

PRISON BOWL IX

Questions written and edited by Hunter College High School (Gilad Avrahami, Sam Brochin, Christopher Chilton, David Godovich, Lily Goldberg, Ada-Marie Gutierrez, Diane Hwangpo, Joshua Kwan, Chloe Levine, Alice Lin, Brian Lu, Helen Lyons, Daniel Ma, Albert Tai, Luke Tierney, and Rachel Yang), with contributions from Rohan Nag and Jeff Xie

Finals Round

Tossups

1. Lac fields were an early system of irrigation in this country. This nation's current capital was retaken during a rebellion in which the Mac briefly interrupted the rule of this country's longest serving dynasty, the Later Le. The French provinces of Cochinchina and Tonkin would later become part of this country. The Nguyen ("NWEE-an") dynasty initially ruled the south of this country from the city of Hue. It's not China, but Ma Yuan put down one rebellion led by this country's Trung Sisters. For 10 points, name this Southeast Asian country with capital at Hanoi.

ANSWER: Vietnam <GA>

2. The Sabine River flows into this body of water. Laguna Madre is a 130-mile long lagoon separated from this body of water by Padre Island. The winter houses of Henry Ford and Thomas Edison lie near the mouth of a river that ends in this body of water at Sanibel Island, an island famous for its seashells. One estuary that lies on this body of water is Lake Pontchartrain, which is in the bayou region. This body of water contains Galveston Bay. When one 2005 hurricane reached land after crossing this body of water, it heavily damaged the city of New Orleans. For 10 points, name this largest gulf in the world that spans between the southern coast of the US and its namesake country.

ANSWER: Gulf of Mexico <DM>

3. In an equation used to calculate this quantity, vacuum permeability divided by 4 pi is multiplied by a line integral. This quantity is instrumental in the splitting of spectral lines in the Zeeman effect, and it can be calculated via the Biot-Savart law. Charge is multiplied by the cross product of this quantity and velocity to find the Lorentz force on a particle, and voltage is proportional to the time rate of change of this quantity's flux. In a solenoid, increasing the number of loops will generate increases in this quantity, which is measured in teslas. For 10 points, name this vector field that contains north and south poles.

ANSWER: magnetic field (accept B field, accept magnetic after "field") <AT>

4. Richard Strauss quoted the first four measures of this piece at the end of his *Metamorphosen*, adding the annotation "IN MEMORIAM!" This work's final movement is a set of variations on a theme used earlier in its composer's ballet *The Creatures of Prometheus*. This work's first theme ends with a chromatic C-sharp, and it begins with two orchestra-wide E-flat major chords that declare the tonic. This piece's second movement is an adagio assai funeral march. Its creator retracted its dedication when its dedicatee declared himself Emperor of France. For 10 points, name this Beethoven symphony originally dedicated to Napoleon Bonaparte.

ANSWER: Ludwig van Beethoven's Symphony No. 3 in E-Flat Major (accept clear knowledge equivalents like Beethoven's Third, also accept *Sinfonia Eroica* or Eroica Symphony, neither "Beethoven" or "symphony" is required after mention) <GA>

5. This architect of the oval-shaped Bell Labs Holmdel Complex designed a piece of furniture that was used extensively on the set of the original *Star Trek*, his "Tulip Chair." He included an oculus atop a windowless building that resembles his brick cylinder, the MIT Chapel. Another of this architect's works is topped by two wing-shaped concrete thin-shells. This architect of the TWA Flight Center is more famous for a monument located in the Jefferson National Expansion Memorial. That monument is a 630 foot-tall metal catenary curve. For 10 points, name this architect of the Gateway Arch in St. Louis.

ANSWER: Eero Saarin <AT>

6. Some characters in this book whisper, "Busy, busy, busy," and a fictional language spoken in this book translates "Twinkle, twinkle, little star" to "Tsvent-kiul, tsvent-kiul, lett-pool store." That language is spoken on an island where a popular religion is Bokononism, whose adherents are threatened by the giant hook of the Christian dictator, "Papa Monzano." In this book Felix waits for the atomic bomb to drop while playing the title game. One character in this book calls himself Jonah, and discovers a substance with freezing abilities kept by the Hoenikker children, called ice-nine. For 10 points, name this novel which satirizes the arms race, the fourth work by Kurt Vonnegut.

ANSWER: Cat's Cradle <CL>

7. This country, the sender of cables in the Venona documents, conducted the SOXMIS liaison mission. The Bullitt Mission to this country was meant to end the civil war in this country. John F. Kennedy conducted the "pen pal" correspondence with this nation's leader. A scheduled meeting with this country's leader was moved to New York City due to Vietnam War protests. Novikov's "telegram" was this country's response to George Kennan's "long telegram", and this nation's "era of stagnation" overlapped with its years of détente with the US. For 10 points, name this Cold War opponent of the US.

ANSWER: USSR or Soviet Union

8. One theory connects the origin of this philosophy with the defacing of coins, and a philosopher of this movement pioneered the idea of cosmopolitanism by calling himself a “citizen of the world.” This philosophy, practiced by Crates of Thebes and Antisthenes, idolized Heracles because of his capture of Cerberus. One proponent of this philosophy was known for carrying a lamp during the day while looking for an “honest man.” That man infamously begged for a living and often resided in a large ceramic jar. This philosophy of Diogenes of Sinope derives its name from the phrase “dog-like.” For 10 points, name this Ancient Greek philosophy that rejected societal conventions.

ANSWER: cynicism <AT>

9. Goodpasture syndrome is an autoimmune disease involving this organ and the kidneys. This organ contains bitter taste receptors which convert angiotensin I to angiotensin II. This organ contains a hilum that connects the parietal and visceral pleural membranes, and the severity of a disease affecting it is assessed by a spirometer. That disease, involving the breakdown of this organ’s tissues, is known as emphysema. This organ, which is comprised of alveoli, is subject to bronchitis. For 10 points, name these respiratory organs that supply oxygen to the blood and are used in air exchange.

ANSWER: lungs <AT>

10. It’s not cotton, but a businessman who was judged to be largest producer of this good in a particular country was said to be a this commodity king. The most famous king of this commodity was Carlos Leôncio de Magalhães (“muh-GAW-less”). From the 1790s onward, plantations producing this good were found in Venezuela along with cocoa producing establishments. This crop was cultivated in the red soil of São Paulo in Brazil, and it was often grown in fazendas. The Ottomans opened this commodity’s first “house” in Damascus. The city of Mocha (“MO-kuh”) in Yemen exported this crop, and Indonesia makes its “Sumatra” and “Java” types. For 10 points, name this caffeinated beverage.

ANSWER: coffee

11. Unusually high reflective areas on radars are known as these entities’ debris balls. A measuring system for these entities attempts to relate the Beaufort and Mach scales. Residential architecture and types of vegetation were later accounted for in an “enhanced” version of that system. During periods of rainfall, these entities are surrounded by RFDs after they form from supercells. A scale measuring these entities ranks them from F0 to F5, and assesses the damage caused by them. That scale is named after Fujita. For 10 points, name these rapidly-spinning columns of air.

ANSWER: tornadoes (accept twisters, prompt on cyclones) <AT>

12. In one of this man’s works, two characters meet by chance at a dog pound, and end up getting a drink at a bar called the Cathedral. That work is about Santiago Zavala and Ambrosia, the former of which is an activist with Cahuide. The title of one book by this man literally translates to *The City and the Dogs* and takes place at a military school; that book is known in English as *The Time of the Hero*. Another work by this man is set partly in Piura, and features characters called “the lieutenant” and “the native.” For 10 points, name this contemporary Peruvian author and essayist of *The Green House* and *Aunt Julie and the Scriptwriter*.

ANSWER: Jorge Mario Pedro Vargas Llosa [accept 1st Marquis of Vargas Llosa; prompt on partial] <CL>

13. This writer created a biography of Richard Savage and a Neoclassical tragedy titled *Irene*. He annotated the plays of Shakespeare and wrote *The History of Rasselas, Prince of Abissinia*, as well as the influential periodical *The Rambler*. This man wrote *A Journey to the Western Islands of Scotland* about his travels with his later biographer, James Boswell. This man completed his most influential work alone, though it took him nine years, and it was the pre-eminent work in its genre until one created at Oxford. For 10 points, name this English writer and lexicographer who in 1755 created *The Dictionary of the English Language*.

ANSWER: Samuel Johnson [prompt on Johnson] <CL>

14. The Swiep (“sweep”) forest was an important location at one battle during this war, in which the forces of Ludwig von Benedek were dealt a crushing defeat. Throughout this conflict, the muzzleloading Lorenz rifles of one side were badly outclassed by the more modern rifles of their opponents. Either Koniggratz or Sadowa was the most important battle in this war, a decisive victory for the northern belligerents. Helmuth von Moltke served as the chief of staff for the primary state on the winning side of this war. For 10 points, identify this 1866 conflict in which the southern states of the German Confederation were defeated by a collection of northern German states led from Berlin.

ANSWER: Austro-Prussian War (accept Seven Weeks War, Unification War, Prussian-German War, Brothers or Fraternal War; accept War of 1866 until year is mentioned; prompt on German Civil War) <LT>

15. One man in this work scolds a crowd at the Areopagus after finding an altar “to an unknown god,” and in this book, tongues of fire representing the Holy Spirit appear over the heads of men. After one man in this book claims to have seen the Son of Man sitting at the right hand of God, the Sanhedrin order his stoning; that man was Stephen. This book describes the first Pentecost, and in this book, Saul was blinded on the road to Damascus and converted to Paul. For 10 points, name this New Testament book which describes the deeds done by the apostles to spread the church to the Roman Empire.

ANSWER: Acts of the Apostles (or Book of Acts) <JK>

16. Reacting a molecule with osmium tetroxide will yield one of these compounds with two of its namesake groups in the “syn” position. Produced in the Ziegler process, these compounds are the final product of Grignard reactions. One device measuring their concentration assesses the electric current produced by the oxidation of them to acetic acid and water. 95% of a common azeotrope’s volume is comprised of one of these substances, and one of them plus a carboxylic acid will yield an ester. For 10 points, name these compounds containing an OH group, exemplified by methanol and ethanol.

ANSWER: **alcohols** <AT>

17. Twelve of these objects were in the protection of priests known as the Salii; the original copy was owned by Numa Pompilius. Sir Gawain found one of these objects that once belonged to Judas Maccabeus. A particularly badass one of these objects used during the Trojan War doubled as a flamethrower; another of these objects held by Ajax was notably large and made of seven cowhides and bronze. Perseus famously used one of these objects to avoid the gaze of Medusa. For 10 points, identify this type of armor, one of which was held by Achilles in his battle with Hector and exemplified by the Aegis held by Athena.

ANSWER: **shields** <JK>

18. In this play, one character wants to prove that God is unnecessary, while his nephew wants to accumulate wealth, and so locks his uncle in a laboratory. In the beginning of this play, General Manager Domin tells that story to Helena, a member of the League of Humanity. Alquist decides not to kill Helena and Primus in Act III of this play because they are the new Adam and Eve. Although the title figures initially seem content in servitude, by this play’s end they have annihilated the human race. For 10 points, name this science fiction play which coined the term for a complex machine often resembling a human, a work by Karel Capek.

ANSWER: **R.U.R.** [accept **Rossum’s Universal Robots** or **Rossumovi Univerzální Roboti**] <CL>

19. A Fortunato Depero painting from this movement features two tunnels and some slanted buildings arranged in an “M” shape. Other paintings in this movement include one where horses and men run wild, *The City Rises*, and another clearly featuring the numbers “6943.” Marinetti stated that a certain entity was more beautiful than the Winged Nike of Samothrace in this art movement’s manifesto. Another work from this movement is a sculpture depicting an armless figure stepping forward, *Unique Forms of Continuity in Space*. Giacomo Balla and Umberto Boccioni were artists from, for 10 points, what 20th century Italian movement that glorified speed and technology?

ANSWER: **Futurism** <AT>

20. This creator of the Rorschach test-like Verbal Summator devised a teaching machine, a question-displaying box. He classified the strength of a response based on emission, energy level, speed, and repetition in his book *Verbal Behavior*. This man who equated “negative reinforcement” to punishment also wrote a utopian novel where citizens can be classified as Planners or Managers. He developed a cage containing audiovisual stimuli, a response lever, and a food dispenser, the operant conditioning chamber. The author of *Walden Two* was, for 10 points, what psychologist who created a namesake box?

ANSWER: B. F. **Skinner** (accept Burrhus Frederic **Skinner**) <AT>

TB. This author wrote about Consilience, where Charmaine and Stan give up their freedom every second month and fall in love with their alternates, and one book by this author is narrated by Iris Chase. In a book by this author, Cordelia and two friends throw Elaine Risley’s hat into a ravine. In addition to *Cat’s Eye* and *The Blind Assassin*, this author created a character once known as Jimmy but now called Snowman. In another work by this author, “the Eyes” are the secret police of a dystopian theocracy named Gilead, and some of agents who may be working for the Mayday resistance take Offred [of-FRED] away. For 10 points, identify this Canadian author of *Oryx and Crake* and *The Handmaid’s Tale*.

ANSWER: Margaret **Atwood** <CL>

Bonuses

1. To calculate the gravitational form of this quantity for an object located near the Earth’s surface, multiply the object’s mass by its distance from the ground and g. For 10 points:

[10] Name this type of energy stored in an object due to its position or configuration.

ANSWER: **potential** energy (accept **PE** or **U**)

[10] The non-relativistic form of this Frenchman’s namesake function equals a system’s kinetic energy minus its potential energy.

This man also names a series of five points where the gravitational pulls of two bodies cancel out.

ANSWER: Joseph-Louis **Lagrange** (accept **Lagrangian**)

[10] This hypothetical structure’s walls contain infinite potential energy, while its interior has zero potential energy. This means that infinitely large forces prevent the single particle housed inside this structure from leaving it.

ANSWER: **particle in a box** (or **infinite square well**, or **infinite potential well**) <AT>

2. This ruler was referred to as the “Red Sultan” by his enemies for his repressive internal policies. For 10 points each:

[10] Name this Ottoman ruler who oversaw the First Constitutional Period before retaking autocratic control. He was overthrown by the Young Turks in 1909 and was replaced by his brother, Mehmed V.

ANSWER: **Abdulhamid II**

[10] This period of modernization, especially of the millet system, ended when Abdulhamid issued the First Ottoman Constitution.

ANSWER: **Tanzimat**

[10] These Ottoman soldiers, initially drawn from Christian households, were later abolished after they revolted against Mahmud II in the Auspicious Incident.

ANSWER: **Janissaries** <LT>

3. The French are evidently excellent at creating drama, because France has produced many great playwrights. For 10 points each:

[10] Identify this writer of *The Imaginary Invalid*, *The Misanthrope*, and a work about Elmire, Orgon, and the title hypocrite, *Tartuffe*.

ANSWER: **Molière** [accept Jean-Baptiste **Poquelin**]

[10] This French playwright kept the sadness to a minimum in *Esther*, written for youth, and his one comedy, *Les Plaideurs*, but is best known for his tragedies like *Phèdre*, *Andromaque*, and *Athalie*.

ANSWER: Jean(-Baptiste) **Racine**

[10] This man wrote a rationalized version of the *Oedipus* story, as well as *Zaïre*, *Mahomet*, *Mérope*, and a work in which Herod the Great murders the title character, *Mariamne*. He is better known for a 1759 novel criticizing optimism.

ANSWER: **Voltaire** [accept Francois-Marie **Arouet**] <CL>

4. For two points A and B on a sphere, these entities are defined as the shorter arc of the great circle passing through A and B. For 10 points:

[10] Name these entities, the shortest possible paths between two points on a curved surface.

ANSWER: **geodesics**

[10] Geodesics have many applications in fields of geometry where many of this man’s basic axioms do not hold. Many of this Greek mathematician’s contributions to mathematics are detailed in his 13-book series, *Elements*.

ANSWER: **Euclid** of Alexandria

[10] The axiom most significantly broken in non-Euclidean geometry is this postulate, which evaluates whether two lines will eventually meet or not. This statement is equivalent to Playfair’s axiom.

ANSWER: **parallel** postulate (accept Euclid’s **fifth** postulate) <AT>

5. Answer some questions about the fate of this world. At least how Christians see it, anyways. For 10 points each:

[10] During the end of the world, this entity will supposedly fall to Earth after the sounding of a trumpet. It’s indicated as an angel or a star in various sources, and will turn all the water on Earth bitter.

ANSWER: **Wormwood**

[10] This third horseman of the Apocalypse carries a set of scales and rode a black horse. On the day he appears a voice announces that a “quart of wheat” would cost a day’s wages.

ANSWER: **Famine**

[10] The end of the world is found in this last book of the bible, written by John of Patmos. It tells of the defeat of Satan and the Second Coming.

ANSWER: Book of **Revelation** <JK>

6. The Durand Line separates this nation and Afghanistan. For 10 points each:

[10] Name this country with capital at Islamabad. This country also controls Karachi.

ANSWER: Islamic Republic of **Pakistan**

[10] This narrow mountain pass through the Durand Line is the main route between Afghanistan and Pakistan. Babur attacked India through this pass to start the Mughal dynasty.

ANSWER: **Khyber** Pass

[10] The Taliban, ISIL, and their allies have been fighting in northwest Pakistan and southeast Afghanistan, which is primarily where this ethnic group lives. Malala Yousafzai is of this ethnicity.

ANSWER: **Pashtun** (similar-sounding word forms) <DM>

7. A notable example of this poetic form is “Mad Girl’s Love Song” by Sylvia Plath. For 10 points:

[10] Identify this closed form of poetry consisting of nineteen lines, divided into three tercets and a quatrain, which has two refrains and two repeating rhymes. Perhaps the most famous example is “Do Not Go Gentle Into That Good Night” by Dylan Thomas.

ANSWER: **villanelle** [accept **villanesque**]

[10] This female American poet featured the refrains “The art of losing isn’t hard to master” and variations with the word “disaster” in a famous villanelle, “One Art.” She also wrote “The Armadillo” and *North and South*.

ANSWER: Elizabeth **Bishop**

[10] Another villanelle is “If I Could Tell You,” by this poet of “Funeral Blues,” “The Shield of Achilles,” and a poem written “in one of the dives / On Fifty-second Street” contemplating an invasion of Poland, *September 1, 1939*.

ANSWER: W. H. **Auden** [accept Wystan Hugh **Auden**] <CL>

8. This Italian sculptor also served as architect for the Vatican's St. Peter's square. For 10 points each:

[10] Name this man, who included golden stucco rays in the background of his *The Ecstasy of Saint Teresa*. His other sculptures include *The Rape of Proserpina* and a depiction of David.

ANSWER: Gian Lorenzo **Bernini**

[10] Due to its extreme realism, Bernini rose to prominence following the creation of a Greek mythology-inspired marble sculpture featuring these two figures. One of these two figures is in the process of turning into a laurel tree.

ANSWER: **Apollo** and **Daphne** (accept in any order)

[10] Bernini created a four-columned black and gold one of these structures to be built over the tomb of St. Peter. These structures are canopies of state, typically over an altar or throne.

ANSWER: **baldacchino** [or **baldachin**] <RY>

9. This character longs to do more than "mend the stockings or mind the stew." For 10 points each:

[10] Identify this character, who runs away to London to avoid marrying a wool stapler. She kills herself when she discovers she is pregnant, never fulfilling her dream of becoming a writer, though her brother was a famous playwright.

ANSWER: **Judith Shakespeare** [prompt on partial]

[10] Judith Shakespeare is a character in this essay that argues that women require financial freedom, and the title possession, to be able to write. It was based on its author's lecture series "Women and Fiction."

ANSWER: **A Room of One's Own**

[10] *A Room of One's Own* is an extended essay by this author of *To the Lighthouse* who wrote about Septimus Smith in *Mrs. Dalloway*.

ANSWER: (Adeline) Virginia **Woolf** [do not accept or prompt on "Virginia Euwer Wolff"] <CL>

10. In the fictional island nation introduced in this book, there is no private property, and housing is rotated between citizens every ten years. For 10 points:

[10] Name this 16th century novel that attempted to depict an ideal society located in the New World.

ANSWER: **Utopia**

[10] *Utopia* is a work by this English humanist philosopher. This man's refusal to endorse Henry VIII's divorce of Catherine of Aragon was depicted in Robert Bolt's *A Man For All Seasons*.

ANSWER: Sir Thomas **More**

[10] In *Utopia*, this traveler tells a fictionalized version of More about his experiences in the titular nation. More suggests that this man was a member of Amerigo Vespucci's crew.

ANSWER: **Raphael Hythlodæus** (accept either underlined portion) <AT>

11. Many musical works were written in response to the dramatic events of World War II. For 10 points each:

[10] This Aaron Copland piece for brass and percussion was written in response to US involvement in the Second World War. It attempted to motivate Americans to increase labor and production.

ANSWER: **Fanfare for the Common Man**

[10] This composer's *Leningrad Symphony* was originally written in praise of Vladimir Lenin, but soon became regarded as a commemoration to the Soviet citizens who lost their lives during World War II.

ANSWER: Dmitri **Shostakovich** (or Dmitri Dmitriyevich **Shostakovich**)

[10] This man featured 52 screeching violins in his *Threnody for the Victims of Hiroshima*. Excerpts from his music were also featured in Stanley Kubrick's *The Shining*.

ANSWER: Krzysztof **Penderecki** <AT>

12. Maslow posited that the safety needs level is likely to be found in these people, who were also studied by Urie Bronfenbrenner. For 10 points each:

[10] Identify these people, whom Erik Erikson studied at Pine Ridge Indian Reservation. Lev Vygotsky said that some of them use self-talk.

ANSWER: **children** [accept **kids** or other equivalent descriptions; do not accept or prompt on "babies," etc.]

[10] This Swiss developmental psychologist made sensorimotor and operational stages of child development as well as schemata.

ANSWER: Jean **Piaget**

[10] Jean Piaget pioneered the "genetic" form of this discipline, which concerns itself with the theory of knowledge. It was first used by James Ferrier in a work captioned "The Theory of Knowing and Being."

ANSWER: **epistemology** <CL>

13. This process begins when pioneer species like lichen and fungi begin to “normalize” a habitat. For 10 points:

[10] Name this phenomenon, where an ecosystem develops in an area previously devoid of life. It frequently occurs after forest fires or lava flows.

ANSWER: **primary succession** (prompt on ecological **succession**, do not accept “secondary succession”)

[10] Primary succession frequently occurs in the chaparral, an example of one of these entities. These entities, like the tundra and tropical rainforest, are formations of plants and animals that have similar climates.

ANSWER: **biomes**

[10] When an ecosystem undergoes ecological succession for a long period of time, it will eventually reach this steady state, where it will consist of organisms best suited to its average conditions.

ANSWER: **climax community** (prompt on **climax**) <AT>

14. The head of the World Christian Fundamentals Association named this law. For 10 points each:

[10] Name this Tennessee law that prohibited teaching evolution in public schools. It was signed by Governor Austin Peay (“pea”), and was used to prosecute the defendant in the Scopes Monkey Trial.

ANSWER: **Butler Law**

[10] This organization financed John Scopes' defense as a way to critique the Butler Law. They believed that it imposed a religious philosophy on the public, violating the Establishment Clause of the First Amendment.

ANSWER: **American Civil Liberties Union**

[10] This Nebraska Populist led the prosecution at the Scopes Monkey Trial. He also made the “Cross of Gold” speech as the Democratic nominee for President in 1896.

ANSWER: **William Jennings Bryan** [prompt on **Bryan**] <LT>

15. In this work, Tiger Brown fails to stop the protagonist from being sentenced to hanging, but a messenger from the Queen stops the execution and grants that protagonist the title of Baron. For 10 points:

[10] Name this ballad opera adapted from John Gay's *The Beggar's Opera*. In this work, Polly Peachum agrees to marry the main character despite knowing him only for three days.

ANSWER: *The **Threepenny Opera***

[10] *The Threepenny Opera* features lyrics written by this 20th century German playwright. He wrote about a family suffering from the devastation of the Thirty Years' War in *Mother Courage and Her Children*.

ANSWER: Bertolt **Brecht** (accept Eugen Bertolt Friedrich **Brecht**)

[10] Brecht opened his Threepenny Opera with this song, inspired by the Medieval *moritat*, or murder ballad. This song mentions its titular character's wicked deeds, and compares him to a toothed shark.

ANSWER: “The Ballad of **Mack the Knife**” (accept “**Die Moritat von Mackie Messer**”) <AT>

16. This man's geis (“GESH”) was broken when he ate an offering of dog meat out of gratitude. Lugaid took advantage of this, and killed this figure with a magical spear. For 10 points:

[10] Name this Irish mythological hero, who appears in the stories of the Ulster cycle. He himself wielded the spear Gae Bolg and slew a guard dog to receive his title.

ANSWER: **Cu Chulainn** (accept **Setanta**)

[10] This war goddess attempts to interfere with Cu Chulainn in battle multiple times, but is stopped each time. She's often depicted as a trio of sisters consisting of the Badb, the Macha, and the Nemain.

ANSWER: **Morrigan**

[10] In some tales, the Morrigan disguises herself as one of these old female spirits. They wail when someone is about to die.

Answer: **banshee** <JK/AT>

17. After his apprenticeship, this man began working at Midvale Steel Works. For 10 points each:

[10] Name this engineer and author who developed the concept of scientific management, which minimized waste and maximized worker productivity, leading to the rise of city managers and management consultants.

ANSWER: Frederick Winslow **Taylor**

[10] This namesake of an automobile company used scientific management and the assembly line to mass-produce Model Ts in the early 1900s.

ANSWER: Henry **Ford**

[10] Taylorism and McDonaldisation rely on workers' “formal” rationality, an idea proposed by this formulator of the “iron cage” of rationality. He also wrote *Politics as a Vocation*.

ANSWER: Karl Emil Maximilian “Max” **Weber** (“VAY-ber”) <CL/RN>

18. He wrote, "When we are dead, seek not our tomb in the earth, but find it in the hearts of men." For 10 points,
[10] Name this 13th century Sufi poet of the *Spiritual Couplets* and the *Shams of Tabriz*. His followers became known as the whirling dervishes.

ANSWER: **Rumi** [accept Jalāl ad-Dīn Muhammad **Balkh** and **Mawlana**]

[10] Rumi often wrote in this Persian form, a collection of rhyming quatrains. This form also titles a work attributed to Omar Khayyam that was translated into English by Edward FitzGerald.

ANSWER: **rubaiyat**

[10] Rumi also helped popularize this form, made up of couplets structured around a rhyme and a refrain. In this form, each poetic line must be the same length.

ANSWER: **ghazal** <CC>

19. For 10 points each, name some things about the African Union ,an entity established by the Sirte Declaration:

[10] This Chairperson of the African Union from 2009 to 2010 was a supporter of Pan-Africanism. He seized control in "Operation Jerusalem," part of the "One September Revolution" that ousted Idris.

ANSWER: Muammar (Muhammad Abu Minyar) al-**Gaddafi** [accept Colonel **Gaddafi**]

[10] This dictatorial President of Zimbabwe is the current chair of the African Union. He won rigged elections against Morgan Tsvangirai and leads the ZANU-PF.

ANSWER: Robert **Mugabe**

[10] African Union forces intervened in this country after the oil-rich region of Biafra seceded from it in 1967. This country contains Lagos and is the most country populous in Africa.

ANSWER: **Nigeria**

20. Classifications for signals read in this technique include singlets, doublets, and multiplets. For 10 points:

[10] Name this type of spectroscopy that identifies molecular structures by the ways in which their atomic nuclei interact with strong magnetic fields. Frequently used types of it are the proton and carbon-13 types.

ANSWER: **nuclear magnetic resonance** spectroscopy (or **NMR** spectroscopy)

[10] During NMR, a molecule's hydrogen atoms are frequently substituted for these atoms to distinguish the molecular nuclei from the surrounding solvent's nuclei. The nuclei of this hydrogen isotope's atoms contain a neutron.

ANSWER: **deuterium** (accept **D** or **2H**)

[10] The behavior of atoms subject to NMR is measured by this quantity, the resonant frequency of an atomic nucleus relative to a standard in a magnetic field. It is measured in ppm.

ANSWER: **chemical shift** (prompt on **shift**) <AT>

TB. This collection of works portrayed the composer's wife Alice in the piece "C.A.E." and his friend August Jaeger in "Nimrod." For 10 points:

[10] Name this collection consisting of fourteen variations on a mysterious theme.

ANSWER: **Enigma Variations** <AT>

[10] This British composer wrote the Enigma Variations. He's also known for his choral piece The Dream of Gerontius, as well as a piece commonly played at graduations, the *Pomp and Circumstance* march.

ANSWER: Edward **Elgar**

[10] This English cellist is well known for her interpretations of Elgar works, particular her recording of his Cello Concerto in E minor. She battled multiple sclerosis until her death.

ANSWER: Jacqueline (Mary) **du Pré** <AT>