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## Round 9: Tossups

1. In the 11th century BCE, this city was ruled by the Aram-Zobah tribe from the Beqaa Valley. It became independent when Ezron, prevented his kingship of that tribe, captured this city and fought wars that ended with the failed siege of (*) Samaria. It was later annexed into Alexander the Great's empire and lost importance when the government was moved north to Antioch. This city reached its peak after the Muslim conquest, when it was made the capital of the Umayyad Caliphate. For ten points, what city is the capital of modern-day Syria?

## ANSWER: Damascus

2. This work's author originally proposed the title URSA and an image of a bear on the cover. Mr. Pilkington manages Foxwood in this work in which a windmill is repeatedly destroyed and rebuilt, and the Seven Commandments are altered in the night by the propagandist $\left(^{*}\right.$ ) Squealer. After being chased by a pack of trained dogs, Snowball is never seen again, and the "Horn and Hoof" flag is flown while the maxim "Four legs good, two legs bad!" is developed. For ten points, name this allegorical novella about Napoleon the pig, written by George Orwell.
ANSWER: Animal Farm
3. Some members of this order exhibited a coat of pyenofibers as found in the genus Sordes. The azhdarchids were toothless members of this order, while the genus Tapejara had a distinctive crest. Unlike in other ${ }^{*}$ ) archosaurs, the nasal and antorbital cavities of these animals were fused, lightening the skull and making possible their most distinctive feature. They were first hypothesized to have been aquatic, and some are now believed to have lived a seagull-like lifestyle, fishing from the air. Quetzalcoatlus was a member of - for ten points - what extinct order of flying reptiles? ANSWER: Pterosauria (do not accept or prompt on "pterodactyls")
4. John von Neumann ["NOY-man"] once made a mark in pencil on one of this man's dynamos, and was subsequently paid $\$ 5000$. Theodor Fritsch published a four-volume collection of pieces from his anti-Semitic newspaper The Dearborn Independent. This businessman used the scientific management ideas of Frederick W. Taylor to improve efficiency on each of the eighty-four $\left(^{*}\right.$ ) steps of his signature product. Highland Park, Michigan was the site of that assembly line, where this industrialist's Model T car was produced, but "only in black". For ten points, name this man whose Motor Company now manufactures the Focus and F-150.
ANSWER: Henry Ford
5. Gold-mercury amalgams are applied to this material in the technique of ormolu. John Henry Waddell's Gathering and Andrea were made using this material, as was the Dancing Girl recovered from Mohenjo-Daro. A set of $\left({ }^{*}\right)$ plaques made of this substance decorated the palace of the Benin Kingdom, and one work called "The Age of" this substance led to accusations against Auguste Rodin["ruh-DAHN"] of casting from a live model. Donatello's David is made of - for ten points - what alloy of copper and tin whose "Age" came after the Stone Age?
ANSWER: bronze
6. Eldest sons traditionally perform this action in Judaism during the day before a holiday of unleavened bread, and all Jews are obligated to do this on the Seventeenth of Tammuz. In Eastern Orthodoxy, performing this action without almsgiving is considered harmful. Western Christianity teaches that this may be done in conjunction with prayer (*) to drive a demon out, and that Jesus did this while being tempted in the desert for forty days. While meditating towards enlightenment, the Buddha performed this action. For ten points, what action is performed by Muslims during the month of Ramadan?
ANSWER: fasting (accept equivalents or descriptions)
7. The World Columbian Exposition featured a booth where this product was sold by a San Antonio business. "Three way" refers to adding spaghetti and cheese to the Cincinnati variant of this food. The Pedernales recipe for this food was distributed by (*) Lady Bird Johnson. This food's Appreciation Society International does not allow the use of beans for its competitions, though this official dish of Texas often is made with them in "sin carne" preparations. For ten points, identify this stew made with peppers of the same name.
ANSWER: chili
8. The effect of special relativity on interest rates was examined by this author in his paper, "The Theory of Interstellar Trade," before he became an advisor to Ronald Reagan. This economist rethought comparative advantage as a driving force for (*) international trade, proposing the home market effect. This Keynesian thinker proposed a new New Deal and suggested dog-whistling was used to renew the conservative movement in his book "The Conscience of a Liberal." For 10 points, name this 2008 Nobel Laureate and New York Times columnist.
ANSWER: Paul Krugman
9. Pons asinorum was demonstrated in this text before it showed Mersenne primes could be used to find perfect numbers. This text showed that geometric and arithmetic means are not necessarily equal. An algorithm for finding the greatest $\left(^{*}\right)$ common divisor of two numbers is given in this text; that algorithm is named after this its author. Hyperbolic and spherical geometry use four of this book's axioms, while the parallel postulate is necessary to prove this book's results. For ten points, name this book written by Euclid.
ANSWER: $\underline{\text { Elements (accept } \boldsymbol{S t o i c h e a})}$
10. In April 1988, this man wrote an extensive review on the novel Love in the Time of Cholera under the title of Heart's Eternal Vow. The Yoyodyne company in this man's first novel was inspired by this man's experiences working for Boeing. In one of this author's most famous works, Teddy Bloat photographs a map of the sexual encounters of (*) Tyrone Slothrop, an employee of ACHTUNG, whose experiences are followed by the launch of a V-2 rocket. For ten points, name this author of the novels The Crying of Lot 49 and Gravity's Rainbow.
ANSWER: Thomas Pynchon
11. This man's mistress was once captured by an invading army which demanded 3,000 florins for her safe return. His son was rumored to wear a ring containing cantarella, a powdered poison. Cem Sultan was ultimately released by this man as a condition in negotiations with (*) Charles VIII. This religious official was opposed by Cardinal Della Rovere in the papal election, and ordered the execution of heretical friar Girolamo Savonarola. Machiavelli's The Prince praised Cesare, the son of - for ten points - what Pope of the Borgia family?
ANSWER: Pope Alexander VI (accept Rodrigo Borgia; prompt on partial)
12. The remains of one of these objects, described as "geometric", was sculpted in bigger-than-life scale by Claes Oldenburg. A basket of these pour out onto a white tablecloth near bread and a wine bottle in a tilted painting by Paul Cezanne. One of these objects is thought to have been held originally by a now armless statue by (*) Alexandros of Antioch, the Venus de Milo. Son of Man shows a green one of these, with stem and leaves, in front of a man wearing a suit and bowler hat. For ten points, name this object that obscures a self-portrait of Rene Magritte.
ANSWER: apples (accept apple core before Oldenburg)
13. Two men bore seven holes into Wonton in a book often considered the second most important text in this tradition. Also including a scene where a man dreams he is a butterfly, that book is entitled (*) Zhuangzi. Another book in this tradition contains instructions for the use of the bagua to create feng shui ["fung shway"]. That book, the I Ching ["ee ching"], is also used in Confucianism. This tradition was begun by Lao Tzu (lowe-tzoo). For ten points, name this Chinese philosophical and religious school concerned with living in harmony with nature.
ANSWER: Taoism or Dao Jiao or Dao Jia
14. For a Lambertian surface, the result of this phenomenon is isotropic, while cataphotes exhibit its "retro" version. A polarity inversion is possible when this occurs at contact with a denser material, and when a certain quantity is greater than the arcsine of $\mathbf{n}$-sub- $\mathbf{2}$ over $\mathbf{n}$-sub-1, the (*) "total internal" form occurs. According to the laws describing this phenomenon, the angle of incidence is equal to its namesake angle. Mirrors are commonly used in - for ten points - what process where a light ray changes directions?
ANSWER: reflection
15. At the Red Center in this novel, people are forced to confess about their past lives, to which Janine says she was gang-raped at fourteen. The protagonist of this novel has forgotten a portion of her life, which she thinks is because the authorities gave her an injection or a pill. (*) Nick plays Scrabble and allows her to read Vogue magazines, an act that is punishable by law. That character is forced to consummate with the Commander every month in front of his wife Serena to become pregnant. Offred ["of Fred"] appears in - for ten points - what novel by Margaret Atwood about the life in totalitarian state of Gilead?
ANSWER: The Handmaid's Tale
16. This man divided his territories into provinces known as subas and built a house of worship for the study of comparative religion. As a disciple of the Chisti order, he built a shrine which is found in his personal capital city, Fatehpur Sikri. This man earned the title Ghazi after he defeated Hemu at the Second Battle of (*) Panipat. He abolished the jizya tax against non-Muslims, although it was reinstated by his great-grandson Aurangzeb. For ten points, name this ruler of the Mughal Empire who succeeded his father, Humayun.
ANSWER: Akbar I (accept $\underline{\text { Akbar }}$ the Great or Jalal ud-Din Muhammad $\underline{\text { Akbar }}$ )
17. This composer wrote organ music in each of the ecclesiastical modes, including a lost collection of preludes and fugues. A set of keyboard arias and variations that he wrote was named for Apollo's Lyre, and was published with a preface which discussed the nature of music. (*) Johann Christian Bach was pupil of this man, and later exposed his brother Johann Sebastian his organ music. One of his most famous organ works is a chaconne written in F minor, which includes 22 variations. For 10 points, name this German baroque composer of "Canon in D".
ANSWER: Johann Pachelbel
18. This river runs through the Hula Valley, where a swamp was drained in 1951 by diverting this river upstream. Allenby Bridge, spanning this river, was destroyed during Operation Markolet, and the city of Umm Qais lies on the Yarmouk River, its largest tributary. The section of this river to the Sea of (*) Galilee is the western border of the Golan Heights. Iraq crossed this river in 1948, and the Six-Day War changed control of this river's West Bank. For ten points, what river ends in the Dead Sea and flows between Israel and a namesake country?
ANSWER: River Jordan (accept Nahar ha-Yarden or Nahr al-Urdun)
19. This author produced a paper on creativity for the Advanced Research Projects Agency, although he rejected a position in fear that access to classified material would limit his ability to write fiction. In one fictitious paper by this author, the properties of a water soluble compound known as (*) Thiotimoline are described. The psychologist Shereen 501 investigates the effects of darkness on a person's psyche, and he created a theory in which one axiom is that humans are the only sentient beings. For ten points, name this author of the Foundation Series who formulated the Three Laws of Robotics.
Answer: Isaac Asimov
20. The Janka test measures this quantity using a small metal ball, and the "side" variety is measured perpendicular to the grain. The Leeb test uses change in velocity to measure this quantity, and the increase of this quantity due to strain creates errors in measurements of the (*) "indentation" type. The sclerometer measures this quantity for minerals under the scratch test, which can produce a comparative scale on which talc has a value of one, and diamond has a value of ten. For ten points, what physical quantity is measured on the Mohs scale?
ANSWER: hardness

## TIEBREAKER:

In one scene in this work, an old woman is taken on a carriage ride by her caretaker to induce a stroke. One character in this work dies during the Battle of Waterloo and another manages to charm King George IV by acting as Clytemnestra in a game of (*) charades. George Osborne marries one of the two central characters of this work but ends up flirting with other before he is sent off to the war. Dobbin eventually reconciles with Amanda Sedley and returns to England while Jos suspiciously dies after signing of his life insurance money to Becky Sharp in - for ten points - what "novel without a hero" by William Thackeray?
ANSWER: Vanity Fair

## Round 9: Bonuses

1. For ten points each, answer these questions about art and the American Civil war.
[10] Daniel Chester French sculpted this man, who served as the president of the United States for the duration of the Civil War for a colossal marble monument in WAshington, D.C.
ANSWER: Abraham Lincoln
[10] This artist created many paintings showing soldiers in the Civil War, like his Prisoners from the Front. During the war, he was made prints for the magazine Harper's Weekly.
ANSWER: Winslow Homer
[10] This Impressionist artist painted a naval battle between the USS Kearsage and the CSS Alabama, which occurred off the coast of his native France.
ANSWER: Edouard Manet
2. Each year in this novel are subsidized by a different corporate sponsor also known as Subsidized Time. For ten points each:
[10] Name this dystopian novel that features the Incandenza family in the superstate known as the Organization of North American Nations.

## ANSWER: Infinite Jest

[10] Infinite Jest was written by this author who talks about the Maine lobster festival in his essay, Consider the Lobster. ANSWER: David Foster Wallace
[10] In Infinite Jest, Enfield Academy primarily teaches this sport whose major figures include Serena Williams and Novak Djokovic.
ANSWER: Tennis
3. Each of these geometric figures has a unique orthocenter and centroid. For ten points each:
[10] Name this geometric figure whose angles sum to 180 degrees.
ANSWER: triangle or 3-gon
[10] This triangle fact can be used to determine, given the length of two sides and the measure of one angle, the measure of the third side; or the measure of one angle if given the length of all three sides.
ANSWER: Law of Cosines
[10] The law of cosines can be used to derive this theorem, which gives the length of a cevian [CHAY-vee-un] in terms of the triangle's lengths; it can be memorized by the mnemonic "a man and his dad put a bomb in the sink".
ANSWER: Stewart's theorem
4. Answer some questions about action potential in neurons, for ten points each.
[10] This elongated portion of a neuron is covered with myelin to insulate it in most vertebrates. It joins to the cell body at its namesake hillock.

## ANSWER: axon

[10] In a myelinated neuron, these are the spaces between myelinated sections that allow an action potential to move quickly down the axon.

## ANSWER: Nodes of Ranvier or myelin sheath gaps

[10] These two ions are necessary for the propagation of an action potential through an axon. Their concentrations across a membrane are maintained in all cells by a namesake pump.

5. Several Knightly orders were founded in the Middle Ages to fight in the name of Catholicism. For 10 points each: [10] Name this Medieval Order, which took part in the Crusades and were forced off the islands of Cyprus and Rhodes by the Ottomans before becoming the Knights of Malta.

## ANSWER: Knights Hospitaller

[10] Name this rival Order, which had possessions famously confiscated by the French king Philip and Pope Clement V. ANSWER: Knights Templar
[10] This 1242 battle was a major defeat for the Livonian branch of the Teutonic Knights at the hands of Prince Alexander Nevsky of Novgorod and was glorified in an 1938 film by Sergei Eisenstein.
ANSWER: Battle on the Ice (Accept Battle of Lake Peipus)
6. The "specific" form of this quantity is used in Tsiolkovsky's rocket equation. For ten points each:
[10] That "specific" variety is this quantity divided by the unit of propellant. More generally, this value is the integral of force over time.
ANSWER: impulse (prompt on " J ")
[10] Impulse is dimensionally equivalent to this other physical quantity. Applying impulse to an object changes its value for this.
ANSWER: linear momentum
[10] In the rocket equation, the delta $v$ equals the specific impulse times $g$ times the natural logarithm of the ratio of initial mass and this quantity, the mass of the rocket without propellant.
ANSWER: dry mass
7. This device was designed to maximize temperature and minimize luminosity. For ten points each:
[10] Name this piece of lab equipment which was invented at the University of Heidelberg and which produces an open flame, often using propane or butane.
ANSWER: Bunsen burner
[10] Robert Bunsen discovered this element, whose isotope 133 is used to formally define the meter and the second.
ANSWER: cesium
[10] In 1860, Bunsen became a foreign member of this Swedish organization that awards the Physics, Chemistry, and Economics Nobels.
ANSWER: Royal Swedish Academy of Sciences
8. At the end of this war, the US gained control of Puerto Rico, Guam and the Philippines. For ten points each:
[10] William Randolph Hearst and Joseph Pulitzer utilized yellow journalist tactics to call for this war, which ended after the Battle of Manila Bay.
ANSWER: Spanish-American War
[10] Part of the trigger for the Spanish-American War was the explosion of this American ship in Havana Harbor during the Cuban War of Independence.
ANSWER: USS Maine
[10] Prior to the Spanish-American War, efforts for Cuban independence began during this war where Cuban rebels signed the Pact of Zanjon as part of a neutrality agreement with Spain.
ANSWER: Ten Years War
9. For ten points each, name the following about adaptations of William Shakespeare's Macbeth.
[10] In one episode of this American television show, Principal Willoughby writes the play Macbeth in Space as a school play; its cast includes this show's characters Libby, Cindy, Carl and Sheen.
ANSWER: The Adventures of Jimmy Neutron: Boy Genius
[10] This man adapted and starred in Macbeth in 1948; his other Shakespearean film roles included the lead in Othello and Falstaff in Chimes at Midnight, while his other films include Touch of Evil and The Magnificent Ambersons.
ANSWER: Orson Welles
[10] Toshiro Mifune and Isuzu Yamada starred in the 1957 jidaigeki-style Macbeth adaptation Throne of Blood, directed, co-written, and co-produced by this man.
ANSWER: Akira Kurosawa
10. Richard Hamilton created his Just what is it that makes today's homes so different, so appealing in this medium. For ten points each:
[10] Name this medium that combines different 2-dimensional works, including newspaper and magazine clippings, to form a cohesive image.
ANSWER: collage (anti-prompt on photomontage)
[10] In addition to painting, Marc Chagall designed works in this medium, often for synagogues. One work in this medium by Chagall is in the UN Headquarters.
ANSWER: stained glass (prompt on glass)
[10] This type of painting can use a thicker pigment called gouache. Unlike oil or acrylic painting, the colors achieved with this medium are usually translucent.
ANSWER: watercolor
11. For ten points each, identify these structures where religious texts are interpreted:
[10] Akshardam is largest example of one of these structures found in the US where the teachings of Vedic texts are practiced among devotees.
ANSWER: Mandir (Prompt on Hindu temple)
[10] Buddhist monasticism in Cambodia and Thailand is often practiced at one of these structures. The one at Angkor is featured on the Cambodian flag.
ANSWER: Wat (pronounced watt)
[10] Bristol Cathedral used to be this type of Christian monastery, as was a similar structure in St. Gallen, Switzerland. ANSWER:Abbey
12. For ten points each, answer some questions about geological features in a certain U.S. state.
[10] This type of geological feature is only found in dry areas and is caused by extensive erosion by wind and water exposing clay-rich soils.
ANSWER: Badlands
[10] Badlands National Park is in this U.S. State. This state is bisected by the Missouri River, leading to the geologically and culturally distinct sections of the state known internally as West River and East River.
ANSWER: South Dakota
[10] This mountain range is in the West River portion of South Dakota; it is known as the home of Mt. Rushmore, the most important tourist destination in South Dakota.
ANSWER: Black Hills
13. In this novel, Clifford is paralyzed waist down after being sent to war. For ten points each:
[10] Name this novel about the affair between the title upper-class woman and her gamekeeper, Oliver Mellors.
ANSWER: Lady Chatterley's Lover
[10] Lady Chatterley's Lover was written by this author who wrote about the the degrading effects associated with life during the Industrial Revolution in his most famous works.
ANSWER: David Herbert Lawrence
[10] Before engaging in her affair with Oliver Mellors, Lady Chatterley had an affair with Michaelis, a man with this profession who met Clifford after he became a successful author.
ANSWER: Playwright
14. Answer some questions about the Zionist Movement. For ten points each:
[10] This man declared that the Dreyfus Affair inspired him to establish the World Zionist Organization that encourages Jewish immigration to Palestine.
Answer: Theodore Herzl
[10] A member of this banking family was the addressee of the Balfour Declaration and funded land purchases in Palestine through the Palestinian Colonization Association.
Answer: The Rothschilds (or clear equivalents)
[10] This ship named for the enslavement of Israelites in Egypt was intercepted by the Royal Navy during the Aliyah Bet movement in 1947 and all of it passengers were sent back to Europe.
Answer: SS Exodus
15. Brian Wilson is a songwriter for this rock band. For ten points each:
[10] This band wrote and performed, "Fun, Fun, Fun" as well as "I Get Around" and "Wouldn't it be nice" which was featured in their album, Pet Sounds.
ANSWER: The Beach Boys
[10] The Beach Boys helped to define this genre of music, named after their home state.
ANSWER: California Sound
[10] This California Sound album by the Beach Boys features the tracks, "Little Deuce Coupe" and "Catch a Wave". ANSWER: Surfer Girl
16. In this work, the Gods of Norse mythology were fleeing Trojan warriors. For ten points each:
[10] Name this literary work from which the vast majority of modern understanding of Norse myth is derived. In its first section, the Gylfaginning, Gylfi is forced to show his wisdom by asking questions about Norse myth. It can be contrasted with the poetic work of the same type.
ANSWER: Prose Edda
[10] The Prose Edda was written by this man who was twice elected lawspeaker at the Althing and who also wrote the Heimskringla, a history of Norway and its kings.
ANSWER: Snorri Sturluson
[10] Snorri Sturluson wrote the Prose Edda in Old Norse. Name this modern language most closely related to Old Norse.
ANSWER: Icelandic or Islenska
17. In this book, one character does not like honey despite claiming to like every food. For ten points each:
[10] Name this children's book featuring Eeyore, Piglet, and Tigger.
ANSWER: Winnie-the-Pooh
[10] This author of "Winnie-the-Pooh" also wrote "The Red House Mystery" and was the father of Christopher Robin. ANSWER: Alan Alexander Milne
[10] This illustrator of "Winnie-the-Pooh" also illustrated "The Wind in the Willows."
ANSWER: Ernest Howard Shepard
18. Formal logic can be used to determine if some statements are true. For ten points each:
[10] This is the name given in predicate logic to statements which are never true, such as p and not p for all predicates p .

## ANSWER: Contradiction

[10] This is the name given in predicate logic for statements which are always true, such as DeMorgan's Law.
ANSWER: Tautology
[10] This law can be stated as the tautology p or not p . This law is always true because all statements in predicate logic are either true or they are false and there is no third option.
ANSWER: Law of the Excluded Middle
19. Japan lost a lot of territory during and after the end of World War II. For ten points each:
[10] Japan lost control of a puppet state in this territory in northern China, which they had originally conquered following the Mukden Incident
ANSWER: Manchuria or Manzhou
[10] Japan lost its claim to the southern portion of this island off the coast of Russia after the Soviet Union violated its non-aggression pact and invaded at the end of the war,
ANSWER: Sakhalin Island
[10] This island was the first U.S. territory conquered by Japan after the attack on Pearl Harbor and was returned 5 days after the formal Japanese surrender.
ANSWER: Wake Island
20. Followers of this movement seek to eliminate pollution. For ten points each:
[10] Name this ideology and social movement concerned with preserving or improving the health of ecological systems.

## ANSWER: Environmentalism

[10] The American environmentalist movement was sparked by "Silent Spring," an exposé on the dangers pesticides written by this author.
ANSWER: Rachel Carson
[10] "Silent Spring" and the activism of Rachel Carson inspired this philosophy of Arne Næss ["ar-NAY nass"], which includes the belief that nature has intrinsic value beyond its extrinsic value for human exploitation.

## ANSWER: Deep Ecology

## EXTRA:

For ten points each, identify these cars that revolutionized the automobile industry:
[10] This Volkswagen economy car was commissioned by Adolf Hitler. With over 21 million units, this round-roofed car is the most manufactured platform ever.

## ANSWER: Volkswagen Beetle

[10] This first model of automobile was propelled by an internal combustion engine was sold for 600 imperial German marks and used one of the earliest four-stroke engines.
ANSWER: Benz Patent-Motorwagen
[10] This model of car developed by Tesla Motors has a fully electric transmission and has possessed semi-autonomous drive since 2014.
ANSWER: Tesla Model S

