

WHAQ (Washington High Academic Questionfest) II: Miami Connection

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Written by current and former members of the teams at Washington and Miami Valley

Packet 13

Tossups

1. **The foreground of one painting by this artist depicts a man crawling inside of a black ball and another chopping off his own leg. Another painting by this artist shows three men and their dogs returning from an unsuccessful trip, with ice skaters in the distance. This artist of *Netherlandish Proverbs* and (*) *Hunters in the Snow* depicted a farmer ignoring a young man about to drown in another painting. Auden's "Musee des Beaux-Arts" [*"Muse-ay day Bose Arts"*] was inspired by, for 10 points, what Flemish artist's *Landscape With the Fall of Icarus*?**

ANSWER: Pieter **Bruegel** the Elder <David Dennis>/<ed. CW>

2. **In a poem about these objects, the speaker declares "Earth's the right place for love" after earlier describing a boy "too far away from town to learn baseball." William Blake compared wrath to one of these objects, that his foe is "outstretched" beneath. Joyce Kilmer wrote that, "I think I shall never see / A poem as lovely as [one of these (*) objects]." A poem about these objects ends by saying "one could do worse" than swinging on them. For 10 points, name these objects described in Robert Frost's "Birches."**

ANSWER: **trees** [or specific kinds of trees, such as **birches** before it is read] <Joe Stitz>/<ed. ME>

3. **On an episode of *The Simpsons*, this film star endorses a fragrance called "Versatility," with the slogan "Smell like [this person] for cheap." In one role, she threatens Philip Seymour Hoffman's character with a crucifix; that film is *Doubt*. She demands her assistant deliver her an unpublished (*) *Harry Potter* manuscript in another role, and she won an Oscar for portraying Margaret Thatcher in *The Iron Lady*. For 10 points, name this woman who played fashion editor Miranda Priestly in *The Devil Wears Prada*, often called our "greatest living actress."**

ANSWER: Meryl **Streep** [or Mary Louise **Streep**] <Tyler Benedict>/<ed. SP>/<ed. JO>

4. **The most common host cells for developing therapeutic recombinant proteins come from Puck's CHO line, which he developed using cells from this organ in Chinese hamsters. Theca cells in this organ secrete androstenedione, which adjacent granulosa [*"gran-yoo-low-sah"*] cells convert into estradiol [*"ess-trah-dye-all"*]. An "LH surge" in this organ triggers (*) Graafian follicles to burst open, later forming the corpus luteum. After ovulation, cells can leave this organ through Fallopian tubes to travel to the uterus. For 10 points, name these female reproductive organs that are the site of egg cell formation.**

ANSWER: **ovaries** <David Dennis>/<ed. AR>

5. **This man argued that the body of Christ was present everywhere, including the bread and wine, while debating the Eucharist at the Marburg Colloquy. This man called the members of an uprising he inspired “filthy swine;” that uprising he inspired was the Peasants’ War. This man declared “here I stand, I can do other” before he was excommunicated by the bull *Exsurge Domine* [“Ex-ur-gay Dom-ee-nay”], which was issued by Pope Leo X after the Diet of (*) Worms [“Vurms”]. Due to his anger at the sale of indulgences, this man nailed a list of declarations to the church door in Wittenberg [“Vitt-en-berg”]. For 10 points, name this German monk who authored the *95 Theses*, which kicked off the Protestant Reformation.**

ANSWER: Martin Luther <Tyler Benedict>/<ed. JO>

6. **This man was given a gold crown whilst retrieving a ring from the bottom of the sea to prove his parentage. This man’s buttocks were left attached to a rock in the underworld after a rescue attempt. This man claimed he wished to inspect a bronze club, and in doing so tricked Periphetes. This man failed to change the color of his ships’ sails, causing his father (*) Aegeus to leap into the sea out of grief. Ariadne gave this man a ball of silk thread to assist with one task, and he thanked her by abandoning her on Naxos. For 10 points, name this king of Athens, who entered the labyrinth and slew the Minotaur.**

ANSWER: Theseus <David Dennis>/<ed. JO>

7. **Much of the opposition to this legislation stems from an interpretation of the Hayden rider. The potential for states to drop support for this legislation was declared moot in *Idaho v. Freeman*. The Eagle Forum was created to oppose this legislation, which was first written by Alice Paul in 1923. This legislation missed the mark for (*) ratification by its 1979 deadline, in part due to a campaign with the phrase “I am for Mom and apple pie” by activist Phyllis Schlafly. In 2017, Nevada became the 36th state to ratify this proposed amendment. For 10 points, name this unratified Constitutional amendment that aims to stop discrimination based on sex.**

ANSWER: Equal Rights Amendment [or ERA] <David Dennis>/<ed. JO>

8. **This character learns from Lord Munodi about the disastrous effects of the Academy of Projectors, and later discovers that Alexander the Great died of alcoholism. This character is convicted of treason for urinating on a fire in a royal palace. He helps settle a conflict about (*) eggs between the Little and Big Endians before fleeing to Blefescu. This character returns home after spending time with the horse-like Houyhnhnms [“HWIN-ums”]. For 10 points, name this character who encounters tiny people in Lilliput and giants in Brobdingnag in a novel by Jonathan Swift.**

ANSWER: Dr. Lemuel Gulliver [or Lemuel Gulliver; or Gulliver’s *Travels*] <Carrie Derner>/<ed. ME>

9. **The break-up of one moon of this planet may explain the resultant two bodies' co-orbital condition. The four "Gallic" moons of this planet, such as Albiorix, have an egg-shaped orbit. Giant, planet-encircling thunderstorms are observed on this planet about every 20 to 30 years and are referred to as "great white spots." This cloud cover of this planet's (*) north pole features a hexagon, as imaged by the Cassini satellite, which is due to crash into this planet in late 2017 after passing through its rings. For 10 points, name this sixth planet from the Sun.**

ANSWER: **Saturn** <David Dennis>/<ed. HB>

10. **In a 1998 vote over this action, a majority of votes went to "none of the above." In a 2012 vote concerning this action, over a half-million ballots were returned blank. Opponents of this procedure often identify themselves by waving a white flag with a red figure of a man wearing a straw workers hat. The most recent referendum concerning this process came after the triggering of the largest municipal bond market (*) bankruptcy in U.S. history, and was a campaign promise of Governor Ricardo Rosselló. In June 2017, only 23% of the population voted overwhelmingly in favor of, for 10 points, what process that would end with a 51-starred flag flying over San Juan?**

ANSWER: **Puerto Rican Statehood** [or anything reasonably involving **Puerto Rico** and the idea of **joining the US as a state**] <David Dennis>

11. **Bonds between this element and hydrogen are counted when calculating the Styx number. Ten atoms of this element and fourteen atoms of hydrogen form a white crystalline compound that notably smells like chocolate. That cluster is classified as *nido*, according to a set of electron-counting rules devised by Kenneth (*) Wade. This element, which is mined from the ores colemanite and ulexite [*"yoo-lex-ite"*], forms a trifluoride that is a strong Lewis acid but planar. This first element of the p block violates the octet rule by having only six valence electrons. For 10 points, name this metalloid with atomic symbol B.**

ANSWER: **boron** [or **B** before it is read] <Max Mader>/<ed. AR>

12. **During this leader's tenure, a group including Paul Rose abducted Trade Consul James Cross and a man whose body was found in the trunk of a car. This head of state's terms were interrupted by Joe Clark. When this leader was accused of mouthing profanity at opposition members, he claimed to have said "fuddle duddle," and he improved his nation's welfare system in the "Just Society" program. After Pierre (*) Laporte's death, he declared "Just watch me" before invoking the War Measures Act against the FLQ to resolve the October Crisis. For 10 points, name this Canadian prime minister whose son, Justin, is the current prime minister.**

ANSWER: **Pierre Trudeau** [or Joseph Philippe Pierre Yves Elliott **Trudeau**; or **PET**; prompt on **Trudeau**; do NOT accept "Justin Trudeau"] <John John Groger>/<ed. JO>

13. **This quantity can be calculated by using a chained system in which expenditure shares for multiple years are used. Joseph Stiglitz criticized the “fetishism” of this quantity in a 2009 report. The U.S. Bureau of Economic analysis uses the (*) expenditure method to calculate this quantity. Dividing this quantity’s nominal form by its real form and multiplying by 100 yields its namesake “deflator.” Okun’s Law relates this quantity’s decreases to increases in unemployment. For 10 points, name this economic value of a country’s finished goods and services.**

ANSWER: Gross Domestic Product [do NOT accept “Gross National Product” or “GNP”]
<Sophia Johnson>/<ed. HB>

14. **In one play by this man, a photographer uses his “one eyed box” to take pictures of one character after his motorcycle breaks down. In that play by this author, La-kun-le refuses to pay a bride price, resulting in Sidi’s marriage to the village chief, (*) Baroka. In another play by this man, British officer Simon Pilkings prevents Elesin from committing ritual suicide, causing Olunde to take his place. For 10 points, name this Nigerian playwright of *Death and the King’s Horseman* and *The Lion and the Jewel*.**

ANSWER: Wole Soyinka [or Akinwande Oluwole Babatunde Soyinka] <William Groger>/<ed. ME>

15. **"Reasonings" and "foundations" refer to ceremonies from this religion. Pinnacle was formed as this religion's first self-sustaining community by Leonard Howell. A line of blood separates Robert Athlyi Rogers' followers and nonbelievers in the Holy Piby, an important text in this religion. Its followers are required to avoid (*) chemicals in food and be vegetarian, according to the I-tal [*“eye-tall”*] diet. Many adherents of this religion consider Haile Selassie the incarnation of God, or Jah, on Earth. For 10 points, name this Jamaican religion whose practitioners are known for wearing dreadlocks and smoking ganja.**

ANSWER: Rastafarianism [or the Rastafari movement] <Sophia Johnson>/<ed. AR>

16. **A symphony by this composer has a “Minuetto al Roverso” third movement, where the second theme is the reverse of the first theme, giving it its nickname. Written during wartime stress, this composer’s *Mass for Troubled Times* gradually had its nickname changed, in honor of the victor at the Battle of the Nile. This composer wrote an oratorio that opens with the “Representation of Chaos,” *The (*) Creation*. This composer wrote twelve symphonies during his time in London. For 10 points name this composer of the *Lord Nelson Mass*, and 104 symphonies, including the “Palindrome”, “Farewell”, and “Surprise.”**

ANSWER: Franz Josef Haydn <David Dennis>

17. **An early form of this technology was improved by Wang Zhen, and later by Hua Sui, by including bronze. Many Dutch consider Laurens Koster as having invented this technology, and it was introduced to Romania by an Albanian called Basil the Wolf. William Bullock was killed while working on the web rotary version of this technology, which allowed it to use continuous rolls of (*) paper.** The man credited with developing this technology used it in Mainz to create a 42-line Bible. For 10 points, name this technology credited to Johannes Gutenberg, that used movable type.

ANSWER: **Printing Press** [prompt on print; prompt on press; do NOT accept “printer”] <David Dennis>/<ed. JO>

18. **In one novel by this author, a pirate followed by five dogs saves 1,000 quarters to buy a golden candlestick. That character is in a group of “paisanos” who burn down a house after their leader Danny’s death. Another novel by this author sees Kino, Juana, and (*) Coyotito suffer many misfortunes while in possession of the title object. This author of *Tortilla Flat* and *The Pearl* wrote about Jim Casy’s death during a strike, while attempting to flee the Dust Bowl. For 10 points, name this author, who wrote about the Joad family in *The Grapes of Wrath*.**

ANSWER: John **Steinbeck** [or John Ernst **Steinbeck**, Jr.] <Carrie Derner>/<ed. ME>

19. **This region’s largest city grew around the settlement of Gastown. This division that contains Haida Gwaii and the city of Kelowna is home to Butchart Gardens in its capital. A gold rush took place along the Fraser River in this province, which contains the resort town of Whistler and (*) Pacific Rim National Park. It is separated from a large island by the Georgia Strait and from a neighboring country by the Strait of Juan de Fuca. For 10 points, name this westernmost Canadian province, which contains the cities of Victoria and Vancouver.**

ANSWER: **British Columbia** <John John Groger>/<ed. DD>

20. **In this formulation, the Nambu-Goto and Polyakov actions govern the movement of objects which move along surfaces known as D-branes. This formulation depends on a large number of free parameters, making it practically untestable. Ed Witten used conformal field theory to unite various versions of it in an eleven-dimensional extension, known as (*) M-theory. It attempts to reconcile gravity and quantum mechanics. For 10 points, name this theory that all elementary particles are made up of the namesake vibrating, one-dimensional shapes.**

ANSWER: **String** Theory <David Dennis>/<ed. HB>

Bonuses

1. The only law from this man's law code that survives today is his homicide law. For 10 points each:

[10] Name this ancient Greek legislator, whose name is now synonymous with an unforgiving law due to the harshness of his law code.

ANSWER: **Draco** [or **Dracon**; or **draconian** laws]

[10] Draco promulgated the first constitution of this Greek city-state. Solon instituted his namesake reforms in this city-state, which practiced democracy.

ANSWER: **Athens** [or **Athinai**; or **Athenai**]

[10] This later chief magistrate of Athens changed the Council of 400 into the Council of 500. This man divided the *demes*, or natural divisions of Attica, into the 10 tribes of Athens.

ANSWER: **Cleisthenes** [or **Clisthenes**] <Cole Phinney>/<ed. JO>

2. An example of this art form in San Francisco is an apron wearing figure wearing a gas mask, featured next to the words “if at first you don’t succeed call an airstrike.” For 10 points each:

[10] Name this form of street art, which is practiced by the Haitian-American Jean Michael Basquiat. It is often considered to be vandalism.

ANSWER: **Graffiti**

[10] This Harlem mural by Keith Haring features many stick figures in various poses. Its title three-word phrase is surrounded by many skulls and a dollar bill to the left.

ANSWER: **Crack is Wack**

[10] This anonymous British graffiti artist made the apron wearing figure in San Francisco, and was known for his feuds with King Robbo.

ANSWER: **Banksy** <Jonathan Amlong>/<ed. CW>/<ed. JO>

3. Benjy narrates part one of this novel with frequent chronological jumps. For 10 points each.

[10] Name this novel about the Compson family. Quentin narrates the events leading up to his suicide in part two of this novel.

ANSWER: *The **Sound and the Fury***

[10] This author of *As I Lay Dying* wrote *The Sound and the Fury*.

ANSWER: William **Faulkner** [or William Cuthbert **Faulkner**]

[10] This fictional Mississippi county created by Faulkner appears in both *As I Lay Dying* and *The Sound the Fury*

ANSWER: **Yoknapatawpha** [“*Yok-naw-pah-tau-pha*”] County (accept any reasonable pronunciation) <ed. ME>

4. You are doing an experiment where you have to extract caffeine from coffee. For 10 points each:

[10] You need to perform this separation method after boiling the ground coffee beans in water. The gravity version of this separation method is often used at home, while we use the vacuum type in a lab.

ANSWER: **filtration**

[10] You then perform this separatory method to take the caffeine out of the water. You add some dichloromethane [*“dye-chlor-oh-meth-ane”*] and put the solution in a separatory funnel, creating two layers and performing this separation method.

ANSWER: liquid-liquid **extraction**

[10] Another way to perform decaffeination is by using a supercritical fluid of this substance. In solid form, this substance is known as dry ice.

ANSWER: **carbon dioxide** [or **CO2**] <David Dennis>/<ed. AR>

5. *NOTE TO MODERATOR: Accept, but do not otherwise reveal, the alternate answer to the first part. Thanks!*

The second movement of this work requires the musician to have a 14-and ¾-inch-long piece of wood in order to play a “chord.” For 10 points each

[10] Name this piano piece, named for a Massachusetts town. This piece has “Hawthorne” and “Emerson” movements, and it quotes multiple Beethoven works.

ANSWER: **Concord Sonata** [or **Ives’ Piano Sonata #2**]

[10] This American composer of the Concord Sonata once proposed an amendment to the US Constitution, which would allow citizens to propose legislation to Congress.

ANSWER: Charles **Ives**

[10] This work by Ives consists of a call-and-response between a trumpet and a group of woodwinds, played over a bed of strings. Leonard Bernstein gave a series of lectures at Harvard on tonality in music named after the title of this work.

ANSWER: *The **Unanswered Question*** <David Dennis>

6. The protagonist of this novel visits a family who lives in an upside-down boat, and goes to school at Salem House. For 10 points each.

[10] Name this semi-autobiographical novel about the title character, who escapes his step-father Edward Murdstone and marries Agnes Wickfield.

ANSWER: **David Copperfield**

[10] This author of *David Copperfield* also penned the novels *Hard Times* and *The Mystery of Edwin Drood*.

ANSWER: Charles **Dickens**

[10] This character in *David Copperfield* attends school with David and is later imprisoned for “fraud on the Bank of England.”

ANSWER: **Uriah** Heep [or Uriah **Heep**] <Carrie Derner>/<ed. ME>

7. For 10 points each, answer these questions about people named Zeno:

[10] Zeno of Elea famously described these types of problems. Examples of them include Achilles and the tortoise, and the arrow one.

ANSWER: **Paradoxes**

[10] The Zeno from this city was a pupil of Crates of Thebes. That man later rejected his teacher's Cynicism and formed his own philosophy of Stoicism.

ANSWER: **Citium**

[10] Zeno of Sidon is described by Cicero as a leading thinker in this school of thought. This school's namesake preached a philosophy that *aponia*, or absence of pain, was desirable.

ANSWER: **Epicureanism** <Sophia Johnson>/<ed. HB>

8. Answer the following about conflicts between the US and Native Americans. For 10 points each:

[10] Andrew Jackson fought in a series of wars named for these people, which included the Battle of Wahoo Swamp and the Battle of Lake Okeechobee in Florida.

ANSWER **Seminoles**

[10] This tribe's 1,170 mile fighting retreat ended when Chief Joseph of this tribe surrendered, and delivered his "I will fight no more forever" speech.

ANSWER: **Nez Perce** [or **Nimi'ipuu**]

[10] This massacre of Lakota by the U.S. Army began after the deaf Black Coyote refused to give up his rifle.

ANSWER: **Wounded Knee** Massacre <Jonathan Amlong>/<ed. JO>

9. This figure has false teeth made of jewels, but they are knocked out and replaced with kernels of corn. For 10 points each:

[10] Name this figure. His sons are Zipacna, who loves to eat crabs, and Cabrakan, called "the Earthquake." Before his downfall, he claimed to be the sun and moon.

ANSWER: **Seven Macaw** [or **Vucub Caquix**]

[10] Seven Macaw was defeated by these mythological brothers, who bested the Lords of Xibalba after a series of ball games.

ANSWER: **Hero Twins** [or **Hunahpu** and **Xbalanque** in either order]

[10] Seven Macaw and the Hero Twins appear in the *Popul Vuh*, a book chronicling the mythology of this Mesoamerican people.

ANSWER: **Mayans** [or **K'iche**; or **Quiché**] <Tyler Benedict>/<ed. JO>

10. Force numbers 13 to 17 were added to this scale by the U.S. Weather Bureau in 1955. For 10 points each:

[10] Name this descriptive scale developed by a British admiral, that includes descriptions of the surface of the sea at measurements 0-12.

ANSWER: **Beaufort** scale

[10] The Beaufort scale is a measurement of the effects of this phenomenon, the movement of air molecules, on a full-rigged man-of-war.

ANSWER: **wind**

[10] This device, which is used to scientifically measure wind speed, calculates how many times a blown cup revolves around a pivot. The Beaufort scale was calibrated to measure this device in 1939.

ANSWER: **anemometer** <David Dennis>/<ed. HB>

11. What was believed by some Muslims to be the tomb of this prophet was destroyed by the Saudi Arabian government in Al-Awjam. For 10 points each:

[10] Name this prophet, who was part of the "Company of the Good," according to Surah 38. In 2nd Kings' account of this successor to Elijah, his remains revived a dead man.

ANSWER: **Elisha** [or **Alyasa**; do NOT accept "Elijah"]

[10] In Surah 71, this man laments his people's response to his preaching. Allah commands him to build a ship to save two of each animal and all remaining believers from "the Great Calamity."

ANSWER: **Noah** [or **Nûh**]

[10] Muhammad was allegedly descended from this prophet. According to Islamic tradition, the Zamzam Well appeared at the feet of where this son of Hagar once stood.

ANSWER: **Ishmael** [or **Ismā'īl**] <Sophia Johnson>/<ed. AR>

12. One leader with this surname claimed that Pakistanis would "eat grass," but build a nuclear bomb, while another married Asif Ali Zardari and was assassinated in 2007. For 10 points each:

[10] Give this shared surname of Zulfikar Ali, the founder of the Pakistan People's Party, and his daughter Benazir, the first female head of state of a Muslim-majority country.

ANSWER: **Bhutto** [or Zulfikar Ali **Bhutto**; or Benazir **Bhutto**]

[10] Zulfikar Ali Bhutto was deposed and eventually hanged after a military coup led by this general. This man made the "Islamization" of Pakistan a primary political goal.

ANSWER: Muhammad **Zia** ul-Haq [or Muhammad Zia **ul-Haq**]

[10] Zia himself died under suspicious circumstances in one of these disasters, also the cause of death of UN Secretary-General Dag Hammarskjöld and Polish president Lech Kaczyński.

ANSWER: **plane crash** [or any answer that indicates a **plane** went **down**; prompt on **assassinations**] <Tyler Benedict>/<ed. JO>

13. In a novel by this author, the brothers Mitsusaburo and Takashi participate in an uprising against a Korean “Emperor.” For 10 points each.

[10] Name this author of *The Silent Cry* and *Nip the Buds, Shoot the Kids*.

ANSWER: Kenzaburo **Oe**

[10] Oe’s *A Personal Matter* centers on Bird’s acceptance of the brain damage of a person with this relationship to him. Caliban has this relationship with Sycorax [“*Sih-core-axe*”] in *The Tempest*.

ANSWER: his **son** [or her **son**]

[10] Kenzaburo Oe is an author from this Asian country, that is known for the haikus of Matsuo Basho.

ANSWER: **Japan** [or **Nippon**; or **Nihon**] <Carrie Derner>/<ed. ME>/<ed. JO>

14. The largest mangrove forest in the world is located in the Sundarbans, a part of the Brahmaputra [“*Brah-mah-poo-trah*”] River Delta in this country. For 10 points each:

[10] Name this densely-populated Asian nation, whose cities include Khulna and Cox’s Bazar.

ANSWER: People’s Republic of **Bangladesh** [or Gana Prajatantri **Bangladesh**]

[10] This city of over 8 million inhabitants is the capital of Bangladesh.

ANSWER: **Dhaka** [or **Dacca**]

[10] Until 1971, Bangladesh comprised the Eastern part of this Islamic Republic, at one time led from Rawalpindi.

ANSWER: Islamic Republic of **Pakistan** [or **Pakstan**; or Islam-i Jamhuriya-e **Pakistan**] <John John Groger>/<ed. DD>

15. Disorders due to this malfunction include Turner syndrome and Klinefelter syndrome. For 10 points each:

[10] Name this phenomenon, in which chromosomes fail to separate normally during meiosis or mitosis.

ANSWER: **nondisjunction**

[10] When nondisjunction leads to three copies of chromosome 21, it causes this syndrome.

Signs of this disorder include a single crease on the palm and mental disability.

ANSWER: **Down** syndrome [or **Down’s** syndrome]

[10] This general term refers to the presence of an abnormal number of chromosomes in a cell.

Examples of this phenomenon include the absence of one chromosome, or monosomy.

ANSWER: **aneuploidy** <David Dennis>/<ed. AR>

16. This play is the longest running show on London's West End, with over 25,000 performances since 1952. For 10 points each.

[10] Name this mystery play about the murder of Maureen Lyon. Sergeant Trotter interrogates the residents of Monkswell Manor in this play.

ANSWER: *The Mousetrap*

[10] This author of *The Mousetrap* also wrote about a group of strangers, who are each accused of murder and killed on an island, in her novel *And Then There Were None*.

ANSWER: Agatha Christie

[10] Christie created this fictional detective, who investigates the stabbing of Mr. Ratchett in *Murder on the Orient Express*, and also appears in her first play *Black Coffee*.

ANSWER: Hercule Poirot [or Hercule Poirot] <Carrie Derner>/<ed. ME>

17. This artist's extensive use of cross-hatching to express depths of shading was a major step in the development of medieval woodcuts and engraving. For 10 points each:

[10] Name this German artist, whose *Four Horsemen* are part of his *Apocalypse* series. A woman wears a crown made of leaves in this artist's *Melencolia I*, which also includes a magic square.

ANSWER: Albrecht Durer

[10] Durer's woodcut of this religious figure *In his Study* depicts a sleeping lion in its foreground. Durer also depicted this saint *In the Wilderness*.

ANSWER: St. Jerome

[10] This Dutch artist's last work, *Snakes*, is a woodcut depicting three of the animals melding into a disc of interconnected rings. Many of this artist's works were mathematically inspired.

ANSWER: M.C. Escher [or Maurits Cornelis Escher] <David Dennis>/<ed. CW>

18. *NOTE TO MODERATOR: Do not reveal the alternate answers to the first part of the bonus unless a team answers with that, as it will reveal the answer to the second part. Thanks!*

The Bayeux Tapestry opens with Edward the Confessor sending Harold Godwinson as an ambassador to this monarch. For 10 points each:

[10] Name this king, who launched the Harrying of the North campaign after the death of Robert de Comines. The Bayeux Tapestry depicts this king's victory at the Battle of Hastings.

ANSWER: William the Conqueror [or William I; or William the Bastard; or William of Normandy; prompt on William]

[10] Before invading England, William the Conqueror ruled this region. Edward the Confessor's mother, Emma, was a descendant of Rollo, the founder of the duchy of this region.

ANSWER: Normandy [or Normandie]

[10] Before founding Normandy, Rollo led these people on raids of Paris. These people raided the monastery of Lindisfarne and served the Byzantine Empire as the Varangian Guard.

ANSWER: Vikings [or Norsemen; or Northman] <Cole Phinney>/<ed. JO>

19. In this process, the mass number is unchanged but the atomic number changes by one. For 10 points each:

[10] Name this type of decay, where a nucleus emits an electron or positron to compensate the change of electric charge. In the minus form of this decay, a neutron converts into a proton.

ANSWER: **beta** decay

[10] In this process, the inverse of beta decay, an electron in an atom's inner shell is drawn into the nucleus converting a proton into a neutron and ejecting a neutrino.

ANSWER: **electron capture**

[10] This interaction mediates beta decay, and allows quarks to change flavors. This interaction is itself mediated by the W and Z bosons.

ANSWER: **weak** nuclear **force** <David Dennis>

20. It is the most successful independent record label in history, and was once the highest-earning black-owned business in America. For 10 points each:

[10] Name this record label, headquartered in Detroit until 1972. Its artists included the Temptations, the Supremes, and Stevie Wonder.

ANSWER: **Motown** Records [or **Tamla Motown**]

[10] This man was the founder of Motown Records. He also worked as a songwriter, penning hits like "Lonely Teardrops" for Jackie Wilson.

ANSWER: Berry **Gordy**, Jr. [or Berry **Gordy** III]

[10] This singer debuted his signature dance move, the Moonwalk, at Motown's 25th anniversary celebration. Gordy said this man was the "greatest entertainer ever" at his 2009 funeral.

ANSWER: Michael **Jackson** [or Michael Joseph **Jackson**] <Tyler Benedict>/<ed. SP>/<ed. JO>