

### Tossups

1. According to one account, a man who wanted to trade cotton with the people on this vehicle was given a red cap and two hawk's bells before being sent away. The crew of this vehicle included the ultimately unneeded interpreter Luis de Torres. This vessel was made for holding cargo and was nicknamed for having been built in Galicia. The log of this carrack was reconstructed from the Barcelona Copy. Rodrigo de Jerez sailed on this ship and became the first European to smoke tobacco. Juan de la Cosa owned this ship, which Diego Arana used to build the walls at La Navidad after it ran aground on Hispaniola. For 10 points, name this flagship that only made one westward trip to the New World in 1492 as part of Christopher Columbus's voyage with the Pinta and Nina.

ANSWER: Santa Maria [accept Gallega before "Galicia" is read]

2. The protagonist of this game is attacked by guards after drawing a baseball numbered "77" in a raffle. Its protagonist listens to a woman sing an a capella version of "Fortunate Son" and plays a version of "Will the Circle Be Unbroken" on a guitar that he finds. Its protagonist, who has the letters AD tattooed on his hand, encounters Cornelius Slate after passing through a museum commemorating the defeat of the Boxer Rebellion. Locations in this game include the industrial center Finktown, which is overrun by a rebel group called the Vox Populi. Its protagonist, who chooses either a bird broach or a cage broach for his companion, drowns the prophet Zachary Comstock before a brief visit to the underwater city of Rapture. For 10 points, name this 2013 sequel in which Booker DeWitt and Elizabeth try to escape the floating city of Columbia.

ANSWER: BioShock Infinite [do not prompt on "Bioshock"]

3. This compound's structure is the simplest repeating unit in chiralane and twistane. 28 people were killed in Flixborough, England in 1974 when a factory oxidizing this compound into KA oil exploded. Steric effects are quantified by determining the difference in free energy when a substituent is placed on this molecule, a difference called the A value. Two molecules of this compound are fused together in decalin. To minimize flagpole interactions, this compound undergoes a 10.8 kcal pseudorotation. The twist boat is a conformer of this compound, though in its stablest form, half the hydrogens are equatorial and half axial; that conformer has zero strain and is called a chair. It is produced through complete hydrogenation of benzene. For 10 points, name this six-membered cycloalkane.

ANSWER: cyclohexane [prompt on C<sub>6</sub>H<sub>12</sub>]

4. This composer wrote a work with movements titled "Concord," "The Lake," and "The Mountain," the inaccurately titled *My Father Knew Charles Ives*. He wrote an unusually quiet fanfare for two offstage trumpets. Another composition by this composer contains the movements "Meister Eckhardt and Quackie" and "The Anfortas Wound," and takes its title from a book by Schoenberg. Another fanfare by this composer begins with a wood block marking the beat. This composer of *Tromba Lontana* and *Harmonielehre* wrote a "memory space" beginning with the repeated word "missing." That work, commissioned after the 9/11 attacks, is *On the Transmigration of Souls*. For 10 points, name this minimalist composer of *Short Ride in a Fast Machine* and operas like *Nixon in China*.

ANSWER: John Coolidge Adams

5. In *Au Revoir Les Enfants*, the orphans stop laughing and stare in awe when they see a panning shot of this structure while watching an early Charlie Chaplin short. Norman Lloyd plays an arsonist who falls to his death from it in the climactic scene of Alfred Hitchcock's *Saboteur*. *The Godfather Part II* includes a shot of a young Vito singing a Sicilian folk song while looking at this structure through the bars of a quarantine cell. Part of it was built by Richard Morris Hunt, who was funded largely by Joseph Pulitzer's pledge to print the name of each person who donated. A broken chain lies at the feet of this sculpture, which rests on a steel infrastructure designed by Gustave Eiffel. For 10 points, name this colossal Frederic Bartholdi sculpture of a crowned woman lifting a torch in New York Harbor.

ANSWER: the Statue of Liberty [or Liberty Enlightening the World]

6. In a novel by this author, an explosion at Stanton Mick's moon base supposedly kills Glen Runciter, although subsequent events imply that Runciter is actually alive and everyone else is in a state called "half-life" or "cold-

pac.” In that novel, Joe Chip discovers the role of the title time-altering substance. In another novel by this author, Agent Fred, also known as Bob Arctor, is addicted to Substance D. One of his novels takes place in the aftermath of World War Terminus, when the Voigt-Kampff test is used to distinguish humans from androids, which are tracked down by the bounty hunter Rick Deckard. For 10 points, name this author of *Ubik*, *A Scanner Darkly*, and *Do Androids Dream of Electric Sheep?*

ANSWER: Philip Kindred **Dick**

7. This man took a central motif of his first book from Poe’s story “Descent into the Maelstrom,” arguing his readers should calmly evaluate their situation to escape the onslaught. He noted that “we look at the present through a rear-view mirror” in a later book. Another of his books is structured around the ten “thunders” of *Finnegan’s Wake*. He argued that the concepts of “author,” “public,” and even “nation” were created by the uniformity of moveable type in a book subtitled “The Making of Typographic Man.” This author of *War and Peace in the Global Village* distinguished between two forms of media based on their level of involvement, his “hot” and “cool” media. For 10 points, name this Canadian author of *The Gutenberg Galaxy* and *Understanding Media* who wrote “the medium is the message.”

ANSWER: Marshall **McLuhan**

8. A ruler of this country worked towards establishing an “official nationalism” by creating the paramilitary Wild Tiger Corps. This country was forced to give up territories to France after August Pavie leveraged the Paknam Incident against it. A king of this country considerably lessened the trade restrictions of the Burney Treaty by agreeing to the Bowring Treaty with Great Britain. That king of this country responded to a letter from James Buchanan by offering to send elephants and employed as a governess the author of *The Romance of the Harem*, Anna Leonowens. For 10 points, name this Southeast Asian country that was never colonized by the Europeans and was once ruled by Mongkut, or Rama IV, who was the basis for a character in *The King and I*.

ANSWER: **Siam** [or Kingdom of **Thailand**; or **Ratcha Anachak Thai**; or **Prathet Thai**]

9. The masses of discrete objects that undergo this process are characterized by the Salpeter and Chabrier functions, which are initial mass functions. When a system's free-fall time is less than its sound-crossing time, this process will be initiated by a pressure shock. Its subjects often generate Herbig-Haro objects along polar jets during the T Tauri stage of this process, which typically involves evolution along the Hayashi track. Bok globules are sites for this process, which occurs at high rates in starburst galaxies and is often accompanied by the formation of a protoplanetary disk. For 10 points, name this process in which a dense clump within a molecular cloud contracts and turns into a luminous object like Betelgeuse.

ANSWER: **star formation** [or obvious equivalents]

10. This thinker called everything that is true of an individual substance at a particular time its “complete concept.” Ramon Llull’s *Ars Magna* inspired this man’s plans for an “alphabet of human thought.” This deviser of the predicate-in-notion principle has a namesake “law” concerning the identity of indiscernibles. This thinker replaced causation with his idea of “pre-established harmony.” This author of a refutation of Locke’s *Essay Concerning Human Understanding* and a *Discourse on Metaphysics* used the principle of sufficient reason to address the problem of evil in his *Theodicy*. For 10 points, name this German polymath who believed in immaterial windowless unities called monads, and wrote that God must have created the best possible world before co-discovering calculus.

ANSWER: Gottfried Wilhelm **Leibniz**

11. A poem by this author remembers a man who “loved his learning better than mankind” named Lionel Johnson. This author of “In Memory of Major Robert Gregory” tells the reader to “take down this book, and slowly read, and dream of the soft look your eyes had once” in the poem “When You Are Old.” In another poem, he laments that he can “but enumerate old themes” and resolves to lie down in “the foul rag and bone shop of the heart.” In another poem by this author, the speaker observes “nine-and-fifty” of the title birds swimming. This poet of “The Circus Animals’ Desertion” also wrote a poem in which a “rough beast ... slouches towards Bethlehem to be born.” For 10 points, name this poet of “The Wild Swans at Coole” and “The Second Coming.”

ANSWER: William Butler **Yeats**

12. During one time period of this type, a human witnessed a tree with leaves like elephant ears after seeing Moses weep in the sixth heaven. The 'Isha prayer service occurs during this time period. Within a specific holiday, many

people start off this time period by eating a date fruit at *iftar*. Prayer during one of these time periods is valued the same as a thousand months of prayers. A white steed with a human face flew to the "farthest mosque" in Jerusalem during one of these times with Muhammad. One of these "of Power" was the time at which Gabriel first appeared to reveal the Qur'an. It occurs after Maghreb time in Islamic timekeeping. For 10 points, name this recurring span of time, during which meals are eaten in Ramadan and the last of five prayers is said daily.

ANSWER: **nighttime** [or **layla**; prompt on "after sundown" or "before sunrise" or similar; do not accept "sunset," "sunrise," "sunup," "sundown," "dawn," or "dusk"; accept **Night** Journey or **Mir'aj** until "Isha" is read; prompt on "journeys" or "ascents to heaven" until "Isha" is read]

13. One mathematical object named for this man is equivalent to an uncontrolled quantum NOT gate, and is one of three such objects that perform rotations on the Bloch sphere. Those objects named for this man, which are isomorphic to the quaternions, are unitary involutions which, when made skew-Hermitian, are infinitesimal generators of SU(2). An integral containing a term of the form " $\phi^* \psi \psi^* \phi$ " induces a statistical interaction that is repulsive for the subjects of a statement named for this man; that interaction is the exchange interaction. In addition to naming three 2x2 complex spin matrices, he lends his name to the principle that no two fermions may occupy the same quantum state. For 10 points, name this Austrian who won the 1945 Nobel for his namesake exclusion principle.

ANSWER: Wolfgang Ernst **Pauli**

14. In the Ulster Cycle, one of these objects owned by Celtchar is kept in a cauldron of venomous black blood. One of these named Ron or Rhongomyniad was used by King Arthur. The warrior woman Scathach gave her trainee one of these objects. The island of Onogoro was made when brine dripped from a jeweled one of these objects, which was used to draw up Japan's islands by Izanagi and Izanami. Chiron's wedding gift to Peleus was one of these objects, which was later used to heal Telephus by Achilles. A sea monster's bones were used to make Gae Bulg, one of these things wielded by Cu Chulainn. Another one was stuck in Yggdrasil as a god hung from it to learn the runes. For 10 points, name these objects exemplified by Odin's Gungnir and the weapon used by Longinus on Jesus's side.

ANSWER: **spears** [or **lances**; or **javelins**; or **polearms**; accept **naginata** due to ambiguities with the Japan clue]

15. Hans Eworth painted a version of the Judgment of Paris in which Paris is replaced by this person. In a portrait of this person, there is a sharp contrast between the stormy skies in the top right and the sunny skies in the top left; that painting is by Marcus Gheeraerts the Younger. In another painting, this person's hand sits on a globe and a pair of green curtains in the background frame two scenes of naval battles. This person is the subject of the Ditchley Portrait. Two panel portraits of this person attributed to Nicholas Hilliard show her wearing her emblems, the pelican and the phoenix. One of her country's military victories inspired the allegorical *Armada Portrait* of her. For 10 points, name this "Virgin Queen" of England.

ANSWER: Queen **Elizabeth I** of England

16. In an article about the "Triage at" this location, M. Gregg Bloche and Jonathan Marks described choices made by Joseph Wehrman and David Auch that resulted in Gus being put on a leash. A series of events at this location led to the later retirement of Ricardo Sanchez. The possible spread of Copper Green to this location was described in the article "The Gray Zone" by Seymour Hersh. Joe Darby was responsible for alerting people to problems at this place, which were investigated in the Taguba Report. Chip Frederick, Lynndie England, and Charles Graner all worked at this location, where Manadel al-Jamadi was murdered. For 10 points, name this location where pictures and stories of physical and sexual abuse caused international outrage over the treatment of prisoners held by the U.S. in Iraq.

ANSWER: **Abu Ghraib** prison [or **Baghdad Central** Prison]

17. One character in this novel invents a bladder complaint called bipalychaetorsonectomy to justify ordering a beer milkshake. Another character in this novel is a bouncer who reads Christian Science texts to prostitutes and, after hearing someone call him a pimp, stabs himself in the heart with an icepick. In this novel, Holman's Department Store hires a flagpole skater who is going for a world record. In this novel, the dog Darling becomes the newest resident of a former fishmeal storage shed known as the Palace Flophouse, which is leased out to the main characters by the grocer Lee Chong. This novel is about a group of boys who try to throw a party for the marine biologist Doc on the title street. For 10 points, name this novel by John Steinbeck.

ANSWER: **Cannery Row**

18. Nationalists from this country fought for the Nazis in the Roland and Nachtigall Battalions. In this country in 1942, Bakery Number Three workers played soccer as FC Start against Nazis in the Death Match. The first only-online newspaper was named for this country's "Pravda" and was edited by the journalist Georgy Gongadze, whose murder became part of the "Cassette Scandal" during the presidency of Leonid Kuchma. Otto Rasch led Einsatzgruppe C in this country, where a forced famine called the Holodomor and the Babi Yar massacre occurred. This country evacuated citizens from its "zone of alienation," including Pripjat, in 1986. For 10 points, name this Eastern European country where the Chernobyl disaster occurred.

ANSWER: Ukraine [or Ukrayina]

19. In culture, this tissue is often referred to as a dome composed of a central zone, peripheral zone, and rib zone. Cells in this tissue are regulated by CLAVATA3, which binds to the CLV1 receptor to repress expression of WUS. The histogen theory originally outlined the organization of this tissue, which is populated by cells called initials. KNOX genes regulate cell niche in this tissue. According to the current model, the outermost section of this tissue is called the tunica and the inside is called the corpus. The cork cambium is an example of the lateral or secondary type of this tissue. For 10 points, name this tissue, the "apical" type of which is found in both roots and shoots, and which contains plant stem cells.

ANSWER: apical meristem [prompt on any type of cambium]

20. In a short story by this author, the title character kills his parents, who are sleeping in his bed, because he thinks it is his wife sleeping with another man. In that short story, the title character later helps a leper cross a river before being taken to heaven. He wrote a novel in which a deadly veil called the Zaimph is stolen by the mercenary leader Matho and recovered by the title character, whose father is Hamilcar Barca. This author of "The Legend of Saint Julian the Hospitaller" is best known for a novel whose title character attends a performance of *Lucia di Lammermoor* where she meets Léon Dupuis, with whom she has an affair despite being married to the doctor Charles. For 10 points, name this author of *Salammbô* and *Madame Bovary*.

ANSWER: Gustave Flaubert

TB1. In this country, a derelict maze-like concrete slaughterhouse was turned into a mall called "1933." A grey stone history museum in here was designed by the head of Amateur Architecture Studio. Kohn Pedersen Fox designed a "World Financial Center" named for a city in this country that has a trapezoidal gap at its top that has led to bottle opener comparisons. A TV headquarters here, which was made possible through Ole Scheeren's diagonal steel tubes, consists of two towers which converge at the top like a pair of shorts. In addition to Rem Koolhaas's TV station headquarters, this country is the site of an aquatics center known as the Water Cube and a Herzog and de Meuron stadium called the Bird's Nest. For 10 points, name this country, the site of the Forbidden City.

ANSWER: China

**Bonuses:**

1. Name some characters from *Remembrance of Things Past*, for 10 points each.

[10] This lover of Odette de Crécy and father of Gilberte visits the narrator's house when the latter is a child. The way past his house is contrasted with the Guermantes way, and gives its name to the first volume of the novel.

ANSWER: Charles Swann [accept either name]

[10] The narrator falls in love with this girl, who disappears at the end of *The Captive*. In *Sodom and Gomorrah*, the narrator begins to suspect that she is a lesbian.

ANSWER: Albertine Simonet [accept either name]

[10] This painter, also known as Monsieur Biche, is one of the many artists in the novel, and introduces the narrator to Albertine.

ANSWER: Elstir

2. This god killed Kingu to earn the Tablets of Destiny. For 10 points each:

[10] Name this four-eyed, four-eared son of Ea, the chief god of the Babylonian pantheon. Give the name he had *before* he received fifty extra names for splitting Tiamat apart to create the earth and sky.

ANSWER: Bel Marduk

[10] This Babylonian creation epic tells of Marduk's defeat of Tiamat. Its seven tablets, found in the Library of Ashurbanipal, open with the words "When on high," and are often compared to Genesis.

ANSWER: Enuma Elish

[10] This Babylonian god of wisdom received a winged dragon called the *mushussu* from his father Marduk. He writes the fate of each human in the Tablets of Destiny.

ANSWER: Nabu [or Nebo]

3. According to the relation of Kutta and Joukowski, the lift force on a fluid equals its far-field density times its far-field velocity times this quantity. For 10 points each:

[10] Name this quantity, which is defined as the line integral of velocity around a closed curve.

ANSWER: circulation

[10] According to a theorem due to this person, circulation is conserved for an inviscid fluid, assuming the integration loop travels with the fluid. This scientist co-names a fluid instability arising from velocity shear at a fluid interface.

ANSWER: William Thomson, Lord Kelvin [or William Thomson]

[10] Kelvin's circulation theorem fails in the presence of external rotational forces like this one, which seems to deflect objects as viewed from a rotating frame. This fictitious force determines the direction in which cyclones spin.

ANSWER: Coriolis force [or Coriolis effect]

4. This character is engaged to Rosa Bud, who is also pursued by Neville Landless. For 10 points each:

[10] Name this character whose murder remains unsolved because the novel in which he appears was left unfinished at the author's death.

ANSWER: Edwin Drood [accept either name]

[10] *The Mystery of Edwin Drood* is by this author of *Bleak House* and *Oliver Twist*.

ANSWER: Charles John Huffam Dickens

[10] People tend to think that this uncle of Edwin was meant to be the murderer. This choirmaster is also in love with Rosa.

ANSWER: John Jasper [accept either name]

5. This man was called "perhaps the most timid waterman in the world" and described as "a man of no peculiar merit." For 10 points each:

[10] Name this French-speaking man who worked for a time for the North West Company before he began living in Metaharta to trade with the Hidatsas and Mandan.

ANSWER: Toussaint Charbonneau

[10] Charbonneau and his wife Sacagawea worked as translators for this expedition, which explored the Louisiana Territory for Thomas Jefferson.

ANSWER: Lewis and Clark Expedition [or Corps of Discovery Expedition]

[10] This man, William Clark's slave, accompanied the expedition on its journey. Some Native Americans thought

he was magical because of his black skin.

ANSWER: Yorik

6. This island contains its country's most active volcano, Mt. Aso. For 10 points each:

[10] Name this site of the cities Fukuoka and Nagasaki. It is the third largest Japanese island after Honshu and Hokkaido.

ANSWER: Kyushu

[10] This body of water lies between the islands of Kyushu, Shikoku, and Honshu. It is home to the famous Itsukushima shrine and has long been a vital part of trade in Japan.

ANSWER: Seto Inland Sea [or Seto Naikai]

[10] Okinawa is the largest island in this chain that trails southwest from Kyushu.

ANSWER: Ryukyu Islands

7. This man used the word "différance" to describe wrongs which cannot be resolved using one rule applied to both the culprit and the victim. For 10 points each:

[10] Name this French theorist who, in 1979, wrote an essay defining the "condition" of his era as one in which all "metanarratives" or "grand narratives" have lost their legitimation.

ANSWER: Jean-Francois Lyotard

[10] Lyotard thereby defined this intellectual era, which Frederic Jameson related to "late capitalism." Post-structuralists such as Jacques Derrida were lumped into this era by Alan Sokal as "Fashionable Nonsense."

ANSWER: postmodernism [or postmodernity; or the postmodern condition]

[10] This other French postmodernist noted how "hyperreal" substitutes for reality are gaining ground in *Simulacra and Simulation*. He wrote on made-for-TV broadcasts of combat in "The Gulf War Did Not Take Place."

ANSWER: Jean Baudrillard

8. It speaks of the "strange things done in the midnight sun by the men who toil for gold." For 10 points each:

[10] Name this poem whose narrator performs the title action "on the marge of Lake LeBarge."

ANSWER: "The Cremation of Sam McGee"

[10] Robert Service, the author of "The Cremation of Sam McGee," is a poet from this country, also home to the 2013 Nobel laureate Alice Munro.

ANSWER: Canada

[10] Dunstan Ramsay dodges a snowball that hits Mary Dempster, causing her to go into labor, in this novel, the first in Canadian author Robertson Davies' Deptford Trilogy.

ANSWER: Fifth Business

9. Francis Hargrave argued in this case that English common law did not recognize the claims of Charles Stewart, who wanted to send this case's namesake to Jamaica. For 10 points each:

[10] Name this landmark case decided in 1772 by Lord Mansfield.

ANSWER: Somerset Case [or Somerset v. Stewart]

[10] The ruling in the Somerset Case was a victory for this movement in Britain, which sought to end the 'nefarious trade.' This movement fully succeeded in Britain in 1833 with the passage of the Emancipation Act.

ANSWER: abolitionism [accept equivalent answers about ending slavery]

[10] This Member of Parliament wrote *A Letter on the Abolition of the Slave Trade* before the passage of the Slave Trade Act of 1807, but died before he could see his efforts fully rewarded by the Slavery Abolition Act in 1833.

ANSWER: William Wilberforce

10. These proteins were named because mutants in them had unequally divided P granules in nematode zygotes. For 10 points each:

[10] Name this family of proteins which establish cell polarity. The apical complex composed of these proteins leads to asymmetric division of stem cells.

ANSWER: Par proteins [or specific proteins like Par3 or Par6]

[10] Par2 localizes to the posterior cortex of an embryo because this other protein, a component of the cytoskeleton, is mostly inactivated near the site of sperm entry. This protein's head slides along actin during muscle contraction.

ANSWER: myosin [or myosin II; or any other number of myosin]

[10] Polarization in a developing embryo is first readily apparent in this stage, composed of 16 or 32 cells, when

compaction occurs. This structure, which resembles a raspberry, develops into the blastocyst.

ANSWER: morula

11. Name some things from the intersection of earthquakes and architecture, for 10 points each:

[10] This architect crowed when his Imperial Hotel survived a Tokyo earthquake. He built the house Fallingwater in Pennsylvania.

ANSWER: Frank Lloyd Wright

[10] This C.Y. Lee building, which is vertically divided into eight segments, staves off earthquake damage with a massive gold-painted tuned mass damper which is visible to guests.

ANSWER: Taipei 101

[10] Shigeru Ban used this material to build disaster relief shelters in Japan and a cathedral in Christchurch after its 2011 earthquake. Frank Gehry's "wiggly chair" is made from this material.

ANSWER: cardboard [prompt on "paper"]

12. Antigonus I died during this battle, which was won by Lysimachus and Seleucus I. For 10 points each:

[10] Name this 301 BCE battle fought in Phrygia by members of the Diadochi. This battle stopped Antigonus from reuniting the lands of an earlier ruler.

ANSWER: Battle of Ipsus

[10] Antigonus's goal was to reunite the lands of this Macedonian conqueror. The Diadochi were named for being the successors of this man.

ANSWER: Alexander the Great [or Alexander III; prompt on "Alexander"]

[10] A key element to the Battle of Ipsus was Seleucus's use of these troops, which were provided by Chandragupta Maurya. When Antigonus's son Demetrius led the cavalry too far away from the main battle, these troops stopped him from returning.

ANSWER: war elephants

13. This doctrine can be found through individual conflicts or when a federal regulatory scheme occupies a whole field. For 10 points each:

[10] Name this doctrine with "conflict" and "field" varieties. It holds a state law is invalid when it conflicts with Federal law.

ANSWER: Federal preemption

[10] The preemption doctrine derives from this clause of Article VI of the Constitution, which places "This Constitution, and the Laws of the United States" above state law.

ANSWER: Supremacy Clause [or Article 6 Section 2]

[10] In August of 2013 the Justice Department announced it would not bring preemption cases against state laws regarding this substance, which is now legal in Washington and Colorado.

ANSWER: marijuana [accept equivalents]

14. In a prayer concluding the Torah service, the Torah is likened to this organism "for those who hold fast to it."

For 10 points each:

[10] Name this plant which Adam and Eve *were* allowed to eat from until their expulsion from the Garden of Eden. A flaming sword and two cherubim block the way back to this plant after they ate from its forbidden counterpart.

ANSWER: the Tree of Life [or Etz Chayim; prompt on "tree[s];" do NOT accept "Tree of Knowledge of Good and Evil"]

[10] These ten "emanations" of God, from Kabbalah and Jewish mysticism, are linked in a graph diagram sometimes called the "Tree of Life." They include *keter*, or "crown," and *gevurah*, or "bravery."

ANSWER: sefirot [or sephiroth]

[10] In the first book of the Book of Mormon, this father of Laman and Nephi has a vision of a tree of life with glowing white fruit. After his sons marry the daughters of Ishmael, his family sails from Arabia to America.

ANSWER: Lehi

15. "Clair de Lune" appears between "Menuet" and "Passepied" in his *Suite Bergamasque*. For 10 points each:

[10] Name this French Impressionist composer of *La Mer*.

ANSWER: Achille-Claude Debussy

[10] In this final movement of Debussy's *Children's Corner*, a ragtime melody is occasionally interrupted by a

leitmotif from Richard Wagner's *Tristan und Isolde*. It is named after a type of racist doll.

ANSWER: **Golliwogg's Cakewalk**

[10] In this final movement of Debussy's Nocturnes, a wordless chorus depicts the title mythological figures.

ANSWER: **Sirens** [or **Sirènes**]

16. The Lyman series of hydrogen's spectral lines occur in this region of the electromagnetic spectrum. For 10 points each:

[10] Name this region of the spectrum which is energetic enough to excite electronic transitions in highly conjugated systems. It has slightly shorter wavelength than visible light.

ANSWER: **ultraviolet** radiation [or **UV**]

[10] This compound absorbs UV light at 217 nm. The simplest conjugated compound, it reacts in the S-cis form with ethylene to give cyclohexene in the prototypical Diels-Alder reaction.

ANSWER: 1,3-**butadiene**

[10] UV light is used in this technique to measure the secondary structure of proteins. This technique measures the difference of absorbance in a sample between left and right circularly polarized light.

ANSWER: **circular dichroism** [or **CD**]

17. The first director of this agency was Isser Harel, who led it when it captured a man using the alias Ricardo Klement. For 10 points each:

[10] Name this Israeli intelligence service that in 1960 had agents travel to Buenos Aires to abduct Adolf Eichmann.

ANSWER: **Mossad** Merkazi Le-modiin U-letafkidim Meyuhadim

[10] The Moroccan waiter Ahmed Bouchiki was accidentally killed by Mossad instead of Ali Hassan Salameh, the Red Prince of this group. Members of it were killed by Mossad in Operations Wrath of God and Spring of Youth.

ANSWER: **Black September** [or **Aylul al-Aswad**]

[10] Mossad agents are accused of murdering Mahmoud al-Mabhouh, a founder of Hamas's Izzedine al-Qassam Brigades, in a hotel room in this Middle Eastern city in 2010.

ANSWER: **Dubai**

18. This poem frequently makes references to Confucian political philosophy. For 10 points each:

[10] Name this long poem, whose sections include "Rock-Drill" and "Pisan," and which famously denounces *usura*.

ANSWER: *The* **Cantos**

[10] *The Cantos* is by this American poet of the collection *Ripostes*. He wrote about a poet whose "true Penelope was Flaubert" in "Hugh Selwyn Mauberley."

ANSWER: Ezra Weston Loomis **Pound**

[10] Many of Pound's poems are extremely brief, like his two-line poem "In a Station of the Metro." Name the two adjectives which appear in the second line of the poem.

ANSWER: **wet** and **black**

19. Generically, these systems store and organize information. For 10 points each:

[10] Name these computer systems that can be queried using languages like SQL. "Relational" ones consist of tables in which each row is uniquely identified by a primary key.

ANSWER: **databases**

[10] This operation is used to link multiple tables together based on attributes that their columns have in common. The "inner" type of this operation in SQL is a generalization of the "natural" type in relational algebra.

ANSWER: **JOIN** [or **INNER JOIN**; or **natural join**]

[10] To achieve faster access at the cost of higher space usage, databases may create these structures, which permit faster-than-linear access to unordered data. This name is also given to the collection of records searched by a search engine.

ANSWER: **index**

20. This artist depicted a factory in his precisionist painting *Aucassin and Nicolette*. For 10 points each:

[10] Name this artist of *I Saw the Figure 5 in Gold*.

ANSWER: Charles **Demuth**

[10] This name appears cut off at the top of *I Saw the Figure 5 in Gold*.

ANSWER: **Bill**



[10] A mask and the numbers “1 2 3” appear in a Demuth painting whose title is this word repeated three times. Robert Indiana is known for his sculptures of this four-letter word, with the second letter tilted.

ANSWER: **love**