kill Balder and is tied up with a snake dripping venom over him as punishment.

ANSWER: **Loki**

[10] This spider from Ashanti lore catches a jaguar and some hornets and has a memorable encounter with a tar baby.

ANSWER: **Anansi**

[10] This Native American trickster is sometimes said to have created humanity out of mud. The Wasco believe he killed the evil Thunderbird.

ANSWER: **Coyote**

15. He names a twisted tower he designed in Hanover, and his *DZ Bank Building* in Berlin is located immediately in front of the Brandenburg Gate. For 10 points each:

[10] Name this American architect of Seattle's *Experience Music Project*, whose buildings often features distinctive sculpted titanium or stainless steel exteriors.

ANSWER: Frank Owen **Gehry** [or Ephraim Owen **Goldberg**]

[10] Gehry's best known work is one of these museums located in Bilbao, Spain. Frank Lloyd Wright designed another one located in New York.

ANSWER: **Guggenheim** Museum

[10] This concert hall located in Los Angeles is another Gehry design, along with acoustics expertise from Yasuhisa Toyota.

ANSWER: *Walt **Disney** Concert Hall*

16. In the final act of this play, Don Parritt commits suicide by jumping off a fire escape. For 10 points each:

[10] Name this play about traveling salesman Hickey, who tries to convince the denizens of Harry Hope's bar to give up their "pipe dreams."

ANSWER: *The Iceman Cometh*

[10] This American playwright of *The Emperor Jones* and *Long Day's Journey Into Night* wrote *The Iceman Cometh*.

ANSWER: Eugene O'Neill

[10] Inspired by the *Oresteia*, this trilogy by O'Neill includes *Homecoming*, *The Hunted*, and *The Haunted*, and centers on the Oedipal desires of Orin and Lavinia Mannon.

ANSWER: *Mourning Becomes Electra*

17. Adam Mickiewicz wrote this country's national epic, *Pan Tadeusz*. For 10 points each:

[10] Name this European country, also the birthplace of the author of *Quo Vadis?*, Henryk Sienkiewicz.

ANSWER: Poland

[10] This other European country's national epics include *Parsifal*, written by Wolfram von Eschenbach, and the *Nibelungenlied*, which inspired Richard Wagner's Ring Cycle.

ANSWER: Germany

[10] Elias Lonnrot compiled this country's national epic, the *Kalevala*, which features the exploits of Ilmarinen, Lemminkäinen, and Vainamoinen.

ANSWER: Finland

18. All the rivers in this country, including the The, Ou, and Kading, are tributaries to the Mekong. For 10 points each:

[10] Name this country with capital at Vientiane.

ANSWER: Laos [or Sathalanalat Paxathipatai Paxaxôn Lao; or Lao People's Democratic Republic]

[10] On the Xiangkhoang plateau in Laos, a plain named for these prehistoric objects is drained by the Ngum River. It is home to a number of airfields that were used against the Pathet Lao.

ANSWER: Jars [or Plain of Jars; or Plain des Jarres; or Thong Haihin]

[10] The Mekong River reaches the Pacific in this nation. The Gulf of Tonkin is found in its Red River delta, while its capital is Hanoi.

ANSWER: Socialist Republic of Vietnam [or Cong Hoa Xa Hoi Chu Nghia Viet Nam]

19. This architect designed the *North Christian Church* in Columbus, Indiana, as well as the *Kresge Auditorium* at MIT. For 10 points each:

[10] Name this Finnish architect who also designed *Dulles International Airport*.

ANSWER: Eero Saarin

[10] Saarinen is best known for this stainless steel monument, part of the Jefferson National Expansion Memorial in St. Louis, Missouri.

ANSWER: Gateway Arch [prompt on St. Louis Arch]

[10] In addition to Dulles, Saarinen has designed the *TWA Flight Center* at this airport, known for its shell-like design.

ANSWER: JFK International Airport [or John F. Kennedy International Airport; or Idlewild Airport]

20. He was jailed for what were interpreted as threats of anti-English violence in his newspaper *United Ireland*. For 10 points each:

[10] Name this Irish politician who signed the Kilmainham Treaty and worked for Irish Home Rule until being defamed in the Kitty O'Shea affair.

ANSWER: Charles Stuart **Parnell**

[10] The other signatory of the Kilmainham Treaty was this four time British prime minister, the leader of the Liberal Party and rival of Benjamin Disraeli.

ANSWER: William Ewart **Gladstone**

[10] Gladstone was publicly blamed for the death of this British General in the fall of Khartoum to the forces of the Mahdi.

ANSWER: Charles George **Gordon**

21. During the action of this play, the title character's offspring Eilif, Swiss Cheese, and Katrin all die. For 10 points each:

[10] Name this play about Anna Fierling, who earns a living by pulling a canteen during the Thirty Years' War.

ANSWER: **Mother Courage and Her Children**

[10] This German proponent of "epic theater" wrote *Mother Courage and Her Children*, as well as *The Good Woman of Szechwan* and *The Caucasian Chalk Circle*.

ANSWER: Bertolt **Brecht**

[10] Brecht wrote about the rule of this dictator in both his allegory *The Resistible Rise of Arturo Ui* and *The Private Life of the Master Race*.

ANSWER: Adolf **Hitler**