

Round 5

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Tossups

(1) **In these substances, magnetic fields can produce low-frequency transverse oscillations called Alfvén waves. These substances are studied by Langmuir probes, and can only be affected by electric fields up to the Debye length [duh-BYE length]. These substances can be confined in a (*) torus shape in tokamaks. These substances occur at high temperatures when electrons escape the pull of the nucleus, such as in lightning strikes and the Sun. For ten points, name this highly ionized gas often called the “fourth state of matter.”**

ANSWER: plasmas

(2) **An unfinished work by this author describes the survivor of a car accident, and is titled “Cady’s Life.” This author planned to remove criticisms of her mother and details of her relationship with Peter from a memoir that was rediscovered by (*) Miep Gies [meep gees]. This author’s most famous work is written as letters addressed to “Kitty,” which were scattered in the Achterhuis [OCK-ter-hwees] in a home in Amsterdam. For ten points, name this Dutch author who hid from Nazis while writing her *Diary of a Young Girl*.**

ANSWER: Anne Frank (accept Annelies Marie Frank; accept The Diary of Anne Frank before it is read)

(3) **A red barn and a church spire are in the background of this painting, whose central structure was inspired by the Dibble House in Iowa. This painting’s central figures were modeled on a dentist and the artist’s sister, who insisted that she was meant to be a (*) farmer’s daughter rather than his wife. A white farmhouse with an ornate window is in the background of, for ten points, what painting by Grant Wood in which a somber woman stands next to a man holding a pitchfork?**

ANSWER: American Gothic

(4) **This activist was bailed out of jail by Virginia Durr, who had earlier helped her attend Highlander Folk School. In 1955, this activist resisted the orders of James Blake, leading to her arrest on (*) Cleveland Avenue, which has since been named after this woman. For ten points, name this woman who, after finishing her job as a seamstress, sparked the Montgomery Bus Boycott by refusing to sit in the back of a bus.**

ANSWER: Rosa Parks

(5) **This historical group worshipped the son of Coatlicue [koh-at-lee-kway], who was impregnated by a ball of feathers. These Nahuatl-speaking people worshipped a “left-handed” or “southern” hummingbird, (*) Huitzilopochtli [hwee-tsil-oh-pokt-lee], and a rain god named Tlaloc [t-lah-lock] in a pair of temples perched on top of a pyramidal platform. For ten points, name these people who worshiped gods like Quetzalcoatl [ket-zal-koh-ah-tull] in the Templo Mayor in Tenochtitlan before they were conquered by Hernan Cortes.**

ANSWER: Aztecs (accept Aztec empire; prompt on “Mexica” or “Mexicatl”)

(6) **This literary character is called “Cleave-the-Wand” by a Templar who demands his release from Front-de-Boeuf’s castle along with Cedric and Lady Rowena. After defeating Hubert, this character is offered a job as a guard by Prince (*) John, but pledges his archery skill to Richard the Lionhearted. Friar Tuck and Little John work with this character in Sir Walter Scott’s *Ivanhoe*. For ten points, name this legendary English hero who led the Merry Men in Sherwood Forest to rob from the rich and give to the poor.**

ANSWER: Robin Hood (accept either underlined name; accept Robin of Locksley; accept Robert Locksley)

(7) **In this country, Walter Burley Griffin designed a planned city focused around a Parliamentary Triangle. The Carlton Gardens, in one of this nation’s state capitals, contains a hall that hosted this country’s 1888 (*) centennial celebration. A through-arch bridge nicknamed “the coathanger” and a white-sailed opera house are in this country, in the capital city of New South Wales. For ten points, name this country governed from Canberra, whose largest cities include Melbourne and Sydney.**

ANSWER: Australia (accept Commonwealth of Australia)

(8) **Segregation in the area around this structure was the subject of a 1964 Zonian protest over display of the American flag. John Hay negotiated a treaty for the construction of this project with Philippe-Jean Bunau-Varilla that allowed the construction of (*) Gatun Lake near Colón, as well as a series of artificial locks that transport cargo through this waterway. For ten points, name this canal that stretches from the Atlantic to the Pacific through a namesake central American country.**

ANSWER: Panama Canal

(9) **This element is reacted with calcium carbide in the Frank-Caro process to make calcium cyanamide. A molecule of this element has a lone pair in amines. A magnetite catalyst is reacted with a gas of this element in the (*) Haber-Bosch process, and it is reacted with toluene to make explosives. This element can be “fixed” to hydrogen to make ammonia. For ten points, name this element whose diatomic gas makes up most of Earth’s atmosphere, symbolized N.**

ANSWER: nitrogen (prompt on “N” before it is read)

(10) **In a game named for this character *Unleashed*, he transforms into a werewolf-like creature during night phases. This character defends Merlin against a corrupted King Arthur in one of his namesake *Storybook* games, in which Amy Rose, Silver, and (*) Blaze the Cat represent characters from Arthurian legend. In a 2020 film named for this character, Jim Carey plays his enemy, Doctor Robotnik, who learns the secret of this character’s inter-dimensional, gold rings. For ten points, name this speedy video game hedgehog.**

ANSWER: Sonic the Hedgehog

(11) **The border of this US state was the subject of the Aroostook War and the ensuing Webster-Ashburton Treaty in 1842. This state entered the Union with Missouri in the Missouri Compromise, after it voted to secede from (*) Massachusetts. The Spanish-American War was triggered by the sinking of a warship named for this state. The Appalachian Trail runs from Georgia to, for ten points, what state in New England whose capital is Augusta?**

ANSWER: Maine

(12) **The cuscus, sometimes called this kind of “monkey,” is only found east of Wallace’s line. Females of these animals have twin reproductive tracts, and an extinct carnivorous one of them, the (*) thylacine, could open its jaws eighty degrees. A popular pet one of these animals is the sugar glider, which is a type of opossum. For ten points, name this group of mammals that keep their developing young in an external pouch, such as koalas and kangaroos.**

ANSWER: marsupials (prompt on “mammals” before it is read; prompt on “animals” before it is read)

(13) **Description acceptable. A largely-refuted work by Derek Freeman claimed that two people undergoing this process lied to an anthropologist about their casual sexual encounters. A 1928 work described taupou as a part of this process, and argued that (*) girls on the island of Ta’u who underwent this transformation were more successful than American girls at understanding menstruation. For ten points, name this process that titles an anthropological book by Margaret Mead about undergoing this transformation in Samoa.**

ANSWER: Coming of Age in Samoa (accept descriptions of becoming an adult or growing up; accept descriptions of going through puberty)

(14) **This country was the home of a poet who sees the “Cloudy River of the sky” while thinking of “absent friends.” Poets from this country wrote “Autumn Day in Kui Prefecture” and “Drinking Alone by Moonlight,” and were two of the (*) “Immortals of the Wine Cup.” A novel from this country describes the antics of Sun Wukong, the Monkey King. The classic novel *Journey to the West* describes a trip to India from, for ten points, what country home to the Tang dynasty poets Du Fu and Li Bai?**

ANSWER: China (accept Zhongguo)

(15) **This type of number is the exponent and modulus in Fermat’s Little Theorem. Euclid [yu-klid] proved a method for constructing one of these numbers by multiplying a list of them and adding one. The Sieve of (*) Eratosthenes [siv of air-uh-TOSTH-uh-nee-z] finds these numbers by crossing out all multiples of these numbers from a list of the whole numbers, leaving a list that begins “2, 3, 5, 7, 11.” For ten points, name this type of number that is only divisible by two factors: one and itself.**

ANSWER: prime numbers (accept primes)

(16) **This man negotiated the Treaty of Hudaib-biyah and, after the agreement was broken by Nawfal, he defeated the Quraysh, who had chased this man from his hometown during the hijra. This man rode Buraq to the (*) Masjid al-Aqsa during his Night Journey, and was told to “Recite!” in a cave on Mount Hira by the angel Jibreel. This religious figure led his followers to Medina from his home city, Mecca. For ten points, name this prophet, the founder of Islam.**

ANSWER: Muhammad (prompt on “The Prophet” before “prophet” is read)

(17) **A “Grande” [“grand”] work in this musical genre was dedicated to Karl von Lichnowsky. A composer who wrote a work in this genre nicknamed *Pathétique* included a three-voice fugue in another of these works titled (*) *Hammerklavier*. One of these works is subtitled “quasi una Fantasia” and features C-sharp minor triplet arpeggios that evoke the reflection of the night sky on Lake Lucerne. For ten points, name this type of musical composition for a solo keyboard instrument, exemplified by Beethoven’s *Moonlight*.**

ANSWER: piano sonatas by Beethoven (prompt on “sonata” or “sonatas by Beethoven”)

(18) **This ruler’s Lord Privy Seal, Robert Cecil, was forced to prepare for her death in secret, since she refused to name a successor. In 1558, this ruler reversed her predecessor’s Catholic reforms with her Act of Supremacy. In a speech at (*) Tilbury, this monarch claimed that she had the “heart and stomach” of a king. Philip II [the second] attempted to invade this queen’s country with the Spanish Armada. Mary I [the first] was succeeded by, for ten points, what “virgin queen” of England, the daughter of Henry VIII [the eight]?**

ANSWER: Elizabeth I (prompt on “Elizabeth” or “Queen Elizabeth”)

(19) **In 2005, a NASA probe found knots in this planet’s Encke Gap. This planet’s natural satellites include Mimas and Enceladus. This planet’s “String of Pearls,” a chain of storms, was observed by the (*) Cassini probe before it crashed into this planet in 2017. Another storm covers this planet’s north pole, and has a persistent hexagonal shape. This gas giant is orbited by Titan outside its rings. For ten points, name this second-largest planet in the solar system, the sixth from the sun.**

ANSWER: Saturn

(20) **In this novel, Catherine spreads a rumor that a rich bootlegger is Kaiser Wilhelm’s cousin, and falsely claims that the narrator’s cousin is Catholic to explain why Tom can’t get divorced. In this novel, a new dog leash convinces (*) George Wilson that Myrtle’s affair led to her death, so he shoots this novel’s protagonist in his pool. Daisy Buchanan runs over her husband’s mistress in, for ten points, what novel narrated by Nick Carraway and written by F. Scott Fitzgerald?**

ANSWER: The Great Gatsby