

1. **This scientist was the first to note that Mars's polar caps have seasonal changes, leading this man to propose that they are made of water. He was the first to realize that double stars actually contained two gravitationally bound stars, leading to him coining the term binary star. This man also coined the word asteroid. He discovered Enceladus and Mimas, as well as infrared radiation. This scientist discovered the moon (*) Oberon, as well as the object it orbits. For 10 points, name this discoverer of Uranus.**

ANSWER: Sir Friedrich Wilhelm Herschel

001-11-29-02102

2. **The death of Beatriz Viterbo opens one work by this man, while another work concerns a German spy during World War One named Dr. Yu Tsun who murders a man named Dr. Albert to convey the location of British artillery. This writer of the story "The Garden of Forking Paths" also wrote a work that partially takes place in the house of the poet Carlos Danieri and concerns a (*) point in space that contains all other points. For 10 points, name this Argentine author known for writing such works as "The Library of Babel" and "The Aleph".**

ANSWER: Jorge Luis Borges

064-11-29-02103

3. **When this man visited Argentina, Severino Di Giovanni planned to bomb the train he was on. His namesake "moratorium" called for a one-year cessation of reparation payments by Germany. This man signed the act outlawing yellow dog contracts named for Norris and La Guardia. This man had (*) Douglas MacArthur break up the Walter W. Waters-led Bonus Army. For 10 points, name this President whose time in office was marred by his poor response to Black Tuesday, which occurred at the start of the Great Depression.**

ANSWER: Herbert Clark Hoover

024-11-29-02104

4. **In one novel by this author, the protagonist almost decides to join the agrarian community of a Mexican woman named Terry. Old Bull Lee is a drug addict who appears in a novel by this author, who described climbing Matterhorn Peak with Gary Snyder in his novel *The Dharma Bums*. This author fictionalized himself as (*) Sal Paradise in a novel that centers on his escapades with Neal Cassady, who is fictionalized as Dean Moriarty. For 10 points, name this writer from the Beat generation who wrote *On the Road*.**

ANSWER: Jean-Louis "Jack" Kerouac

026-11-29-02105

5. **During this event, Edmund Heines was found in bed with an eighteen-year-old. One of the architects of this event was Viktor Lutze, who became the successor of the primary target of this event. Another victim of this event was Kurt von Schleicher, the last Chancellor of the Weimar Republic. Its aim was to eliminate supporters of (*) Franz von Papen and other critics of the Nazi regime. For 10 points, name this purge that targeted Ernst Röhm and the SA and was led by Adolf Hitler.**

ANSWER: Night of the Long Knives [or Operation Hummingbird; or Nacht der langen Messer]

024-11-29-02106

6. This author tells of Roberto della Griva, who is stranded near the International Date Line, in his *Island of the Day Before*. In another book of his, Jacopo Belbo uses the computer Abulafia (AH-boo-LAH-fee-uh) to concoct a parody of conspiracy theories. This author and semiotician's (SEM-eye-ott-ISH-in's) first novel features (*) Adso of Melk trying to solve a series of murders in a medieval monastery. For 10 points, name this Italian author of *Foucault's Pendulum* and *The Name Of The Rose*.

ANSWER: Umberto Eco

082-11-29-02107

7. One leader of this modern country issued a *farman* in 1848 that abolished the importation of slaves by sea. That leader was part of this country's Qajar dynasty. A ruler of another dynasty in this modern country had a secret police called the Savak, led the White Revolution, and was almost ousted by Mohammad Mossadeq. That leader of the (*) Pahlavi dynasty lost power in this country after a revolution turned it into an Islamic republic. For 10 points, name this Middle Eastern country taken over in 1979 by supporters of the Ayatollah Khomeini.

ANSWER: Islamic Republic of Iran [or Jomhuri-ye Eslami-ye Iran]

023-11-29-02108

8. In Orphic tradition, this god is known as Phanes and is called the firstborn. The story of this male god and his love is first told in *The Golden Ass*, by Lucius Apuleius (app-uh-LAY-us). In that story, this figure leaves his lover after she drops oil on him while trying to see his face. This figure fathers Hedone (hud-OWN-ay), goddess of (*) pleasure, with his wife, the mortal Psyche. For 10 points, name this son of Aphrodite and Ares, a love god depicted with wings and a bow.

ANSWER: Eros [or Cupid]

080-11-29-02109

9. One character in this opera announces his profession in the aria "Der vogelfänger bin ich ja" (DER FOH-gehl-FON-ger BIN ICK YAH) before having his mouth padlocked. The aria "O Isis und Osiris" is sung by Sarastro (sah-RAHSS-tro), whose servant Monostatos (mah-NO-stah-TOSSE) tries to take away the love interest of the protagonist. In this opera, (*) Tamino is asked by the Queen of the Night to find her daughter Pamina with the aid of the bird catcher Papageno (pa-pa-GAY-no) and the title instrument. For 10 points, name this opera by Wolfgang Amadeus Mozart.

ANSWER: *The Magic Flute* [or *Die Zauberflöte*]

083-11-29-02110

10. This man was replaced in one role by Raymond T. Odierno. In 2007 MoveOn.org published a full page ad in the New York Times condemning this man's "betrayal." From 2008 to 2010 this man moved to Tampa, Florida to head U.S. Central Command. In 2010, this man returned to field command after an interview in (*) *Rolling Stone* led to the ouster of Stanley McChrystal from command in Afghanistan. For 10 points, name this Army General known for his success in Iraq.

ANSWER: David Howell Petraeus

015-11-29-02111

11. Gradient-index ones have a variable spatial distribution of indexes. Metamaterials can be used to create "super" ones. These are subject to chromatic and spherical aberration. For thin ones, an approximation exists to the formula named for the maker of one. (*) Converging ones include those that are biconvex. An important feature of them is their focal length. For 10 points, name these optical implements which refract light which can be found in glasses.

ANSWER: lens

001-11-29-02112

12. **An underwater facility beneath a prison in this city is referred to as "The Raft." The Avengers formerly used Stark Tower in this city as a headquarters, and Wilson Fisk runs the underworld in this city. The Richards family purchased the upper five floors of the Baxter Paper Company Building in this city. In 2009, this city elected as its new mayor former newspaper magnate (*) J. Jonah Jameson. For 10 points, name this city in which Peter Parker sold pictures of himself as Spider-Man to the Daily Bugle newspaper.**

ANSWER: New York City

002-11-29-02113

13. **The equation for the volume of this solid can be derived from the equation for the volume of a cone using Cavalieri's principle. The space enclosed by one of these solids can be doubled according to the Banach-Tarski paradox. When a plane passes through the center of this solid, the resulting intersection is known as a great (*) circle. All the points on its surface are the same distance from its center. For 10 points, name this solid whose volume is four-thirds pi times r cubed and whose surface area is four pi times r squared.**

ANSWER: sphere

024-11-29-02114

14. **Although some believed that his brother Otto was a better choice, this man came to power after the death of his father Charles Louis, which itself followed the suicide of Crown Prince Rudolf. A proponent of "Trialism," he had a morganatic marriage with Sophie von Chotek despite opposition from his uncle Emperor (*) Franz Joseph. During a visit to Sarajevo, this man was murdered by the Black Hand member Gavrilo Princip. For 10 points, name this Archduke of Austria whose assassination is considered to have sparked World War I.**

ANSWER: Franz Ferdinand

083-11-29-02115

15. **This artist's *The Fairman Rogers Four in Hand* was based off the photographs of Eadweard Muybridge who showed that all four of a horse's legs leave the ground while it is galloping. One work by this artist shows a group of six naked men swimming in a lake. In another work by this painter, a man in the foreground sits in a rowboat while on the Schuylkill River. In addition to (*) *The Swimming Hole* and *Max Schmitt in a Single Scull*, this artist painted a work in which a group of students listen to a lecture by the title professor about a surgery being performed at Jefferson Medical College. For 10 points, name this American artist of *The Gross Clinic*.**

ANSWER: Thomas Eakins

064-11-29-02116

16. **Like hydrocarbons, this compound has unusually high concentration in photochemical smog in relation to other kinds of smog. Although only about ten percent of the total amount of it in the atmosphere is in the troposphere, it is nevertheless classified as a greenhouse gas. This molecule is broken down in a radical reaction with (*) CFCs. For 10 points, name this ultraviolet light-absorbing molecule whose namesake "layer" now has a hole in it.**

ANSWER: ozone [or O₃]

003-11-29-02117

17. As an Oxford student, this man collaborated with Robert Boyle to study the nature of human blood. He rebuked theologians who engaged in bitter debates over abstruse issues in his *The Reasonableness of Christianity* and advocated an end to persecution of Catholics in his *Letter Concerning Toleration*. This author of a "fundamental constitution" for the (*) Carolina colonies said that property rights derive from "mixing labor" with the land and advocated the protection of those rights with a social contract in the second part of his response to Robert Filmer's argument for the divine right of kings. For 10 points, name this author of *Two Treatises on Government* whose individual rights philosophy greatly influenced the American Founding Fathers.

ANSWER: John Locke

019-11-29-02118

18. In the final stanza of this poem, the speaker asks the addressee to roll all of their strength and sweetness "up into one ball." Earlier, he describes finding rubies along the Ganges River and notes that before him lay "deserts of vast eternity." The speaker of this poem would spend hundreds of years admiring the addressee's (*) body and wait for her "till the conversion of the Jews," but unfortunately he hears "time's winged chariot hurrying near." Beginning with the line "Had we but world enough, and time," this is, for 10 points, what poem by Andrew Marvell?

ANSWER: "To His Coy Mistress"

083-11-29-02119

19. One composition in this genre uses a 5/4 "limping waltz" and has the marking "pppppp" for extra quietness. Another of these compositions uses "Goin' Home," a spiritual, and another, which commemorates the July Revolution, was written by Berlioz and is called "Funeral and Triumphant." The "Queen" and "Miracle" ones are among those nicknamed for Paris and London, which were written by a man who composed (*) 104 of these works. For 10 points, identify this type of composition, examples of which include Tchaikovsky's *Pathetique* and Dvorak's *New World*.

ANSWER: symphony [or symphonies]

020-11-29-02120

20. The Raja Ampat Islands and this island are the last habitats of the Northern cassowary. Michael Rockefeller disappeared while investigating this island's Asmat region. This island's highest point is Puncak Jaya, though its Mount Wilhelm is sometimes considered the highest point in Oceania. This island's western half was once known as (*) Irian Jaya; its eastern half is part of an independent country with capital at Port Moresby. For 10 points, name this island that includes Indonesia's West Papua province.

ANSWER: New Guinea [do not accept "Papua New Guinea"]

003-11-29-02121

21. This monarch was known for collecting books and works of art in creating the King's Library. This man's predecessor was the last British monarch to personally lead troops into battle at the Battle of Dettingen. This monarch dismissed the Fox-North Coalition due to his hatred of Charles James Fox, and he appointed Fox's rival, Pitt the Younger, as Prime Minister. Some historians believe that (*) porphyria caused his mental illness. For 10 points, name this English king whose reign overlapped with the American Revolution.

ANSWER: George III of Great Britain [or George William Frederick; or Georg Wilhelm Friedrich; prompt on George]

024-11-29-02122

22. The remodeling action of polycomb proteins prevents this process and the homeodomain is found in "factors" of it. This process often ends with the addition of a poly(A) tail. The removal of exons, in a process called splicing, also occurs at the end of this process. Retroviruses such as HIV are named for their ability to perform this process in (*) reverse. The product of this process is subsequently shipped off to the ribosome. For 10 points, name this biological process in which a DNA sequence is used to create a sequence of messenger RNA.

ANSWER: transcription

064-11-29-02123

23. This man wrote a play whose title is a double entendre which can refer to Lord Darlington. His scathing letter to Alfred Douglas was later edited and published as *De Profundis*; that work, like a poem that claims that "each man kills the thing he loves," was written while in Reading Gaol (JAIL). One of this man's works was satirized in the skit, (*) "The Advisability of Not Being Brought Up in a Handbag." For 10 points, name this author of *Lady Windermere's Fan* and *The Importance of Being Earnest*.

ANSWER: Oscar Fingal O'Flaherty Wills Wilde

003-11-29-02124

1. President James Buchanan recommended statehood for this territory under the pro-slavery Lecompton Constitution. For 10 points each:

[10] Name this state that saw fighting over slavery culminate with the Sack of Lawrence during its "Bleeding" period.

ANSWER: **Kansas**

[10] This Kansas was the father of Nancy Kassebaum. He lost his home state as the Republican candidate against Franklin Roosevelt in the 1936 election.

ANSWER: Alf **Landon** [or Alfred Mossman **Landon**]

[10] Kansas was also the home of this longtime senator who was Gerald Ford's vice-presidential candidate in 1976. He later lost to Bill Clinton in the 1996 elections.

ANSWER: Bob **Dole** [or Robert Joseph **Dole**]

030-11-29-02201

2. He composed the opera *L'Arianna*. For 10 points each:

[10] Name this Italian baroque developer of the opera genre. He composed *L'Orfeo* and *The Coronation of Poppea*.

ANSWER: Claudio **Monteverdi**

[10] This man's operatic take on the Orpheus story was *Orpheus in the Underworld*, which contains can-can music. He also composed *The Tales of Hoffmann*.

ANSWER: Jacques **Offenbach**

[10] Like several other composers, this man wrote an *Orfeo ed Euridice*. He composed the *Surprise* and *Farewell* symphonies.

ANSWER: Franz Joseph **Haydn**

001-11-29-02202

3. This is represented by an equals sign with a tilde on top. For 10 points each:

[10] Name this relationship between two shapes where one can be converted to the other through an isometry.

ANSWER: **congruent** [or **congruence**]

[10] This is a weaker condition than congruence. It means that the figures have the same shape, but are not necessarily the same size.

ANSWER: **similarity**

[10] This type of similarity results from the composition of a dilation and a rotation about a common point. This term can also refer to a shape named for Fermat where the radius is proportional to the square root of the angle.

ANSWER: **spiral** similarity

001-11-29-02203

4. This painting shows a lonely street scene and an advertisement for Phillies cigars. For 10 points each:
[10] Name this painting that shows a woman in red sitting at a corner diner next to a man in a fedora.

ANSWER: **Nighthawks**

[10] *Nighthawks* is a painting by this American who also showed scenes of urban loneliness in *Office at Night* and *Automat*.

ANSWER: Edward **Hopper**

[10] Hopper painted a barber pole and a fire hydrant casting long shadows in this painting of a street scene before the start of a weekend day.

ANSWER: **Early Sunday Morning**

026-11-29-02204

5. The founder of this religion wrote scriptures such as *The Hidden Words* and *The Four Valleys*. For 10 points each:

[10] Name this religion founded by Baha'u'llah.

ANSWER: **Baha'i**

[10] The governing body of Baha'i is this institution whose seat is in Haifa, Israel.

ANSWER: **Universal House of Justice**

[10] Siyyid Ali Muhammad Shirazi, who took this title which is Arabic for "gate," is a major figure in the Baha'i faith.

ANSWER: the **Bab**

024-11-29-02205

6. This part of the Silk Road is located in the Spin Ghar Range. For 10 points each:

[10] Name this mountain pass that connects Pakistan to Afghanistan.

ANSWER: **Khyber** Pass

[10] The Spin Ghar Range connects to this range by Shandur. This mountain range has its highest point at Tirich Mir and it lies between Pakistan and Afghanistan.

ANSWER: **Hindu Kush**

[10] This boundary line runs through the Hindu Kush and serves as the border between Pakistan and Afghanistan.

ANSWER: **Durand** Line

023-11-29-02206

7. For 10 points each, answer these questions about the Eastern Front during World War I.

[10] For some time, Russian troops were personally commanded by this last Tsar who was overthrown in 1917.

ANSWER: **Nicholas II** of Russia [or **Nikolay Aleksandrovich**; prompt on **Nicholas**]

[10] Earlier, Russian forces were crushed at this August 1914 battle, also the site of a 1410 battle involving the Teutonic Knights.

ANSWER: Battle of **Tannenberg**

[10] Russian involvement in the war ended with this 1918 treaty signed in modern day Belarus.

ANSWER: Treaty of **Brest-Litovsk**

064-11-29-02207

8. The May Laws, or Falk Laws, were passed during this period to establish state control over the training of the clergy. For 10 points each:

[10] Name this period of German history of the 1870s in which the government tried to limit the influence of the Catholic Church.

ANSWER: **Kulturkampf**

[10] Kulturkampf was the brainchild of this "Iron Chancellor," the first chancellor of the German Empire.

ANSWER: Otto Eduard Leopold von **Bismarck**

[10] Earlier, Bismarck forged this document that provoked France into the 1870 to 1871 Franco-Prussian War.

ANSWER: **Ems** Dispatch [or **Ems** Telegram]

064-11-29-02208

9. Its structure is a triple helix, and its conformation is a left-handed helix. For 10 points each:

[10] Identify this fibrous protein, the most abundant in vertebrates, which is the major component of bones and connective tissue.

ANSWER: **collagen**

[10] Every third amino acid in collagen is this amino acid. Its side chain consists of only two hydrogen atoms, which makes it the smallest of the amino acids normally found in proteins.

ANSWER: **glycine**

[10] A genetic mutation that leads to the incorrect substitution of an amino acid in collagen and the disruption of the tight triple helix is the usual cause of this disease. It is characterized by fragile bones.

ANSWER: **osteogenesis imperfecta** [or **brittle bone disease**]

066-11-29-02209

10. This man wrote music for *The Second Hurricane* and *El salón México*. For 10 points each:

[10] Name this composer of *Fanfare for the Common Man*.

ANSWER: Aaron **Copland**

[10] This ballet with music by Copland is about a wedding in rural Pennsylvania.

ANSWER: **Appalachian Spring**

[10] Appalachian Spring features a variations on "Simple Gifts", a tune that Copland found in a collection of hymns from this religious group.

ANSWER: **Shakers**

001-11-29-02210

11. The patient HM was important in studying this occurrence. For 10 points each:

[10] Name this general condition that sees a loss of memory.

ANSWER: **amnesia** [or anterograde **amnesia**]

[10] This type of amnesia sees the sufferer unable to remember things that occurred before the onset of the amnesia.

ANSWER: **retrograde** amnesia

[10] In this disorder, a person forgets their identity. The person often starts wandering and tries to establish a new identity.

ANSWER: **fugue** state [or dissociative **fugue**]

001-11-29-02211

12. In recent years, this title has once again been taken up by its Silver Age occupant, Hal Jordan. For 10 points each:

[10] Name this DC superhero, who uses a power ring and is a member of a namesake "corps."

ANSWER: **Green Lantern**

[10] Traditionally, Green Lantern's power ring does not work against any object of this color. It is the color of Charlie Brown's shirt and the area around the bat on Batman's chest in most costumes.

ANSWER: **yellow**

[10] The Guardians who operate the Green Lantern Corps live on this planet, home to the Main Power Battery.

ANSWER: **Oa**

019-11-29-02212

13. In this novel, a dark secret confessed by the title character to her true love, Angel Clare, causes him to attempt to start a new life in Brazil. For 10 points each:

[10] Identify this novel in which Jack Durbeyfield learns that is related to a rich family and sends his daughter to them, only for her to be raped by Alec.

ANSWER: **Tess of the D'Urbervilles**

[10] *Tess of the D'Urbervilles* was written by this author, who wrote about Gabriel Oak and Michael Henchard in *Far From the Madding Crowd* and *The Mayor of Casterbridge*.

ANSWER: Thomas **Hardy**

[10] All of Hardy's major novels and poems are set in this semi-fictional region, co-located with a namesake Anglo-Saxon kingdom in the Heptarchy.

ANSWER: **Wessex**

020-11-29-02213

14. Identify these characters from the *Arabian Nights' Entertainments*, for 10 points each.

[10] This clever slave woman discovers the forty bandits hiding in oil barrels and dispatches of them and earns her freedom from her master Ali Baba.

ANSWER: **Morgiana**

[10] The stories in the work are related to Shahryar by this woman, the daughter of an executioner, who delays her impending execution every night.

ANSWER: **Scheherazade**

[10] One of the best stories in the collection concerns this Chinese bum who defeats a powerful sorcerer with the aid of the genies of the ring and lamp.

ANSWER: **Aladdin**

020-11-29-02214

15. In the twenty-first century, this country has been led by John Howard, Kevin Rudd, and Julia Gillard. For 10 points each:

[10] Name this country that was mapped by explorer James Cook.

ANSWER: Commonwealth of **Australia**

[10] A recurring political issue in Australia is the horrible past treatment of these Australian natives who made up the Stolen Generation.

ANSWER: **Aborigines**

[10] The current Prime Minister, Julia Gillard, is a member of this party.

ANSWER: Australian **Labor** Party

015-11-29-02215

16. This work points to Anaxagoras and Thales as examples of thinkers with sophia, or wisdom, but no phronesis, or practical wisdom. For 10 points each:

[10] Identify this work which propounds the "doctrine of the mean" and discusses being witty and showing magnanimity as means to attain eudaimonia, or happiness.

ANSWER: Nichomachean Ethics [or Ethika Nikomacheia; or Ethik?n Nikomachei?n]

[10] The *Nichomachean Ethics* was written by this Greek philosopher, the author of *Poetics* and student of Plato.

ANSWER: Aristotle

[10] Aristotle led the peripatetic school at this Athenian gymnasium and meeting place, named for the wolf-like aspect of Apollo.

ANSWER: Lyceum [or Lykeion]

020-11-29-02216

17. In this novel, the Persian reveals to Raoul that the title character is a deformed architect named Erik. For 10 points each:

[10] Name this novel, whose title character composes *Don Juan Triumphant* and pines for the diva Christine.

ANSWER: *The Phantom of the Opera* [or *le fantôme de l'Opéra*]

[10] This French author of mysteries and thrillers wrote *The Phantom of the Opera*. His other recurring characters include Joseph Rouletabille and Cheri-Bibi.

ANSWER: Gaston Leroux

[10] In this other adventure novel by the Baroness Orczy, the British Percy Blakeney dons the title persona in order to save aristocrats, such as the Comte de Tournay, from the French Revolutionary government.

ANSWER: *The Scarlet Pimpernel*

080-11-29-02217

18. For 10 points each, name these parts of the respiratory system.

[10] This "windpipe" carries air from the nose and mouth into the bronchi and back out.

ANSWER: trachea

[10] This muscle near the bottom of the lungs contracts to allow the lungs to expand, and expands to force air out of the lungs.

ANSWER: diaphragm (DIE-uh-FRAM)

[10] In addition to the abdominal muscles and the diaphragm, these muscles are used in breathing. They come in external and internal varieties and are used to move the ribs.

ANSWER: intercostal muscles

003-11-29-02218

19. One member of this family wrote love poems to Ada Dwyer Russell in *Pictures of the Floating World*. For 10 points each.

[10] Identify this literary family consisting of that Imagist, Amy, and the author of "Skunk Hour," Robert.

ANSWER: **Lowell**

[10] Another Lowell, James, poked fun at this poem by Edgar Allen Poe, which opens with the line "Once upon a midnight dreary, while I pondered, weak and weary." The title bird of this poem rests atop a "bust of Pallas" while its speaker laments the loss of Lenore.

ANSWER: "The **Raven**"

[10] Robert Lowell's participation in an anti-Vietnam War march in D.C. served as the inspiration for this author's *Armies of the Night*. He described an American regiment's participation in the Philippines Campaign in the Pacific Theater in *The Naked and the Dead*.

ANSWER: Norman Kingsley **Mailer**

020-11-29-02219

20. Answer the following about assassinations in modern Europe, for 10 points each.

[10] In 1986, this Swedish prime minister was fatally shot while walking home from a movie. Though suspects such as the South African government have arisen, the killer was never caught.

ANSWER: Sven Olaf **Palme**

[10] In 1981, Mehmet Ali Agca shot this man four times in St. Peter's Square, though he survived.

ANSWER: **John Paul II** [prompt on partial answer; or Karol **Wojtyla**; prompt on The **Pope**]

[10] This castor bean-derived poison was shot into Bulgarian dissident Georgi Markov's thigh in 1978 in London, making Markov the most important person ever killed by a poisoned umbrella.

ANSWER: **ricin**

019-11-29-02220

21. Pons and Fleischmann developed the "cold" version of this process which ultimately proved to be a fraud. For 10 points each:

[10] Name this process in which multiple atoms combine to form a larger atom, the opposite of nuclear fission.

ANSWER: nuclear **fusion**

[10] In one nuclear fusion process, a carbon atom is formed from the fusion of three of these positively charged particles which contain two protons and two neutrons and which are equivalent to a helium nucleus.

ANSWER: **alpha** particle

[10] One consideration in nuclear fusion is this process of quantum mechanics, in which a particle is able to cross a classically forbidden region.

ANSWER: quantum **tunneling**

064-11-29-02221