

## DACQ

## D ynasty A cademic C ompetition Q uestions

September 2007 Packet 4: Tossups

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- 1. During the 1950s, this body's low density caused numerous NASA scientists to speculate that this body could be an artificial spaceship created to clear radiation from its planet's atmosphere. The probable source of the Kaidun meteorite, it is home to the Stickney Crater, named for the (\*) wife of discoverer Asaph Hall. Likely a class C asteroid, it is much larger than its companion. From the Greek for "fear," FTP, name this moon of Mars which orbits alongside its partner, Deimos. ANSWER: Phobos
- 2. During his time assisting a friend with the newspaper "The Humanity," this man adopted the epithet "the Patriot" and later spent a year at Nachok. After the August Revolution he sent a letter to Harry Truman requesting support but was ignored, and allowed Operation Passage to Freedom while (\*) constructing a namesake network that would prove decisive in the coming struggle against the US. An opponent of Ngo Dinh Diem, FTP, name this communist leader of North Vietnam. ANSWER: Ho Chi Minh
- 3. Sanderson estimations allow this quantity to be predicted without first determining bond lengths, and it is the subject of Allen's valence electrons equation. Allred and Rochow used Slater's rules to estimate it, and the "absolute" variety was explored by Mulliken. Analysis of (\*) bond polarity inspired the best-known scale used to determine this quantity, created by Linus Pauling. Fluorine's value of 3.98 in that scale is the highest for, FTP, what measure of an atom's capacity to draw electron's to itself?

ANSWER: **Electronegativity** 

4. The Mania, Mangoky, and Bestikoba rivers flow through this country's Tsaratavana and Ivakoany massifs, and its Lake Alaotra lies south of the Masoala Penninsula. To the east lie the Mascarene Islands, which include Rodrigues, Reunion, and (\*) Mauritius, while Comoros sits in the Mozambique Channel, which separates this island from the continent. With capital at Antananarivo, FTP, identify this country, an island located southeast of Africa.

ANSWER: Madagascar

5. This novel ends as the narrator compares his current abode to Broadway, after a frightening experience with Ras the Exhorter and the Brotherhood. Earlier, a fight at the Golden Day bar while that narrator was escorting Mr. Norton causes Dr. Bledsoe to (\*) expel him from a college modeled on Tuskeegee, leaving the the nameless narrator with a resentment of white society. FTP, identify this Ralph Ellison novel about an African-American individual whom society cannot see. ANSWER: Invisible Man

6. Traditional Islam holds that this man is destined to combat the *dajjal*, but contradicting views on his death led several Islamic jurists to accept the Swoon hypothesis. The Holy Prepuce is a relic associated with this man, who related stories regarding the (\*) faith of a mustard seed and a helpful traveler from a certain ethnic group. He delivered the beatitudes during the Sermon on the Mount, and helped out a dying party at Cana by turning water into wine. FTP, identify this son of Mary, the savior of a certain monotheistic religion.

ANSWER: Jesus Christ or Jesus of Nazareth

7. Pencil and paper ready. J.T. is running for SGA president against a single opponent and knows he needs to rig the election to win. He wants to create the fewest number of fake ballots possible in an election with 2400 voters such that the candidates will be tied. Given that J.T. legitimately wins only 15% of the vote, determine how many votes he must add to ensure a tied election. This value can be found by realizing that J.T. only needs to forge an amount equal to (\*) 70% of the cast ballots. FTP, how many fake votes does J.T. need to force a tie? You have ten seconds.

ANSWER:  $\underline{1680}$  votes (J.T. wins 15% or 360 votes, meaning his opponent wins 85% or 2040.  $\underline{1680} + 360 = 2040$ , thus tying the vote).

8. Article IX of this treaty failed when a "buffer zone" did not materialize, and Jonathan Russell and James Bayarad called for the return of slaves which was instead covered by a payment of \$350,000 as part of it. Popularly called the Peace of (\*) Christmas Day, it was signed before Edward Pakenham faced Andrew Jackson at the Battle of New Orleans. Negotiated by Quincy Adams, FTP, identify this treaty signed in Belgium that ended the War of 1812.

ANSWER: Treaty of Ghent

9. He is often cited as the father of Alcoholics Anonymous since one of his patients, Roman H., inspired Bill Wilson to focus on spirituality. He examined Eastern thought with *The Psychology of Kundalini Yoga* and his *Psychology and Alchemy* drew inspiration from his emphasis on (\*) symbols, similar to his *anima* and *animus*. Centering his theories on the presence of archetypes and the collective unconscious, FTP, identify this Swiss psychoanalyst who broke with Freud.

ANSWER: Carl Gustav Jung

10. This band's "In and Out of Love" and "Only Lonely" appeared on their much derided 7800° Fahrenheit, copies of which were thrown at Tico Torres when they opened for Ratt. Their third and most successful album contained songs like "Never Say Goodbye" and "Wanted (\*) Dead or Alive," both co-written by guitarist Richie Sambora. Recently, they gained country popularity with "Who Says Yoo Can't Go Home," but, FTP, what hair band is remembered for "You Give Love a Bad Name" and "Livin' on a Prayer" and named after lead singer Jon?

ANSWER: Bon Jovi

11. In this work, the brother of the narrator's love interest is a Jesuit officer who supports a move to South America due to his sister's involvement with two Portuguese noblemen. Other characters include the syphilitic Paquette and Jaques the Anabaptist, for whose drowning Lisbon (\*) Bay had been expressly created according to a character based on Leibniz. Cunegonde and Dr. Pangloss figure prominently in, FTP, what satire alternatively titled "Optimism," a work of Voltaire? ANSWER: Candide

- 12. He adapted a theme created by Frederick the Great in *The Musical Offering*, while Leopold commissioned his *Orchestral Suite No. 3 in D*, which contains his famous "Air on the G String." He collected a series of preludes and fugues for aspiring composers in (\*) *The Well-Tempered Clavier*, while other works include *The Art of Fugue* and *St. Matthew Passion*. The subject of the BWV catalogue, FTP, identify this creator of the *Goldberg Variations* and the *Brandenberg concertos*. ANSWER: Johann Sebastian Bach
- 13. This site's massive bell, once superheated by a lightning strike, was added about six hundred years after its construction under either the Zirids or the Nasrids. Home to the Wine Tower and the Gate of Judgement, Count Sebastiani ransacked this site and (\*) Napoleon tried to blow it up Its other areas include the Hall of the Ambassadors, the Court of the Blessing, and the famous Court of the Lions. From the Arabic for "red," FTP, identify this Moorish fort located in Granada, Spain. ANSWER: Alhambra
- 14. This comparison-based, unstable sorting algorithm is efficient to run in parallel due to its recursive nature. Although a deterministic version will be vulnerable to a worst-case runtime of O(n²) [Oh of n-squared], picking a randomized (\*) pivot will yield an average case of O(n log n). FTP, name this sort which divides elements according to whether they are less than and greater than the pivot, named for its speed.

ANSWER: Quicksort

15. This figure acquired many characteristics, including transformation and dominance over the wind, from various weather gods, and one myth tells how his rival got him drunk and tricked him into sleeping with his sister. Often identified with (\*) Kukulkan, he is credited with creating man by spilling his blood onto bones, and is associated with the fifth sun. The brother of Xolotl, FTP, identify this creator of maize and the calendar whom Cortes may have been mistaken for, a feathered serpent who served as the chief Aztec god.

**ANSWER: Quetzalcoatl** 

16. This man lends his name with Schumer to a bill denouncing voter intimidation, and with Feingold to a bill restricting corporate jet usage. He often refers to his experience with Altgeld Gardens, when he joined the Trinity United Church, and shares ancestry with Jefferson Davis. FOX News delivered a (\*) false report claiming this politician had spent time at a terrorist school in Indonesia. First gaining fame by delivering the 2004 Democratic Convention keynote address, FTP, identify this Illinois Senator, an African-American Democratic candidate for president.

ANSWER: Barack Obama

17. This work is set following the Battle of Arginusae, and it features one of the main characters donning Heracles's lion skin and being mocked for looking like a cross-dresser. That character trades clothes with his servant to avoid vengeful men like Aeacus whom Heracles has killed, leading to a fortunate encounter with servant girls for (\*) Xanthias. Though Euripides is the intended target, Dionysius chooses Aeschylus as the superior tragedian. FTP, identify this Aristophanes play which is named for the work's amphibian chorus.

ANSWER: The Frogs (or Batrachoi)

- 18. This leader of the Admirable Campaign described the necessity of combat with generosity in his "Letter from Jamaica," and advocated a federal system in his Cartegena Manifesto. Through the Congress of Angostura, he gained control of an organization war with Peru, the (\*) Gran Columbia, following his own victory at Boyaca and Sucre's victory at Ayacucho. Inspiring similar victories by O'Higgins and San Martin, FTP, identify this South American "Liberator." ANSWER: Simon Antonio de Bolivar
- 19. This organelle releases "calcium spikes" important for the endocrine system since it stores the ions, and mutations in it are responsible for Friedreich's ataxia and Wilson's disease. 70S, or bacterial, ribosomes are found in this body, one piece of evidence for Lynn Margulis's (\*) endosymbiotic theory. Containing folds called cristae, it is the site of the electron transport chain and it produces ATP. FTP, identify this "power house" of the cell.

ANSWER: Mitochondrion or Mitochondria

20. He is first introduced in the short story "Youth, a Narrative" and shares his usual duties with Smith, Captain Anthony, and Flora de Barral in 1913's Chance. He speaks of a man who encounters Dain Waris after leaving the Patna and, in his most famous appearances, is compared to Buddha and (\*) tells a story to a group of seamen in the Thames estuary about an expedition to find the ivory trader, Kurtz. FTP, name this narrator of Joseph Conrad's Lord Jim and Heart of Darkness who shares his surname with an Elizabethan playwright who wrote Doctor Faustus.

ANSWER: Charles (Charlie) Marlow (any name)



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Bonuses

1. Bonus: Given a list of US politicians, identify the common state represented, FTPE:

[10] Ed Rendell, Bob Casey, Jr., and Arlen Specter.

ANSWER: Pennsylvania

[10] Bill Ritter, Ken Salazar, and formerly Ben Nighthorse Campbell.

ANSWER: Colorado

[10] Phil Bredesen, Lamar Alexander, and Bob Corker, who defeated challenger Harold Ford Jr.

ANSWER: Tennessee

2. Bonus: This artist applied the signature "R. Mutt" to one of his many ready-mades. FTPE: [10] Identify this Dada artist famous behind *Fountain*, a giant white urinal exhibited in 1917.

ANSWER: Marcel Duchamp

[10] *Fountain* was famously photographed in front of Marsden Hartley's *The Warriors* at the 291 Gallery of this photographer, the husband of Georgia O'Keefe.

ANSWER: Alfred Steiglitz

[10] Duchamp's best-known work is probably this piece which depicts the "motion" of a lone figure. Its premiere at the Armory Show prompted the oft-repeated description "explosion in a shingle factory."

ANSWER: Nude Descending a Staircase, No. 2

3. Bonus: He served as Governor of Tennessee and Speaker of the House before becoming president. FTPE:

[10] Identify this Dark Horse Democrat who won the election of 1844.

ANSWER: James K. Polk

[10] Polk defeated this three-time candidate, a Kentucky senator who devised the American System.

ANSWER: Henry Clay Sr.

[10] Polk's term saw the creation of this rider on an appropriations bill introduced by a Pennsylvania representative which sought to prevent slavery from spreading to territories gained from Mexico.

ANSWER: Wilmot Proviso

4. Bonus: Name these Henrik Ibsen plays, FTPE:

[10] Dr. Stockman is horrified by the resistance he encounters when trying to expose the deadly, infectious state of the town's renowned springs in this play.

ANSWER: An Enemy of the People

[10] The titular figure of this play is married to the idiotic George Tesman, and commits suicide with her father's pistols after Judge Brack tries to blackmail her over the death of Eilert Lovborg.

ANSWER: **Hedda Gabler** 

[10] The titular entities of this play about the Alving family are embodied by congenital syphilis, which causes Oswald to go insane while he lusts after his half-sister Regina.

ANSWER: Ghosts

5. Bonus: Answer the following about characteristics of the outer core of the Earth, FTPE.

[10] The Earth's magnetic field arises in part due to the presence of this effect in the outer core, arising from the rotation of the Earth. It does not appear in an inertial reference frame, causing it to sometimes be referred to as a fictitious force.

**ANSWER:** Coriolis Effect or Force

[10,10] FTP per answer, the outer core is composed mostly of an alloy of what two transition metals? ANSWERS: **Iron (or Fe) and Nickel (or Ni)** 

6. Bonus: Identify these linked figures from the Trojan War, FTPE:

[10] This great warrior and son of Thetis slays Hector before catching an arrow in a certain spot in his ankle.

ANSWER: Achilles

[10] Hector's killing of this cousin and lover of Achilles prompts the hero's rage. This young warrior got into trouble when he tried to lead the Myrmidons.

**ANSWER: Patroclus** 

[10] King Priam, Hector's father, and Astyanax, Hector's son, are both killed by this son of Achilles.

ANSWER: Neoptolemus

7. Bonus: Identify these financial advisers who did some publishing during their time, FTPE:

[10] This Physiocrat and disciple of Quesnay published *Reflections on the Formation and Distribution of Wealth* advocating the importance of land in economic systems. He's better known for formulating the *Six Edicts* while serving under Louis XVI (16).

ANSWER: Anne Robret Jacques Turgot, Barond de Laune

[10] This author of *Essays on the Great Depression* succeeded Alan Greenspan as Chairman of the Federal Reserve.

ANSWER: Ben Shalom Bernanke

[10] This first US Treasury Secretary published a series of documents with John Jay and James Madison. He would later be killed by Aaron Burr in a duel.

**ANSWER: Alexander Hamilton** 

8. Bonus: This man's early period was characterized by tracts like *Human, All-Too-Human* and *The Wanderer and His Shadow*. FTPE:

[10] Identify this German philosopher who penned the autobiographical *Ecce Homo* and made a famous declaration in *The Gay Science*.

ANSWER: Friedrich Nietzsche

[10] Nietzsche famously made this claim regarding the status of a deity in that work, specifically in "The Madman" and "New Struggles" sections.

ANSWER: God is Dead or the Death of God (or Gott ist Tott)

[10] The Will to Power and Eternal Return are discussed in this Nietzsche about a man who comes down from a mountain cave and begins preaching to the masses. It is subtitled "A Book for All and None."

ANSWER: Thus Spoke Zarathustra or Thus Spake Zarathustra or Also Sprach Zarathustra

9. Bonus: Fancy 3D computer graphics rely on matrix algebra. Answer these questions about matrices FTPE.

[10] This is a matrix with only one row or one column.

ANSWER: Vector

[10] This scale factor for linear transformations is can only be computed on an  $n \times n$  matrix. For a 2  $\times$  2 matrix, it is ab - cd.

ANSWER: Determinant

[10] The solution for a system of equations in terms of determinants can be determined using this method, which decreases in efficiency as matrices increase in size. It is named for a Swiss mathematician.

**ANSWER:** Cramer's Rule

10. Bonus: Answer these questions about *The Lusiads*, FTPE:

[10] *The Lusiads* combines classical mythology with the recent expansionary history of this Iberian nation, whose explorers included Bartolomeu Dias and Pedro Cabral.

ANSWER: **Portugal** 

[10] *The Lusiads* tells the story of this historical explorer, who didn't actually get drunk with Bacchus and Tethys but did make history by sailing directly from Europe to India.

ANSWER: Vasco da Gama

[10] This author of *The Parnasum* created *The Lusiads*.

ANSWER: Luis Vaz de Camoes

11. Bonus: Struggle through this agonizing organic chem bonus, FTPE:

[10] Ethylene is the simplest example of this class of compounds, with general formula CnH2n. They also possess at least one carbon-carbon double bond.

ANSWER: Alkenes (the middle "e" is essential, as alkanes and alkynes are different things)

[10] Alkenes act as dienophiles in this reaction which produces a cyclohexen system, and is named for two German chemists.

**ANSWER: Diels-Alder Reaction** 

[10] In the Diels-Alder reaction, the dienophile alkene is activated by one of these agents, which are characterized by their ability to accept two electrons and form a coordinate covalent bond. They are usually contrasted with Bronsted-Lowry and Arrhenius acids.

ANSWER: Lewis Acids

12. Bonus: He committed suicide on Calauria while facing charges stemming Harpalus's embezzlement. FTPE:

[10] Identify this Greek orator who delivered the *Philippics*.

ANSWER: Demosthenes

[10] Demosthenes delivered the *Philippics* against Philip II, who ruled this kingdom which fought the Lamian War against Athens and the Greek states.

ANSWER: Macedonia

[10] In Plutarch's Parallel Lives, Demosthenes is compared with this author of On Laws and On Duties.

ANSWER: Marcus Tullius Cicero

- 13. Bonus: His first poetry collection was 1923's *Tulips and Chimneys*, though the publisher ignored his request to use an ampersand in the title. FTPE:
- [10] Identify this American writer of poems like "anyone lived in a pretty how town," a man preoccupied with doing some crazy things with punctuation.

ANSWER: Edward Estlin Cummings

[10] Cummings's support of his friend William Brown led to his imprisonment by the French army during World War I, an ordeal recounted in this novel.

ANSWER: The Enormous Room

[10] Cummings's other novel, *Eimi*, details his trip to Europe and the Soviet Union, during which he met this painter of *Les Demoiselles d'Avignon* and *The Old Guitarist*.

**ANSWER: Pablo Picasso** 

14. Bonus: Identify these musicians who were inspired by the Orpheus myth, FTPE:

[10] This renaissance composer of *The Coronation of Poppea* and *L'Arianna* altered Striggio's ending to the 1607 opera *L'Orfeo*.

ANSWER: Claudio Monteverdi

[10] This composer of *Tales of Hoffman* created the famous Can-Can as a part of his *Orpheus in the Underworld*.

ANSWER: Jacques Offenbach

[10] The 1948 ballet Orpheus was created by this Russian composer of Petrushka and The Firebard.

ANSWER: Igor Stravinsky

15. Bonus: Its moat and quincunx were created in an attempt to emulate the mythical Mount Meru. FTPE:

[10] Identify this Southeast Asian temple complex, built for Suryavarman II in the 1100s.

ANSWER: Angkor Wat

[10] Angkor Wat is located in this country which has its capital at Phnom Penh.

ANSWER: Cambodia

[10] Suryavarman II was a king of this empire, which ruled much of Southeast Asia during the medieval period. It created industrial projects like East Baray but lost Thailand to the Ayutthaya.

ANSWER: Khmer Empire

16. Bonus: Identify these animals for which evolution just didn't work out, FTPE:

[10] This flightless bird currently appears on the flag of Mauritius, even though the entire populatin was wiped out centuries ago.

ANSWER: **Dodo** 

[10] Thylacine is the formal name of this carnivorous marsupial, which resembled the coyote and which lived on Australia as well as on its namesake island.

ANSWER: Tasmanian Tiger or Tasmanian Wolf or Tazzie

[10] This other flightless bird is more closely related to the razorbill than its lesser counterpart, the dovekie. Its influences on modern culture include lending its name the American Ornithologists' Union and providing numerous terrible puns.

ANSWER: Great Auk (prompt on partial answer)

17. Bonus: Identify the following metrical feet given wonderfully brief descriptions, FTPE:

[10] Unstressed, stressed. Popular with Shakespeare.

ANSWE: **Iambic** 

[10] Stressed, unstressed. Used in numerous children's rhymes.

ANSWER: Trochee or Trochaic

[10] Unstressed, unstressed, stressed. A favorite of Dr. Seuss.

ANSWER: Anapestic

18. Bonus: Answer these questions about the seminal treatise on power, *The Prince*, FTPE:

[10] This author of *Discourses on Livy* wrote *The Prince*.

ANSWER: Niccolo Machiavelli

[10] This son of Alexander VI is generally considered to be the inspiration for the Prince. His relationship with his sister Lucrezia may have led his father to order his death.

ANSWER: Cesare Borgia

[10] Machiavelli went apolitical with an update of *The Golden Ass*, a work originally by this Romano-Berber satirist.

ANSWER: Lucius Apuleius Platonicus

19. Bonus: Answer these questions about asterisk-branding in baseball, FTPE:

[10] Popular legend holds that this Yankee right fielder had his 1961 home run record branded with an asterisk, since he played more games to reach 61 home runs than did Babe Ruth.

ANSWER: Roger Maris

[10] This key figure in the BALCO scandal will have the ball from his 756<sup>th</sup> home run branded and sent to the baseball hall of fame. Thankfully we won't have to hear about his feelings on the subject, since his ill-conceived reality show was canceled.

**ANSWER: Barry Bonds** 

[10] This fashion designer won the action for Bonds's ball and facilitated a vote which should have resulted in a victory for "banish it to space." He is also known for his abounding love for rhinoceroses.

ANSWER: Marc Ecko (or Marc Milecofsky)

20. Identify these Canadian provincial capitals, FTPE:

[10] Edgar Dewdney though a location referred to as "Pile of Bones" would make a good city, and founded this capital of Saskatchewan.

ANSWER: Regina

[10] This large city is home to the CN Tower and the Maple Leafs. It is the capital of Ontario.

ANSWER: Toronto

[10] The Saint John River Valley is the site of this host of the Harvest Jazz and Music Festival. It is the capital of New Brunswick.

ANSWER: Fredericton