Brookwood Invitational Scholars' Bowl

Round 10

Written and edited by Zach Billett, Mostafa Bhuiyan, Joseph Reifenberger, Adam Silverman, Brady Weiler, and Jacky Zhu

Tossups

1. **A white hollyhock flower is suspended next to one of these objects in midair in a 1935 canvas. One of these objects resembles Jesus’ crucifix in a painting subtitled for the colors red, white, and blue. These objects, which are commonly shown in *vanitas* still-lifes, are stacked in a pyramid in a painting by Paul Cezanne. One sits below an** (\*) astrolabe, at the feet of the Dintevilles, but extremely distorted and oriented diagonally, in Holbein the Younger’s painting of *The Ambassadors*. These objects were often shown along with flowers by Georgia O’Keeffe. For 10 points, name these objects often used to symbolize the Day of the Dead.

ANSWER: **skull**s [or **head**s; or **ram’s head**s; or **cow**’s **head**s; or other specific skulls from various animals; prompt on **bones**; prompt on **skeleton**s]

2. **This thinker hypothesized that the idea of the existence of God must be infinite, and have a cause that is infinite, which is God, in a circular argument. This thinker underwent a “metaphysical turn” and collected his metaphysics in a work allegedly spanning six days of meditation. This rationalist said that innate intellect, not the** (\*)senses, provided information about substance, since the senses could be betrayed by an evil demon. He answered the mind-body problem by proposing substance dualism. In his *Discourse on Method*, this thinker first used the *cogito*. For 10 points, name this French philosopher who said, “I think, therefore, I am.”

ANSWER: Rene **Descartes**

3. **David Burnet prevented the schooner *Invincible* from transporting this man as a prisoner. During his exile on Staten Island, this man introduced the American public to chicle, used to make chewing gum. This “Napoleon of the West” was ousted at the start of the Reform War. After this man lost 630 men in a battle, compared to 9 Americans, his wooden** **(\*)** leg was stolen and paraded around the US. This man ordered a massacre at Goliad, weeks after his troops killed James Bowie. This eleven-term president lost the Battle of San Jacinto. For 10 points, name this longtime dictator of Mexico who won at the Alamo.

ANSWER: Antonio Lopez de **Santa Anna** [prompt on partial answer]

4. **A character in this novel dies from fright after a magician whom he has executed comes back to haunt him. This novel’s villain dies from splitting headaches after refusing to let a doctor operate. At a naval battle in this novel, one side uses straw boats to capture the other side’s arrows. Three men in this novel sacrifice a black ox and a white horse and swear to become** (\*) brothers. The Battle of Red Cliffs is a highlight of this novel, which has heroes like Guan Yu facing off against Cao Cao [SOW SOW]. For 10 points, name this Chinese classic by Luo Guanzhong [LOW gwahn-JONG], an epic set at the end of the Han Dynasty, which focuses on states led by the Wei, Shu, and Wu.

ANSWER: ***Romance of the Three Kingdoms*** [or **Sanguo yanyi**]

5. **In the lumped element model, this process predominates at low Biot** [bee-OWE] **number. The proportionality constant of this process has units of Watts per meter per Kelvin. The flux from this process varies with the negative gradient of the temperature in Fourier’s Law. This process shares its name with the lower-energy counterpart to the (\*)** valence band. Materials which permit this process often obey the free electron model and hold electrons loosely. This process will occur in contacting metals. For 10 points, name this method of heat transfer contrasted with convection and radiation, which does not occur in insulators.

ANSWER: **conduction** [or word forms]

6. **David Plouffe** [PLUFF]**, the manager of Obama’s 2008 campaign, now works for this company. Emil Michael, an executive of this company, suggested hiring journalists in 2014 to investigate its critics. Employees of this company have access to “God View.” This company, which is banned in Germany, suspended its** (\*) “pop” service in France after massive protests in June 2015 nearly got Courtney Love killed. This heavyweight of the “gig economy” is led by Travis Kalanick. Bill de Blasio lost a public spat with this company in summer 2015 over its avoidance of labor laws for employee “contractors.” For 10 points, name this competitor of Lyft, a taxi service.

ANSWER: **Uber**

7. **One of this author’s speakers declares that he is composed of “Eros and dust” and wishes, like “ironic points of light”, to “show an affirming flame.” This author imagined “dogs [going] on with their doggy life” in a poem that recalls “how everything turns away/quite leisurely from the disaster.” In another poem, this author rhetorically asked, “Was he free? Was he** (\*) happy?”, noting “Had anything been wrong, we certainly would have heard.” He collaborated on several plays with lover Christopher Isherwood. This poet described Breughel’s Icarus in “Musée des Beaux Arts.” For 10 points, name this British poet of “September 1, 1939.”

ANSWER: WH **Auden** [or Wystan Hugh **Auden**]

8. **A B-minor piece by this composer starts with fermata-held Ds in octaves by the cornets before the entrance of the double basses and bassoons. The flute and the oboe trade off the melody in a piece by this composer depicting the rising sun. This composer wrote a piece telling of the “Death of (\*)** Ase” and also composed a song for Solveig. This composer symbolically depicted a hero escaping the lair of the trolls in a *prestissimo* finish. He included “Morning Mood” in a set of incidental pieces for a play that also included “In the Hall of the Mountain King.” For 10 points, name this Norwegian composer of *Peer Gynt*.

ANSWER: Edvard **Grieg**

9. **An eight-book history of this conflict begins with some Swiss men burning down their houses. During a siege in this campaign, a general used shape pikes called *cippi* to form a circumvallation surrounded by a contravallation. The losing commander of this conflict, a member of the Arverni tribe, was strangled after winning at** (\*) Gergovia. A set of commentaries on this conflict mentions a region “omnis divisa in partes tres”. Vercingetorix [ver-sin-JET-or-icks] was captured at its pivotal siege at Alesia. The winning general of these wars later crossed the Rubicon. For 10 points, name these “wars” in modern-day France which earned Julius Caesar fame.

ANSWER: **Gallic** Wars

10. **Heinrich events raised the level of this body of water. The Lost City hydrothermal vents are found within it. Extremely salty water in the northern part of this body of water sinks from thermohaline circulation, forming its namesake Deep Water. Magnetic stripes in this body of water were the original primary evidence for** (\*) seafloor spreading. A gyre in it creates a still region where turtles can breed and sargasso accumulates. Benjamin Franklin discovered a warm current that joins the Labrador Current in this body of water. For 10 points, name this ocean, home to the Gulf Stream, which has a ridge where the Eurasian and North American plates meet.

ANSWER: **Atlantic** Ocean

11. **This author wrote about master marksman Silvio, who memorably leaves a hole in a painting, in his story “The Shot.” This author’s “Little Tragedies” include a play that inspired the Mozart and Salieri myth. This author created the motif of the superfluous man in a novel written in a namesake iambic tetrameter with off-set masculine and feminine rhymes. (\*)** Herman commits suicide after a failed card game in this author’s story “The Queen of Spades.” This author created a character who dances with Olga at a ball and is forced to kill his best friend, Lensky, in a duel. For 10 points, name this Russian poet who wrote *Eugene Onegin*.

ANSWER: Alexander **Pushkin**

12. **This deity is given Anat and Astarte as wives in a compromise brokered by Neith** [NEETH]**. This god becomes a black pig when he “eats” the moon once a month. This god was thought both bisexual and infertile after his genitals were torn off. He loses a boat race in a boat actually made of stone. This deity convinced his (\*)** brother to lay down in a box, sinks the box, then later mutilates his brother’s body and scatters it into fourteen pieces. This god protects the solar barge from a giant serpent every night. He gouges out the eye of his rival Horus. For 10 points, name this brother of Osiris, the Egyptian god of the desert and other bad things.

ANSWER: **Set** [or **Seth**]

13. **When this technique is used for purification, its residue is called mud. This process obeys the equation “small m = Q over F times big M over z”. Hydrogen for gas chromatography is generated through this process. Faraday discovered two laws governing this process. While carrying out this process, Fleischmann and Pons claimed they had discovered cold fusion.** (\*) Alumina dissolved in cryolite undergoes this process to purify aluminum. Humphrey Davy used this process to isolate the alkali metals. This process produces oxygen and hydrogen gas when applied to water. For 10 points, name this method of splitting molecules with an electric current.

ANSWER: **electrolysis** [or word forms; or **electrorefining**]

14. **Description acceptable. This event was sparked by a request for some oil from the lamp of the Holy Sepulcher, sent to Pope Clement IV. The “Blue Princess”, Kokachin, was transported to Persia at its end. Members of this endeavor were given a gold tablet called a *paiza*. A book about this event was titled “The Million”. After he was captured by the** (\*) Genoese, a participant described this event to prison-mate Rustichello. An account of this event taught Europeans about pasta and paper money. This event was the second trip of Niccolo and Maffeo to the court of Kublai Khan. For 10 points, name this 24-year-long journey along the Silk Road described by a Venetian traveller.

ANSWER: Marco **Polo**’s travels [accept any answers involving Marco **Polo**]

15. **Jean Nouvel designed the multicolor, phallic-shaped Agbar Tower in this city. A building in this city is nicknamed “the quarry” because of its undulating gray stone facade. A church here has eighteen spires, and facades named for the Nativity, Passion, and Glory. A mosaic dragon welcomes visitors to a** (\*) park in this city. Lilly Reich and Ludwig Mies designed its namesake chair for a 1929 International Exposition. This city is home to a church that has been under construction for 133 years, the Sagrada Familia. For 10 points, name this city where Antoni Gaudi worked in Catalonia.

ANSWER: **Barcelona**, Spain

16. **Iain Douglas-Hamilton founded a nonprofit organization to counter the sale of this commodity, which is measured by CITES using the MIKE program. Daniel arap Moi symbolically lit fifteen tons of this commodity on fire in 1989. 70% of this commodity, acquired despite the Accra Declaration, goes to China, where it is believed to cure disease. Sale of this commodity** (\*) threatens two of the members of the Big Five. Kruger National Park maintains a store of this commodity after its sale was banned internationally in the 90s. For 10 points, name this commodity called “white gold,” which is harvested by poachers from elephants.

ANSWER: **ivory** [or elephant **tusk**s]

17. **A text from this movement declares that the “problem that has no name” is people thinking, “Is this all?” A book about this movement's theory "from margin to center" was written by bell hooks. William** **Godwin wrote the “memoirs” of an early member of this movement who wrote a** (\*) “vindication” in response to Charles Talleyrand. This movement is currently in its “third wave” in the US; its second wave was pioneered by the founder of NOW, Betty Friedan. For 10 points, name this movement which also included Simone de Beauvoir, which advocates the equality of women.

ANSWER: **feminism** [or **feminist** movement; or the **women**’s movement; or **first-wave feminism**; or **second-wave feminism**; or **third-wave feminism**]

18. **The structure of these compounds is given by the mnemonic “All Altruists Gladly Make Gum in Gallon Tanks.” A single vertical line crossed by four horizontal lines represents their stereochemistry. These compounds often form either five or six-member rings with an oxygen atom, and a carbon hanging off the ring. Their condensation makes a** (\*) glycosidic bond. The ends of DNA are named for the 3 and 5 carbons of these compounds, which bond to a phosphate and a nucleobase to make a nucleotide. These monomers condense to form amylopectin, starch, and cellulose. For 10 points, name these building blocks of carbohydrates, like glucose.

ANSWER: **monosaccharide**s [or **sugar**s; or **hexose**s; or **pentose**s; prompt on **carbohydrate**s; prompt on **saccharide**s; ask players to be less specific for answers of **glucose** or **deoxyribose** or **ribose**]

19. **The doctrine of constitutional avoidance was introduced in a Supreme Court case between Ashwander and this corporation. David Lilienthal was known as “Mr. <this company>”. It signed the Fontana Agreement with ALCOA. Nebraska Senator George Norris was the main proponent for this corporation. The Muscle** (\*) Shoals Bill, vetoed by Herbert Hoover, was the initial impetus for this organization. It supplied the electricity for the Manhattan Project at Oak Ridge. It was created in 1933 as one of the earliest New Deal programs. For 10 points, name this hydroelectric power company that serves Kentucky, North Carolina, and a namesake state.

ANSWER: **Tennessee Valley Authority** [or **TVA**]

20. **Two consecutive chapters in this novel are both titled “Knights and Squires.” Its chapters “Dusk” and “Sunset” are written in the form of a play. This novel, which begins with a chapter called “Loomings” and a dedication to Nathaniel Hawthorne, ends with three chapters titled “The Chase”. This book’s middle section has** (\*) nonfiction chapters, like “The Gam” and “Cetology.” In its chapter “The Bosom-Friend”, the narrator meets a cannibal at the Spouter Inn in Nantucket. Chapters in this novel include “The *Pequod* Meets the *Rachel*” and “Queequeg in His Coffin”. For 10 points, name this novel about Ishmael and Captain Ahab, by Herman Melville.

ANSWER: ***Moby-Dick****; or The Whale*

TB: **Karl Marx wrote an extremely harsh biography of this man for the *New American Cyclopedia*. This man’s mistress Manuela Saenz threw herself in front of some assassins, saving his life. With Francisco Santander, he won a battle at the Vargas Swamp. This Creole advocated permitting any atrocity committed against a Spaniard as “war to the death.” He invited a southern contemporary to the** (\*) Guayaquil Conference, where this man advocated setting up small republics. Venezuela’s official name includes this native son, who served as the first president of Gran Colombia. For 10 points, name this “liberator” of South America.

ANSWER: Simón **Bolivar** y Ponte

Bonuses

1. Answer the following about Jerome Robbins, for 10 points each:

[10] Robbins choreographed this musical, with music by Leonard Bernstein, and directed its movie adaptation. Tony and Maria are stand-ins for Romeo and Juliet in gangster-ous New York City in this musical.

ANSWER: ***West Side Story***

[10] In Robbins’ memorable wordless opening to *West Side Story*, the Jets are hanging out on a basketball court, performing this action. The Sharks then proceed to do this action while dancing around, too.

ANSWER: **snap**ping their fingers [or obvious equivalents]

[10] Robbins also choreographed a ballet and musical named for this fictional character. Allison Williams played this male character in a live 2014 NBC revival of Robbins’ musical, in a sort-of-sequel to *The Sound of Music Live!*

ANSWER: **Peter Pan** [prompt on partial answer; or ***Peter Pan Live!***]

2. A socialist pedophile in this novel is reading every book in the library in alphabetical order. For 10 points each:

[10] Name this 1938 “manifesto” of existentialism. Its protagonist is writing a biography of a French aristocrat but is impeded by a funny feeling he gets whenever he holds a rock.

ANSWER: ***Nausea*** [or *La* ***Nausée***]

[10] In this existentialist play, a military deserter named Garcin is harassed for all eternity by Ines and Estelle in a small room with atrocious decorations.

ANSWER: ***No Exit*** [or ***Huis Clos***]

[10] Both *Nausea* and *No Exit* were written by this French patron of existentialism and author of *Being and Nothingness*.

ANSWER: Jean-Paul **Sartre**

3. Answer the following about revolutionary inventions of the late Middle Ages, for 10 points each:

[10] Medieval farmers finally figured out that overfarming land could kill the soil, so they introduced this system, during which a tract of land alternates between grain, legumes, and being left fallow.

ANSWER: **three-field** system [or **crop rotation**]

[10] These devices, which were used in Tang China, were improved in Europe by using water wheels as an escapement mechanism. Harun al-Rashid gave one powered by water to Charlemagne.

ANSWER: mechanical **clock**s [or astronomical **clock**s; or water **clock**s]

[10] These triangular sails, introduced by the Portuguese caravels, allowed boats to tack against the wind, and greatly sped up the voyages of sailors during the Age of Discovery.

ANSWER: **lateen** sails

4. The strengthening in connections across these spaces leads to long-term potentiation. For 10 points each:

[10] Name these narrow spaces that separate axons from dendrites, into which namesake vesicles containing neurotransmitters are released.

ANSWER: **synapse**s [or **synaptic cleft**s]

[10] Synapses are found in between these cells, the fundamental units of the nervous system.

ANSWER: **neuron**s

[10] Synapses are effectively analogous to these other structures in animal cells. These structures connect two cells and allow them to directly share cytoplasm, similar to plasmodesmata in plant cells.

ANSWER: **gap junction**s [prompt on partial answer]

5. George McGovern won nomination in 1972 largely due to these people, after he rewrote the DNC rules to allow them. For 10 points each:

[10] Name these people who cast a vote at the nominating convention, even though they’re not tied to a single state. They’re usually bigwigs in the party.

ANSWER: **superdelegate**s [or **automatic delegate**s]

[10] The rest of the delegates to the national convention are chosen either by primary election, or by one of these local gatherings at people’s houses and schools. Iowa kicks off the nominating season with one of these events.

ANSWER: **caucus**es

[10] Until 2000, California implemented this type of primary system, in which people were capable of voting for a member of either party, regardless of their registered affiliation. It often encourages “defensive voting.”

ANSWER: **blanket** primary

6. These people weren’t emancipated in Russia until 1861. For 10 points each:

[10] Name these feudal peasants.

ANSWER: **serf**s

[10] The emancipation of serfs in Russia took place under the rule of this reformist tsar, who implemented local governances called *zemstvo* and was assassinated in 1881.

ANSWER: Tsar **Alexander II** [prompt on **Alexander**]

[10] Abroad, Alexander wasn’t quite so reform-minded, since he joined this alliance with Kaiser Wilhelm I and Franz-Joseph to quell unrest in Poland and the Balkans. It was masterminded by Otto von Bismarck.

ANSWER: **Three Emperors’** League [or the League of the **Three Emperors**]

7. One of these creatures named Briareus either defended Zeus or fought against Zeus, depending on the myth. For 10 points each:

[10] Name these creatures which helped the Olympians against the Titans during the Titanomachy. They guard over the Titans in Tartarus.

ANSWER: **hecatonchire**s [heck-ah-TAWN-kyres; or close phonetic equivalents; prompt on **centimanes**]

[10] The hecatonchires each have this many hands. Io was guarded by a giant with this many eyes, named Argus.

ANSWER: **100** [or one **hundred**]

[10] The hecatonchires joined forces with these other creatures against the Titans. These one-eyed creatures forged Zeus’ thunderbolts.

ANSWER: **Cyclopes** [or **cyclops**]

8. Name some Imagist poets, for 10 points each:

[10] This man was briefly an Imagist before splitting with the movement’s leaders. He is best-known for writing about an object “beside the white chickens” on which so much depends, “The Red Wheelbarrow.”

ANSWER: William Carlos **Williams**

[10] This self-proclaimed leader of the Imagists wrote the “Pisan” section of *The Cantos* while in exile in Italy. His long poem *Hugh Selwyn Mauberley* is autobiographical.

ANSWER: Ezra **Pound**

[10] A female Imagist with this surname wrote the collection *A Critical Fable* and the poem “Patterns.” An earlier relative with this surname wrote *A Fable for Critics* and the *Biglow Papers*.

ANSWER: **Lowell** [or Amy **Lowell**; or James Russell **Lowell**]

9. For 10 points each, answer some questions about controversial endings to perfect game bids in baseball:

[10] In 2010, pitcher Armando Galarraga was on this team when his perfect game bid was broken up with two outs in the ninth by a bad call by first-base umpire Jim Joyce.

ANSWER: **Detroit** **Tigers** [accept either independently]

[10] In 2015, Pittsburgh’s Jose Tabata was controversially hit by a pitch to end this Washington Nationals ace’s bid for a perfect game with one out to go. This pitcher won the 2013 AL Cy Young as a member of the Tigers.

ANSWER: Max **Scherzer**

[10] In 1995, this then-Expos pitcher had a perfect game broken up in the tenth inning by a Bip Roberts double. This 2015 Hall of Fame inductee’s number 45 has been retired by the team with whom he won the 2004 World Series.

ANSWER: Pedro **Martinez**

10. These objects have lobes often labelled plus and minus, depending on the sign of the wave·function. For 10 points each:

[10] Name these complex solutions to the Schrodinger equation, which are characterized by the numbers n, l, and m.

ANSWER: atomic **orbital**s [or specific types of orbitals]

[10] According to the Pauli exclusion principle, each orbital can hold at most this many electrons. This is the number of available spin states in a single orbital.

ANSWER: **two**

[10] The square of the magnitude of a wavefunction equals this quantity, according to a fundamental tenet of quantum mechanics. Normalization is done to make sure that the integral of this quantity over all space equals one.

ANSWER: the **probability** of finding an electron [or **probability density**; or the **probability amplitude**]

11. Time to talk gun policy. For 10 points each:

[10] This pro-Second Amendment organization, led by Wayne LaPierre, is one of the most important lobbyists in Congress.

ANSWER: **National Rifle Association** of America [or the **NRA**]

[10] President Obama's recent executive order was worded to "clarify" the responsibility of this government agency in mandating background checks. This bureau in the Department of Justice is usually known by a three letter acronym.

ANSWER: Bureau of **Alcohol**, **Tobacco**, and **Firearms** [or **ATF**]

[10] The executive order was pushed along with the help of this current Attorney General, who succeeded Eric Holder.

ANSWER: Loretta **Lynch**

12. This piece is immediately preceded by “Saturday Night Waltz”, and in it, the woodblock represents the movement of a horse. For 10 points each:

[10] Name this segment of *Rodeo* based on the folksong “Bonyparte’s Retreat.” It is a lively Western dance in 2/4 (“two four”) time.

ANSWER: “**Hoe-Down**” from *Rodeo*

[10] *Rodeo* and *Billy the Kid* are ballets by this American composer who is better-known for a ballet choreographed by Martha Graham, *Appalachian Spring*.

ANSWER: Aaron **Copland**

[10] In the penultimate section of *Appalachian Spring*, Copland wrote five variations on this Shaker tune. This tune is in the Christian hymnal under the name “Lord of the Dance.”

ANSWER: “**Simple Gifts**” [or “The **Gift to Be Simple**”]

13. A famine in this region in 1770 killed ten million Indians under the governance of the British Empire. For 10 points each:

[10] Name this region of South Asia where Subhas Chandra Bose was born. The Awami League originated as an independence movement for this region.

ANSWER: **Bengal** [or West **Bengal**; or East **Bengal**; do not accept or prompt on “Bangladesh”]

[10] The 1770 famine was largely caused by overproduction of this commodity, rather than food. The British traded this good for silver with China.

ANSWER: **opium** [or **poppy**]

[10] In the 19th century, more than ten million people died in the Bengali region as a result of a series of epidemics of this bacterial disease, which is spread through contaminated drinking water.

ANSWER: **cholera**

*Note to moderator: Read the second part of this bonus slowly.*

14. The magnitude of the nth term of the Taylor series for this function of “x minus one” equals “x minus one” to the n, over n. For 10 points each:

[10] Name this function which has a vertical asymptote at x = 0 [x equals zero] but no horizontal asymptote.

ANSWER: **log**arithmic function [or **natural log**arithmic function; or **ln**]

[10] In reality, the Taylor series also includes this function of n, which alternates between positive and negative one, depending on if n is even or odd.

ANSWER: **negative one** to the **n** power [or **(-1)^n**; or mathematical equivalents; also accept **negative one to the n plus one** or **negative one to the n minus one** power]

[10] The derivative of a logarithmic function only equals one over x if this number is the base of the logarithm. This irrational number is the base of the natural logarithm.

ANSWER: **e** [or **2.718**…]

15. Name some appearances of the Devil in fiction, for 10 points each:

[10] Young Goodman Brown encounters a man in black, who brings him to a witch’s sabbath, in a story by this American novelist of *The Scarlet Letter*.

ANSWER: Nathaniel **Hawthorne**

[10] Jabez Stone is represented by this lawyer, against the Devil himself, in a story by Stephen Vincent Benet that parodies an earlier story by Washington Irving.

ANSWER: Daniel **Webster** [prompt on **Daniel**]

[10] A failed voice actor in this 20th century novel grows horns and turns into a goat, which gets him arrested by the London police. In contrast, another character in this novel turns into the angel Gabriel.

ANSWER: *The* ***Satanic Verses***

16. Wild Bill Hickock served as this city’s marshal for a grand total of two months after he accidentally shot his deputy. For 10 points each:

[10] Name this “wildest and wooliest” town in the West, which was the endpoint of the Chisholm trail for cattle rangers en route from Texas. It eventually got supplanted by Dodge City.

ANSWER: **Abilene**, Kansas

[10] Cattle drives ended with the closing of the open range, largely due to this invention. This invention, patented by Joseph Glidden, permitted rangers to stay in one place because their cattle could be fenced in.

ANSWER: **barb**ed wire [or **barb**ed fence; or **bob** wire]

[10] While stationed in Dodge City and on assignment in Texas, this Wild West lawman first encountered Doc Holliday. This man’s brother Virgil was the town marshal at Tombstone during the gunfight at the OK Corral.

ANSWER: Wyatt **Earp**

17. Malus’ Law states that the intensity coming out of these objects equals the intensity coming in times the cosine squared of the angular difference. For 10 points each:

[10] Name these devices which only allow certain light waves to pass, depending on the angles in which they oscillate. They are used in 3D glasses.

ANSWER: **polarizer**s [or **polarized lenses**; prompt on **filter**s]

[10] In a light wave, these two vector quantities oscillate in mutually perpendicular planes. The ratio of these two quantities equals the speed of light.

ANSWER: **electric** field and **magnetic** field [or **E** and **B**; prompt on partial answer]

[10] The Poynting vector, which is perpendicular to both the E and B fields, equals this quantity per unit area. This quantity measured in watts equals the amount of energy delivered per unit time.

ANSWER: **power**

18. Jean-Leon Gerôme painted in this style. For 10 points each:

[10] Name this style of art which was associated with the namesake institution in Paris. The neoclassical and Romantic styles derived from this mainstream painting school.

ANSWER: **Academic** art [or the **Academie** des Beaux-Arts; or **Academic**ism]

[10] The Romanticism of academic art was embraced by this French painter of *Liberty Leading the People* and *The Death of Sardanapalus*.

ANSWER: Eugene **Delacroix**

[10] The French Academy developed the hierarchy of genres, which placed this genre of painting at the top, above portraits. *The Battle of San Romano* and *The Death of General Wolfe* are examples of paintings in this genre.

ANSWER: **history** paintings [or **historical** painting]

19. This author’s translations of Ovid’s *Amores* got him into trouble with the law. For 10 points each:

[10] Name this Elizabethan author of *Doctor Faustus* who mysteriously died in a barroom brawl at the age of 29, unless he didn’t and really wrote all of Shakespeare’s plays, as some conspiracy theorists would have it.

ANSWER: Christopher **Marlowe**

[10] Advocates of the Marlovian authorship hypothesis point to a scene in this play in which Barabbas says, “What star shines yonder in the east?” This rather anti-Semitic play is set in the Ottoman Mediterranean.

ANSWER: *The* ***Jew of Malta***

[10] Although both Marlowe and Shakespeare published in *quarto* format, with four leaves per page, the first collection of Shakespeare was published in the “First” of these books, which instead has two leaves per page.

ANSWER: **folio**s [or the **First Folio**]

20. The central god of this religion is named Bondye [BOND-eye]. For 10 points each:

[10] Name this syncretic religion popular in Haiti, which venerates loas, though not creepy dolls.

ANSWER: **Voodoo** [or Haitian **Vodou**]

[10] A variant of Voodoo called La Regla de Arara developed in this country, which was also where Santería developed in the New World.

ANSWER: Republic of **Cuba**

[10] Haitian Voodoo often emphasizes these locations, which are where the earth and the spirit come together. Papa Legba is the loa of these locations.

ANSWER: a **crossroad**s