

DACQ

*Dynasty Academic Competition
Questions*

*September 2007
Packet 2:
Tossups*

© 2007 Dynasty Academic Competition Questions. All rights reserved. This work may not be reproduced or redistributed, in whole or in part, without express prior written permission solely by DACQ. Please note that non-authorized distribution of DACQ materials that involves no monetary exchange is in violation of this copyright. For permission, contact Chris Ray at Cray@dacquestions.com.

1. His son-in-law Kovu was once sent to kill him, and may bear some responsibility for the death of this figure's only son, Kopa, an event which causes him to be overly protective of his daughter Kiara. During his youth this son of Sarabi encountered Shenzi, Bonzai, and (*) Ed, who served his nefarious uncle and helped engineer his father's trampling by wildebeests. The husband of Nala, son of Mufasa, and nephew of Scar, FTP, identify this title character of *The Lion King*.

ANSWER: Simba (prompt on "The Lion King")

2. This man was known as "general day-after-tomorrow" to a people he helped Nelson Miles combat, the Nez Perce. He commanded the corps that allowed the Union army to be flanked at Chancellorsville and lost numerous men through incompetence at Gettysburg, but still served as (*) superintendent at West Point and in another administrative position after the war. FTP, identify this head of the Freedmen's Bureau, the namesake of a famous black university.

ANSWER: Oliver Otis Howard

3. It is equal to the negative derivative of the Law of Gravitation, so for a two-body system, it can be expressed as the negative gravitational constant times the two (*) masses divided by the distance between them, while for one body it is equal to its weight times its height. FTP, name this property, a measure of energy stored in a system, which can be demonstrated by holding an object in the air without dropping it.

ANSWER: Gravitational Potential Energy (do not accept "potential")

4. The employer of Reynaldo, his first line references "laboursome petition," and he is mocked by being forced to describe the animalistic qualities of overhead clouds and to admit that he is a fishmonger. He famously states "be thou familiar, but by no means vulgar," (*) "neither a borrower nor a lender be," and "to thine own self be true" to his departing son. Stabbed through a screen after being mistaken for Claudius, FTP, identify this father of Ophelia and Laertes in *Hamlet*.

ANSWER: Polonius

5. The ratio of quartz to feldspar is key in the classification of this type of rock. Crystal size varies with the depth at which they form, and when exposed to erosion, this kind of rock can produce batholiths. Pahoehoe can form rhyolite or (*) basalt, and other examples of this kind of rock include granite and obsidian. Divided into extrusive and intrusive varieties, FTP, identify this rock which forms when magma cools, as contrasted with metamorphic or sedimentary rock.

ANSWER: Igneous Rock

6. This country's cabinet of ministers includes a Minister of Coal Industry, and a recent foreign minister, Borys Tarasyuk, was forced to resign after a conflict with the Supreme Council, or Verkhovna Rada. In 2004, detractors of Victor Yanukovych congregated in (*) Independence Square in this country, and responded to the Dioxin poisoning of Viktor Yushchenko by initiating the Orange Revolution. FTP, identify this "breadbasket" of Russia, with capital at Kiev.

ANSWER: Ukraine

7. When performed by Meccan merchants, this practice was called *i'tifad* and provoked the organization of a collective commercial economy. Those who had performed it in Dante's *Inferno* appear as gnarled trees and bushes, and Donatists viewed it as the vehicle of salvation. Judas (*) Iscariot's performance of this act in the "field of blood" is described as a penance in Matthew, despite the fact that it is a mortal sin. FTP, identify this act committed by Demosthenes, Cleopatra, Sylvia Plath, and Kurt Cobain, the taking of one's own life.

ANSWER: Suicide

8. According to legend, this man's sister betrayed a group of fellow adventurers, near the Western Settlement, for which he may have executed her. Items associated with him include the Maine Penny, and he bestowed the name "Land of the Flat Rocks," or Helluland, to land that was probably (*) Baffin Island. The supposed founder of Vinland after a landing in Labrador, FTP, identify this second generation Norse explorer, the son of Erik the Red.

ANSWER: Leif(r) Ericson

9. His time in Wiemar led to his treatment of the Dies Irae in *Totentanz* and his experimental *Concerto Pathatique*, as well as the *Dante* and *Faust* symphonies. His *Grand Etudes after Paganini* contains his "La Campanella," and he was famed for his skills as a (*) pianist. The father-in-law of Wagner, he is best known for a group of nineteen roma-inspired pieces including "Carnival of Pest." FTP, identify this composer of the *Hungarian Rhapsodies*.

ANSWER: Franz Liszt

10. This collaborator of Aaron Klug challenged mainstream authority by asserting that Tobacco Mosaic Virus particles had a constant length, and an early publication discussed carbon fiber strength in coal. This scientist's more famous contributions came while working with Maurice (*) Wilkins, and involved varying the humidity of a certain molecule. FTP, identify this female researcher whose X-ray crystallography was essential in Watson and Crick's analysis of DNA.

ANSWER: Rosalind Franklin

11. Pencil and paper ready. Al is doing an experiment to demonstrate the effects of global warming, and has a box with dimensions of 25 by 75 by 40 centimeters, which contains 73 liters of water. Al throws in a cubic block representing a glacier, with sides measuring 20 centimeters, and wants to measure the amount of water splashed out of the box. Remembering that one milliliter is equal to a cubic centimeter, (*) find, FTP, the difference between the volume of the box and the volume of the water plus the cube. You have ten seconds.

ANSWER: 6 Liters (accept "6000 cubic centimeters" or "6000 milliliters" or other equivalents) [volume of the box is $25 \times 40 \times 75 = 75000$ cubic centimeters = 75 L, volume of the block is $20^3 = 8000$ cubic centimeters = 8 L, (volume of water + block) – (volume of box) = $(73 + 8 \text{ L}) - (75 \text{ L}) = 6 \text{ L}$]

12. Islands in this body include the Ritchie archipelago and the Nicobar group, generally part of a larger chain that makes up its eastern boundary. Rivers that flow into this body of water include the Feni, Meghna, Naf, Kaveri, Irrawaddy, and (*) Brahmaputra. It connects to the Gulf of Mannar via the Palk Strait, which lies near Sri Lanka, and borders the tip of Sumatra and the ports of Madras and Yangon. The Ganges flows into, FTP, what large body of water southeast of India?

ANSWER: **Bay of Bengal**

13. One character in this work fails a suicide attempt by shooting himself in the chest after his decorated participation in the Thousand Days War. The constant presence of a daguerreotype is reflected upon after a pig-tailed child is carried off by red ants, while the ghost of (*) Melquiades prompts Aureliano's translations, leading to the obliteration of Macando. Centering around the Buendia clan, FTP, identify this numerically-titled novel by Gabriel Garcia Marquez.

ANSWER: **One Hundred Years of Solitude or Cien Anos de Soledad**

14. After breaking off his force and heading south, this winner at Badger Pass dispatched a force which lost at Samara Bend against the Bulgars but defeat Mistislav III of Kiev at Kalka River. That force was, according to the *Secret History*, was commanded by Jebe and (*) Subotai, who had helped this general defeat the Khwarezmids and the Kara-Khitai. Earlier, he defeated the Song and established the Yuan dynasty, famously led by his grandson. FTP, identify man, born Temujin, who terrorized much of the known world as chief of the Mongol horde.

ANSWER: **Genghis Khan (accept Temujin before mentioned)**

15. The grandfather of Sarpedon, he himself was the grandson of Sisyphus through Glaucus of Corinth. He slew his brother Deliades, which landed him at the court of Proetus of Tiryns until Stheneboea accused him of rape, after which Iobates gave him a seemingly impossible (*) task. That task was accomplished after an acquisition at the Pierian Spring and a spear with molten lead helped combat a child of Echidna. FTP, identify this man who used Pegasus to slay the Chimera.

ANSWER: **Bellerophon**

16. A compound containing this element and chlorine is produced industrially as a byproduct of the Solvay process, and this element's crystal structure is cubic face centered. It is present in a variety of minerals, including Iceland Spar, dolomite, (*) gypsum, and its namesake mineral, which are affected by its softness and full 4s orbital. FTP, name this alkaline earth metal, element number twenty, also found in limestone and bones.

ANSWER: **Calcium**

17. This friend of Arthur Koestler repeats the line "that day is past" in a poem exploring his communist sympathies, *A New Song*. Collaborative projects include *Street Scene* with Kurt Weill, *Sweet Flypaper of Life*, and *Mule Bone* with Zora Neale Hurston. He claims he hears a "drowsy, syncopated tune" and asks if a title (*) entity will "dry up/like a raisin in the sun" in two poems, *The Weary Blues* and *A Dream Deferred*. FTP, identify this author of *The Negro Speaks of Rivers*, the best-known author of the Harlem Renaissance.

ANSWER: **Langston Hughes**

18. Ben Shahn turned his most famous canvas piece into this kind of work, and *Parks, the Circus, the Klan, the Press* is a famous one by Thomas Hart Benton. David Siquieros and Jose Clemente Orozco are known for creating this kind of work, while (*) Trotsky, soldiers, and a man surrounded by scientific images appear in *Man at the Crossroads*, a famous one. Diego Rivera was a master of, FTP, what kind of painting which is placed on a wall or other permanent surface?

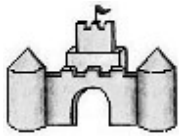
ANSWER: Murals

19. It was preceded by Thomas Erle's conference at Charborough House, in which participants debated one individual's pending involvement in the War of the League of Augsburg. Edward Russel, Henry Compton, and Bishop Sidney were part of the *Immortal Seven* who extended the (*) invitation associated with this event, aided by the second "Protestant Wind" which led to a landing at Brixham. The defection of John Churchill and Princess Anne led James II to acquiesce to, FTP, what 1688 bloodless change of power in England?

ANSWER: The Glorious Revolution

20. This author discussed his personal faith through a fictional dialogue with Augustine in *My Secret Book*, and published his letters in *Epistolae Familiares* and *Seniles*. He wrote about Scipio Africanus in *Africa*, but is most famous for poetry like *Trionfi* and a work inspired by a visit to an (*) Avignon church, the *Canzoniere*. FTP, identify this Italian whose fixation with Laura inspired numerous namesake sonnets.

ANSWER: Petrarch



DACQ

Dynasty Academic Competition Questions

September 2007
Packet 2:
Bonuses

1. Bonus: Answer the following about amateur nation-building in Latin America, FTPE:

[10] This American found his medical degree boring and decided to head south, conquering people and establishing the Republic of Sonora. He would go on to succeed Patricio Rivas as president of Nicaragua until Vanderbilt got the US to capture him.

ANSWER: **William Walker**

[10] Walker was one of these nation-toppling mercenaries of the mid 19th century, whose numbers included Narciso Lopez and John Quitman. The term was later applied to the act of droning on and on in the senate to block a bill, as done notably by Wayne Morse and Strom Thurmond.

ANSWER: **Filibusters**

[10] Lopez and Quitman were involved with several US attempts to wrest this island from Spanish control. That goal was finally achieved after battles like San Juan Hill during the Spanish-American War.

ANSWER: **Cuba**

2. Bonus: Answer the following about different forms of carbon, FTSNOP:

[5,5] F5PE, identify the two forms of carbon which, along with amorphous carbon, are the most commonly-occurring. One has a cubic crystal system, tetrahedral bonds, and is known for its hardness; the other forms in very thin layers that can slide off, leaving streaks and making it an excellent lubricant.

ANSWERS: **Diamond and Graphite**

[10] This rare type of carbon, not discovered until 1985, includes structures like carbon nanotubes and buckyballs.

ANSWER: **Fullerenes**

[10] This is the term for different pure forms of an element, such as diamond, graphite, and fullerene, that vary only in terms of their bonding structure.

ANSWER: **Allotropes**

3. Bonus: Answer the following questions about the cheerful poetry of Emily Dickinson, FTPE:

[10] This poem describes the “dews” that “drew quivering and Chill,” and features a carriage that holds the speaker, immortality, and the titular entity.

ANSWER: **Because I could not stop for Death**

[10] The titular sound occurs “between the heavens of storm”, and after the titular event, the windows fail and the speaker observes the stillness in the room in this poem, whose title mentions an insect.

ANSWER: **I heard a Fly buzz – when I died**

[10] One Dickinson poem proclaims that the speaker died for this concept. According to Keats, this quality's relationship with truth is “all ye know on earth, and all you need to know.”

ANSWER: **Beauty**

4. Bonus: His penultimate album was *American IV: The Man Comes Around*. FTPE:

[10] Identify this singer, one of the few musicians to hold a place in both the country music and rock and roll hall of fame, remembered for hits like *Folsom Prison Blues* and *A Boy Named Sue*.

ANSWER: **Johnny Cash**

[10] In this song written for his wife Vivian, Cash states that he finds it “very, very easy to be true” and performs the title action “because your mine.” Evidently it wasn't so easy, as Cash would soon divorce Vivian for June Carter, whose life with the singer is the basis for a similarly-named 2005 feature film.

ANSWER: **I Walk the Line (do not accept just “Walk the Line”)**

[10] Cash collaborated with famed producer Rick Rubin on a moving cover of *Hurt*, which was originally written by Trent Reznor for this band's album *Downward Spiral*.

ANSWER: **Nine Inch Nails**

5. Bonus: Take a troubling geographical tour of tectonic plates as you try to navigate this bonus!

Assume you begin on the North American plate, specifically in southern California. FTPE:

[10] Moving southwest would bring you to this massive plate, named for the massive ocean which it supports.

ANSWER: **Pacific Plate**

[10] Moving northwest would cause you to encounter this plate, once known as the Farallon Plate and bounded by the Nootka Fault and Blanco Fracture Zone. It is named for a Greek-born explorer who sailed for Spain.

ANSWER: **Juan de Fuca Plate**

[10] Crossing the Cocos plate to the southeast, you might encounter this plate, home to the Carnegie Ridge and three smaller microplates. It shares its name with a Peruvian region known for its eponymous “lines,” a series of massive geoglyphs.

ANSWER: **Nazca Plate**

6. Bonus: Answer the following about magnetism, FTPE:

[10] This most typical form of magnetism is characterized by an object remaining magnetized after an external magnetic field is removed, forming a permanent magnet. It is found in numerous elements, one of which is of course iron.

ANSWER: **Ferromagnetism**

[10] This rare form of magnetism is an extremely weak repulsion of an external magnetic field. Superconductors are perfect ones, while bismuth is the strongest.

ANSWER: **Diamagnetism**

[10] Gauss's Law of Magnetism deals with this property, symbolized by the letter phi and measured in Webers, that describes changes in the magnetic field.

ANSWER: **Magnetic Flux**

7. Bonus: This man's time in Sakhalin inspired his short story *The Murder* about the homicidal Yakov, while his wife's infidelity may be the basis for *The Lady with the Dog*. FTPE:

[10] Identify this Russian writer, better known for creating characters like Lopakhin, Treplov, and the titular Ivan Petrovich Voinitsky.

ANSWER: **Anton Chekhov**

[10] Voinitsky is the title relative of this Chekhov play, reworked from his earlier *The Wood Demon*, which features a failed relationship between Sonia and Astroff.

ANSWER: **Uncle Vanya**

[10] The interactions between Andre, the army, and the titular Olga, Masha, and Irina Prozorov drive this play about how much of a bummer it was to live in Russia in the late 19th century.

ANSWER: **Three Sisters**

8. Bonus: Identify these philosophers associated with theories involving the base elements, FTPE:

[10] In addition to describing the ultimate principle of *logos*, this philosopher from Ephesus believed that all life was flux and, thus, the base element was fire.

ANSWER: **Heraclitus**

[10] This philosopher from Miletus has a namesake theorem about three points on a circle that form a right angle. He claimed that water was the base element.

ANSWER: **Thales of Miletus**

[10] The first theory involving the four elements – air, earth, water, and fire – was put forth by this Sicilian, who made the somewhat unfortunate decision to prove his immortality by jumping into Mount Etna.

ANSWER: **Empedocles**

9. Bonus: Given an Asian country, years in office, and some notable achievements, identify the twentieth century leader, FTPE:

[10] India, 1966-1977 and 1980-1984. Authorized operation Bluestar against the Sikh Golden Temple, which prompted her assassination.

ANSWER: **Indira Gandhi**

[10] Pakistan, 2005-current. Launched a bloodless coup and engaged in conflicts with pro-democracy advocates like Iftikhar Chaudhry.

ANSWER: **Pervez Musharraf**

[10] China, 1978-1992. Succeeded Mao Zedong, eased state regulation on the economy and suppressed the Tiananmen Square protests.

ANSWER: **Deng Xiaoping**

10. Bonus: Identify the type of animals who serve these functions in Norse myth, FTPE:

[10] Hugin and Munin, who act as Odin's winged scouts.

ANSWER: **Ravens** (“crows” is not acceptable, but prompt on “birds”)

[10] Tanngnisnir and Tanngnjostr, or tooth-gnasher and tooth-grinder, who pull Thor's chariot.

ANSWER: **Goats**

[10] Sleipnir, which serves as Odin's mount and is fairly normal despite having eight legs.

ANSWER: **Horse**

11. Bonus: This museum's Las Vegas site was closed in 2003 before being combined with a loaned Hermitage collection. FTPE:

[10] Identify this Museum, whose flagship New York site features a spiraling central chamber.

ANSWER: **Solomon R. Guggenheim Museum**

[10] This American architect, known for creating Fallingwater and the Robie House, designed the New York Guggenheim.

ANSWER: **Frank Lloyd Wright**

[10] Frank Gehry designed the fish-like, titanium-panelled Guggenheim in this Spanish port city.

ANSWER: **Bilbao**

12. Bonus: This quantity's low value in trees may account for the fact that planting fresh trees at higher altitudes may actually increase global warming. FTPE:

[10] Identify this quantity, defined as the ratio of incident to reflected electromagnetic radiation.

ANSWER: **Albedo**

[10] Eris, formally classified as this kind of object, has an 86% albedo. It is actually larger than the best-known recent addition to this classification, Pluto.

ANSWER: **Dwarf Planets**

[10] Certain mundane substances, such as coal, can have shadowed depressions in which effective albedo approaches zero, a property seen in these entities which absorb all electromagnetic radiation and are subject to Wien's and the Stefan-Boltzman law.

ANSWER: **Black Bodies**

13. Bonus: Answer the following questions about decisive naval engagements in the ancient world, FTPE:

[10] The Greco-Persian wars were decided after this 480 BC naval engagement, the result of meticulous planning by Themistocles, in which Persian ships were smashed near the namesake island.

ANSWER: **Salamis**

[10] An earlier naval engagement in the war, Artemisium, supposedly occurred the same day as this better-known clash in which Leonidas and three hundred Spartans faced the Persians in a mountain pass.

ANSWER: **Thermopylae (feel encouraged to penalize anyone who yells "SPAAAARTA!!!")**

[10] The departure of Cleopatra's ships left Mark Antony unable to win the Battle of Actium against this able lieutenant of Octavian.

ANSWER: **Marcus Vipsanius Agrippa**

14. Bonus: Samuel and Liza Hamilton, Irish immigrants, are the scions of one of the two key families in this work. FTPE:

[10] Identify this biblically-inspired novel which takes place in the Salinas Valley of California.

ANSWER: **East of Eden**

[10] This author of *The Log from the Sea of Cortez*, *Tortilla Flat*, and *Of Mice and Men* wrote *East of Eden*.

ANSWER: **John Steinbeck**

[10] Cyrus's son Adam, and Adam's own sons Caleb and Aron, play out the book of genesis as members of this other key family in *East of Eden*.

ANSWER: **Trasks**

15. Bonus: Answer the following about individuals associated with linguistics, FTPE:

[10] The author of *Pirates and Emperors* and namesake of a formal language hierarchy, this MIT linguistics professor is known for his widely publicized, extremely liberal political views.

ANSWER: **Noam Chomsky**

[10] This Swiss “father of linguistics” began by examining the vowel systems of the Indo-European language, later publishing his most famous work, *Course in General Linguistics*.

ANSWER: **Ferdinand de Saussure**

[10] Schlegel and Rask actually formulated this law about the evolution of voiced and voiceless stops, but it is named after Jacob, who is better remembered for collecting folk tales with his brother Wilhelm.

ANSWER: **Grimm's Law**

16. Bonus: In contrast to other deuterostomes, they use a water vascular system for respiration. FTPE:

[10] Identify this phylum which includes sea cucumbers.

ANSWER: **Echinodermata**

[10] Echinodermata includes class Asterozoa, which is comprised of these organisms which notably possess five appendages and the ability to regenerate.

ANSWER: **Starfish or Sea Stars**

[10] Echinodermata possess the radial form of this quality. Most organisms possess only the bilateral variety.

ANSWER: **Symmetry**

17. Bonus: Identify the following ballets, FTPE:

[10] Significantly less morbid than his earlier *Grohg*, this Aaron Copeland ballet takes its name from its rural Pennsylvania setting and features the Shaker hymn “Simple Gifts.”

ANSWER: **Appalachian Spring**

[10] An E.T.A Hoffman tale is the basis for this Tchaikovsky ballet, which includes characters like Clara, the Mouse King, and the Sugar Plum fairy.

ANSWER: **The Nutcracker**

[10] A sacrifice is the culminating point of this Stravinsky ballet, which caused a riot upon its 1913 premiere.

ANSWER: **The Rite of Spring**

18. Bonus: Answer the following questions about influential moments in agrarian history, FTPE:

[10] The Optimates really hated these Roman reformer brothers, whose pursuit of class equality and agrarian prosperity prompted both of their brutal murders.

ANSWER: **Gracchii or Tiberius and Gaius Gracchus**

[10] Allen Tate, Robert Penn Warren, and John Crowe Ransom were part of the Southern Agrarian school of poetry, alternatively named after this Tennessee university which itself is named for a railroad magnate.

ANSWER: **Vanderbilt University**

[10] The belief that national wealth derived first and foremost from agriculture was the major tenet of this French economic school whose members included Quesnay, Mirabeau, and Turgot.

ANSWER: **Physiocrats**

19. Bonus: Given authors, identify the nationality they all share, FTPE: If you need an easier author, you'll get five.

[10] Timothy Findley, William Gibson, Michael Ondaatje.

[5] Margaret Atwood.

ANSWER: **Canadian or Canada**

[10] Ben Okri, Christopher Okigbo, Wole Soyinka.

[5] Chinua Achebe.

ANSWER: **Nigerian**

[10] Gabriele D'Annunzio, Italo Calvino.

[5] Luigi Pirandello.

ANSWER: **Italian or Italy**

20. Bonus: Answer these questions about some things in math named for Leonhard Euler, FTPE:

[10] Euler's criterion, used for determining primality, can be proven by the the "little theorem" of this French mathematician.

ANSWER: **Pierre de Fermat**

[10] Euler's Number is a sequence that begins with these six numbers.

ANSWER: **2.71828** (question does not ask for decimal to be placed, but answer is wrong if placed incorrectly)

[10] 2002 Euler is classified as one of these objects, the first of which discovered was Ceres.

ANSWER: **Asteroids**