

Blue Devil Academic Tournament II

Written and edited by the Norcross Academic Team (Mostafa Bhuiyan, Hernan Morales, Joey Reifenberger, Michael Sokolow), Tanay Kothari, Adam Silverman, and Brady Weiler

Round 4- Tossups

1. Dissenters known as “Abhorrers” attempted to have this monarch assemble Parliament with the Exclusion Bill. Unrest during this king’s reign led to the murder of Edmund Godfrey, fabricated by Titus Oates. This supposed target of the Popish Plot was also targeted in the Rye House Plot. This monarch’s government failed to respond properly to the Great (*) Fire of London, and his younger brother was deposed in the Glorious Revolution. For ten points, name this Stuart king, the brother of James II, whose reign began the restoration.

ANSWER: **Charles II** Stuart (prompt on “Charles”)

2. This team loaned Romelu Lukaku out to West Brom in August, leading to Victor Moses becoming a key backup for this team. José Mourinho managed this team to 2 League titles and a domestic cup victory, but disagreements with owner (*) Roman Abramovich led him to resign. Current players for this club that plays its home matches at Stamford Bridge include Petr Cech (pr. check), Eden Hazard, and its captain John Terry. Last year this team raised the European Champion Clubs' Cup after a winning penalty was scored by Didier Drogba. For ten points, name this English soccer club known as the “Blues” that won the 2012 UEFA (u-efa) Champions League.

ANSWER: **Chelsea** F.C.

3. The curl of the vector potential \mathbf{A} equals this quantity. One equation gives it as proportional to current times the integral of “ $d\mathbf{L} \times \hat{\mathbf{r}}$ over r^2 ”. The divergence of this quantity equals zero according to one of Maxwell’s equations. The Lorentz force on a charged particle equals charge times velocity cross this quantity. The law of (*) Biot-Savart is used to give differential values for it in space. The line integral of it equals permeability times current according to Ampere’s Law. It is measured in gaussses or Teslas. For ten points, name this quantity symbolized \mathbf{B} or \mathbf{H} which measures the strength of a certain field produced between north and south poles.

ANSWER: **magnetic field** strength (or **B** or **H** before mention)

4. The speaker of this poem recalls the “shadows of the indignant desert birds” in a “waste of desert sand.” The speaker also realizes that “twenty centuries of stony sleep/Were vexed to nightmare by a rocking cradle.” This poem asserts that “the best lack all conviction, while the worst are full of passionate intensity.” The speaker of this work laments that “The (*) falcon cannot hear the falconer” and that “things fall apart.” This poem asks “what rough beast” “Slouches towards Bethlehem to be born?” For ten points, name this poem by William Butler Yeats about the return of Christ.

ANSWER: “The **Second Coming**”

5. A region in Taoudeni served as an important source for this commodity, which a certain empire gained control of after defeating Judar Pasha at the Battle of Tondibi and securing a source in Taghaza. In 1648, serfs in Moscow protested tsar Alexei’s tax on this item during a namesake “riot.” The (*) Songhai Empire was known for its trade of this commodity. A British monopoly on it led to a 1930 non-violent protest led by Mohandas Gandhi during a namesake “march.” For ten points, name this commodity valued throughout history for its ability to preserve food.

ANSWER: **salt**

6. In Daniell cells, forerunners to the modern battery, zinc was oxidized by this element. Along with yttrium, barium, and oxygen, this element was found in the first high-temperature superconductor. Reducing sugars can be detected when this metal's plus-two cation is reduced in Benedict's solution, causing this element's (*) blue form to turn into its red oxide. It has the second-highest thermal and electrical conductivity of any element other than silver. Its alloys include brass and bronze. For ten points, name this metal with atomic number 29 and symbol Cu.

ANSWER: copper (or Cu before mention)

7. The Orphist school painter Robert Delaunay included a green outline of this landmark in his *Simultaneous Windows (2nd Motif, 1st Part)*. This structure appears in the background of a painting depicting an anthropomorphic cat and a two-faced blue man. That painting, as well as a self-portrait with seven fingers, depicts this landmark and was painted by (*) Marc Chagall. This structure first premiered at the 1889 World's Fair and today stands in the Champ de Mars in the same city as the Arc de Triomphe and the Louvre. For ten points, name this very tall structure designed by its namesake French architect in Paris.

ANSWER: Eiffel Tower

8. This author created a character that finds a pack of cards in a burnt leather case while visiting a bungalow and the Jolly Seventeen. That protagonist also meets a Swedish farmer named Erik Valborg. Another of his characters is saddened by the death of Leora Tozer and stops working to find a cure for the (*) plague. This author also wrote about a Winnemac businessman who is unhappy with his life with Myra, and another of his protagonists tries to reform Gopher Prairie while living with her husband Kennicott. For ten points, name this first American author to win the Nobel Prize in Literature, who wrote *Arrowsmith*, *Babbitt*, and *Main Street*.

ANSWER: Sinclair Lewis

9. According to one tale, this deity wept tears of gold after her lover disappeared and was killed in the form of a sea monster. Another lover of this mother of Gersemi takes the form of a boar and is named Ottar. This deity owns a cloak which changes the user to a falcon and lives in the palace Folkvang, where half of the warriors (*) killed on the battlefield go. After a fishing trip, her husband brought her two blue cats which now pull her chariot. This goddess agreed to sleep with four dwarves in order to gain a magical necklace named Brisingamen. For ten points, name this Norse goddess of love and sister of Freyr.

ANSWER: Freya (or Frevja; do NOT accept "Freyr")

10. The Ore Mountains form a border between this country and an eastern neighbor. The city of Rostock lies in the northern part of the nation and is the largest city in the state of Mecklenburg-Vorpommern. The longest river in this country lends its name to a state with capital at Mainz [pr. mynz]. The state of (*) Baden-Württemberg (vurtem-bearg) in this country is famous for its cuckoo clocks and is home to the Black Forest. Principal cities in this country include Hamburg and Munich. For ten points, name this European nation with the capital of Berlin.

ANSWER: Federal Republic of Germany (or Bundesrepublik Deutschland)

HALFTIME. SCORECHECK. ASK IF THERE ARE ANY PLAYER SUBSTITUTIONS.

11. In one scene, this literary character wakes up from his sleep and says the word "Shakespeare." In the book that he appears in, he is constantly bothered by his varicose ulcer. This figure talks about the new dictionary to a worker named Syme, who is later (*) vaporized. He receives a note from a character he met during the Two Minutes Hate, in which people support a face with a large mustache. He betrays his love interest after being subject to rats in Room 101 by a member of the Inner Party named O'Brien. For ten points, name this character, the lover of Julia, who is the protagonist of George Orwell's *1984*.

ANSWER: Winston Smith (accept either)

12. A majority of these organisms possess short cells called vassal elements and lose their fiber cells at maturity. A primitive example of these organisms which is a key to their phylogenetic tree is *Amborella*. A micropyle allows their cells to become triploid during (*) double fertilization. Two classes of these organisms are the monocots and eudicots. Distinct characteristics of these organisms include a terminal sac called an anther and sporophylls called carpals, the bases of which contain pollen receptors called ovaries. For ten points, name these organisms which produce flowers and fruits, distinguishing them from the gymnosperms.

ANSWER: Angiosperms (prompt on “flowering plants”)

13. Jews traditionally stare at their fingernails during a Shabbat tradition involving these objects. The Hebrew word “ner”[pr. NAIR] is often used in prayers involving them. Examples of these objects include *yahrtzeit* [pr. Yart-zayt] ones used after the death of family members, and an elevated one called the (*) *shamash*. A blue and white one of these objects is used for Havdalah services and is twisted. The most notable use of these objects in Judaism commemorates a Maccabean victory and the miracle that olive oil lasted for eight days and nights. For ten points, name these objects traditionally placed in a menorah and lit on Hanukkah.

ANSWER: candles (accept menorah until mentioned or chanukiyah; accept ner until mentioned; accept oil lamp; accept lights or flames or same-knowledge equivalents)

14. This president’s power was limited after his Secretary of State attempted to end the strike of the Youngstown Sheet & Tube Co. One of this president’s policies was inspired by the “Long Telegram” of George Kennan, who influenced this president’s signing of NSC-68 for a (*) “rollback” foreign policy. This man’s policy of “containment” was carried out in Greece in order to slow the spread of communism, part of his namesake “doctrine.” He signed an executive order that integrated the troops. For ten points, name this US President during the Korean War who approved the use of the atomic bomb on Hiroshima and Nagasaki.

ANSWER: Harry S Truman

15. In one opera by this composer, the protagonist is threatened to be hanged and disguises himself as a monk before accidentally killing Pompeo. That figure finishes a work for Pope Clement VII. This composer’s second symphony contains a section entitled “Orgy of the Brigands.” This composer of *Benvenuto Cellini* and (*) *Harold in Italy* depicted a pastoral setting of two shepherds and included a clarinet elaborating upon the idée fixe theme in a piece with movements entitled “Dream of a Witches’ Sabbath” and “March to the Scaffold.” For ten points, name this 19th century French Romantic composer of *Symphonie Fantastique*.

ANSWER: Hector Berlioz

16. In one painting depicting this war, black clouds brew to the right of a man who is about to kill a soldier sitting beneath a flag. Four flags hang in the background while five men gather in front of a desk in a depiction of an event during this conflict. Another painting of a battle from this war depicted in many John (*) Trumbull works appears behind the “daughters” of this conflict in a Grant Wood work. That painting of this war depicts a general with his right leg bent forward sailing across an icy river on Christmas Day. For ten points, name this war which is the subject of a painting in which the Delaware is crossed in 1776 by George Washington.

ANSWER: American Revolutionary War (or American War of Independence or Revolutionary War)

17. An unseen character in this novel is called a “foot-washing Baptist” before the main character tries to put a note on a windowsill with a fishing pole. Earlier in this book, the protagonist is beaten with a ruler after trying to help Walter Cunningham. In this novel, children discover a medal, bars of soap and chewing gum inside the (*) knothole of a tree. In this book, one of the main characters goes to a school party wearing a ham costume, and witnesses the trial of a black man named Tom Robinson, who is defended by Atticus in Maycomb, Alabama. For ten points, name this novel narrated by Scout Finch which is the only book by Harper Lee.

ANSWER: To Kill a Mockingbird

18. One ruler of this empire quelled a rebellion in Taxila after its people became discontent with the ministers, and also fought a succession crisis with his brother Susima. The founder of this empire lent Seleucus I hundreds of war elephants that were critical during the Battle of Ipsus and was succeeded by his son Bindusara. Another leader of this empire is known for (*) constructing several Rock Edicts throughout his lands and for the bloody conquest of Kalinga, leading that leader to convert to Buddhism. For ten points, name this empire founded by Chandragupta and led by Ashoka the Great.

ANSWER: Mauryan Empire

19. One type of these substances commonly contains two elongated regions separated by a composition plane in Carlsbad twinning. The general molecular formula for common examples of these minerals includes eight oxygen atoms. Microcline, orthoclase, and sanidine are the three main varieties of a type of these minerals designated with the letter (*) "K." A type of this mineral appears at the top of the continuous column in Bowen's reaction series. That series of this mineral are the plagioclases. For ten points, name these minerals which are a six on the Moh's hardness scale and are the most abundant on Earth's crust.

ANSWER: feldspar (accept "plagioclase" until "eight")

20. The protagonist of this novel promises to stand on a highway to enforce the beauty of two shepherdesses. Carts filled with demons cause one character in this book to climb up a tree while on a hunting trip with a duke and duchess. The protagonist of this novel confuses a wash bin for the magical (*) helmet of Mambrino. A barber in this work burns books of chivalry of the title character, who dedicates his journey to Dulcinea. A famous scene in this novel describes the protagonist charging at some windmills. For ten points, name this novel about the rider of Rocinante and companion of Sancho Panza, written by Miguel de Cervantes.

ANSWER: *The Ingenious Gentleman Don Quixote of La Mancha* (or *El ingenioso hidalgo don Quijote de la Mancha*)

YOU HAVE REACHED THE END OF THE ROUND. DO NOT GO ON TO TOSSUP 21 UNLESS THERE IS A TIE.

21. One character in this novel throws a bowl against a wall after slapping a man. In another scene from this novel, two characters toss away their wedding rings at a bazaar. The protagonist of this work has a son named Wade and learns about the death of her daughter Bonnie Blue. This novel opens with two characters discussing the owner of the (*) Twelve Oaks Plantation and his engagement to Melanie Hamilton, a friend of the wife of Rhett Butler. The protagonist of this book falls in love with Ashley Wilkes while living on Tara plantation. For ten points, name this novel set in Georgia about the beauty Scarlett O'Hara, written by Margaret Mitchell.

ANSWER: *Gone With the Wind*

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Round 4- Bonuses

1. During this geologic era, the continent of Africa was located at the South Pole. For ten points each:

[10] Name this “old-life” geologic era during which new species appeared in the Cambrian period. At its end, over ninety percent of the world’s species were wiped out in the Permian extinction.

ANSWER: **Paleozoic** Era

[10] During the Paleozoic era, its Cambrian period introduced these now extinct arthropods, which are now studied with the use of fossils. These animals were hard-shelled and had segmented bodies.

ANSWER: **Trilobites**

[10] This fourth geologic period of the Paleozoic era preceded the formation of coal beds during the Carboniferous period. During this “Age of the Fish,” the first terrestrial arthropods appeared.

ANSWER: **Devonian** Period

2. For ten points each, answer some questions about poems by T.S. Eliot:

[10] The phrase “HURRY UP PLEASE IT’S TIME” appears in the “Game of Chess” section of this Eliot work. This work begins with the line “April is the cruelest month.”

ANSWER: *The **Waste Land***

[10] This other Eliot poem describes the subjects as “shape without form, shade without color.” It ends with three repetitions of “This is how the world ends” before declaring it is “not with a bang, but with a whimper.”

ANSWER: “The **Hollow Men**”

[10] This T.S. Eliot poem begins “Time present and time past/Are both perhaps present in time future.” This poem is also the first of the Four Quartets.

ANSWER: “**Burnt Norton**”

3. In one composition, this instrument plays a two eighth-note trill held on a mezzo forte F. For ten points each:

[10] Identify this woodwind instrument which begins that same 1924 composition with a notable glissando. The “King of Swing,” Benny Goodman, played this instrument.

ANSWER: **clarinet**

[10] The clarinet glissando appears at the beginning of *Rhapsody in Blue*, a work by this American composer who also used several taxi horns in his *An American in Paris*.

ANSWER: George **Gershwin**

[10] Gershwin’s *Rhapsody in Blue* was first orchestrated by this other American composer, who is known for depicting a painted desert and a cloudburst in his *Grand Canyon Suite*.

ANSWER: Ferde (Ferdie) **Grofé**

4. In this play, the chorus retells the story of six brothers who were killed by Eteocles’s army. For ten points each:

[10] Name this Greek drama about a niece of a king of Thebes named Creon who buries her brother Polynices.

ANSWER: **Antigone**

[10] *Antigone* is a drama by this ancient Greek playwright, who may be better known for his three-part cycle about Oedipus.

ANSWER: **Sophocles** (or **Sophokles**)

[10] This sister of Antigone attempts to stop her from fighting against Creon’s words. Near the end of the play, this character wishes to die with Antigone.

ANSWER: **Ismene**

5. This kingdom was ruled by the House of Trastámara after Peter I won the Battle of Najera. For ten points each:
[10] Identify this Spanish kingdom which won the Battle of Las Navas de Tolosa against the Almohads. A female queen of this kingdom ordered the Alhambra Decree to expel all the Jews from the land.

ANSWER: Kingdom of Castile

[10] This monarch issued the Alhambra decree as the queen of Castile during the end of the Reconquista. She and her husband Ferdinand of Aragon are known as “The Catholic Monarchs.”

ANSWER: Isabella I of Castile

[10] A revolt of these people of Castile began after Isabella’s grandson, Holy Roman Emperor Charles V, left Spain in 1520. They wished to replace Charles with his mother, Joanna the Mad.

ANSWER: comuneros

6. It can be derived by noting that, at constant temperature, all gases have the same average kinetic energy. For ten points each:

[10] Name this law which states that a gas molecule’s average velocity is inversely proportional to the square root of its molar mass.

ANSWER: Graham’s Law of Effusion

[10] Graham’s Law applies to this physical phenomenon, in which gas particles move freely from areas of high concentration to areas of low concentration. Effusion is a special case of it.

ANSWER: diffusion

[10] The velocity cited for an ideal gas is usually this one, calculated as the square root of 3R times temperature over the gas’ molar mass. In general, this is the quadratic mean of the individual gas molecules’ velocities.

ANSWER: root mean square velocity (or RMS velocity; accept speed for velocity)

7. At the end of this novel, the narrator suffocates his friend with a pillow to end his life after a lobotomy. For ten points each:

[10] Name this novel narrated by a Native American named Chief Bromden which focuses on the conflict between an all seeing nurse and the psychiatric patient Randall McMurphy.

ANSWER: One Flew Over the Cuckoo’s Nest

[10] *One Flew Over the Cuckoo’s Nest* is a work by this American author.

ANSWER: Kenneth Elton “Ken” Kesey

[10] In *One Flew Over the Cuckoo’s Nest*, Randall fights with the nurse over changing the time of day the patients have to do chores so that he may watch this event on TV.

ANSWER: the World Series (prompt on “baseball” or “sports” or similar)

8. The third painting in this series depicts prostitutes stealing the subject’s watch. For ten points each:

[10] Name this series of eight paintings that includes “The Heir,” “The Madhouse,” and “The Gaming House.” It follows the decline of Tom, a son of a merchant.

ANSWER: A Rake’s Progress

[10] William Hogarth, the painter of *A Rake’s Progress*, was an artist from this city. This city is also the location of the National Gallery Art Museum and Big Ben.

ANSWER: London, England

[10] In another series, Hogarth depicted Silvertongue to satirize these events. A 1434 painting depicting one of these events includes a green curtain and a small dog in the center.

ANSWER: wedding or marriage (accept synonyms; (the second clue refers to the *Arnolfini Marriage*))

9. The majority of *Lord Durham's Report* centered on ending rebellions taking place in this province. For ten points each:

[10] Name this French-speaking Canadian province. Its inhabitants were promised free practice of Catholicism by the British in a namesake act.

ANSWER: Province of **Quebec**

[10] *Durham's Report* cited this legislation as a reason for uprisings in Quebec. It was passed to reduce conflict between colonists and Native Americans and prohibited colonists to settle west of the Appalachians.

ANSWER: Royal **Proclamation** of **1763**

[10] The Rebellions of 1837 that inspired *Lord Durham's Report* took place in both Upper and Lower Canada. The Upper Canada Rebellion was led by this politician.

ANSWER: William Lyon **Mackenzie**

10. John Hicks's introduction of the IS-LM model began the "Neoclassical" school named for this thinker. For ten points each:

[10] Name this English economist whose namesake school advocates for higher government spending. That idea was expanded upon in his *General Theory of Employment, Interest, and Money*.

ANSWER: John Maynard **Keynes**

[10] The higher government spending desired by Keynes falls under this type of policy, which focuses on government spending and taxation to change the economy. It is contrasted with monetary policy.

ANSWER: **fiscal** policy

[10] Keynes's *General Theory* introduced the idea that aggregate demand was equal to the sum of government spending, consumption, and this other quantity.

ANSWER: **investment**

11. One leader of this ethnic group established a city at Tanjore and began a conquest finished by his son Rajendra I. For ten points each:

[10] Name this ethnic group that founded the Chola Dynasty and, more recently, came into conflict in a certain Asian nation with a Sinhalese majority.

ANSWER: **Tamils**

[10] The Tamil people are native to India and this island nation, which was the site of a twenty-six year long civil war that ended in 2009.

ANSWER: Democratic Socialist Republic of **Sri Lanka**

[10] In the mid 20th century, the Tamils in the state of Tamil Nadu formed a national identity more in line with this ethnicity of South India. It is distinct from its northern Aryan counterpart, and gave its name to all South Indian languages.

ANSWER: **Dravidians**

12. For ten points each, name these Canadian bodies of water:

[10] This river forms part of the US-Canada border. It originates in Lake Ontario and flows through the cities of Montreal and Québec.

ANSWER: **St. Lawrence** River

[10] Located in the Northwest Territories, this lake is Canada's second largest and deepest. Yellowknife was established here during a gold rush in the 1930s.

ANSWER: The **Great Slave** Lake

[10] Akimiski Island, in this body of water, belongs to the territory of Nunavut despite being rather far away. This bay is the southern portion of Hudson Bay.

ANSWER: **James** Bay

13. David Vitale, the head of the Board of Education in this city, said that “Children First” sites would be built. For ten points each:

[10] Name this Illinois city which in September 2012 was the site of an eight-day teacher union strike to protest the potential closing of over 200 schools.

ANSWER: Chicago, IL

[10] This current mayor of Chicago was able to negotiate a new contract with the Chicago Teacher Union after the end of the strike. This man also served as Barack Obama’s former White House Chief of Staff.

ANSWER: Rahm Israeli Emanuel

[10] During the strike, Chicago Teachers Union President Karen Lewis was supported by this feminist and supporter of “reproductive freedom.” Earlier, this woman founded *Ms. Magazine*.

ANSWER: Gloria Marie Steinem

14. In one story, this crop was discovered after a god noticed that humans were not strong in the paradise of Tamoanchan. For ten points each:

[10] Name this crop prevalent in many Mesoamerican myths. The kernels of this crop became blue, white, yellow, and red after being swept away on the Mountain of Our Sustenance.

ANSWER: corn [or maize]

[10] In one myth, the discovery of corn is attributed to this Aztec god’s embarkation to the Mountain of Our Sustenance. He is the rival of the “smoking mirror,” Tezcatlipoca.

ANSWER: Quetzalcoatl (or Quetzalcohuātl; be lenient on pronunciations)

[10] After being denied the secret of corn by one of these animals, Quetzalcoatl transforms into one of them to find the secret. In Greek mythology, the Myrmidons are the descendants of these creatures.

ANSWER: ants

15. This concept can be defined as justified true belief. For ten points each:

[10] Name this philosophical concept which can be received through acquaintance or description. Epistemology is the study of this concept.

ANSWER: knowledge (accept word forms like “knowing”)

[10] This German Enlightenment philosopher posited that some type of knowledge is understood before experience and dubbed that type of knowledge as “a priori” in his work *Critique of Pure Reason*.

ANSWER: Immanuel Kant

[10] Immanuel Kant’s idea of this concept is that an object is a “thing-in-itself.” This concept, unlike a phenomenon, is the quality of the object in itself.

ANSWER: noumenon (or noumena)

16. One member of this art movement stuck the head of a ram in a tire and is famous for “Combines.” For ten points each:

[10] Name this art movement of the artist of *Monogram*, Robert Rauschenberg, as well as the painter of *Drowning Girl*.

ANSWER: Pop Art

[10] This other Pop Artist who ran “The Factory” is famous for his series of Campbell’s Soup Cans and his many depictions of Marilyn Monroe.

ANSWER: Andy Warhol

[10] The earlier mentioned artist of *Drowning Girl* is this man. This artist is also known for a work which includes the words “I pressed the fire control...and ahead of me blazed rockets through the sky...”

ANSWER: Roy Lichtenstein

17. It only applies to inertial reference frames, unlike its “general” counterpart. For ten points each:

[10] Name this theory developed by Albert Einstein, which argues that the speed of light is constant in every reference frame.

ANSWER: **special relativity**

[10] One common problem in special relativity is this so-called paradox, in which one of the title people travels to a distant star while the other doesn’t move, and each expects the other to be younger.

ANSWER: **twin** paradox (or **clock** paradox)

[10] The twin paradox can be resolved by noting that one of the twins must have done *this* at some point in their travel. After the twin does *this*, he or she is no longer in an inertial reference frame.

ANSWER: **change direction** (or **turn around**; or same-knowledge equivalents; accept **accelerate** or other word forms; generally accept anything that suggests that a twin has to slow down or change directions)

18. For ten points each, name these fictional detectives:

[10] This detective lives at 221B, Baker Street with his trusty assistant Watson. He is the best known character of Arthur Conan Doyle.

ANSWER: **Sherlock Holmes** (accept either)

[10] This detective created by Dashiell Hammett discovers that his friend Miles Archer was killed by Brigid O’Shaughnessy over the title object in the book *The Maltese Falcon*.

ANSWER: **Sam Spade** (accept either)

[10] This detective helps Carmen Sternwood discover who is blackmailing her in Raymond Chandler’s 1930s book *The Big Sleep*. He also appears as a friend of a scarred Terry Lennox in *The Long Goodbye*.

ANSWER: **Philip Marlowe** (accept either)

19. One of these structures at Abu Rawash was built for Djedefre [pr. Ze-def-ray]. For ten points each:

[10] Identify these large structures that were constructed during Egypt’s Old Kingdom. A notable “step” variety of them was built by Imhotep.

ANSWER: **pyramids**

[10] This pharaoh of the Old Kingdom is most famous for ordering his architect Hemon to begin the construction of the Great Pyramid of Giza.

ANSWER: **Khufu** (or **Kheops**)

[10] Imhotep led the construction of the first ever pyramid while serving as architect for this Egyptian pharaoh, who also rebuilt a temple at Khnum.

ANSWER: **Djoser** (or **Netjerikhet** or **Zoser**; be lenient on pronunciation)

20. In ecology, this behavior improves the chances of reproductive success when kin selection occurs. For ten points each:

[10] Name this animal behavior in which one organism reduces its own individual fitness in order to increase the fitness of the overall population.

ANSWER: **altruism**

[10] One of the most well-known examples of altruism occurs amongst these organisms, of which the sterile workers labor for a queen and die after stinging intruders.

ANSWER: honey**bees**

[10] This inequality uses the coefficient of relatedness, the offspring produced by the beneficiary, and the offspring produced by the altruist to determine if natural selection favors altruism.

ANSWER: **Hamilton**’s rule

21. One reason for this battle was the lack of an heir after the death of Edward the Confessor. For ten points each:

[10] Name this 1066 battle which began with the Norman invasion of William the Conqueror. It signified the end of Viking tradition in England.

ANSWER: Battle of **Hastings**

[10] The Battle of Hastings was a disaster for this self-proclaimed English king, who earlier defeated the Norwegian ruler Harald Hardrada at Stamford Bridge.

ANSWER: **Harold II** (or **Harold Godwinson**; prompt on “Harold” or “Godwinson”)

[10] At the Battle of Hastings, Harold II’s army consisted mostly of two groups; one of them included the less experienced fyrds, and the other was this class of experienced soldiers.

ANSWER: **housecarls**