

1. **One character in this work disguises himself as Caius, though he is the Earl of Kent. At this work's end, Kent turns down an offer to rule alongside Albany, whose wife lusts after Edmund, who dies at (\*) Edgar's hands after betraying their father, the Duke of Gloucester. This play ends with the death of a woman who told her father she loves him as a daughter should, despite the flattery of sisters Regan and Cordelia. For 10 points, name this play about Cordelia and her sisters, daughters of the title monarch in this work by William Shakespeare.**

ANSWER: King Lear

059-09-11-01102

2. **Older names for this band included Feedback and The Hype. Their early works included the EP *Three* as well as better known entries, such as *Boy* and (\*) *War*. Following September 11, their songs "One" and "Walk On" off *Achtung Baby* became widely played on MTV. For 10 points, give the name of this rock band which has released *How to Dismantle an Atomic Bomb* and *The Joshua Tree*, whose Irish members include The Edge and Bono.**

ANSWER: U2

063-09-11-01103

3. **An experiment with similar results to it was later conducted by Trouton and Noble. Lorentz argued that the negative result of this experiment was caused by length contraction. This experiment used two mirrors and a (\*) beamsplitter, one of its namesake's interferometer. The fringe shift ended up being within the margin of error, meaning that the earth's movement relative to the substance in question did not appear to exist. For 10 points, name this experiment named for two scientists that was used to disprove the existence of ether.**

ANSWER: Michelson-Morley experiment

001-09-11-01104

4. **One of the events that caused this conflict took place when a general unknowingly admitted to the murder of a foreign ambassador, in the Jumonville affair. One battle of this war was the Battle of the Monongahela, where Edward (\*) Braddock died. Both Marquis de Montcalm and James Wolfe died in a major British victory of this war, the Battle of Plains of Abraham. For 10 points, what war, known as Seven Years War in Europe, pitted the colonists and the British against the namesake groups of people?**

ANSWER: French and Indian War [prompt on Seven Years War]

034-09-11-01105

5. **This entity's notable features include Gould's Belt and the great rift. It causes the zone of avoidance because of its concentrated dust. At its center is the radio emitting (\*) Sagittarius A-star. It includes the Scutum-Crux, Perseus, and Orion arms. It has a halo full of globular clusters and a flattened disk. Near this object is the Large Magellanic cloud. In three billion years this barred spiral will collide with its neighbor, Andromeda. For 10 points, name this galaxy that is home to Earth.**

ANSWER: the Milky Way Galaxy

001-09-11-01106

6. Lord Sidmouth scandalously thanked Thomas Trafford for preserving the public peace in the wake of this event. The orations of Henry Hunt led to this event, which also prompted the passage of the Six Acts. Fifteen people were killed during this event, which was a protest against the unemployment and hunger in Britain following the (\*) Napoleonic Wars. For 10 points, name this 1819 Manchester massacre, nicknamed by creating a portmanteau of its location at St. Peter's field and the site of Napoleon's final defeat.

ANSWER: the Peterloo Massacre [or Battle of St. Peter's Field before it is read]

026-09-11-01107

7. In one of this author's works, the gangsters Roma, Givola, and Giri help in *The Resistable Rise of Arturo Ui*. He wrote another play in which Katrin folds laundry on top of a cannon and Yvette sings "The Fraternalization Song." In that play, Ellif kills peasants and (\*) Swiss Cheese is more law abiding, but they are both executed during the Thirty Years War. For 10 points, name this German playwright of *Mother Courage and Her Children* whose character Mack the Knife appears in *The Threepenny Opera*.

ANSWER: Bertolt Brecht

063-09-11-01108

8. This man gave descriptive names to the four temperaments in order to study transmarginal inhibition, or the body's proclivity to shut down when faced with overwhelming pain and stress. This man introduced cut several nerve endings in his extensive study of animal (\*) digestive systems, which won him a Nobel for Medicine. This man didn't actually ring a bell to signal the animals he's best known for studying, but did collect their saliva as they responded to stimuli. For 10 points, name this proponent of classical conditioning, a Russian who trained dogs.

ANSWER: Ivan Petrovich Pavlov

020-09-11-01109

9. This mythological figure was also known as Cynthia for her birth on a namesake mountain in Delos. One of her attendants conceived Arcas and was changed into a bear, and she spared Agamemnon from having to sacrifice her daughter after he killed one of her pets. In addition to transforming (\*) Callisto and sparing Iphigenia, this goddess was symbolized by the bow and arrow, the deer, and the moon. For 10 points, name this Greek virgin goddess of the hunt, the twin sister of Apollo and known as Diana in Rome.

ANSWER: Artemis [or Potnia Theron; or Aeginea; or Phoebe; do not accept "Diana"]

059-09-11-01110

10. This artist left both his *Death of Actaeon* and *Flaying of Marsyas* unfinished at his death. One of his works shows a deity approaching an abandoned lover in a chariot pulled by two cheetahs, while another shows a sarcophagus and depicts two versions of a woman. In addition to (\*) *Bacchus and Ariadne* and *Sacred and Profane Love*, he painted a depiction of a nude woman who covers her genitalia with one of her hands. For 10 points, name this Renaissance painter of the *Venus of Urbino*.

ANSWER: Titian [or Tiziano Vecelli]

040-09-11-01111

11. At over twice the size of the one in Maine, this region's city of Bangor is the world's largest by that name. One of its population centers, located on the River Foyle, is often called Londonderry. The Stormont government of this place attempts to strike a balance between the interests of the (\*) Orange Order and the "provisional" wing of another group. Often called "Ulster" by one side, this place's existence was once disputed by the IRA. For 10 points, what is this constituent country of the United Kingdom, whose capital and largest city is Belfast?

ANSWER: Northern Ireland [prompt on Ulster before it is read; do not accept or prompt on "Ireland"]

019-09-11-01112

12. **This author described an old woman who asserts "life for me ain't been no crystal stair" in his poem "Mother to Son." This author's poem "Dream Variations" imagines "night coming tenderly, black like me." The speaker of another of this author's poems declares that his (\*) "soul has grown deep" like the Congo, Nile, and the Mississippi. For 10 points, name this Harlem Renaissance poet of "The Weary Blues" and "The Negro Speaks of Rivers."**

ANSWER: James Mercer Langston **Hughes**

004-09-11-01113

13. **This phase of mitosis sees the binding of Cdh1 and the subsequent cleavage of securin and M-phase cyclin. The lengthening of polar microtubules and shortening of kinetochore microtubules help separate (\*) spindle poles during this phase. It is the shortest stage of mitosis, and it sees the migration of sister chromatids to opposite ends of the cell in preparation for the formation of daughter nuclei. For 10 points, this is what phase of mitosis that follows metaphase and precedes telophase?**

ANSWER: **anaphase**

032-09-11-01114

14. **This work ends by extolling freedom from "dirty wind, fire, and water." The narrator of this poem mentions a rose "where some buried Caesar bled" and many translations of this work begin with the word "Awake!" One stanza of this poem describes "Eternal Saki" pouring from a bowl. The narrator of this poem describes "singing in the Wilderness" after mentioning "A (\*) Jug of Wine, A Loaf of Bread, and Thou" For 10 points, name this series of hundreds of quatrains famously translated by Edward Fitzgerald and written in the twelfth century by Omar Khayyam.**

ANSWER: **Rubaiyat** of Omar Khayyam

015-09-11-01115

15. **In one work by this composer, Ninetta sings the prayer "Deh tu reggi in tal momento" as she is led to the scaffold, before discovering that the silver spoon was taken by *The* (\*) *Thieving Magpie*. In another opera, which is rarely played except for its overture, Gessler decrees that the villagers must bow to his hat on top of a pole. That opera's title character succeeds in shooting an apple on top of his son's head. For 10 points, what Italian bel canto composer is known for *William Tell* and *The Barber of Seville*.**

ANSWER: Gioachino Antonio **Rossini**

034-09-11-01116

16. **This ruler caused a revolt in one territory by attempting to arrest Antonio Perez. This leader married the daughter of Henry II through the Treaty of Cateau-Cambrésis. This man caused trouble in a territory with the introduction of a Council of Troubles led by the Duke of Alba. That territory revolted against this man's rule under the leadership of (\*) William the Silent. This leader also assembled a force under the Duke of Medina-Sidonia. For 10 points, name this Spanish king who tried to bring England back under Catholic rule with the Spanish Armada.**

ANSWER: **Philip II** of Spain [prompt on **Philip**]

023-09-11-01117

17. **This man moved to Saratoga to study art with the portrait artist William Page. This man employed Timothy O'Sullivan and Alexander Gardner, the latter of whom produced "A Harvest of Death." He produced *The Gallery of Illustrious Americans* before focusing on documenting a brewing (\*) conflict. That new focus included almost being captured while working during the First Battle of Bull Run. For 10 points, name this American who took many photographs of both Abraham Lincoln and the Civil War.**

ANSWER: Mathew **Brady**

023-09-11-01118

18. **The L-system can generate these entities, as it is capable of describing many iterated function systems. The most famous example of these is defined in terms of whether points on the complex plane, when iteratively squared, are bounded. The Hilbert curve is a (\*) space-filling one of these.** Examples of these include the Menger sponge, the Sierpinski carpet, and the Koch snowflake. For 10 points, name these self-similar geometric structures exemplified by the Mandelbrot set.

ANSWER: fractal

001-09-11-01119

19. **After Monsieur Remontel's shop was destroyed in this nation, Louis-Philippe ordered a naval invasion under the command of Charles Baudin, sparking the Pastry War. France again intervened in this country's affairs when Napoleon III backed the coronation of (\*) Maximilian I as its emperor.** Maximilian was executed by a firing squad in 1867 after the overthrow of his monarchy by partisans led by Benito Juarez and Porfirio Diaz. For 10 points, name this North American nation, once home to the Aztec empire.

ANSWER: Mexico

040-09-11-01120

20. **Members of this religion believe in protecting the “tenth gate” of the human body, through the wearing of a *dastar*. Also on the head, the principles of *kesh* and *kanga* command members of this religion to refrain from cutting their (\*) hair and carry a comb at all times.** Those are among the “Five Ks” that initiated adults in this religion must follow. For 10 points, identify this monotheistic faith, which grew out of the mingling of Hinduism and Islam in the Punjab (POON-job) region of India, and was founded by Guru Nanak.

ANSWER: Sikhism

019-09-11-01121

21. **One severe type of this disease results in a mutation at Xp21, and onset usually occurs before age 5. Gower's sign is used to diagnose that type of this disease, in which excess calcium enters and degrades the sarcolemma. Drooping of the eyelids is a sign of the (\*) myotonic form of this illness.** Along with the Duchenne (doo-SHEN) type of this disease, a less severe type named for Becker delays complete wasting of the legs and pelvis as late as age 30. For 10 points, name this disease in which skeletal muscle atrophies.

ANSWER: muscular dystrophy

032-09-11-01122

1. This organ's loop of Henle helps create a concentration gradient in order to distill urine for excretion. For 10 points each:

[10] Name this organ whose basic unit is the nephron.

ANSWER: **kidney**

[10] This hormone produced by the adrenal gland increases kidney resorption of water and salts. Its secretion is stimulated by the production of angiotensin.

ANSWER: **aldosterone**

[10] These tubes conduct urine from the kidney to the bladder for excretion.

ANSWER: **ureter**

032-09-11-01201

2. This goddess is said to have danced before Ra in order to cheer him up when he was depressed. For 10 points each:

[10] Name this sky goddess who also governed the arts and was depicted as either a cow with the sun between her horns or a woman with a cow's head.

ANSWER: **Hathor**

[10] The name Hathor translates as "The House of" this other deity, whose left eye was the sun and right eye was the moon. A younger god of the same name avenged his father's murder by Set.

ANSWER: **Horus**

[10] Both Hathor and this other goddess were considered mother goddesses. This goddess was both the sister and wife of Osiris.

ANSWER: **Isis**

003-09-11-01202

3. She becomes jealous of Jane Fairfax and abuses her aunt Miss Bates. For 10 points each:

[10] What title character ends up with George Knightley despite her earlier conviction not to marry?

ANSWER: **Emma** Woodhouse

[10] This British author of *Emma* also wrote *Pride and Prejudice*.

ANSWER: Jane **Austen**

[10] Emma is financially independent, unlike the Dashwoods, who are forced to move in at Barton Park after the death of their father in this Austen novel.

ANSWER: **Sense and Sensibility**

034-09-11-01203

4. Name these recent phenomena in American transportation, for 10 points each.

[10] On December 31, 2007, this sixteen-year project to reroute and expand the Interstate Highway System in Boston finally came to an end, twelve billion dollars over budget.

ANSWER: the **Big Dig** [or the **Central Artery/Tunnel Project**]

[10] In March 2009, construction began on a seven-year project to construct a "Silver Line" for this public transit system, whose Orange Line extends from Fairfax in one state to Prince George's County in another.

ANSWER: Washington, D.C. **Metro**

[10] Las Vegas and a small portion of Seattle's downtown are the chief American places whose public transit takes this form. It is more extensively used in Japanese cities such as Chiba and Osaka.

ANSWER: **monorail**

019-09-11-01204

5. The Lamb shift takes place between the energy levels of the 2s and 2p kinds of these constructs. For 10 points each:

[10] S, p, d, f, and g designate what region of space in an atom where an electron might be located?

ANSWER: atomic **orbital**

[10] No two electrons in an orbital can have the same spin according to this statement that no two fermions can occupy the same quantum state at the same time.

ANSWER: **Pauli exclusion** principle

[10] This is the energetic region in a solid where electron states do not exist. It is equivalent to the amount of energy needed to move a valence electron to a conduction state.

ANSWER: **band gap**

032-09-11-01205

6. This novel's protagonist refuses to grow up when he hears his father proclaim that he will become a grocer when he does. For 10 points each:

[10] Name this first book of the Danzig Trilogy.

ANSWER: *The **Tin Drum*** [or *Die **Blechtrommel***]

[10] Name that protagonist, whose first love, Maria, marries Alfred, and whose second, the dwarf Roswitha, is killed by the Allies.

ANSWER: **Oscar** Matzerath [accept **Oscar Matzerath**; prompt on **Matzerath**]

[10] This author of *The Tin Drum* more recently wrote *Crabwalk*.

ANSWER: Günter **Grass**

022-09-11-01206

7. This theorist formulated the "vita activa" in her seminal text, *The Human Condition*. For 10 points each:

[10] Name this German Jewish theorist who coined "the banality of evil" to describe the actions of Nazi Adolf Eichmann, whose trial in Jerusalem she covered for *The New Yorker*.

ANSWER: Hannah **Arendt**

[10] Arendt analyzed the "origins" of this form of political system in Nazi Germany. Also followed in Soviet Russia, this system puts absolute power in the hands of one faction and is associated with extreme militarism and nationalism.

ANSWER: **totalitarianism**

[10] In *The Origins of Totalitarianism*, Arendt analyzed loneliness. Another formulation of loneliness was made by Robert Putnam, who noted the decreased league participation of Americans in this sport in favor of playing it "alone."

ANSWER: **bowling** [or **Bowling Alone**]

003-09-11-01207

8. Their leader Jan van Leiden had sixteen wives and often preached in the nude. This group adopted pacifist principles after they failed in a bloody attempt to establish a New Jerusalem in Munster. For 10 points each:

[10] Name this religious sect which argued that their namesake sacrament should only be performed on adults.

ANSWER: **Anabaptists** [do not accept or prompt on Baptists]

[10] This former priest and creator of the *Ninety-Five Theses* strongly condemned the Anabaptists as well as the egalitarian supporters of the earlier Peasant's Rebellion.

ANSWER: Martin **Luther**

[10] This friend of Martin Luther authored *Loci Communes Theologici* and the *Augsburg Confession*.

ANSWER: Philip **Melancthon**

063-09-11-01208

9. The series *States of Mind* included a work that depicted the chaos of a train station, exemplifying this art movement. For 10 points each

[10] Name this Italian art movement that beautified speed and violence. Its characteristic works include *Dynamism of a Dog on a Leash* by Giacomo Balla and sculptures by Umberto Boccioni.

ANSWER: **Futurism**

[10] The *Futurist Manifesto* declared a roaring motor car to be more beautiful than the *Winged Victory of Samothrace*, a depiction of this aspect of Athena.

ANSWER: **Nike** (NIGH key)

[10] The *Winged Victory of Samothrace* is situated prominently on the Daru staircase of this art museum that includes an I.M. Pei Glass Pyramid and houses the *Mona Lisa*.

ANSWER: **Louvre** Museum [Musée du **Louvre**]

034-09-11-01209

10. After this Republic became a U.S. territory, its first delegate to Congress was Robert Wilcox, who had previously tried to overthrow its government three times. For 10 points each:

[10] Name this current state in which Wilcox objected to the "Bayonet Constitution" forced upon King Kalakaua.

ANSWER: **Hawai'i**

[10] This man became Hawai'i's first territorial governor after that annexation; he had previously served as president of the Republic of Hawai'i.

ANSWER: Sanford Ballard **Dole**

[10] Dole and others proclaimed the Republic of Hawai'i after overthrowing this younger sister of Kalakaua, the last monarch of Hawai'i.

ANSWER: Queen **Liliuokalani**

003-09-11-01210

11. It is equivalent to the statement that heat spontaneously flows only from hotter objects to colder ones. For 10 points each:

[10] Identify this statement that the entropy of the universe increases for any spontaneous process.

ANSWER: **second** law of thermodynamics

[10] This thought experiment, in which an entity separates fast- and slow-moving particles, has been shown not to violate the second law of thermodynamics as originally thought.

ANSWER: **Maxwell's demon**

[10] This type of process sees no transfer of heat, and thus, according to the first law of thermodynamics, work can only be done at the expense of internal energy.

ANSWER: **adiabatic** process [or **isocaloric** process]

032-09-11-01211

12. Its outlet to the Gulf of Venezuela is spanned by the General Rafael Urdaneta Bridge. For 10 points each:

[10] Name this Venezuelan lake fed primarily by the Catatumbo River and plagued by a duckweed infestation.

ANSWER: Lake **Maracaibo**

[10] The Gulf of Venezuela opens into this larger body of water that is bordered to the northwest by the Gulf of Mexico and to the east by the Atlantic Ocean.

ANSWER: **Caribbean Sea**

[10] The city of Maracaibo is the second-largest in Venezuela; the largest is this capital city separated from the Caribbean Sea by the Cerro Avila Mountain.

ANSWER: **Caracas**

040-09-11-01212

13. In this ballet, the evil sorcerer Von Rothbart casts a spell on Odette. For 10 points each:

[10] Name this ballet in which Prince Siegfried breaks the spell which transforms Odette into the title bird.

ANSWER: Swan Lake [or Lebedínoye Ozero]

[10] In this other Tchaikovsky ballet often performed around Christmas, Herr (AIR) Drosselmeyer gifts the protagonist with the title object, which later turns into a prince.

ANSWER: The Nutcracker

[10] This protagonist of *The Nutcracker* throws her slipper at the Mouse King and accompanies the Prince on a dreamlike travel sequence.

ANSWER: Clara

015-09-11-01213

14. Works of this author include the autobiography *American Outpost* and a Pulitzer winner *Dragon's Teeth*. For 10 points each:

[10] Name this socialist author, who ran for Governor of California once as a Socialist and once as a Democrat.

ANSWER: Upton Sinclair

[10] An unintended consequence of this Sinclair novel about Jurgis Rudkus, a worker in the meat-packing industry, was the passage of Pure Food and Drug Act and Meat Inspection Act.

ANSWER: The Jungle

[10] Another American author who ran for a political position from the Socialist Party was this guy, who wrote about the dystopian *The Iron Heel* in addition to *The Sea-Wolf* and *White Fang*.

ANSWER: Jack London

034-09-11-01214

15. Scrap metal dealers needed nine hundred camels to haul away the bronze from this statue after an earthquake. For 10 points each:

[10] Identify this statue of Helios, executed by Chares of Lyndus, which was one of the Seven Wonders of the ancient world.

ANSWER: the Colossus of Rhodes [prompt on partial answer]

[10] Another sculpture among the ancient wonders was the depiction of this Greek god, seated and holding Nike in one hand, at Olympia.

ANSWER: Zeus

[10] This creator of the bronze *Athena Promachos* sculpted the statue of Zeus at Olympia.

ANSWER: Phidias

019-09-11-01215

16. This ruler created a legislative body called the Council of Four Hundred. For 10 points each:

[10] Name this seventh-century BCE lawgiver who produced a legal code that was very strict.

ANSWER: Draco

[10] This seventh- and sixth-century BCE lawgiver attempted more evenhanded reforms of Draco's law code.

ANSWER: Solon

[10] Both Draco and Solon were lawgivers from this Greek city-state, whose navy was built up by the general Themistocles.

ANSWER: Athens

026-09-11-01216

17. He was the first Asian to win a Nobel. For 10 points each:

[10] What Bengali poet wrote the play *Red Oleanders* and the novel *The Home and the World*?

ANSWER: Rabindranath **Tagore**

[10] In this collection of song offerings, Tagore expresses himself toward Jivandevata. Its first poem is about how the divine empties and fills everything with life.

ANSWER: ***Gitanjali***

[10] This Irish poet wrote the introduction to *Gitanjali*. He is famous on his own right for works such as “Wild Swans at Coole” and “The Second Coming.”

ANSWER: William Butler **Yeats**

034-09-11-01217

18. This type of algorithm must be used on a list before a binary search can be run effectively. For 10 points each:

[10] Name this algorithm that compares two elements in a list and swaps them as needed, and which can be used to give order to a list of elements.

ANSWER: **sorting** algorithm

[10] This type of sorting algorithm makes use of pivot values and is also known as partition-exchange sort.

ANSWER: **quicksort**

[10] This sorting algorithm uses diminishing increments in gap sequences that sorts elements first in small groups before ending by sorting the entire list.

ANSWER: **Shell** sort

023-09-11-01218

19. Name these items of religious fashion, for 10 points each.

[10] Most Orthodox and Conservative Jewish men wear this skullcap during daily activities; in many Reform congregations, it is worn only during religious services, and by both men and women.

ANSWER: **yarmulkes** [or **kippas**; or **kippot**]

[10] This most restrictive form of *niqab* for Islamic women is similar to the Iranian *chador*, but with a mesh or cloth screen added to cover the eyes. It is most commonly used in Afghanistan.

ANSWER: a **burqa**

[10] Emulation of the Biblical Nazarites and Kenyan independence fighters, as well as a passage in Leviticus, are the reasons that a certain religion of twentieth-century origin mandates this hairstyle.

ANSWER: **dreadlocks** [in Rastafarianism]

019-09-11-01219

20. Important leaders of this dynasty include Wudi, and this dynasty was founded by Liu Bang. For 10 points each:

[10] Name this Chinese dynasty that followed the Three Kingdoms period and shares its name with the term for ethnic Chinese.

ANSWER: **Han** dynasty

[10] A Taoist sorcerer led this rebellion against the Han dynasty named for the colorful headgear of its participants.

ANSWER: **Yellow Turban** rebellion

[10] This rebellion against the Qing dynasty was led by Hong Xiguan in an attempt to establish the Heavenly Kingdom of Great Peace.

ANSWER: **Taiping** rebellion

032-09-11-01220

21. For 10 points each, name these Spartan rulers.

[10] This king led a band of 300 warriors to their deaths at the Battle of Thermopylae.

ANSWER: **Leonidas**

[10] This predecessor of Leonidas aided Cleisthenes in retaking Athens from Hippias, though he did not intervene in the Ionian revolt of Aristagoras.

ANSWER: **Cleomenes I**

[10] While ruling as the guardian for Charilaus, this lawgiver established a twenty-eight man senate.

ANSWER: **Lycurgus**

040-09-11-01221