



High School Academic Pyramid Questions

2008-2009
Four Quarter Set

Round 12

First Quarter:
Ten Tossups

1. Ylides are molecules in which two adjacent atoms have opposite ones, and the most stable resonance structure most often has the fewest of these. They assume homolytic bond cleavage and approximate the amount of electron density surrounding an atom in a compound. The correct Lewis structure for a molecule has, for 10 points, the fewest of what abstraction, typically calculated by subtracting from the number of valence electrons the number of lone pair electrons and half the number of shared electrons?

ANSWER: **formal charges**

2. Dioxippe and Aetheria, two of this figure's offspring, are responsible for the presence of amber in the river Eridanos. A frustrated Heracles shot an arrow at him before obtaining the cattle of Geryon, and this figure later killed all of Odysseus's crew for eating some of his cattle. The father of Circe and Pasiphae, his son was said to have blackened the Ethiopian people while guiding this man's chariot. For 10 points, name this father of Phaethon, a Titan who was the Greek sun deity.

ANSWER: **Helios**

3. In this poem's third stanza, an owl complains to the moon, and this poem describes the hamlet's "rude forefathers" sleeping in narrow cells. Among the people who may be located in the titular place are, "Some Cromwell guiltless of his country's blood," and "Some mute inglorious Milton." This poem includes the line "The paths of glory lead but to the grave," and it describes a location where one can avoid "ignoble strife," "far from the madding crowd." For 10 points, name this elegy written for common people, a work of Thomas Gray.

ANSWER: **"Elegy Written in a Country Churchyard"**

4. This team broke Denver's heart by signing Von Wafer in the 2008 offseason, and a draft-day trade saw this team deal Nicolas Batum to Portland. They won their 2008-09 opener over the Grizzlies, and key role players for this team include Carl Landry and the newly signed Brent Barry. They traded Donte Green and Bobby Jackson in 2008 for Ron Artest. For 10 points, name this NBA team that features superstuds Tracy McGrady and Yao Ming.

ANSWER: Houston Rockets [either or both names]

5. Some of this island's territorial capitals include Kundiawa, Wabag, and Popondetta while other large cities include Manokwari and Jayapura. Its longest rivers include the Mamberamo, Digul, Sepik and Fly. Its peaks include the former Carstensz Pyramid in Lorentz National Park of the Sudirman Range, and the highest point of the Bismarck Range, Puncak Jaya and Mount Wilhelm. For 10 points, name this second largest island in the world, divided between Indonesia and an eponymous country whose name starts with Papua.

ANSWER: **New Guinea**

6. Minor candidates in this election included Gideon Stewart and Green Smith. The two major party Vice-Presidential nominees were Thomas Hendricks and William Wheeler, while the sitting governors of Ohio and New York faced off as the main candidates. Controversial because of disputed votes in Louisiana, South Carolina and Florida, for 10 points, identify the year of this election, which included an agreement to end Reconstruction in the South and the defeat of Samuel Tilden by Rutherford Hayes.
ANSWER: United States Presidential Election of **1876**

7. This chromosome codes for four members of the DAZ family, and along with chromosome 6, codes for CD24. MIT researchers discovered in 2003 that it is able to recombine with itself in a process known as RecLOH, and extra copies of it can lead to skeletal deformities. A zinc finger protein at p11.31 was erroneously called TDF, until that testis-determining factor was discovered to be its SRY gene. For 10 points, name this sex-determining chromosome in most mammals.
ANSWER: **Y** chromosome

8. This man accepted a commission from Clark Kerr to produce a series of works depicting campuses of the University of California, which he titled *Fiat Lux*. Along with Nancy Newhall, he produced an article on Mission San Xavier del Bac, but a better-known collaboration led to his co-founding of Group f/64. His work at Manzanar resulted in the essay *Born Free and Equal*, and his image of *Ice on Ellery Lake, Sierra Nevada* ranks among his best known. Known for his work at the Half-Dome at Yosemite, for 10 points, name this legendary American photographer.
ANSWER: Ansel **Adams**

9. In one of his novels, Captain Winterbottom's imprisonment of the priest Ezeulu causes widespread famine. In another of his novels, Clara Okeke falls in love with the protagonist, Michael Obiajulu, after he returns from an English education sponsored by the Umofia Progressive Union. The town of Umofia is also the setting of his most famous work, in which the wrestler Okonkwo realizes he cannot fight European encroachment. For 10 points, name this author of *Arrow of God*, *No Longer at Ease*, and *Things Fall Apart*.
ANSWER: Chinua **Achebe**

10. Occurring a little over a week after a key alliance switch in the Treaty of Ried, this engagement was preceded by the Battle of Bautzen, which led to the institution of the Trachenberg Plan by one side. Fighting in this engagement occurred along the Parthe, Pleisse and Elster Rivers and near the villages of Wachau, Mockern and Dolitz, eventually leading to the death of Jozef Poniatowski, the nephew of the last king of Poland. A victory for Charles XIV John of Sweden and Gerhard von Blucher, for 10 points, name this October, 1813 loss for Napoleon in Germany.
ANSWER: Battle of **Leipzig** [accept **Battle of the Nations** until read]



HSAPQ

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Second Quarter:
Ten Tossups
with Bonuses

1. He painted four weeping women in front of a blue cloth in *The Lictors Bring to Brutus the Bodies of His Sons*. In another of his paintings, a naked soldier holds a shield that shows Romulus and Remus nursing. In addition to *The Intervention of the Sabine Women*, he showed a robed man pointing up and taking a cup of hemlock and three brothers reaching for swords. For 10 points, name this painter of *The Death of Socrates* and *The Oath of the Horatii*, who showed a victim of Charlotte Corday in a bathtub in *The Death of Marat*.

ANSWER: Jacques-Louis **David**

BONUS. This author of the essays "On Dante's Patriotic Love" and *Duties of Men* contributed to the periodicals *Thought and Action* and *Apostleship of the People*. For 10 points each:

[10] Name this founder of Young Italy, who proclaimed a republic in Rome in 1849.

ANSWER: Giuseppe **Mazzini**

[10] Young Italy was preceded by this secret organization, the subject of the papal documents *Ecclesiam a Jesu Christo* and *Qui Pluribus*, whose name translates as "charcoal burners."

ANSWER: the **carbonari**

2. He fictionalized the role of the Duc du Guise in the Saint Bartholemew's Day Massacre in his play *The Massacre at Paris*, and Hamlet at one point discusses this author's *Dido, Queen of Carthage*. He digresses into a discussion of why scholars are poor in his version of the story of *Hero and Leander*, but he is better known for a play about a man who learns magic from Valdes and Cornelius and summons Helen of Troy. For 10 points, identify this author who wrote of a pact with Mephistopheles in the play *Doctor Faustus*.

ANSWER: Christopher **Marlowe**

BONUS. France gave us brie and, now, geography questions. For 10 points each:

[10] Nantes and Orleans lie along this longest river in France, which joins the Allier at Le Bec d'Allier.

ANSWER: **Loire** River

[10] The Loire rises in this upland area of France, which includes the cities of Etienne and Limoges. Its highest peaks include Sancy Hill and the Plomb de Cantal.

ANSWER: **Massif Central**

3. This author of "A Bewitched Place" wrote of the titular Cossack's fight against Poles and Jews in *Taras Bulba*. His comedy about Khlestakov being mistaken for the title figure was inspired by an anecdote told to him by Pushkin, while his best known work chronicles a tour across Russia, meeting characters like Belinsky, in the process of implementing a get-rich-quick scheme designed by Chichikov. For 10 points, identify this Russian author of *The Inspector-General*, "The Overcoat," "The Nose," and the novel *Dead Souls*.

ANSWER: Nikolai Vassilievich **Gogol**

BONUS. Tools used by this species included the Oldowan and Acheulean styles. For 10 points each:

[10] Name this pre-human hominid species, an “upright man.”

ANSWER: **Homo erectus** [or **H. erectus**; prompt on **erectus**]

[10] Sometimes categorized as a subspecies of *Homo erectus* is this hominid species, whose specimens include “Turkana Boy.” Its name means “working man.”

ANSWER: **Homo ergaster** [accept **H. ergaster**; prompt on **ergaster**]

4. Much of this man’s finances came from goldmines along the Aroa River, while other aid was provided by Alexandre Petion. Upon entering Trujillo, this man gave the Decree of War to the Death, and he had earlier been victorious at the Battle of Cucuta during the Admirable Campaign. The victor at the battles of Boyaca, Carabobo and Pichincha with generals Francisco Santander and Antonio Sucre, this man was later elected the first President of Gran Colombia. For 10 points, name this leader of South American independence, known as The Liberator.

ANSWER: Simon Jose Antonio de la Santisima Trinidad **Bolivar** Palacios y Blanco

BONUS. This work opens with a bassoon solo in an abnormally high register. For 10 points each:

[10] Name this 1913 ballet, whose first part is entitled “The Adoration of the Earth.”

ANSWER: **The Rite of Spring** [or **Le Sacre du Printemps**]

[10] The music for *The Rite of Spring* was composed by this Russian, who also provided music for the ballets *Petrushka* and *The Firebird*.

ANSWER: Igor **Stravinsky**

5. One group of this name operated under an electoral strategy designed by Peter Mandelson, and another one, led by Paul Keating, was removed from office by Paul Howard in 1996. The leader of the so-called “new” group by this name signed the Maastricht Treaty on European Union for Great Britain. The Australian one is led by prime minister Kevin Rudd, while the British one’s leader is a Scottish former chancellor of the Exchequer who replaced the a chief supporter of the Iraq war. For 10 points, name this party of Gordon Brown and Tony Blair.

ANSWER: **Labour** Party

BONUS. By the equivalence principle, the force exerted on an object in this kind of field is equivalent to the force exerted on an object in an accelerating reference frame. For 10 points each:

[10] Name this field, or the fundamental force that is derived from it.

ANSWER: **gravitational** field [or **gravitational** force; or **gravity**]

[10] This man’s law of universal gravitation states that the gravitational force between two objects is inversely proportional to the distance between them.

ANSWER: Sir Isaac **Newton**

6. He attacked Donatism in *On Baptism*, and he argued for predestination in *The Predestination of the Blessed*. He dismissed the claims that Rome was being sacked because the inhabitants stopped worshipping pagan gods and compared Rome unfavorably to Jerusalem, and he discussed his mother Monica and his life as a Manicheist in a work where he pledged to give up all sexuality before being baptized. For 10 points, name this bishop of Hippo and Doctor of the Church who wrote *The City of God* and *Confessions*.

ANSWER: Saint **Augustine** of Hippo

BONUS. It originates at the left ventricle. For 10 points each:

[10] Identify this largest artery of the human body, which has a namesake arch.

ANSWER: **aorta**

[10] The aorta can be significantly narrowed in females suffering from this condition, where they only have one copy of the X chromosome.

ANSWER: **Turner's** syndrome

7. This man claimed that knowledge was acquired through assimilation, accommodation, and equilibration in theorizing his "genetic epistemology." He divided teaching into "early" and "moral" spheres in theorizing a "child-centered" view of education. Another of his ideas stressed concepts like "decentering" and "object permanence." For 10 points, name this man who theorized the concrete operational and sensorimotor stages in laying out his "theory of cognitive development."

ANSWER: Jean **Piaget**

BONUS. Equivalent to the Angevin dynasty of continental Europe, this English royal house split into Lancastrian and Yorkist factions in the 1450s after three centuries of rule. For 10 points each:

[10] Name this dynasty, which included Henry III, Edward I, and King John.

ANSWER: **Plantagenet**

[10] This brother of King John is known for going on the Third Crusade and for only spending six months of his reign in England.

ANSWER: **Richard I** [or **Richard the Lion-Hearted**; or **Richard Lion Heart**; or **Richard Coeur de Leon**; prompt on **Richard**]

8. This man's lecture *There's Plenty of Room at the Bottom* is regarded as the birth of the field of MEMS. His ratchet violates the second law of thermodynamics. Positrons are represented as electrons moving backwards in time in diagrams introduced by this man. Along with Shin-ichiro Tomonaga and Julian Schwinger, he received the 1965 Nobel Prize in Physics for his work in quantum electrodynamics. For 10 points, name this physicist best known for his amazingly clear *Lectures on Physics* given while a professor at Caltech.

ANSWER: Richard Phillips **Feynman**

BONUS. Name these nineteenth-century British poets, for 10 points each.

[10] This author of *Culture and Anarchy* and "Thyrsis" discussed a place "Swept with confused alarms of struggle and flight / where ignorant armies clash by night" in his poem "Dover Beach."

ANSWER: Matthew **Arnold**

[10] This leader of the Pre-Raphaelites and brother of fellow poet Christina talked about a woman who "leaned out / From the gold bar of Heaven" in his "The Blessed Damozel."

ANSWER: **Dante Gabriel Rossetti** [prompt on **Rossetti**]

9. One member of this dynasty faced uprisings such as the Essex Rebellion and Northern Earls rebellion. Francis I met with another member of this dynasty at the Field of the Cloth of Gold. The Act of Uniformity was passed during the reign of a sickly ruler of this dynasty, and another of its rulers dissolved the monasteries and divorced Catherine of Aragon. For 10 points, identify this dynasty which came to power behind Henry VII and included Henry VIII and Elizabeth.

ANSWER: **Tudor** Dynasty

BONUS. It sees its protagonist carry the burden of sin through the Delectable Mountains, The Slough of Despond, and Vanity Fair. For 10 points each:

[10] Name this allegory.

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

[10] This author of such exciting works as *The Life and Death of Mr. Badman* wrote *Pilgrim's Progress*.

ANSWER: John **Bunyan**

10. The Binet-Cauchy multiplication theorem applies to these functions, and the Sylvester theorem about this function was published without a proof. Successive differentiation is used to determine linear independence in the Wronskian type of this function. It can also be broken down to smaller cases by finding the cofactors and related minors. Cramer's rule uses ratios of these functions to solve linear equations, and if it is equal to zero, a matrix is called "singular." For 10 points, identify this quantity, which for a 2 by 2 matrix is given by $ad - bc$.

ANSWER: **determinant**

BONUS. He visited Utnapishtim, who told this figure about a plant that provided eternal youth, only to see that plant get eaten by a serpent. For 10 points each:

[10] Identify this king of Uruk who rejected the love of Ishtar in his eponymous epic.

ANSWER: **Gilgamesh**

[10] Gilgamesh defeated Humbaba with the help of this friend, a wild man who killed Ishtar's bull of heaven and who was killed by Enlil.

ANSWER: **Enkidu**



HSAPQ

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Third Quarter:
Team Rounds

Choices: THE LETTER P
MASSACHUSETTS

THE LETTER P

All answers in this round will begin with the letter P.

[10] These mal-folded proteins cause such brain diseases as kuru, mad cow, and Kreutzfeld-Jakob syndrome.

ANSWER: prions [accept proteinaceous-infectious agent]

[10] This hydrocarbon comes in iso- and neo- structural isomers and has the formula C-5-H-12.

ANSWER: pentane

[10] This mythological character ate a pomegranate and has to spend several months away from her mother Demeter with her husband, Hades.

ANSWER: Persephone [accept Proserpina, Proserpine, Kore, or Cora]

[10] Christy Mahon pretends to have killed his father in this play by John Millington Synge.

ANSWER: *The Playboy of the Western World*

[10] Japanese destroyers performed a sneak attack on a Russian naval fleet at this location in 1904, beginning the Russo-Japanese War.

ANSWER: Port Arthur [accept Lushunkuo or Ryojun]

[10] This island is home to the descendants of the *HMS Bounty* mutineers.

ANSWER: Pitcairn Island

[10] Containing islands like Luzon and Leyte, this country has its capital at Manila.

ANSWER: the Philippines

[10] This composer of *Ode to St. Cecilia* collaborated with Nahum Tate on the opera *Dido and Aeneas*.

ANSWER: Henry Purcell

[10] This author of *Mind and Society* has named an "optimal" condition in which no allocation of goods could benefit one without hurting another.

ANSWER: Vilfredo Federico Damaso Pareto

[10] In this E.M. Forster work, Dr. Aziz is accused by Adela Quested of assault in the Marabar Caves.

ANSWER: A Passage to India

MASSACHUSETTS

All of the answers in this round are somehow related to the state of Massachusetts.

[10] This African-American was one of the five people killed in the Boston Massacre.

ANSWER: Crispus **Attucks**

[10] This author wrote a play about a lesbian scare in a girls' school in Massachusetts in *The Children's Hour*, and also wrote *The Little Foxes*.

ANSWER: Lillian Florence **Hellman**

[10] Explaining this "fifth" state of matter won MIT scientist Wolfgang Ketterle the Nobel; it is named after two scientists.

ANSWER: **Bose-Einstein Condensates** [or **BECs**]

[10] This American illustrator of genre scenes like *Saying Grace* and the patriotic *Rosie the Riveter* lived in Massachusetts.

ANSWER: Norman Perceval **Rockwell**

[10] This Wampanoag chief fought a namesake war in Massachusetts in the 1670s.

ANSWER: King **Philip** [accept **Metacomet**]

[10] This Massachusetts native designed the Peacock Room, painted *Nocturne in Black and Gold: The Falling Rocket*, and painted a portrait of his mother as an "Arrangement in Black and Gray."

ANSWER: James Abbott McNeill **Whistler**

[10] This hook-shaped peninsula in Barnstable County, Massachusetts is a lobstering haven.

ANSWER: **Cape Cod**

[10] Louis Farrakhan, the founder of this Black Power religious group, hails from Boston.

ANSWER: the **Nation of Islam**

[10] This Worcester native was a pioneer in liquid-fuel rockets such as his "Nell" prototype.

ANSWER: Robert Hutchings **Goddard**

[10] This poem about a "shattered hulk" of a ship was penned by Boston Brahmin Oliver Wendell Holmes, Sr.

ANSWER: "**Old Ironsides**"



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Fourth Quarter:
Ten Tossups

1. This composer's double violin concerto in D minor opens with the main theme transposed to A minor. Another of his works includes an aria meant to soothe Count Kaiserling, as well as a series of preludes of fugues in every key designed to demonstrate a new system of tuning. He also composed six concerti grossi for a margrave and a mass which Felix Mendelssohn used to revive his work. For 10 points, name this composer of the *St. Matthew's Passion*, *Goldberg Variations*, and *Well-tempered Clavier* as well as the *Brandenburg Concertos*.

ANSWER: Johann Sebastian **Bach**

2. Sympathetic characters in this novel include Rachel Halliday and Phineas Fletcher, a Quaker who gives the central characters shelter. Senator John Bird is castigated by his wife Mary for his voting record and eventually helps Eliza cross the frozen Ohio River, where she is eventually joined by her husband George Harris in Canada. The title character is not so lucky, as he falls victim to the vicious Simon Legree, who beats him to death. For 10 points name this novel by Harriet Beecher Stowe that depicted the cruelty of slavery.

ANSWER: **Uncle Tom's Cabin**

3. One type of this technique uses either a Buchner or a Hirsch funnel, and cannot be used if the solvent has a low boiling point as it will evaporate before this technique can be finished. A second kind of this technique uses the "fluted" form of a special kind of paper. This process, including the aforementioned "vacuum" and "gravity" types, is designed to remove solutes from solution by forming small pores that liquids can pass through but not solids. For 10 points, identify this technique often performed by water purification systems.

ANSWER: **filtration** [accept equivalent answers such as **filtering**]

4. The first section of this work is a follow-up to its author's *De Cive*, and the fourth and final section of this work bashes clergymen who mix Aristotle with scripture as a "confederacy of deceivers" who would usher in the "Kingdom of Darkness." Also containing sections "Of Man" and "Of a Christian Common-Wealth," it concludes that an absolute monarchy is the best form of government. For 10 points, name this tome which labels human existence in the state of war "solitary, poor, nasty, brutish, and short," written by Thomas Hobbes.

ANSWER: *The **Leviathan**, or The Matter, Forme and Power of a Common Wealth Ecclesiasticall and Civil*

5. In one work by this man, the arias "For Him that I Adore" and "Pensa all Patria" are sung by Isabella in the court of Mustafa. Another of his works is set in Naples and centers on jealousy between Don Geronio and Selim. In addition to *The Italian Girl in Algiers* and *The Turk in Italy*, this man composed a work in which the aria "Deh, tu reggi in tal memento" is sung by Ninneta, while another of his operas ends with Count Almaviva's marriage. For 10 points, name this Italian composer of *The Thieving Magpie*, *William Tell* and *The Barber of Seville*.

ANSWER: Gioachino Antonio **Rossini**

6. In the Confederacy, LeRoy Walker was the first to occupy this position. William Belknap was the only man of this position to be impeached, and it was last held by Kenneth Clairborne Royall. The first man to hold this post was charged with transporting the artillery captured at Fort Ticonderoga, while another was protected by the Tenure of Office Act from removal by Andrew Johnson. For 10 points, name this position held by Edwin Stanton and Henry Knox, combined with the navy department in 1947 to form the Secretary of Defense.

ANSWER: United States **Secretary of War**

7. One of this author's characters writes an article on green bowler hats, which is a strictly taboo subject in *The Daily Express*. Another of his works ends when Todd holds Tony Last prisoner and forces him to read Dickens novels aloud. Along with *Vile Bodies* and *A Handful of Dust*, he wrote of Anthony Blanche berating a narrator's career as an architectural painter, while Rex Mottram has an unfulfilling marriage with Julia Flyte. For 10 points, name this author, who wrote about Sebastian Flyte and Charles Ryder in *Brideshead Revisited*.

ANSWER: Evelyn **Waugh**

8. This man described God as "society, writ large" and examined totemism's origins in one work and another work documented the development from mechanical to organic solidarity in industrial the industrial age. In addition to *Elementary Forms of Religious Life* and *The Division of Labor in Society*, this man's most famous work describes the disintegration of social norms as "anomie" which leads the increase of altruistic, egoistic, anomic, and fatalistic types of the titular phenomenon. For 10 points, identify this French sociologist, the author of *Suicide*.

ANSWER: Emile **Durkheim**

9. Stolonifera is an order of organisms connected by stolons found in this phylum, while the actinopharynx and mesenteries are unique to a subset of this phylum. Groups in this phylum include Anthozoa and Cubozoa. All members of this phylum contain structures capped by an operculum, the poison-laden nematocysts. Life cycles in this phylum consist of an anchored polyp stage and a free-floating medusa stage. The phylum Coelenterata split into Ctenophora and this phylum. For 10 points, identify this phylum which contains corals and jellyfish.

ANSWER: **Cnidaria** [accept **Coelenterata** before read]

10. This event had the immediate result of battles at Sablat, Pilsen and Wisternitz and was perpetrated by a group of nobles including Lobkowitz, Kinsky, Kaplir and led by Henry of Thurn. Precipitated by a violation Rudolf II's Letter of Majesty, this event was led by men who supported Frederick V, the Winter King, over Matthias at Hradcany Castle. For 10 points, name this event which resulted in Philip Fabricius, Vilem Slavata of Chlum and Jaroslav Borzita of Martinice being thrown out of a window into a pile of manure in the capital of Bohemia in 1618.

ANSWER: First **Defenestration of Prague**