

1. This man examined the head sizes of immigrants to America and concluded that they were determined by the environment in which people were raised instead of by race or ethnicity. In another work, this man argued that the goal of eugenics was self-destructive. In his most famous work, this man argues against (*) racism and looks at similarities between civilized and archaic cultures. For 10 points, name this professor of Columbia University, who wrote *The Mind of Primitive Man* and was known as the "Father of American Anthropology."

ANSWER: Franz Boas

140-12-69-07101

2. One character in this book is carried off by ants after being born with an ominous pig's tail. Another character in this novel ascends to the sky and has the epithet "the Beauty." In addition to (*) Remedios and Pilar Tenesa, another character in this novel loses thirty-two civil wars and has seventeen sons who bear permanent Ash Wednesday Crosses. This novel ends as the last Aureliano translates the texts of Melquiades. Ursula Iguaran holds together a family in, for 10 points, what Gabriel Garcia Marquez novel chronicling the Buendias?

ANSWER: <u>One Hundred Years of Solitude</u> [or <u>Cien Anos de Soledad</u>]

186-12-69-07102

3. One god of this object is worshiped in the Gayatri mantra and was the father of the great warrior Karna. The domain of the Hindu god Surya, this object was celebrated in a Roman festival on December 25th according to a cult that called it "unconquered." Apophis regularly attacks another god of this object who rides on a barge. The wolf Skoll will devour this object at the end of the world in Norse myth. It is also represented by the Egyptian (*) Aten and the Greek Helios. For 10 points, identify this object, which Egyptians identified with the eye of Ra.

ANSWER: the **sun** [or **Sol**]

019-12-69-07103

4. During the Maccabee revolt, Eleazar Avaran died while destroying one of these weapons to demonstrate their vulnerability. The use of nearly a hundred of these at the Hydaspes River convinced Alexander to cease marching into India. They were countered at the Battle of Zama when Scipio Africanus ordered men to blow trumpets, scaring (*) these mounts into running back through the Carthaginian lines. For 10 points, identify these animals that crossed the Alps with Hannibal during the Second Punic War.

ANSWER: war elephants

019-12-69-07104

5. In 2002, this nation's city of Goma was devastated by the eruption of nearby Mount Nyiragongo. The eastern border of this country contains the Rwenzori mountains. Lake Mweru lies on its border with Zambia. This country is home to the Yellala Falls upstream from Matadi, as well as the (*) Livingstone Falls. In 1996, the Tutsi-Hutu conflict spilled over to this country from neighboring Rwanda. For 10 points, identify this African country with capital at Kinshasa, formerly known as Zaire. ANSWER: the **D**emocratic **R**epublic of the **C**ongo [do not accept "Republic of the Congo"]

6. This quantity's namesake "head" is a length measurement obtained by observing this quantity's decrease in a Venturi meter. This quantity has the same base units as energy density, and in the formula for thermodynamic work, it is integrated with respect to volume. For a gas, it increases as more particles (*) hit the sides of the gas's container, and for a liquid it equals fluid density times gravitational acceleration times height and is measured in pascals. For 10 points, name this measure of force per unit area.

ANSWER: pressure

104-12-69-07106

7. One building in this city has an inner dome surrounded by a whispering gallery, whose architect is buried underneath with the inscription "If you seek his monument, look around you." Another building in this city contains the Poets' Corner. This city contains the adjoining Kensington Gardens and (*) Hyde Park. Christopher Wren re-designed St. Paul's Cathedral in this city, whose Westminster Abbey is the burial place of many monarchs. For 10 points, name this city, whose namesake bridge lifts up to allow tall ships to continue sailing the Thames.

ANSWER: London

121-12-69-07107

8. During this election, one candidate's slogan of "In Your Heart, You Know He's Right" was parodied by the Democrats. The losing candidate in this election was criticized for his casual use of the phrase "conventional nuclear weapons," and that man previously wrote the book *The Conscience of a Conservative*. The winner of this election used the (*) "Daisy" ad and later promoted the Great Society. For 10 points, identify this election in which Lyndon Johnson defeated Barry Goldwater.

ANSWER: Election of 1964

189-12-69-07108

9. One enzyme in this pathway is mutated in the endochondroma-causing Ollier's disease. The fact that one intermediate in this process is prochiral allows an iron-sulfur enzyme to stereospecifically isomerize it through a cis-aconitate intermediate. Its first step sees (*) oxaloacetate combine with acetyl-CoA and happens in the mitochondria. For 10 points, name this cycle important in respiration, which occurs after glycolysis and before the electron transport chain.

ANSWER: Krebs cycle [or Citric acid cycle or citrate cycle or tricarboxylic acid cycle or TCA cycle]

048-12-69-07109

10. One section of this work focuses on a young woman who refuses to follow her lover to Buenos Aires, and in another, a young boy visits the deathbed of his mentor, Father Flynn. This work including "Eveline" and "The Sisters" concludes with a story set during Aunt Kate and Aunt Julia's Christmas party. That story depicts the strain placed by Michael (*) Furey on the marriage of Gretta and Gabriel Conroy. For 10 points, "The Dead" features in what short story collection by James Joyce? ANSWER: <u>Dubliners</u>

191-12-69-07110

11. One man from this nation owned Tremor Enterprises, a horse breeding company that gained much of its funding from the operations of Los Zetas. In May 2012, three generals from this country were detained in attempts to curb the Beltran Leyva organization. A July 2012 presidential election in this country saw the defeat of Josefina Vazques Mota and the return to power of the (*) PRI party, led by Enrique Pena Nieto. For 10 points, name this Latin American country that has seen much violence between the forces of President Felipe Calderon and those of several drug cartels.

ANSWER: Mexico [or United Mexican States]

12. In one of this man's poems, he described coming across a rotting carcass while on a walk with his lover. He imagined taking a voyage to "languorous Asia and burning Africa" in "The Hair." Sailors hinder the title bird of his "The Albatross." His most notable poetry collection opens with an exhortation "To the (*) Reader" and has sections such as "Revolt" and "Spleen and Ideal." For 10 points, name this French poet who wrote *Les Fleurs du Mal*.

ANSWER: Charles Baudelaire

192-12-69-07112

13. Reading this text out loud is to be done while following the rules of *tajweed*, and its chapters are sometimes preceded by characters like *alif*, *laam*, and *meem*. One portion of this text describes the (*) Night Journey, and it includes a chapter titled "The Cow." It is taught that this book was revealed in a cave called Hira by the angel Jibreel. For 10 points, identify this holy text of Islam.

ANSWER: the **Qur'an** [or **Al-Qur'an** Al-Majeed; or the **Koran**]

189-12-69-07113

14. This man's words were printed by friend Lucas Cranach the Elder, who painted several portraits of this man and witnessed his wedding to former nun Katherina von Bora. He urged nobles to "smite, slay, and stab" revolting peasants and argued for a real presence in the Eucharist at the Marburg Colloquy. This believer in (*) salvation by faith alone refused to recant at the Diet of Worms. For 10 points, name this man from Wittenberg who opposed indulgences in his 95 Theses and sparked the Protestant Reformation.

ANSWER: Martin Luther

104-12-69-07114

15. By using two prisms in series to split light into its constituent colors and recombine them, this scientist became the first to show that color was due to light alone. This scientist championed the corpuscular theory of light in his *Opticks*. He co-discovered differential (*) calculus with Leibniz. In his most famous work, he derived Kepler's laws from his three laws of motion. For 10 points, name this scientist who described universal gravitation in his *Philosophiae Naturalis Principia Mathematica*.

ANSWER: Isaac Newton

066-12-69-07115

16. Among this composer's popular works for piano are his two *Arabesques*. This composer included Japanese and Spanish themes in his *Estampes*. One of his orchestral works includes the movement "Play of the Waves," and another beings with a flute solo and is based off a Stephane Mallarme poem. This composer of *La* (*) *Mer* is most famous for the third section of his *Suite bergamesque*, a solo piano depiction of moonlight. For 10 points, name this French composer of *Prelude to the Afternoon of a Faun* and "Clair de Lune."

ANSWER: Claude Debussy

140-12-69-07116

17. During the early middle ages, this modern-day country was ruled by the Zagwe Dynasty. This modern country's Era of the Princes came to an end with the ascension of Tewodros II, and another king of this country defeated an invasion at the Battle of Adowa; that ruler was Menelik II. The (*) Italians used poison gas and tanks during their conquest of this country, which was once known as Abyssinia. For 10 points, name this country once ruled by Haile Selassie from the capital of Addis Ababa. ANSWER: Federal Democratic Republic of **Ethiopia** [or **Ityop'iya** Federalawi Demokrasiyawi Ripeblik]

18. This artist designed the stained glass for the Reims Cathedral and included scenes from operas by fourteen composers in his Paris Opera House roof painting. In another painting by this artist, a man in green flees with a sack and a synagogue burns. His most famous painting includes a man with a scythe next to a row of upside down houses as well as a (*) green-skinned man staring at a goat. This artist depicted atrocities against Jews in his *White Crucifixion*. For 10 points, name this Russian artist of *I and the Village*.

ANSWER: Marc Zaharovich Chagall

141-12-69-07118

19. This poet claimed that Thomas Melvill had "a Roman nose" in "The Last Leaf." One poem by this man claims that a "shattered bulk should sink beneath the wave." That poem by this man begins "Ay, tear her tattered ensign down!" The title creature is a (*) "ship of pearl" in another poem by this man including the line, "Build thee more stately mansions, O my soul." For 10 points, name this Fireside poet who wrote "Old Ironsides" and "The Chambered Nautilus."

ANSWER: Oliver Wendell Holmes

149-12-69-07119

20. A logarithmic relationship between the transmissivity of light and the product of a solution's absorptivity and this property is illustrated by Beer's law. This property of a solution is controlled by preparing the solution in a volumetric flask. Unlike its counterpart, the (*) mass of the solvent does not affect the calculation of this quantity. For 10 points, name this quantity calculated as the number of moles of solute over the volume of the solution, contrasted with molality.

ANSWER: molarity [or molar concentration]

014-12-69-07120

21. Cataclastic rocks are mainly found in these systems. Horst and graben are separated by these systems. Stress buildup in them was the subject of Henry Reid's elastic rebound theory. Their upper and lower blocks are called the hanging (*) wall and footwall. These systems are fractures in the rocks of the Earth's crust along which rocks are displaced relative to each other. Two types are dip-slip and strike-slip. For 10 points, name these systems that are the origin of most earthquakes and include the San Andreas.

ANSWER: **fault** zones [prompt on tectonic plate **boundaries**]

066-12-69-07121

22. During this conflict, the Aragon Offensive was launched after one side lost the city of Teruel. The Abraham Lincoln Brigade fought in this war. This conflict began during the presidency of Manuel Azana, and resulted in the overthrow of Second Republic Prime Minister Juan Negrin. The Republican side in this conflict was defeated by the (*) fascist Falange (fah-LAHN-hay), and it included the bombing of Guernica. For 10 points, name this war that resulted in Francisco Franco's dictatorship. ANSWER: Spanish Civil War [or Guerra Civil de España]

189-12-69-07122

23. One work by this man features a character who disingenuously praises "The Couch of Eros" and owns a tortoise named Plautus. In that same work by this author, Hannah Jarvis discovers that the Sidley Park Hermit was Septimus (*) Hodge. Another work by this man begins with a coin flip repeatedly resulting in heads and ends with an ambassador announcing the demise of two friends of Hamlet. For 10 points, identify this playwright of *Arcadia* and *Rosencrantz and Guildenstern Are Dead*. ANSWER: Tom Stoppard [or Tomas Straussler]



- 1. This character's real name is Prince Dakkar, and he was the son of an Indian Raja who became an anti-imperialist rebel. For 10 points each:
- [10] Name this character whose alias refers to the fact he does not see himself as part of any nation. He entertains Professor Pierre Arronax and ultimately dies in the book *The Mysterious Island*.

ANSWER: Captain Nemo

[10] Captain Nemo was created by this French author in his book *Twenty Thousand Leagues Under the Sea.* He also wrote the book *Around the World in Eighty Days*.

ANSWER: Jules Verne

[10] In this Verne novel, a Gun Club in Baltimore led by "Impey Barbicane" wants to create a giant cannon to accomplish the title goal.

ANSWER: *From the Earth to the Moon* [or *De la Terre a la Lune*]

052-12-69-07201

- 2. Answer these questions about the side lengths of triangles, for 10 points each.
- [10] This theorem states that for a right triangle, the square of the hypotenuse's length is equal to the sum of the squares of its other side lengths.

ANSWER: Pythagorean theorem

[10] The Pythagorean theorem is a general case of this theorem, which relates the square of one side of a triangle to the other two sides and a trigonometric function of the opposing angle.

ANSWER: law of cosines [or cosine rule]

[10] To fill in Heron's formula for computing a triangle's area, all three side lengths must be subtracted from this related quantity before those three differences are multiplied by each other.

ANSWER: <u>semiperimeter</u> of the triangle [or <u>half</u> the <u>perimeter</u>, or <u>perimeter divided by 2</u>; or the <u>perimeter over two</u>]

104-12-69-07202

- 3. Douglas Haig ordered this offensive to reach the coast and destroy German submarines, but made little progress due to the extremely deep mud. For 10 points each:
- [10] Name this 1917 World War I battle, also known as the Third Battle of Ypres. It was one of the first battles where the Germans used mustard gas.

ANSWER: Battle of **Passchendaele**

[10] The Battle of Passchendaele took place in Flanders, part of this country. Germany invaded this neutral country at the beginning of World War I.

ANSWER: Kingdom of **Belgium** [or Royaume de **Belgique**; or Koninkrijk **Belgie**]

[10] The Germans invaded Belgium according to this plan, which sought to neutralize France quickly so that Germany could focus on the Eastern front.

ANSWER: Schlieffen Plan

- 4. One expansion by this video game developer is *Mists of Pandaria*, which followed the *Cataclysm* expansion. For 10 points each:
- [10] Name this video game developer that created the *Warcraft* series, the MMORPG *World of Warcraft*, and the *Diablo* series.

ANSWER: **Blizzard** Entertainment [or Activision **Blizzard**; prompt on **Vivendi** SA]

[10] Blizzard also created these games that deal with the wars in the Koprulu Sector between the Protoss, Terran, and Zerg. They are huge as an e-sport in South Korea.

ANSWER: <u>Starcraft</u> series [or <u>Starcraft</u>: Brood War; or <u>Starcraft</u> II; or <u>SC2</u>; prompt on <u>Brood War</u>]

[10] One of the most controversial features in Blizzard's *Diablo III* was this place where a player could spend actual currency to buy high level equipment.

ANSWER: **Real Money Auction House** [or **RMAH**]

153-12-69-07204

5. In 1980, this volcano underwent a massive eruption that caused it to shrink in height. For 10 points each: [10] Name this volcano found in Washington state.

ANSWER: Mount St. Helens

[10] Mount St. Helens is a volcano in this mountain range, which also includes Mt. Rainier and Mt. Hood.

ANSWER: Cascades

[10] Volcanic and seismic activity in Washington is due to the subduction of this tectonic plate under the North America plate.

ANSWER: Juan de Fuca plate

140-12-69-07205

- 6. Pandarus is tricked into shooting at this man, destroying the true made between Greek and Trojan forces in the *Iliad*. For 10 points each:
- [10] Name this king of Sparta and first husband of Helen.

ANSWER: Menelaus (meh-NEH-lee-us)

[10] This Trojan prince offers to settle the war by fighting Menelaus one on one, but flees when it is clear he will lose. His kidnapping of Helen initiates the war.

ANSWER: Paris

[10] Menelaus and Agamemnon were sons of this man, whose family is usually called the "House of" him.

ANSWER: Atreus

121-12-69-07206

- 7. Answer some questions about protein synthesis, for 10 points each:
- [10] Protein synthesis, or translation, occurs in these RNA-containing organelles, which read messenger RNA codons. In eukaryotes, they have 40S and 60S components.

ANSWER: ribosome

[10] Along with the alpha helix, this other shape is the main protein secondary structure. It comes in parallel and antiparallel varieties.

ANSWER: **beta** pleated sheet

[10] A "barrel" of beta-pleated sheets makes up the main structure of this useful protein, which glows a namesake color when excited. It was originally discovered in jellyfish by Shimamura.

ANSWER: green fluorescent protein or GFP

- 8. After the visitor Mr. Lockwood is frightened by the appearance of a ghost, this character opens a bedroom window in an attempt to let the ghost in. For 10 points each:
- [10] Name this dark-skinned orphan who was adopted by the Earnshaw family, but eventually came to possess both Thrushcross Grange and Wuthering Heights.

ANSWER: Heathcliff

[10] Wuthering Heights was written by Emily, one of the three literary sisters from Victorian England with this surname.

ANSWER: **Bronte**

[10] Heathcliff attempts to secure Thrushcross Grange by forcing his son Linton to marry this woman, who happily marries Hareton Earnshaw by the end of the book.

ANSWER: <u>Young Catherine</u> Linton [or <u>Cathy</u>; or <u>Catherine Jr.</u>; prompt on <u>Catherine</u>]

020-12-69-07208

- 9. The signing of this document was followed by the First Barons' War. For 10 points each:
- [10] Name this document signed in 1215 at Runnymede that outlined the liberties of the English nobility.

ANSWER: Magna Carta [or Great Charter]

[10] The First Barons' War was instigated by this king's failure to uphold the agreements of the Magna Carta.

ANSWER: John Lackland

[10] John's mother was this woman from present-day southwest France. She married John's father, Henry II, after annulling her marriage to Louis VII of France.

ANSWER: **Eleanor of Aquitaine** [prompt on **Eleanor**]

192-12-69-07209

- 10. Answer the following about illuminated manuscripts, for 10 points each.
- [10] Vellum and this other material obtained from the hides of animals were used to produce the manuscripts.

ANSWER: parchment

[10] During the Middle Ages, book production was the dominion of *scriptoria* in these religious institutions, whose cloistered inhabitants worked as scribes.

ANSWER: monasteries

[10] This illuminated manuscript of the four gospels was created by Celtic monks on the isle of Iona. It is now in Dublin.

ANSWER: Book of **Kells** [or Book of **Columba**; or **Leabhar Cheanannais**]

080-12-69-07210

- 11. This novel ends as Fenichka marries Nikolai. For 10 points each:
- [10] Name this novel in which the nihilist Bazarov visits the country home of his friend, Arkady Kirsanov.

ANSWER: *Fathers and Sons* [or *Otcv i Deti*]

[10] Fathers and Sons is a novel by this Russian author of A Sportsman's Sketches.

ANSWER: Ivan **Turgenev**

[10] In Fathers and Sons, Bazarov enjoys collecting these amphibious animals for dissection.

ANSWER: frogs

- 12. The binary search algorithm can only be performed on items which have already undergone this process. For 10 points each:
- [10] Identify this process of putting a list in a specified order.

ANSWER: sorting

[10] This divide-and-conquer sorting algorithm was developed by C.A.R. Hoare. It consists of a partition phase, where the pivot is determined, and a sort phase.

ANSWER: quicksort

[10] This divide-and-conquer sorting algorithm was developed by von Neumann. Its worst case runtime is big O of n log n, but quicksort usually outperforms it.

ANSWER: mergesort

066-12-69-07212

- 13. This French monarch once proclaimed, "I am the state." For 10 points each:
- [10] Identify this French absolute monarch who was known as the "Sun King."

ANSWER: **Louis XIV** of France [prompt on **Louis**]

[10] Louis XIV's attempts to gain power and influence in one country after the death of Charles II led to this war, which was ended by the Treaty of Utrecht.

ANSWER: War of the **Spanish Succession**

[10] Before the War of the Spanish Succession, Louis XIV fought a war against the Grand Alliance, which was alternatively known as the "League of" this German city.

ANSWER: Augsburg

189-12-69-07213

- 14. During this period, nationalistic composers began to incorporate their country's folk songs into their music. For 10 points each:
- [10] Name the era of musical history that came after the Classical Period and gave way to the Contemporary. It lasted through the 19th and early 20th century and was characterized by a greater emphasis on the emotional power of music.

ANSWER: the **Romantic** period

[10] During the Romantic period, this type of movement replaced the minuet as the third movement of a symphony. Because this type of piece is usually light and fast, its name is Italian for "joke."

ANSWER: scherzo

[10] Many German Romantics, such as Schubert, composed these musical settings of German poetry. These songs are sometimes collected in cycles like Schubert's *Winterreise*.

ANSWER: lieder

080-12-69-07214

- 15. In one work, this sociologist claimed the replacement of greed with an ethical standard as an incentive to economic success led to the development of the title system among Calvinists. For 10 points each:
- [10] Name this German sociologist who wrote *The Protestant Ethic and the Spirit of Capitalism*.

ANSWER: Max Weber

[10] Weber's *Politics as a Vocation* examined leadership based on this quality. This commonplace idea refers to a leader's ability to inspire devotion in his followers through the force of his personality.

ANSWER: **charisma** [do not accept other answers]

[10] In *Politics as a Vocation*, Max Weber defined the state as an institution that monopolizes the legitimate use of this activity.

ANSWER: violence [or force]

- 16. Answer some questions about the New Deal, for 10 points each.
- [10] The New Deal was promoted by this President, who was the only President elected to more than two terms.

ANSWER: Franklin Delano Roosevelt [or FDR; prompt on Roosevelt]

[10] This New Deal act paid farmers to keep parts of their fields fallow to try and raise the value of crops. It was declared unconstitutional in *United States v. Butler*.

ANSWER: **Agricultural Adjustment** Act [or **AAA**]

[10] This New Deal initiative administered by Harry Hopkins resulted in significant building construction, road work, and bridge work. Its Federal Arts Program also hired various painters, writers, actors, and musical artists.

ANSWER: Works Progress Administration [or WPA]

189-12-69-07216

- 17. Uncle Rondo wears a kimono in one scene in this story. For 10 points each:
- [10] Name this story in which Sister moves herself to the title location after Stella-Rondo returns to China Grove.

ANSWER: "Why I Live at the P.O."

[10] "Why I Live At the P.O." was written by this Southern author of *The Robber Bridegroom* and *Delta Wedding*.

ANSWER: Eudora Welty

[10] In this Eudora Welty novel, the title character's father, Judge Hand, dies after a botched eye operation, and his funeral is disrupted by the Chisoms.

ANSWER: The Optimist's Daughter

194-12-69-07217

- 18. Answer some questions about the moment of inertia, for 10 points each:
- [10] Moment of inertia is the rotational analogue of this quantity, which is measured in units of kilograms.

ANSWER: **mass** [prompt on **m**]

[10] The moment of inertia is equal to the quotient of this quantity and angular acceleration. It is the rotational analogue of force.

ANSWER: torque

[10] This theorem, sometimes known as Steiner's theorem, is used to find the moment of inertia about one line given the moment of inertia about another line, provided that the slopes of the lines are equal.

ANSWER: parallel-axis theorem

189-12-69-07218

- 19. An emaciated St. Jerome appears on the right side of this painting. For 10 points each:
- [10] Name this work by Parmagianino in which a swan-like Virgin Mary holds an elongated baby Jesus.

ANSWER: <u>Madonna of the Long Neck</u> [or <u>Madonna with the Long Neck</u>; or <u>Madonna dal collo lungo</u>]

[10] *Madonna of the Long Neck* is a work in this style also used by El Greco that often features elongation and highly stylized poses.

ANSWER: Manner ism [accept word forms]

[10] This Italian Mannerist painter is known for a version of the Last Supper that includes servants attending a slanted table.

ANSWER: **Tintoretto** [or Jacopo **Robusti**; or Jacopo **Comin**]

20. This compound is inactivated by enzymes that cleave its beta-lactam ring, which in For 10 points each:

[10] Name this prototypical antibiotic discovered by Alexander Fleming by accident in a moldy petri dish.

ANSWER: penicillin

[10] Penicillin inhibits the synthesis of peptidoglycan, which is a key molecule in this part of a bacterium. Gram-positive bacteria have a very thick one outside of the membrane.

ANSWER: cell wall

[10] The original fungus that produced penicillin, P. rubrum, belongs in this phylum of sac fungi.

ANSWER: <u>ascomycota</u> [or <u>ascomycete</u>s]

048-12-69-07220

21. A burglary ring was found to be operating within this city's police department in the Summerdale scandal. For 10 points each:

[10] Name this Midwestern city. Richard J. Daley was its longest serving mayor until 2010, when his son surpassed his record.

ANSWER: Chicago

[10] This man built Chicago's Democratic machine while serving as alderman and mayor in the early 1930s. He died after a man attempting to assassinate Franklin Roosevelt shot him instead.

ANSWER: Anton Joseph Cermak

[10] Cermak's predecessor was the incredibly corrupt Bill Thompson, who was supported by this leader of the Chicago Syndicate. This man ordered the killing of seven of Bugs Moran's associates in the St.

Valentine's Day Massacre.

ANSWER: Alphonse **Capone**