

WHAQ (Washington High Academic Questionfest) III: Miami Vice
Edited by Jacob O'Rourke, David Dennis, Mike Etzkorn, Bradley McLain, Ashwin
Ramaswami and Chandler West

Written by current and former members of the teams at Washington and Miami Valley;
Aleija Rodriguez; Ganon Evans, and Max Shatan

Packet 3

Tossups

1. **One character in this novel mocks the “colt’s mane over [the protagonist’s] eyes,” resulting in hot applesauce being thrown in his face. This novel ends with a younger generation, who can “brave Satan and all his legions,” electing to marry on New Year’s Day. In this novel, Isabella escapes to London to give birth to (*) Linton, as told by Nelly Dean, who relates the tale of the title location to Mr. Lockwood. For 10 points, name this novel centering on the relationship between Catherine Earnshaw and the orphan Heathcliff, written by Emily Brontë.**

ANSWER: **Wuthering Heights** <British Lit> <William Groger>/<ed. ME>

2. **This artist depicted himself as a helmsman in a seascape that was stolen from the Isabella Stewart Gardner museum in 1990. This artist painted a crown resting atop a turban as a king recoils from glowing Hebrew letters in one panting. This artist of *Storm on the Sea of Galilee* and *Belshazzar’s Feast* depicted an illuminated blonde girl with a chicken (*) around her waist in his most famous painting. That painting also depicts a man waving a blue and yellow flag. For 10 points, name this Dutch artist who depicted Franz Banning Cocq’s militia in *The Night Watch*.**

ANSWER: **Rembrandt** Harmenszoon van Rijn [or Rembrandt Harmenszoon **van Rijn**] <Visual FA>
<Ganon Evans>/<ed. CW>

3. **The rediscovery of a text named for this ruler helped to spur the founding of the University of Bologna. This leader was alleged to have killed a trillion people and was depicted as a demonic figure who was able to detach his head in *The Secret History* of Procopius. The scholar Tribonian headed a commission that published namesake “novels” that solved contradictions within a (*) law code named for this ruler. This emperor’s general Belisarius [“*Bell-eh-saar-ee-us*”] crushed the Blue and Green factions of chariot racing fans while ending the Nika riots. For 10 points, name this Byzantine emperor who ordered the construction of the Hagia Sophia [“*ha-ee-uh so-fee-uh*”] and was advised by his wife Theodora.**

ANSWER: **Justinian** the Great [or **Justinian** I; or Flavius Petrus Sabbatius **Iustinianus** Augustus; or Codex **Justinianus**; or **Justinian**’s Law Code; do NOT accept or prompt on “Justin,” as this was the ruler who came before him] <Misc. History> <Aleija Rodriguez>/<ed. JO>

4. **The Boussinesq [“boo-sin-esk”] approximation of the Navier-Stokes equations ignores variation in this quantity except in the buoyancy term. Porosity can be defined as one minus the ratio of the bulk and particle types of this quantity. A hydrometer uses Archimedes’ principle to measure this quantity, which stays constant in an (*) incompressible fluid. The ratio of this quantity for a substance to that of water gives the specific gravity. An object whose value for this property is greater than that of the fluid around it will sink. For 10 points, name this quantity equal to an object’s mass per unit volume.**
ANSWER: density <Physics> <David Dennis>/<ed. AR>

5. **Most families will pour an extra glass of wine for a prophet during this holiday and say a prayer to represent the coming Messiah. Children sometimes “steal” the afkoman on this holiday. This holiday occurs on the 15th of Nisan [“Nye-sann”]. The youngest member asks four questions about this holiday during the ritual (*) seder [“say-dur”], which typically ends in the singing of the phrase, “Next year in Jerusalem.” Since all leavening is forbidden on this holiday, the only bread that can be eaten is matzo. For 10 points, name this holiday that celebrates the Israelites’ exodus from Egypt.**
ANSWER: Passover [or Pesach] <Religion> <Silas Clements>/<ed. AR>/<ed. JO>

6. **In the two-part episode “Beginnings,” the first person to have this title, Wan, was shown gaining his powers from lion turtles and fusing with the spirit Raava. A figure with this title attempted to kill Koh for stealing the face of his fiancée, Ummi. One figure to hold this title preceded by the word “dark” was created by the merger between Vaatu and (*) Unalaq. This title was held by a character who is accompanied by the flying bison Appa and defeats Fire Lord Ozai. Only the holder of this title can bend all four elements. For 10 points, what title was held by people like Kuruk, Kyoshi, Korra, and Aang?**
ANSWER: Avatar [or the Dark Avatar; or Avatar: *The Last Airbender*; or Avatar: *The Legend of Aang*] <Trash> <William Groger>/<ed. SP>/<ed. JO>

7. **A ruler of this country secretly married Lilian Baels six years after he lost his first wife Astrid to a car accident. The first king of this country was invited following a revolution that started with a performance of Auber’s *The Mute Girl of Portici*. Irish national Roger Casement accused this country’s king, and his de-facto subordinates in Boma, of having soldiers sever the (*) hands of workers who had not fulfilled their rubber quotas in the Congo Free State. For 10 points, name this country once ruled by Leopold II, which consists of Flanders, Wallonia, and the Brussels-Capital Region.**
ANSWER: Belgium [or Kingdom of Belgium; or Konigreich Belgium; or Koninkrijk Belgium; or Royaume de Belgique] <European History> <David Dennis>/<ed. JO>

8. **In 2012, this type of bond between two boron atoms was formed for the first time. One of these bonds is reduced by a palladium-on-calcium-carbonate catalyst invented by Herbert Lindlar. Atoms participating in these interactions are sp [“S P”] hybridized. The diatomic molecules dinitrogen and carbon (*) monoxide both have these bonds between their two central atoms. The simplest carbon compound with these bonds is acetylene, one of the alkynes [“al-KINES”]. For 10 points, name these covalent bonds in which atoms share six electrons.**
ANSWER: triple bonds [prompt on covalent (bonds)] <Chemistry> <Ashwin Ramaswami>

9. The central section of one ballet by this composer depicts a contest between twelve dancers and was inspired by the “Bransle” tune found in a manual of French court dance. *The Soldier’s Tale* was produced during this composer’s neoclassical period, during which he also created *Symphony of Psalms*. This composer of *Agon* [“ay-gon”] wrote a ballet in which thirteen princesses dance with magic (*) golden apples, and another ballet by this man caused a riot at its Paris premiere. For 10 points, name this composer of such ballets as *The Firebird*, and *The Rite of Spring*.

ANSWER: Igor Stravinsky <Auditory FA> <Aleija Rodriguez>/<ed. DD>

10. In this novel, the protagonist responds “they die” to a question about what children do if they don’t drink milk. A corrupt political leader in this novel uses his “great bull voice” as a means to make money. A lawyer takes a trial case *pro deo* in this novel over the murder of the author of “The Truth About Native Crime.” At the beginning of this novel, Reverend (*) Theophilus Msimangu [meh-see-mahn-goo] warns the protagonist of his sister Gertrude’s bootlegging and prostitution. Arthur Jarvis dies at the hands of Absalom in, for 10 points, what novel centering on Stephen Kumalo, written by Alan Paton?

ANSWER: Cry, the Beloved Country <European/World Lit> <William Groger>/<ed. ME>

11. One lake that used to be part of this body of water was created by isostatic rebound and is home to the city of Uppsala. An island in this body of water, which was home to Lake Malaren, is home to the chalk formation King’s Chair. The northern arm of this body of water has low enough salinity levels to support freshwater wildlife. In addition to the Gulf of (*) Bothnia, another arm of this sea separates Oland from the mainland and is called Kalmar Strait. For 10 points, name this European Sea that lies between Sweden and Finland, as well as a group of namesake countries including Latvia and Estonia.

ANSWER: Baltic Sea <Geography> <Brad McLain>

12. After Antilochus sacrificed himself to save Nestor, a giant son of Tithonus and Eos was defeated by this figure. In addition to Memnon, this figure killed Thersites after he mocked this figure for mourning over the body of an Amazon. This figure once clogged a river with bodies, which prompted that river to try and drown him, only to be stopped by Hephaestus’ flames. In addition to fighting (*) Scamander, this hero dragged Hector’s corpse around the walls of Troy after his friend Patroclus was killed. For 10 points, name this hero who was dipped in the River Styx to grant immortality, but had his heel unprotected.

ANSWER: Achilles [or Achilleus] <Mythology> <Brad McLain>

13. In one novel by this author, Chicken Little drowns after the title character accidentally loses her grip and tosses him into a river while Nel Wright watches on. In another novel by this author, Guitar Bains chases after the ancestral gold of Milkman Dead. This author of *Sula* and *Song of Solomon* wrote a novel that takes place at (*) 124 Bluestone Road and centers on the title character sparking Sethe’s [“seth-uh’s”] remorse for the killing of her daughter. For 10 points, name this female African-American author of *Beloved*.

ANSWER: Toni Morrison [or Chloe Ardelia Wofford] <American Lit> <William Groger>/<ed. ME>

14. A scale for these systems was updated in 2006 to account for additional damage indicators such as construction quality. A “hook echo” on the radar is a characteristic sign of one of these systems. A Totable Observatory for these systems failed to work due to having too a high center of gravity for the intense (*) winds. These phenomena are usually formed from mesocyclones in supercells. The Enhanced Fujita Scale is used to measure the intensity of these phenomena. For 10 points, name these rotating funnel clouds that frequently occur in their namesake “Alley” in the American Midwest.
ANSWER: tornadoes [or twister; or whirlwind] <Other Science> <David Dennis>/<ed. AR>

15. The first free black settlement in the US was established in this state at Fort Mose. The short-lived Fort Caroline was built along the St. Johns River in this state as a safe haven for the Huguenots. James Moore led one side in the Battle of Ayubale [*“ay-oo-ball-ay”*] in this state. Micanopy and Osceola were leaders of a tribe from this state which fought a series of wars against the U.S. The (*) Adams-Onís [*“oh-nees”*] treaty eventually ceded this state to the U.S. This state contains the longest continually occupied European settlement in the U.S. at St. Augustine. For 10 points, name this southern state, the home of the Seminoles
ANSWER: Spanish Florida [or La Florida] <American History> <David Dennis>/<ed. CW>/<ed. JO>

16. Three decisive, successive victories for one side in this conflict are collectively known as the Deed of December. Those battles were won by a man who besieged the fortress of Humaitá [*“hoo-may-TAH”*] during this war. This war began after the Blancos were defeated in an election by the Colorados, and one side’s forces were commanded by the Duke of (*) Caxias [*“cax-ee-as”*]. A head of state instigated this war by invading Mato Grosso. That man, Francisco Solano López, was killed at this war’s Battle of Cerro Cora, and led a nation that lost 90% of its male population. For 10 points, name this war, where Paraguay was defeated by Uruguay, Argentina, and Brazil.
ANSWER: War of the Triple Alliance [or the Paraguayan War before “Paraguay” is read] <World History> <John John Groger>/<ed. JO>

17. These organelles are formed through the fusion of transport vesicles with late endosomes. I-cell disease occurs when certain proteins are unable to reach this organelle due to not being tagged properly in the Golgi body. Sphingo-lipidoses are examples of "storage diseases" named for this organelle, involving an accumulation of excess products in the cell. Proteins tagged with (*) mannose-6-phosphate are destined *for* these hydrolase-rich organelles, whose pH is around 4.5. For 10 points, name these organelles that degrade and recycle cellular waste.
ANSWER: lysosomes <Biology> <David Dennis>/<ed. AR>

18. **One procedure involving these subjects classifies them as disorganized, secure, or insecure and was designed by Mary Ainsworth. In addition to the “strange situation” experiments, an experiment involving subjects of this type pitted groups against each other at a namesake camp. That was Sherif’s (*) Robber’s Cave experiment. Gibson and Walk used a checkerboard pattern in their “visual cliff” experiment to demonstrate these subjects’ ability in depth perception. For 10 points, name these subjects who Jean Piaget studied the development of, who learn to walk around 12 months old.**
ANSWER: children [or more specific groups like children, teenagers, infants, etc.] <Social Science>
<David Dennis>/<ed BM>

19. **This author describes seeing “lover by lover” “paddle in the cold / companionable streams” noting how the hearts of the title creatures “have not grown old” in a poem that begins “The nineteenth autumn has come upon me / Since I first made my count.” This author of “The Wild Swans at Coole” described seeing a “vast image out of (*) *Spiritus Mundi*” after noting “things fall apart / the center cannot hold.” That poem by this author describes a “rough beast,” which “slouches towards Bethlehem to be born.” For 10 points, name this Irish poet who wrote “The Second Coming.”**
ANSWER: William Butler Yeats <British Lit> <Aleija Rodriguez>/<ed. ME>

20. **A wall on a facility for these people bears the quote: “Sometimes by losing a battle, you find a new way to win the war.” A policy concerning these people was directed in a memo that praised Operation Streamline. Treatment of these people is the subject of the Flores Settlement, which was cited by the White House as justifying a policy concerning these people. The Department of Homeland Security has attempted to rescind an act concerning these people, (*) DACA. For 10 points, name these people, some of whom, due to a “zero-tolerance policy,” were detained or deported separate from their families.**
ANSWER: (children of) illegal immigrants [or illegals; or undocumented immigrants; or DREAMers before “DACA” is read; prompt on DREAMers after “DACA” is read] <Current Events> <David Dennis>

Tiebreaker. **A major reform by an emperor with this first name was carried out by the minister Nikolai Milyutin. An emperor of this name implemented the May Laws, which restricted Jewish movement within the Pale of Settlement. That emperor, known as “the Peacemaker,” was the son of another czar with this first name, who supported local government through organizations called (*) *zemstvos*. A czar of this name was assassinated by the People’s Will in 1881, and he earned the epithet “the Liberator” due to his most famous action. For 10 points, give this first name of three Romanov czars, the second of whom emancipated the serfs.**
ANSWER: Alexander [or Aleksandr; or Alexander I; or Alexander II; or Alexander III; or Alexander the Liberator; or Alexander the Peacemaker; or Aleksandr Osvoboditel; or Aleksandr Mirotvórets] <European History> <Tyler Benedict>/<ed. JO>

Bonuses

1. In the Arkteia festival at Brauron, young Greek girls would act like these animals as part of a cult dedicated to Artemis. For 10 points each:

[10] Name these animals. In Korean folklore, one of these animals lived in a cave for 100 days eating only garlic and mugwort before becoming a woman and giving birth to Korea's first king, Dangun.

ANSWER: **bears**

[10] A bear festival is celebrated by the Nivkh, who live in the island of Sakhalin in this modern-day country. The rise of Christianity in this country led to the construction of St. Basil's Cathedral in Moscow.

ANSWER: **Russia**

[10] The Ainu [*"a-YEE-noo"*] people of this nation treated bear cubs like children for two years before sacrificing them in the Iomante ritual. Today, the Ainu mostly live in this Asian nation's north.

ANSWER: **Japan** [accept **Nippon**-koku; or **Nihon**-koku] <Religion> <Tyler Benedict>/<ed. AR>

2. When Britain was still young and wild and not so free, it was terrorized by a Danish king named Guthrum, the leader of the Great Heathen Army. For 10 points each:

[10] Name this Anglo-Saxon king, who created the Danelaw after signing the Treaty of Wedmore with Guthrum. He is the only English king with the epithet "the Great."

ANSWER: **Alfred** the Great

[10] In his youth, Alfred was tormented by these raiders, who were led by Ivar the Boneless. Guthrum's Great Heathen Army was made up of many of these Scandinavian raiders.

ANSWER: **Vikings** [or **Norsemen**; prompt on **Danes**]

[10] The Treaty of Wedmore gave Guthrum East Mercia, while Alfred drove the Vikings out of this region. This kingdom, which Alfred ruled, led the unification of England before the Norman conquest.

ANSWER: **Wessex** <European History> <Audrey Bush>/<ed. JO>

3. Answer some questions about dismembering in mythology. For 10 points each:

[10] This hero fought and killed Procrustes, a bandit from Attica who would stretch or cut people to make them fit in a bed. Other feats of this hero include slaying the Minotaur.

ANSWER: **Theseus**

[10] In Norse myth, Odin, Vili and Ve create the world by dismembering this frost giant, a primeval being who dwelt in the void Ginnungagap.

ANSWER: **Ymir**

[10] In these people's mythology, the creator god Anguta tries to force his daughter Sedna to marry village hunters. When she refuses and marries a dog, her father drags her out to sea and cuts off her fingers, which become seals and other sea creatures.

ANSWER: **Inuit** [or **Inuk**; or **Yupik**; or **Aleut**; or **Eskimos**; prompt on **Native Americans** or **Native Canadians**] <Mythology> <Tyler Benedict>/<ed. BM>>

4. The protagonist of a work set in this conflict remembers that gray-eyed soldiers are the keenest marksmen. For 10 points each:

[10] Name this conflict. The protagonist of a short story set during this conflict is told of a great quantity of driftwood that would burn like tinder.

ANSWER: American **Civil War**

[10] This aforementioned short story centers around the feigned escape of Peyton Farquhar [*“far-kwar”*], who is hanged by Union troops at the end of this story.

ANSWER: “An **Occurrence at Owl Creek Bridge**”

[10] “An Occurrence at Owl Creek Bridge” was written by this prolific American author. This author’s disappearance in Mexico is the subject of Carlos Fuentes’s novel *The Old Gringo*.

ANSWER: Ambrose **Bierce** [or Ambrose Gwinnett **Bierce**] <American Lit> <William Groger>/<ed. ME>

5. The Rule 90 cellular automaton can produce one type of these shapes. For 10 points each:

[10] Name these shapes. The Sierpinski type of these shapes recursively contains an infinite number of the equilateral type of these shapes.

ANSWER: equilateral **triangles**

[10] The Sierpinski triangle is an example of these mathematical objects that exhibit self-similarity. They include the Cantor Set and the Koch Snowflake.

ANSWER: **fractals**

[10] This mathematician’s “set” on the complex plane is an example of a fractal. His paper “How long is the coast of Britain?” discusses self-similar curves that have Hausdorff dimension between 1 and 2.

ANSWER: Benoit **Mandelbrot** <Other Science> <David Dennis>/<ed. AR>

6. The world of professional wrestling has produced some film stars as well! For 10 points each:

[10] The most financially successful wrestler-turned-actor is this man, who plays Luke Hobbs in the *Fast & Furious* franchise and voiced Maui in *Moana* before starring in *Skyscraper*.

ANSWER: “The **Rock**” [or Dwayne **Johnson**; or Dwayne Douglas **Johnson**; or Rocky **Maivia**]

[10] This female fighter appeared in *Furious 7* with Dwayne Johnson and is set to star in a remake of *Road House*. After losing to Amanda Nunes in a recent MMA fight, she signed a contract with WWE.

ANSWER: Ronda **Rousey** [or Ronda Jean **Rousey**]

[10] One of the first wrestlers to achieve screen success was this enormous Frenchman, who played Fezzik in *The Princess Bride*. According to a street art sticker, this man “has a posse.”

ANSWER: **André the Giant** [or André René **Roussimoff**; or “**André the Giant Has A Posse**,” prompt on **André** alone] <Trash> <Tyler Benedict>/<ed. SP>

7. Sandra Gilbert and Susan Gubar referred to this character in the title of their feminist critique of Victorian literature, *The Madwoman in the Attic*. For 10 points each:

[10] Name this character supervised by Grace Poole, whose youth in Jamaica is chronicled in Jean Rhys's parallel novel *Wide Sargasso Sea*.

ANSWER: **Bertha** Mason [or Bertha **Mason**; or Antoinette **Cosway**; or **Antoinette** Cosway]

[10] Bertha Mason sets fire to Thornfield Hall and commits suicide by jumping off its roof in this novel by Charlotte Brontë about the eponymous heroine, who befriends Helen Berns at Lowood.

ANSWER: **Jane Eyre**

[10] Bertha was the first wife of this man, the owner of Thornfield Hall, who loses a hand and his eyesight as a result of the house fire. He ends up marrying Jane at the end of the novel.

ANSWER: Mr. Edward **Rochester** [or Edward **Rochester**; prompt on anyone who says **Mother Bunches**] <British Lit> <Tyler Benedict>/<ed. ME>

8. In 1898, the Rough Riders gave Theodore Roosevelt a cast of this sculpture. For 10 points each:

[10] Name this bronze sculpture which depicts a mustached cowboy holding onto the reins of a rearing horse.

ANSWER: *The **Bronco Buster***

[10] *The Bronco Buster* is by this American artist, who often depicted the American West. He depicted another cowboy in his sculpture *The Wicked Pony*.

ANSWER: Frederic **Remington**

[10] The original cast of *The Bronco Buster* is located under a newly installed portrait of Andrew Jackson in this White House room.

ANSWER: The **Oval Office** <Visual FA> <Ganon Evans>/<ed. CW>

9. This tribes' namesake "Wars" against the United States began with the Jicarilla War, during which a massacre of gold-prospecting settlers prompted a Kit Carson-led American retaliation. For 10 points each:

[10] Name this Native American tribe, who fought American settlers in the Chiricahua Mountains until their defeat in 1887.

ANSWER: **Apache** [or **Apache** Wars; or Jicarilla **Apache**]

[10] This Apache leader surrendered to Nelson Miles at Skeleton Creek after leading guerilla raids in the West. His name was later used by GIs when they were jumping out of planes.

ANSWER: **Geronimo** [or **Goyathlay**; or the **One Who Yawns**]

[10] Geronimo visited the World's Fair when it was held in this Midwestern city in 1904. Lewis and Clark's Corps of Discovery departed from this city.

ANSWER: **St. Louis**, Missouri <Misc. History> <Ganon Evans>/<ed. JO>

10. Faraday's first law of this process states that the mass of chemical deposition is proportional to the charge passed through the substance. For 10 points each:

[10] Name this process that passes a direct current through an ionic substance to separate materials. It can be performed on water to produce hydrogen and oxygen gas.

ANSWER: **electrolysis**

[10] Sir Humphry Davy discovered this element by performing electrolysis on its namesake hydroxide, which is known as lye. The Downs cell also uses electrolysis to produce this alkali metal.

ANSWER: **sodium** [or **Na**]

[10] The French scientist de Boisbaudran discovered this element through electrolysis, naming it for his home country. At the time, this element was known as "eka-aluminum" from Mendeleev's predictions.

ANSWER: **gallium** [or **Ga**] <Chemistry> <Alejja Rodriguez>/<ed. AR>

11. Not usually considered a big fan of music, Queen Anne surprisingly paid this composer a £200 a year pension for life. For 10 points each:

[10] Name this composer, whose *Te Deum and Jubilate* were written to celebrate the signing of the Treaty of Utrecht. This composer's *Rinaldo* was the first Italian language opera written for the London stage.

ANSWER: George **Handel** [or George Frideric **Handel**]

[10] Legend states that Handel wrote this work to regain favor with George I, who had opposed the treaty of Utrecht. This work was first performed on barges as the royal party floated down the Thames.

ANSWER: **Water Music**

[10] There has since been a lot of speculation as to why George II stood during a performance of this Handel oratorio, but it has become a custom to do so during its "Hallelujah Chorus."

ANSWER: **Messiah** <Auditory FA> <David Dennis>

12. This rebellion was partially sparked by a severe two-year-long drought in the Shan-dong. For 10 points each:

[10] Name this 1899-1901 rebellion against western influence, which was led by the Society of Righteous and Harmonious Fists.

ANSWER: The **Boxer** Rebellion [or **Boxer** Uprising; or **Yihequan Movement**]

[10] The Boxer Rebellion occurred in this country, whose Qing [*"ching"*] Dynasty also lost the Opium Wars and was severely weakened by the Taiping [*"tie-PING"*] Rebellion.

ANSWER: **China** [or People's Republic of **China**; or **Zhonghua** Renmin Gongheguo; or **Chunghua** Jen-min Kung-ho-kuo; or **Zhongguo**]

[10] This regent issued a proclamation in support of the Boxers. She effectively ended the rule of the Gangxu [*"gong-shu"*] Emperor by putting him under house arrest.

ANSWER: Empress Dowager **Cixi** [*"see-shee"*] [or **Tz'u-hsi**; or **Xitaihou**; or **Xiaoqin Xianhuanghou**] <World History> <Alejja Rodriguez>/<ed. JO>

13. This character tells the narrator a story about how, in his first attempt to use a wheelbarrow, he tied it to his chest, propping it on his shoulders. For 10 points each:

[10] Name this Polynesian man covered in tattoos, who worships an idol named Yojo. The narrator shares a bed with this character in a crowded Nantucket inn.

ANSWER: **Queequeg**

[10] This protagonist bonds with Queequeg in Nantucket before both serve under Captain Ahab on the *Pequod*.

ANSWER: **Ishmael**

[10] Ishmael is the protagonist in *Moby Dick*, a maritime adventuring novel by this author.

ANSWER: Herman **Melville** <American Lit> <Carrie Derner>/<ed. ME>

14. In a rotational system, power is found from the scalar product of angular velocity and this force. For 10 points each:

[10] Name this rotational analogue of force. It can also be found by using Newton's Second Law for rotation, which sets this quantity equal to the product of moment of inertia and angular acceleration.

ANSWER: **torque** [or **moment of force**]

[10] In this simple technique, the fingers align with the radius, curl towards the force applied, and then the thumb indicates the direction of torque.

ANSWER: **right-hand** rule [or **RHR**]

[10] When multiple forces are applied to the same point, this statement asserts that the total torque on the point is equal to the product of the radius and the sum of the applied forces.

ANSWER: **principle of moments** [or **Varignon's** Theorem] <Physics> <Ganon Evans>/<ed. AR>

15. One structure of this type is attached to the front of the Old Town Square building in Prague and dates back to the 15th century. For 10 points each:

[10] Name this type of object, exemplified by London's Big Ben.

ANSWER: **clock**

[10] A painting by this artist shows the Gros-Horloge, a large astronomical clock in Rouen. This artist also depicted the wrecking of the ship *Zong* in *The Slave Ship*.

ANSWER: J.M.W. **Turner** [or Joseph Mallard William **Turner**]

[10] In Dubai, an elephant-shaped reproduction of Al-Jazari's Castle clock considered to be an example of an early programmable analog computer, is a *clepsydra*, or a clock driven by this manner.

ANSWER: by **water** <Misc. FA> <David Dennis>/<ed. CW>

16. A manifesto written by this philosopher and Einstein arguing for nuclear disarmament states “Remember your humanity, and forget the rest.” For 10 points each:

[10] Name this British philosopher. This author of “On Denoting” examined the logic of the law of the excluded middle in the sentence “The king of France is bald.”

ANSWER: Bertrand **Russell**

[10] Russell wrote this three-volume work of formal logic with Alfred North Whitehead. This work shares its name with an earlier book by Sir Isaac Newton.

ANSWER: ***Principia Mathematica***

[10] Russell’s thought experiment about a teapot orbiting the sun argues that those who argue that this entity exists have the burden of proof on them. In arguing against the existence of this entity, the Baron d’Holbach’s *The System of Nature* was so convincing it made Percy Shelley an atheist.

ANSWER: **God** [or **deities**; or equivalents] <Philosophy> <David Dennis>/<ed BM>

17. One theory of this species’ distinctively terrible smell is that it would have attracted dinosaurs to eat it. For 10 points each:

[10] Name this species sometimes referred to as a “living fossil,” first cultivated about 1000 years ago in China. The only living species in its genus and family, it has various uses in traditional medicine.

ANSWER: ***Ginkgo biloba*** [or **maidenhair tree**]

[10] Another “living fossil” is *Welwitschia mirabilis*, which has only two of these ever-growing structures. These organs, which have an epidermis and mesophyll, are covered by a cuticle.

ANSWER: **leaves** [or **leaf**]

[10] Both *Ginkgo* and *Welwitschia* are members of this group of plants that bear seeds but not flowers. Other members of this group include yews and conifers.

ANSWER: **gymnosperms** <Biology> <David Dennis>/<ed. AR>

18. This case was combined with *Gebhart v. Belton* and *Bolling v. Sharpe* in a ruling that was later mandated to be carried out with “all deliberate speed.” For 10 points each:

[10] Name this 1954 Supreme Court decision that overturned *Plessy v. Ferguson*’s doctrine of “separate but equal” and ordered the desegregation of schools.

ANSWER: ***Brown v. Board of Education of Topeka***

[10] This attorney, who represented the NAACP in *Sweatt v. Painter*, successfully argued for Brown in the case and was later appointed to the Supreme Court by Lyndon Johnson.

ANSWER: Thurgood **Marshall**

[10] In 1957, this Governor of Arkansas contradicted the ruling in *Brown* by using his state’s National Guard to prevent black students from entering Little Rock Central High School.

ANSWER: Orval **Faubus** [or Orval Eugene **Faubus**] <American History> <John John Groger>/<ed. SP>/<ed. JO>

19. Featured prominently in Richard Preston’s “The Hot Zone,” answer some questions about the ash-covered petrified rainforest known as Kitum Cave. For 10 points each:

[10] Kitum Cave is located in this county’s portion of Mount Eglon National Park. A mountain that shares its name with this country is home to the Lewis Glacier and is the source of the Tana River.

ANSWER: Republic of **Kenya** [or **Jamhuri ya Kenya**]

[10] Mount Eglon National Park is located on the northern shores of this lake. This lake, the source of the Nile, is the largest in Africa

ANSWER: Lake **Victoria**

[10] Lake Victoria was home to a large diversity of fish from this family. The introduction of the Nile perch has led to a massive decrease in the number of native fish from this family there.

ANSWER: **Cichlidae** <Geography> <David Dennis>/<ed BM>

20. The title character of this work collects fireflies in a cloth, releasing them all at once to assist a prince. For 10 points each:

[10] Name this work, whose title character has an affair with his brother’s concubine and is exiled to Suma.

ANSWER: *The Tale of **Genji*** [or ***Genji Monogatari***]

[10] *The Tale of Genji* by Lady Murasaki is often considered to be the first modern work in this literary genre. This prose genre is usually split into chapters and characterized by its relatively longer length.

ANSWER: **novel** [prompt on book]

[10] This sometimes excluded chapter in *Tale of Genji* segues to the “Uji Chapters.” This chapter is a quick read as all the pages are blank, implying the death of Genji.

ANSWER: **Vanished** into the **Clouds** [or **Kumogakure**; or **Hidden** by **Clouds**; or **Disappearing** in the **Clouds**; or any reasonable translations of Kumo:**clouds** and gakure:**hidden**] <European/World Lit> <William Groger>/<ed. ME>