

## (MS) Academic Bee Round 3

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### Regulation Tossups

(1) This artist painted the title object against a turquoise sky in *Ladder to the Moon*. This artist painted a rock formation near Abiquiú [[ah-bee-KYOO]] in *The White Place in Sun*. Subjects most identified with this artist appear in paintings such as *Red Canna* and *Cow's Skull: Red, White, and Blue*. For the point, identify this artist, famous for her detailed paintings of flowers.

ANSWER: Georgia **O'Keeffe** (or Georgia Totto **O'Keeffe**)

(2) Soft repeaters of this radiation are believed to originate in starquakes within magnetars and neutron stars with orbiting fossil disks. Large amounts of this radiation are released from jets caused by hypernovas. A flash of this radiation followed by a lower energy afterglow is characteristic of its namesake "bursts." For the point, name this radiation with a higher frequency than X-rays, named for the third letter of the Greek alphabet.

ANSWER: **Gamma** Radiation (or **Gamma** Rays; accept **Gamma** Ray Burst; prompt on "GRB")

(3) During this battle, Lieutenant Lord Rawdon claims to have identified physician Joseph Warren on the battlefield and killed him at point blank range. Either Israel Putnam or William Prescott may have entered history at this battle by saying, "Don't fire until you see the whites of their eyes." The British claimed victory in, for the point, what 1775 battle fought in Boston, mostly on Breed's Hill?

ANSWER: Battle of **Bunker Hill** (accept Battle of **Breed's Hill** before mentioned)

(4) A prophecy in this novel mentions "two sons of Adam" and "two daughters of Eve." In this novel, a lone lamppost is the site of a meeting between Mr. Tumnus and one of the protagonists. In this novel, four siblings of the Pevensy [[PEH-ven-see]] family are sent to live with their uncle during World War Two and discover a magical land while exploring a spare room. For the point, name this fantasy novel by C.S. Lewis in which Narnia is entered through a piece of furniture.

ANSWER: *The **Lion, the Witch and the Wardrobe*** (prompt on "The Chronicles of Narnia")

(5) This type of rock makes up the Taynton Formation where the first dinosaur fossils were identified. The erosion of this type of rock forms karst topography. A Florida formation of this type of rock is named for Key West and is made of fossilized coral. This type of rock is the most common material for making Portland cement. For the point, name this porous, sedimentary rock made of crystalline forms of calcium carbonate.

ANSWER: **Limestone** (prompt on "Carbonate," "Calcium Carbonate," or "CaCO<sub>3</sub>" before "Carbonate" is mentioned)

(6) Alongside Ben Carson, this man was awarded the Presidential Medal of Freedom for his work on the PEPFAR AIDS relief program. Since 1984, this Brooklyn-born physician has headed the National Institute of Allergy and Infectious Diseases. Known for his clashes with Rand Paul, for the point, what Chief Medical Advisor to Joe Biden gained international acclaim during the COVID-19 pandemic?

ANSWER: Anthony **Fauci** (or Anthony Stephen **Fauci**)

(7) This man partnered with Lin Oliver to write the *Ghost Buddy* series and the *Alien Superstar* trilogy. This man also collaborated with Oliver on a series of children's books about a Manhattan 4th grader who, just like this man, has dyslexia, Hank Zipzer. For the point, name this man who won two Golden Globes playing Arthur Fonzarelli, also known as "The Fonz," on *Happy Days*.

ANSWER: Henry **Winkler** (or Henry Franklin **Winkler**)

(8) The parasite *Henneguya* [[hen-uh-GOO-yuh]] *salmonicola* is the only multicellular animal to lack these organelles. The matrix of these organelles is involved in the transfer of electrons to FADH<sub>2</sub> [[F-A-D-H "TWO"]] and NADH [[N-A-D-H]]. Like plastids, these organelles were first formed through endosymbiosis. These organelles possess a matrilineally inherited type of circular DNA. For the point, name these organelles known as the "powerhouse of the cell."

ANSWER: **Mitochondria** (accept **Mitochondrion**)

(9) This poet eulogized Abraham Lincoln in "When Lilacs Last in the Dooryard Bloom'd." This American indicated his acceptance of all religions in the first-person poem "Song of Myself" and described a person "fallen cold and dead" in a poem quoted in *Dead Poet's Society*. "O Captain! My Captain!" was written by, for the point, what author of the poetry collection *Leaves of Grass*?

ANSWER: Walt **Whitman** (or Walter **Whitman**)

(10) This festival incorporates recitations of the *Hanerot Halalu* [[hah-neh-ROH hah-LAH-loo]] and *Ma'oz Tzur* [[mah-OHSS TSOOR]]. This festival commemorates the successful Maccabean revolt against Antiochus [[an-TYE-uh-kiss]] IV of the Seleucid [[suh-LOO-sid]] Empire and the miracle of a jug of oil that lasted for eight days. For the point, identify this festival that features dreidels [[DRAY-duls]] and the lighting of a nine-branched candle called a menorah, a Jewish winter festival.

ANSWER: **Hanukkah** (accept **Chanukah**; accept **Festival of Lights**)

(11) This street is the oldest north-south thoroughfare in New York City. An early network of bright lights lining this street earned it the nickname "The Great White Way." Productions such as *Wicked* and *Hamilton* have been staged on, for the point, what Manhattan thoroughfare, a world capital of musical theatre?

ANSWER: **Broadway**

(12) A shipwrecked English captain named William Adams was elevated to this specific position and headed the Red Seal system. The Taika [[tah-EE-kah]] Reforms led to the creation of this social class which made their last stand in Satsuma during the Boshin War. Following a code known as *bushido*, for the point, what was this class of military nobility in pre-Meiji [[meh-EE-jee]] Reformation Japan?

ANSWER: **Samurai**

(13) The name of one member of this family was derived from his godfather, Georg Philip Telemann. The best-known pieces created by one member of this family include the *Solfeggietto* [[sohl-feh-zhee-EH-toh]]. Another member of this family composed the *Well-Tempered Clavier* and the *Brandenburg Concertos*. For the point, give this family name of German musicians Carl Philip Emanuel and Johann Sebastian.

ANSWER: **Bach** (accept Johann Sebastian **Bach**; accept Carl Philip Emanuel **Bach**)

(14) Introduced in 1939, versions of this character's stories in the U.K. originally changed his name to "Zozo" to avoid offending an English king of the same name. Margret and H.A. Rey created this character that explores a cruise ship in his first book while being transported to a zoo. The Man in the Yellow Hat was the companion of, for the point, what primate and protagonist of a series of picture books?

ANSWER: **Curious George** (prompt on "George")

(15) Initiation into this religion involves wearing 72 threads called *kushti*, symbolizing the 72 chapters of the Yasna. Members of this religion known as the Parsis are the last to traditionally worship in structures called Fire Temples. This religion places its dead in Towers of Silence and preaches against the spirit Ahriman [[AH-ree-mahn]]. For the point, name this dualistic religion from Persia that worships Ahura Mazda.

ANSWER: **Zoroastrianism** (or **Zoroastrians**; accept **Mazdayasna**)

(16) This quantity is plotted on the x-axis of a diagram that visualizes heat transfer in a Carnot [[kar-NO]] cycle. This quantity is measured in Joules per Kelvin, and it equals Boltzmann's constant times the natural log of the number of microstates. This quantity never decreases in isolated systems according to the Second Law of Thermodynamics. For the point, name this quantity measuring disorder in a system.

ANSWER: **Entropy** (accept **S**)

(17) While off the coast of this island, the *Zenobia* sank on its maiden voyage. Two opposing ethnic groups in this island's village of Pyla live side-by-side within the boundaries of the Green Line. This island, a one-time UK holding, was originally offered to King Constantine of Greece as an incentive to join World War One. For the point, name this Mediterranean island, split into Turkish and Greek-supported sides, with its capital at Nicosia [[nih-koh-SEE-ah]].

ANSWER: Republic of **Cyprus** (or **Kypros**; accept **Kibris**; accept **Kypriaki** Dimokratia; accept **Kibris** Cumhuriyeti)

(18) This novel begins with the death of caretaker Frank Bryce and ends with the donation of 1000 galleons to start a joke shop. This novel involves the use of gillyweed and polyjuice potion, and the central character in this novel is able to stand off against his enemy in a graveyard due to the magic of shared cores in their wands. For the point, name this novel, the working title of which included the words "Doomspell Tournament," the fourth novel in the *Harry Potter* series.

ANSWER: *Harry Potter and the **Goblet of Fire***

(19) In brass instruments, these objects are contained within cylindrical Périnet [[pay-rih-NEH]] valves. These objects are attached to a swiveling gudgeon pin in internal combustion engines, in which the purpose of these objects is to transfer force from expanding gas to the crankshaft via a connecting rod. For the point, name this moving component contained by a cylinder in reciprocating engines.

ANSWER: **Pistons**

(20) The main character in this novel asks, "Are there no workhouses?" after meeting two children named Want and Ignorance. That same character in this novel revisits memories in Fezziwig's warehouse and observes the Cratchit family and young Tiny Tim. For the point, name this novel by Charles Dickens in which Ebenezer Scrooge is visited by three ghosts on a certain holiday.

ANSWER: A **Christmas Carol**. *In Prose. Being a Ghost Story of Christmas.*

(21) Verkhoyansk holds this distinction north of the Arctic Circle, and the town of Lytton in British Columbia recently gained this distinction within Canada. For ninety years, El Azizia, Libya was thought to hold this distinction worldwide until an WMO investigation revealed that record belonged to Furnace Creek. Death Valley currently holds, for the point, what weather-related record?

ANSWER: **Hottest** Temperature (accept reasonable equivalents)

(22) One of these creatures named Lotan was defeated by Baal [[BALL]] in Canaanite [[KAY-nuh-nite]] mythology. An eight-headed example of these creatures named Yamato no Orichi had his tail fashioned into the legendary sword *Kusanagi*, or the "Grass-cutting Sword," by the *kami* Susanoo [[soo-sah-NOH-oh]]. Loki is the father of one of these creatures that is partially named for "Midgard" and is defeated by Thor during Ragnarok. For the point, what type of creature tempted Adam and Eve in the Garden of Eden?

ANSWER: **Serpent** (or **Snake**; accept **Dragon** before "Midgard" is mentioned)

(23) This person earned the nickname "Milk Snatcher" during their time as Education Secretary. A military junta led by Leopoldo Galtieri declared war on this politician's nation by invading the Falkland Islands in 1982. For the point, name this Conservative who served as the first female prime minister of the United Kingdom.

ANSWER: Margaret **Thatcher** (or Margaret Hilda **Thatcher**; or Margaret Hilda **Roberts**; or Baroness **Thatcher**)

(24) In one work by this composer, Konstanze reunites with her lover, Belmonte, after being rescued from an Ottoman harem. This composer created *Abduction from the Seraglio* [[suh-RAH-lee-oh]] and worked with the librettist Lorenzo Da Ponte on such works as *Così fan Tutte* and *The Marriage of Figaro*. For the point, identify this Austrian composer of *Don Giovanni*.

ANSWER: Wolfgang Amadeus **Mozart**

(25) The "Z-Scheme" describes a chain of proteins involved in this biological process. The key enzyme of one part of this process is likely the most abundant on earth, RuBisCO. As part of this process, the Calvin Cycle succeeds the light-dependent reactions, which produce NADH and ATP. For the point, name this process in which plants capture energy from sunlight.

ANSWER: **Photosynthesis** (prompt on "Calvin Cycle" before mentioned)

(26) This country's town of Sarmiento recorded Latin America's coldest temperature. This country that contains the province of Córdoba also includes the cities of Rosario and Mendoza, the last of which names a province that contains Aconcagua. Chile shares a 3300 mile-long border with, for the point, what South American country led from Buenos Aires?

ANSWER: Republica **Argentina** (accept **Argentine** Republic)

(27) The prevalence of numbers of this type can be determined using an algorithm named for Gary Miller and Michael Rabin. Integers of this type of number can be checked using an operation called trial division. A.O.L. Atkin and Eratosthenes [[eh-rah-TOSS-theh-nees]] name sieves [[SIVS]] used to find numbers of this type. For the point, identify this type of number that can only be divided by one and itself.

ANSWER: **Prime** Numbers

(28) This instrument follows the opening harp in *Danse Macabre*, playing a dissonant interval called the tritone. This instrument plays the *24 Caprices* of Niccolò Paganini, a virtuoso who was legendarily said to have sold his soul for the ability to master this instrument. Players draw a bow across the four strings of, for the point, what instrument sometimes called a fiddle?

ANSWER: **Violin** (accept **Fiddle** before mentioned)

(29) The *stadion* was part of the first of these events, which were held during a ceasefire known as an *ekecheiria* [[eck-uh-KYE-ree-uh]]. Participants in these events were recognized for their excellence with a crown made of olive leaves. For the point, identify this series of events in ancient Greece that inspired a modern sporting competition that takes place every four years.

ANSWER: **Olympic** Games (or **Olympics**; prompt on "Pan-Hellenic" Games)

(30) After Washington's defeat at the Battle of Brandywine, this object was transported to Allentown to prevent it from being recast, and it was displayed on the opposite side of the 1976 Bicentennial dollar. This object was repurposed as an abolitionist symbol and may have been broken after it was used to mark John Marshall's death in 1835. Famed for its crack is, for the point, what iconic symbol of Philadelphia whose ringing marked the Declaration of Independence of the American colonies.

ANSWER: **Liberty Bell** (accept Old **State House Bell**)

### Extra Questions

(1) This country is home to a citadel called Sacsayhuamán [[sack-say-hwah-MAHN]]. Carvings of naked prisoners decorate this country's El Brujo [[BROO-hoh]] complex in the Chicama Valley. A desert in this country's south contains large geoglyphs depicting animals such as condors and hummingbirds called the Nazca Lines. For the point, name this South American country whose historic Incan cities include Cusco.

ANSWER: Republic of **Peru** (accept República del **Perú**)

(2) Solomon is said to have used one of these objects to control djinn [[JIN]] and demons. In Hindu literature, one of these objects is found in a fish and causes Dushyanta [[doo-SHYAHN-tah]] to recognize his wife. In Norse mythology, Odin owns one of these objects that self-replicates each night and is called Draupnir [[DRAWP-neer]]. For the point, name these small, metal objects which are usually exchanged during a Western wedding.

ANSWER: **Ring** (accept **Seal** of Solomon before "fish" is mentioned; accept Wedding **Rings**; prompt on "Jewelry" or similar answers)