

Brookwood Invitational Scholars' Bowl

Round 14

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Tossups

1. A 1962 paper by Roman Jakobson titled “Why <these people>” explains the cross-culture phonemic similarity of their names. These people were classified as secure or insecure by leaving them in a room with a one-way mirror in Ainsworth’s Strange Situation experiments. Bruno Bettelheim proposed the “refrigerator” type of these people caused (*) autism. Harry Harlow created representations of them out of cloth and wire in his rhesus monkey experiments. Under normal circumstances, these individuals are imprinted upon. Freud’s Oedipus complex explains boys’ attachment to these people. For 10 points, name these people who attach to their babies. ANSWER: mothers [or mamas; or fathers; or papas; or parents; or caregivers; or similar answers; although some clues refer specifically to mothers, some do not, so accept responses involving both male and female parents]

2. The year this war ended, a group of sailors took hostages inside the Marstall over Christmas. Near the end of this war, a navy mutinied rather than launch an unauthorized all-out suicide attack. At its end, Philipp Scheidemann gave a balcony speech overruling Prince Max’s October reforms. Rosa Luxembourg founded the Spartacus League during this conflict. France (*) re-acquired the territories of Alsace and Lorraine in this war’s aftermath. Germany went into hyperinflation after this war, at its government in Weimar, and also signed its “war guilt” clause. For 10 points, name this war which forced Germany to demilitarize after the Treaty of Versailles. ANSWER: World War I [or WWI; or the Great War]

3. This element is generated *in situ* in a Karl Fischer titration. This element is detected in solution by adding lead (II) [two], forming a bright yellow precipitate. Its binary acid is the strongest common acid. This element is used in redox titrations with thiosulfate, and it gets regenerated in a clock reaction that cycles between colorless and (*) blue. A radioisotope of this element with mass 131 is produced in uranium fission. It is the only diatomic element to be solid at room temperature, though it does sublime. This element is vital to thyroid function, which is why it’s added to salt. For 10 points, name this heavy purple halogen with symbol I. ANSWER: iodine [or I until it is read]

4. A self-portrait by this artist shows him with a halo, an apple, and a snake on a red background. A creepy ghost stares at a nude woman lying on a bed in a painting by this artist based on his “wife” Teha’amana. A man in a loincloth picks a mango in the foreground of a canvas by this artist, which also shows a blue (*) idol representing the “beyond”, and is meant to be read right to left. This painter of *The Spirit of the Dead Keep Watch* painted a landscape the same color as Christ’s skin in a scene of the crucifixion with three Breton women included. For 10 points, name this houseguest of van Gogh who painted *The Yellow Christ* while living in Tahiti. ANSWER: Paul Gauguin

5. This character, and the cat Rose Aylmer, are given vitamins from the same eyedropper. This character finds her beau Henry Clinton at a citizens’ council meeting after discovering the pamphlet *The Black Plague*. She finds a blanket draped around her shoulders while watching a neighbor’s house burn down. Uncle Jack and Aunt (*) Alexandra take care of this character. She is mortified to learn that her father is a member of the Ku Klux Klan. This character is called Jean-Louise through most of *Go Set a Watchman*. She is saved by Boo Radley from an attack by Bob Ewell. For 10 points, name this daughter of Atticus, the narrator of *To Kill a Mockingbird*. ANSWER: Scout Finch [or Jean-Louise Finch until it is read; prompt on Finch]

6. A large cup-to-disc ratio indicates the presence of this disease. This condition is treated with drugs like dorzolamide, a carbonic anhydrase inhibitor, or latanoprost. It can be caused by buildup of material in the Schlemm’s canal or the rest of the trabecular meshwork. This disease is classified as either open angle or closed angle. Treatment of this disease focuses on reducing aqueous (*) humor secretion because the drainage canals are blocked. Like cataracts, this disorder is often linked with diabetes, but it results in a buildup in intraocular pressure due to excess fluid. For 10 points, name this leading cause of blindness among Americans. ANSWER: glaucoma [or open-angle glaucoma; or closed-angle glaucoma]

7. A "problem" with this process was divided into logical and psychological issues by Karl Popper. Matters of fact, unlike relations of ideas, are derived from this process assuming the uniformity of nature. A "new riddle" surrounding it considers that being green can be logically identical to being grue. Carl Hempel popularized its paradox about ravens. David (*) Hume described the "problem" of this process. An example of this process is assuming it will rain tomorrow, since it always rains on Sundays. For 10 points, name this reasoning which makes general rules from specific cases, the opposite of deduction.

ANSWER: induction [or inductive reasoning; or the problem of induction]

8. This author's wartime experiences informed his 2012 memoir *There Was a Country* and a poem about a refugee mother who combs her dead child's hair. This author wrote an anthology for the death of compatriot Christopher Okigbo. In a novel by this author, Enoch is blamed for killing a sacred snake, then tears a mask off an ancient (*) spirit, leading to a riot that destroys Mr. Smith's church. The protagonist of that novel hangs himself in failed rebellion, after coming out of a seven-year exile for accidentally shooting a gun at an Igbo festival. For 10 points, name this author who described Okonkwo's village in Nigeria in *Things Fall Apart*.

ANSWER: Chinua Achebe

9. Moderator note: Cairo, in this context, is pronounced "CAY-row", not "KYE-row".

Asian carp comprise more than 95% of fish biomass in some areas of this river, which was invaded by carp in the early 90s. A bridge crossing this river's St. Anthony Falls collapsed in 2007, killing 13 people. An elephant was led across the Eads Bridge over this river in 1874. Two hundred thousand people were forced to relocate after its devastating 1927 floods. The (*) New Madrid seismic zone is on this river. Its lower and upper branches meet at Cairo. This river flows through Natchez and Vicksburg before meeting Lake Ponchartrain on its southern course. For 10 points, name this river which flows into the Gulf of Mexico, the longest in the US.

ANSWER: Mississippi River [prompt on Illinois River]

10. Antonianism was founded in a historical state of this name by a miracle-working woman named Kimpa Vita. Arthur Conan Doyle wrote about the "crime" of a European colony of this name, which was attacked in the media by George Washington Williams and ED Morel. A kingdom of this name converted to Christianity under Afonso I and supplied most of the slaves sold at Sao Tomé; that (*) Portuguese kingdom of this name was located in present-day Angola. The Force Publique cut off rubber workers' hands in a "free state" of this name set up by Leopold II. For 10 points, name this Belgian colony that shares its name with a large river of Central Africa.

ANSWER: Congo [or Kongo; or Kingdom of Kongo; or Congo Free State; or Belgian Congo]

11. Hector Lefuel redesigned this building's Flower Pavillion with 86 statues of illustrious men. Claude Perrault designed a Colonnade for the eastern facade of this complex. A helical staircase used to enter this building curves around an elevator. The Daru Staircase in this building, which lies between two wings designed by Sully and Denon, is topped by a (*) headless marble statue. A mall in front of it has an inverted pyramid that functions as a skylight. Jean-Francois Champollion brought the Rosetta Stone to this building. A glass pyramid designed by I.M. Pei is its entrance. For 10 points, name this palace and huge art museum in Paris.

ANSWER: the Louvre Palace [or the Louvre Museum]

12. Emerson's *Representative Men* picked this man as "the Writer." A poem by this author begins, "Who's riding so late through the endless wild?" and ends when the father discovers his son, who he's holding in his arms, is dead. This author founded Weimar Classicism with his great friend (*) Friedrich Schiller. An epistolary novel by author inspired copycat suicides across Europe, as many readers found themselves jealous of Albert for the affections of Lotte. A two-part verse play by this author has highlights like a contract signed in blood and a poodle transforming itself into the devil. For 10 points, name this German *sturm und drang* poet of *Faust*.

ANSWER: Johann Wolfgang von Goethe [GER-tuh, roughly]

13. These values are the output of the recurrence relation $X_{n+1} = (X_n + b) \bmod m$. A string of these values can't be described in fewer bits than the string by Kolmogorov's definition. To avoid the worst case of quicksort, these values are often computed in the first step. These values are the inputs to a Monte Carlo (*) simulation. In programming, their range is often specified by multiplying a number between 0 and 1 by the range and adding an offset. A seed may be used when generating the "pseudo" type of these values. For 10 points, name these numbers used in statistical sampling, which are generated completely by chance.

ANSWER: random numbers [or pseudorandom numbers; prompt on passwords until "string" is read]

14. The Queen of Pandalam faked an illness that Ayyappa could only cure with this animal's milk. A group of saints trapped a young Shiva in a pit with one of these creatures. This creature comes in third in the Great Race after complaining incessantly about the current. This creature guards the west as one of the Four Chinese symbols along with the phoenix, dragon, and tortoise. To kill Mahishasura, Durga (*) rides one of these creatures, to show her unstoppable power. Shiva is frequently depicted sitting on this animal's skin. A white one represented wise and powerful Chinese emperors. For 10 points, name this big cat found in the Chinese zodiac.

ANSWER: tiger [or white tigers; or black tigers]

15. Enrico Caruso performed as Don José in *Carmen* the night before this event. Governor George Pardee was praised for his handling of this event. Mayor Eugene Schmitz wasn't. Jack London wrote an eyewitness account of this event. A firebreak was created after this event by dynamiting buildings. The "flag" from the Bear Flag Revolt was (*) lost during it. 83 years after this event, a similar one took place on live TV during the World Series. This event caused thousands of unreported deaths in the original Chinatown. Refugees from this event sheltered in Golden Gate Park. For 10 points, name this 1906 disaster caused by a slip in the San Andreas Fault.

ANSWER: 1906 San Francisco earthquake [prompt on earthquake; prompt on other partial answers; players must name both city and event for points]

16. The most common cgs system of units is named for this physicist. This scientist is the namesake of the process of demagnetization. This scientist lends his name to the equation " $\nabla \cdot \mathbf{B} = 0$ ". He first gained fame for predicting Ceres' orbit. A law named for this physicist considers symmetric surfaces enclosing charge. and is useful for calculating the (*) electric field.. He and Tesla are the namesakes of the units of magnetic field. He names two of Maxwell's equations. For 10 points, name this physicist who also discovered and named the normal distribution, or bell curve.

ANSWER: Carl Friedrich Gauss

17. This composer wrote a *legato* string passage mixed with solos by the clarinet and flute in a movement depicting a young prince and princess. In that work, this composer repeated a triplet-heavy, high-register violin solo. The bassoon represents the Kalender Prince in a suite by this composer, who disapproved of the programmatic naming of his movements like "The (*) Sea and Sinbad's Ship." This composer used *The Arabian Nights* as his source material for the suite *Scheherazade*, and he wrote a rapid flute solo for an interlude in his opera *The Tale of Tsar Saltan*. For 10 points, name this Russian composer of "The Flight of the Bumblebee."

ANSWER: Nikolai Rimsky-Korsakov

18. The Occupy movement in this city took place at McKeldin Square. Police Commissioner Anthony Batts moved from Oakland to this city in 2012. The Gilman Homes housing project is here. Its ex-mayor Sheila Dixon embezzled gift cards and was replaced by Stephanie Rawlings-Blake. The first-ever MLB game played without any (*) spectators occurred here in 2015. Its cops used "rough rides", in which arrestees weren't buckled in. Martin O'Malley served as its mayor until 2007. A man suffered a broken spinal cord in this city and went into a coma, sparking April 2015 protests. For 10 points, name this city where Freddie Gray died in police custody.

ANSWER: Baltimore, Maryland

19. **This civilization founded an early republic at the city of Arwad. Leprosy was once known as its namesake disease. Sidon, the birthplace of Jezebel, was the center of this civilization's glassmaking industry. It traded tin with Britain and copper with Cyprus. This civilization's trade depended almost entirely on harvesting *Murex* rock (*) snails. A causeway was built to its largest city by Alexander the Great. It had its first capital at Byblos. Its inhabitants were known as the "purple people" because they sold a valuable dye from Tyre. For 10 points, name this seafaring civilization of the Bronze Age Mediterranean, who introduced the modern alphabet.**
ANSWER: Phoenicians

20. **A character in this play invents a "daughter of [her] father," to counter a claim that women's love isn't as passionate as men's love. A character in this play interprets the riddle "M. O. A. I." to be his own name, and therefore walks around cross-gartered, smiling stupidly. Antonio interrupts a duel in this play so he can be arrested. The jester (*) Feste sings throughout this play, which begins, "If music be the food of love, play on." A page named Cesario dresses in women's clothes and marries the duke of Illyria, Orsino, at this play's end, when Viola reunites with Sebastian. For 10 points, name this Shakespeare comedy written for the end of Christmas.**
ANSWER: Twelfth Night

TB: **This man's son, also the great-grandson of Jonathan Edwards, earned the commission to produce the first Colt Walker revolver. Nathanael Greene's wife Catherine Littlefield insisted that this man move to Mulberry Grove. This man was contracted to produce 10,000 muskets in two years, which he failed to deliver on time. This man invented a wooden (*) cylinder covered in spikes, which was later improved by a row of teeth. This man, who is credited with bringing interchangeable parts to the US, created a device in 1793 that separated seeds from fibers. For 10 points, name this man who indirectly brought in the plantation system with his cotton gin.**
ANSWER: Eli Whitney

Bonuses

1. Examples of proteins made in this way include EPO [E-P-O] and IGF-1. For 10 points each:

[10] Name these proteins which are synthesized commercially from DNA sequences drawn from multiple different organisms.

ANSWER: **recombinant** proteins

[10] This recombinant protein is synthesized in *E. coli* in a process developed by Genentech and Eli Lilly. This protein was the first one to be sequenced. In the body, it signals for glycogen synthesis to occur.

ANSWER: **insulin**

[10] Nordisk, on the other hand, developed recombinant insulin produced from these organisms. The model organism *S. cerevisiae* is one of these fungi used by bakers to make bread.

ANSWER: **yeasts**

2. Jiang Zemin and Deng Xiaoping [DUNG SHOW-ping] retained their authority over this organization after their presidencies, whereas it took Hu Jintao several years of his presidency to head it. For 10 points each:

[10] Name this standing army of China which is governed by the Central Military Commission.

ANSWER: **People's Liberation Army** [or the **PLA**; or **Zhongguo Renmin Jiegangjun**]

[10] The PLA suppressed protests in this Beijing square in 1989, where a lone man stood in front of a tank in an iconic photo.

ANSWER: **Tiananmen** Square

[10] The fourth of the Four Modernizations, as proposed by this diplomat and enacted by Deng Xiaoping, was the modernization of the PLA. This first premier organized Nixon's 1972 trip to China.

ANSWER: **Zhou** Enlai [prompt on **Enlai**]

3. Answer the following about famous entr'actes, or the music played between the acts of an opera. For 10 points each:

[10] The entr'acte before Act 3 of this opera unusually features a flute and harp. This Georges Bizet opera is about a Spanish gypsy who is loved by Don José and Escamillo.

ANSWER: **Carmen**

[10] The happy, emotional intermezzo from this opera is often performed on its own, such as in the opening shadowboxing scene from *Raging Bull*. This *verismo* opera by Pietro Mascagni is performed in double-bill with *Pagliacci*.

ANSWER: **Cavalleria rusticana** [or **Rustic Chivalry**]

[10] This well-known piece from *The Tales of Hoffmann*, by Jacques Offenbach, is the entr'acte between Acts 2 and 3. This duet is sung by Giulietta and Nicklausse.

ANSWER: the **Barcarolle** from *The Tales of Hoffman* [or "**Belle nuit, o nuit d'amour**"]

4. This nation held a referendum in May 2015 that approved same-sex marriage, the first nation to do so. For 10 points each:

[10] Name this largely Catholic European country.

ANSWER: Republic of **Ireland**

[10] This nation became the first in Latin America to permit civil unions in 2008 and later approved same-sex marriage in 2009 under its extremely liberal president Jose Mujica. This nation was the first to legalize marijuana.

ANSWER: Eastern Republic of **Uruguay**

[10] On the opposite end of the spectrum, this African nation passed the controversial so-called "Kill the Gays" bill in 2014. This country continues to struggle against the Lord's Resistance Army.

ANSWER: Republic of **Uganda**

5. Answer the following about "The Convergence of the Twain", for 10 points each:

[10] The poem, which mourns the sinking of the *Titanic*, is by this British author, who is more famous for writing novels like *Tess of the d'Urbervilles* and *Jude the Obscure*.

ANSWER: Thomas **Hardy**

[10] The title mocks this other poet's line that "East is East, and West is West, and never the twain shall meet." This author wrote addressed "The White Man's Burden" to Teddy Roosevelt.

ANSWER: Rudyard **Kipling**

[10] “The Convergence of the Twain” is unusually written in eleven of these stanzas. Villanelles use five of these stanzas followed by a quatrain.

ANSWER: **tercets** [or **three-line** stanzas]

6. The angle produced by the transmitted light in this process is given by Snell’s Law. For 10 points each:

[10] Name this phenomenon in which light bends when it passes into a new medium.

ANSWER: **refraction** [do not accept or prompt on “reflection”]

[10] The angle in Snell’s Law is the angle between the incident light ray and this vector, which is perpendicular to the surface.

ANSWER: surface **normal**

[10] Snell’s Law can be proven from Huygens’ Principle, which states that every point of a wavefront is the source of these very short oscillations, which are combined into waveforms during convolution.

ANSWER: **wavelets**

7. Name some things that Daedalus built, for 10 points each:

[10] Perhaps most famously, Daedalus built this enormous maze to house the Minotaur on Crete.

ANSWER: **Labyrinth**

[10] An obscure quote attributes Daedalus to a dancing floor constructed for this woman, who gave Theseus the ball of string to navigate the Labyrinth. As a gesture of his sincerest thanks, Theseus abandons her on Naxos.

ANSWER: **Ariadne** [do not accept or prompt on “Arachne”]

[10] Daedalus constructed one of these objects for Pasiphae in order to help her satisfy her desires to mate with a white bull.

ANSWER: a **wooden cow** [or a **mechanical cow**; or similar answers involving artificial bovines; prompt on **cows** or similar livestock]

8. This character is celebrating his 33rd birthday in the first section of the novel, the section he narrates. For 10 points each:

[10] Name this autistic member of the Compson family who gives a nonlinear story of the events of April 7, 1928 and his whole life in Yoknapatawpha County, Mississippi.

ANSWER: **Benjy** Compson

[10] Benjy and his siblings Caddy, Jason and Quentin appear in *The Sound and the Fury*, a novel by this Southern author of *Absalom! Absalom!*.

ANSWER: William **Faulkner**

[10] *The Sound and the Fury* opens with Benjy at a golf course with this character. Throughout the novel, this young servant constantly begs Jason Compson for money for a minstrel show.

ANSWER: **Luster**

9. Answer the following about sources of political legitimacy, for 10 points each:

[10] This document popularized the idea of “consent of the governed” required for a ruler. This American document calls it “self-evident” that “all men are created equal.”

ANSWER: **Declaration of Independence**

[10] This three-word concept, which provides legitimacy to many democracies, is the principle that leaders and politicians are held accountable to the same regulations as normal citizens.

ANSWER: **rule of law** [do not accept or prompt on partial answer]

[10] Rule of law in the US is partly protected by this 1967 legislation signed by Lyndon Johnson, which requires federal officials to release documents to the public under request.

ANSWER: **Freedom of Information** Act [or **FoIA**]

10. Answer the following about mercenaries in European history, for 10 points each:

[10] This Italian thinker repeatedly pointed out that employing mercenaries was a really, really terrible idea in his political tract *The Prince*.

ANSWER: Niccolo **Macchiavelli**

[10] This wing of the French armed forces, founded in 1831 by Louis Phillippe, is primarily made up of soldiers from other countries.

ANSWER: French **Foreign Legion**

[10] Before becoming Duke of Milan, Francesco Sforza rose to power as one of these commanders of Italian mercenary armies.

ANSWER: condottieri [or word forms]

11. Vincent D'Onofrio starred as Wilson Fisk in this Netflix show. For 10 points each:

[10] Name this original series about a blind Marvel hero that aired its first season in 2015.

ANSWER: Daredevil

[10] In the series, Matt Murdock is portrayed by this actor, whose earlier roles include Owen Sleater on *Boardwalk Empire*.

ANSWER: Charlie Cox

[10] Marvel announced that Jon Bernthal will take this role in Season 2. Dolph Lundgren and Thomas Jane have also portrayed this antihero, who exacts vengeance on criminals.

ANSWER: The Punisher [or Frank Castle]

12. Answer the following about epic theater, for 10 points each:

[10] Epic theater goes thoroughly against the principles of drama established by this ancient Greek philosopher, who proposed five criteria for a tragic hero and three unities in his *Poetics*.

ANSWER: Aristotle

[10] Epic theater was pioneered by this playwright, who collaborated with Kurt Weill on *The Threepenny Opera* and also wrote *The Caucasian Chalk-Circle*.

ANSWER: Bertolt Brecht

[10] Brecht advocated a minimalist approach to this subject. This French term refers to all of the elements inside the visual frame, such as props, costumes, lighting, composition, and staging.

ANSWER: mise-en-scène

13. Answer the following about the investiture controversy, for 10 points each:

[10] The controversy over appointing bishops was sparked by the reforms launched by the seventh pope of this name. The thirteenth pope of this name created the modern calendar.

ANSWER: Gregory [or Gregory VII; or Gregory XIII]

[10] This Holy Roman Emperor disagreed with Gregory VII over who could appoint the bishops, but eventually backed down, and walked barefoot in the snow to Canossa to show his penance.

ANSWER: Henry IV, Holy Roman Emperor

[10] The disagreement finally ended with a concordat at this city in 1122. At a meeting in this city presided over by Charles V, a man declared, "Here I stand, I can do no other."

ANSWER: Worms [or Concordat of Worms; or Diet of Worms]

14. This form of radiation is emitted when accelerated electrons collide with a solid surface in bremsstrahlung. For 10 points each:

[10] Name this form of radiation, less energetic than gamma rays, which is used in medical imaging.

ANSWER: X-rays

[10] X-rays can be used to identify the structure of proteins or crystals based on this physical effect. The angular spacing of the pattern produced from this process is given by Bragg's Law.

ANSWER: X-ray diffraction [or X-ray interference]

[10] X-ray diffraction is difficult, but the only other method to figure out the atomic structure of proteins is this technique. Samples for this technique are placed in namesake thin-wall glass tubes with deuterated chloroform.

ANSWER: proton NMR [or nuclear magnetic resonance]

15. This piece's conclusion comes with a fugue starting with the piccolo, and ending with the brass reiterating the original theme in the piece's parallel major key. For 10 points each:

[10] Name this piece based on a section of Purcell's *Abdelazar*. This pedagogical piece introduces instruments section-by-section.

ANSWER: *The Young Person's Guide to the Orchestra* [or *Variations and Fugues on a Theme by Purcell*]

[10] *The Young Person's Guide to the Orchestra* was written by this English composer of the operas *Peter Grimes* and *Billy Budd*.

ANSWER: Benjamin Britten

[10] This German composer wrote the pedagogical *Songs for Children*, as well as developing a namesake “Approach” to music education which emphasizes learning rhythm and theory through performance.
ANSWER: Carl **Orff**

16. The League of Humanity was formed for the rights of these creatures. For 10 points each:

[10] Name these creatures who rebel and kill nearly everybody at Rossum’s Factory in a play by Karel Capek. Isaac Asimov described three laws for these creatures.

ANSWER: **robots** [or **androids**; or Rossum’s Universal **Robots**]

[10] Nathanael goes mad after seeing a mechanical doll named Olimpia created by Coppélius and Spallanzani in this short story by ETA Hoffman. Hans Christian Andersen invented the fairy-tale character who titles this story.

ANSWER: “The **Sandman**” [or “Der **Sandmann**”]

[10] A bloody mechanical doll titles an early sci-fi novel by this author, who pioneered the locked-room genre with his “Mystery of the Yellow Room.” He also wrote *The Phantom of the Opera*.

ANSWER: Gaston **Leroux**

17. This group’s leader referred to his belief that conversion to Christianity freed anyone of sin immediately as “perfectionism.” For 10 points each:

[10] Name this intentional community founded by John Humphrey Noyes, named for the New York city in which it was located.

ANSWER: **Oneida** Community [or the **Bible Communists**; prompt on “Perfectionists”]

[10] Noyes found the inspiration to found his Oneida Community during the second of these religious revivals in the US. During the first one, Jonathan Edwards made hellfire speeches like “Sinners in the Hands of an Angry God.”

ANSWER: **Great Awakenings** [or the **First Great Awakening**; or the **Second Great Awakening**; prompt on partial answer]

[10] During the Second Great Awakening, Charles Finney coined this term to describe the areas of New York swept up in the religious movement.

ANSWER: “**burned-over**” districts

18. This painting has the reverse vantage point of a similar Titian painting, and unlike Rubens’ version, this painting includes only Cupid beside the title figure. For 10 points each:

[10] Name this painting in which the title figure stares at the viewer through a mirror held up by Cupid, its artist’s only surviving female nude. This painting’s name comes from the London gallery to which it was given.

ANSWER: **Rokeby Venus** [or *The Toilet of Venus*; or **Venus at Her Mirror**; or **Venus and Cupid**; or *La Venus del espejo*]

[10] In this other painting by the same artist, a young girl dressed in white stands next to some dwarfs. A large easel stands in the left foreground of this 90-square foot canvas.

ANSWER: *Las Meninas* [or *The Maids of Honor*]

[10] The *Rokeby Venus* and *Las Meninas* were both painted by this Spanish artist.

ANSWER: Diego **Velazquez**

19. In a Buddhist story, Huang-Po regrets not breaking the legs of a man who possesses this ability. For 10 points each:

[10] Name this ability. Soon after the feeding of the five thousand, Jesus chastises a man who doesn’t possess this ability by asking “Your faith is so small. Why did you doubt me?” in Matthew 14.

ANSWER: **walking on water** [or **walking** on the **Sea of Galilee**; or obvious equivalents; prompt on partial answers]

[10] The disciple who tries, and mostly fails, to walk on water, is this rock of the Church, who later becomes the first Pope. He denies knowing Jesus three times.

ANSWER: Simon **Peter**

[10] In Luke’s Gospel, during this event, Jesus foretells that Peter will deny him three times. This event is not described in the Gospel of John, but it is assumed to occur right after Peter rejects an offer of foot-washing.

ANSWER: the **Last Supper** [or the **Passover** supper]

20. The temperature of Hawking radiation is inversely proportional to this quantity for a black hole. For 10 points each:

[10] Name this quantity, which is equivalent to energy according to Einstein.

ANSWER: mass

[10] Masses in astronomical terms are often given relative to either the Sun, or to this other planet, which is around 1000 times smaller than the Sun.

ANSWER: Jupiter

[10] Stars of relatively low mass, like the Sun, will eventually follow this branch on the Hertzsprung-Russell diagram. This branch is named because it narrowly approaches the red giant branch.

ANSWER: asymptotic giant branch [or AGB]