

National Academic Bee – Round 2

Regulation Tossups

(1) Astronomer Heidi Hammel referred to this body's GS-37S storm as "Fourth of July Fireworks." This body's magnetosphere has a corkscrew-shaped magnetotail, which was documented in 1986 by *Voyager Two*. The ring system of this body is partially shaped by shepherd moons such as Cordelia and Ophelia, and this planet's five major moons include Oberon, Umbriel, and Miranda. Discovered by William Herschel in 1781, for the point, what ice giant is known for its extreme axial tilt?

ANSWER: **Uranus**

(2) One claim in this essay is attributed to "a native of the island Formosa" in direct reference to notorious conman George Psalmanazar. This essay's author claims that a London acquaintance spoke to "a very knowing American," who gave assurance that the subjects of this essay are a "most delicious nourishing and wholesome food, whether stewed, roasted, baked, or boiled." For the point, name this satirical 1729 essay by Jonathan Swift, which suggests eating Irish babies to deal with poverty.

ANSWER: A **Modest Proposal**

(3) Chick Gandil served as the ringleader of this scandal by organizing a scheme with bookmaker Joseph J. Sullivan. During this scandal, Kenesaw Mountain Landis was criticized for the harsh punishment of Buck Weaver. The guilt of crime boss Arnold Rothstein and athlete Shoeless Joe Jackson were both disputed in the aftermath of this scandal, which involved a championship game against the Cincinnati Reds. For the point, identify this scandal in which members of a Chicago baseball team were bribed to throw the 1919 World Series.

ANSWER: **Black Sox** Scandal (accept clear-knowledge equivalents)

(4) The theoretical upper limit of this technology is described by the Shockley Queisser Efficiency Limit. In 2023, researchers at the University of Rochester leveraged the Purcell effect to substantially improve the efficiency of this technology's perovskite type. This technology relies on radiation to excite valence electrons in a p-n junction to the conduction band. For the point, name this technology which converts light from the Sun into electricity.

ANSWER: **photovoltaic cells** (or **PV cells**; accept **solar cells**; accept perovskite **solar cells**; accept **solar panels**)

(5) In this opera, one couple's move to the countryside is the subject of the aria "The Youthful Ardor of my Ebullient Spirits." This opera was inspired by *The Lady of the Camellias*, a novel that ends with the death of Marguerite. The title character of this opera sings "Love! Madness! Euphoria!" in the aria "Sempre Libera," and the first act of this opera features a *brindisi* duet between Alfredo and the title character, a courtesan. For the point, identify this Giuseppe Verdi opera about Violetta, the titular fallen woman.

ANSWER: **La Traviata**

(6) This dynasty names a type of music that was imported to Japan and formed the *gagaku* genre with *komagaku*. Artifacts from this dynasty were found in the Batu Hitam shipwreck of an Arabian *dhow*. An imperial consort to this dynasty's ruler Emperor Xuanzong [[SHWAN-dzong]] was named Yang Guifei [[GWEH-FEY]], and this dynasty, which was based in Chang'an [[chang-AHN]], faced a revolt led by An Lushan. For the point, name this successor of the Sui [[SWAY]] dynasty, which fostered poets like Li Bai.

ANSWER: **Tang** dynasty (or **Tang** empire; accept **Tang** shipwreck; accept **Tang** treasure; accept **togaku**)

(7) This measurement, which defines the parsec, was originally conceived as the average of the Earth's aphelion and perihelion, a definition used until 2012. Roughly equivalent to 93 million miles, or just under 150 million kilometers, this measurement is equal to the distance light travels in eight minutes and 20 seconds. For the point, what is this measurement, the mean distance between the Sun and the Earth?

ANSWER: **astronomical unit** (or **AU**; prompt on descriptive answers)

(8) This literary character is thought by some scholars to be at least partly based on a major figure of the Musket Wars, Te Pēhi Kupe, a chief of the Māori, which likely inspired this character's homeland of Kokovoko. This character's coffin replaces a life-buoy and saves the life of a protagonist, and that coffin is decorated with motifs similar to this character's many tattoos. For the point, name this character, a close friend of Ishmael who worked with Starbuck as a harpooner on the *Pequod* in the novel *Moby Dick*.

ANSWER: **Queequeg**

(9) In response to a plane shoot-down, this country launched Operation Snoopy. This country's government published a propaganda pamphlet called "Anatomy of Terror" and ran Operation Split-Shot. This country's leader agreed to an accord with Jeremiah Chirau, which was known as the Internal Settlement, and this country declared separatism in the Unilateral Declaration of Independence. Ian Smith once led, for the point, what diplomatically unrecognized, white-ruled country that later became Zimbabwe?

ANSWER: Republic of **Rhodesia** (accept Southern **Rhodesia**; do NOT accept or prompt on "Zimbabwe" or "Republic of Zimbabwe")

(10) Six atoms of this element are bonded to an atom of uranium in the gaseous diffusion method of enrichment. Along with carbon, this element forms many potentially hazardous "forever chemicals" such as Teflon. Compounds containing chlorine, hydrogen, and this element were once widely used as refrigerants and have been implicated in depleting ozone in the atmosphere. For the point, name this halogen, which is commonly added to drinking water to improve dental health.

ANSWER: **fluorine** (accept **F**)

(11) This author published book-length essays such as *Mr. Bennett and Mrs. Brown* as co-founder of the Hogarth Press. This author created a work consisting of soliloquies spoken by six main characters, titled *The Waves*. This author, who described a trip taken to the Isle of Skye by the Ramsay family, was known for pioneering the use of a stream of consciousness narrative. For the point, identify this British author who wrote *To the Lighthouse* and *Mrs. Dalloway*.

ANSWER: Virginia **Woolf** (or Adeline Virginia **Woolf**; or Adeline Virginia **Stephen**)

(12) The world's smallest car, the P50, was built by this island's Peel Engineering Company. This island, which formed the southernmost part of the Kingdom of the Isles, was transferred to Scotland from Norway by the Treaty of Perth. This island is famed for its Tourist Trophy motorcycle race and claims to house the world's oldest continuous parliament, the Tynwald. For the point, name this island between Ireland and Great Britain, whose native Celtic language went extinct in 1974.

ANSWER: Isle of **Man** (accept **Ellan Vannin**; accept **Mannin**; accept **Mann**)

(13) An example of this process that can lead to increases in prezygotic isolation is called reinforcement, which is sometimes known as the Wallace effect. This process, which has a chemosensory form caused by chemical stimuli, can be aided by polyploidy. The same geographic region is shared in the sympatric form of this process, while geographic barriers can limit gene flow and cause this process's allopatric form. For the point, name this process in which an evolving population produces new species.

ANSWER: **speciation** (accept sympatric **speciation**; accept allopatric **speciation**)

(14) *Two answers required.* One of these composers dedicated an Opus 25 set of works to the other's mistress, Marie d'Agoult. One of these composers, who wrote études including "Feux follets" and "Mazeppa," was the subject of a biography by the other, who was also the son-in-law of Richard Wagner. One of these composers partnered with George Sand years after Sand was introduced to the other, who wrote *Transcendental Études*. For the point, name these two Romantic-era composers and pianists, one from Poland and the other from Hungary.

ANSWER: Frédéric **Chopin** and Franz **Liszt** (accept Frédéric François **Chopin** or Fryderyk Franciszek **Chopin** for **Chopin**)

(15) This figure extolled academic skepticism in a book framed as a Socratic dialogue with Quintus titled *De Divinatione*. This figure described various "duties of justice" in the earliest known distinction between passive and active justice. This author of *De Officiis* outlined a theory of rhetoric in *De Oratore*, and this thinker was executed for attacking a political rival in a series of speeches inspired by Demosthenes. For the point, name this Roman orator who attacked Marc Antony in the *Philippics*.

ANSWER: **Cicero** (or Marcus **Tullius** Cicero; accept **Tully**)

(16) With hypochlorite, this compound is reacted to create monochloramine, with which this compound is reacted to create hydrazine in the Olin Raschig process. In the BMA process, this compound and methane are used to create hydrogen cyanide. Production of this compound is made possible by using an iron catalyst in the Haber-Bosch process, and this compound is a form of nitrogenous waste that occurs in urea. Common in fertilizers, for the point, what chemical compound has the formula "N-H-three?"

ANSWER: **ammonia** (accept **N-H-three** before mentioned)

(17) This architect was told to use a design that would inspire people to become interested in politics for the John F. Kennedy Presidential Library and Museum in Boston. This architect utilized an asymmetric design of interwoven triangles to represent bamboo growth patterns in the Bank of China Tower in Hong Kong, and this architect was tasked with designing a museum on the shores of Lake Erie. For the point, name this Chinese-American architect who designed glass pyramids for the Rock and Roll Hall of Fame and the entrance to the Louvre.

ANSWER: I.M. **Pei** (or Ieoh Min **Pei**)

(18) Independent counsel Lawrence Walsh found no evidence that the extent of this scandal was known to the U.S. president. Secretary of Defense Caspar Weinberger was pardoned for participation in this scandal, which was investigated by the Tower Commission. As part of this scandal, John Poindexter and Oliver North served as conduits for negotiations between the National Security Council and officials in the Middle East. For the point, identify this arms-dealing scandal of the Reagan administration.

ANSWER: **Iran-Contra** Affair (accept **Iran Imitative**)

(19) The existence of this region was partially discovered by Léon Teisserenc de Bort and publicized in 1902. Regular convection does not occur within this region because warmer layers naturally rise above cooler layers. Airplanes that are low on fuel fly in this layer of the atmosphere to avoid turbulence and cover more distance, and this layer contains most of the ozone in Earth's atmosphere. For the point, identify this second-lowest layer of Earth's atmosphere, located above the troposphere.

ANSWER: **stratosphere**

(20) This author published a fictionalized account of a homosexual relationship with Gore Vidal in *The Subterraneans*. Zen teacher Alan Watts condemned this author's interpretation of Buddhism in *The Dharma Bums* as a simplistic rejection of culture and social order. Hunter S. Thompson was heavily influenced by this author, who used a long scroll of text to write a novel about Sal Moriarty and Dean Paradise. For the point, identify this Beat Generation author of *On the Road*.

ANSWER: Jack **Kerouac** (or Jean-Louis Lebris de **Kérrouac**)

(21) The Via de' Tornabuoni is located in this city, where Filippo Brunelleschi designed the massive dome of its cathedral. This city is known for its Ponte Vecchio bridge, which crosses the Arno River. The Uffizi Gallery is located in this city, where the banking industry was once dominated by the Medici family, and a square in this city is named for the artist Michelangelo. For the point, name this capital of Tuscany, the largest Italian city between Milan and Rome.

ANSWER: **Florence** (or **Firenze**; or **Fiorenza**)

(22) Two of these devices are placed back-to-back inside a prism in a proof given by Simon Stevin. That expression for these devices derives the mechanical advantage equal to weight over force exerted on an object when friction is not accounted for. These devices, which allow less force to be used while doing the same amount of work, are static wedges. One of the six classical simple machines, for the point, what devices are used to raise and lower objects and facilitated construction of the Ancient Egyptian pyramids?

ANSWER: **inclined plane** (or **ramp**; do not accept "wedge")

(23) This country is home to the founder of the Neoplasticism art movement, as well as another founder of a related movement with a name that translates to English as “The Style.” This country is home to sisters Anna and Rachel Ruysch [[ROYSH]], who produced still-life paintings of flowers in the same century that this country's Guild of St. Luke admitted Judith Leyster. For the point, name this country where the second-most popular museum, after the Rijksmuseum [[RIKES-moo-zeh-um]], houses the works of Vincent van Gogh.

ANSWER: Kingdom of the **Netherlands** (or Koninkrijk der **Nederlanden**; or **Nederland**; accept **Holland**)

(24) Some members of this organization were called “V-men” while based in Vienna at the Hotel Metropole. This organization operated Montelupich prison and targeted left-wing parties in Aktion Gitter, and, in Kraków, this organization held a conference with the NKVD. This organization, which was part of the SiPo, was created by merging police agencies in Prussia through an initiative by Hermann Göring. For the point, name this secret police force of Nazi Germany.

ANSWER: **Gestapo** (or **Geheime Staatspolizei**; accept **Gestapo**-NKVD conferences)

(25) It's not related to the kidneys, but, in fish, this sense involves more glomeruli than it does in mammals. In humans, this sense is the only one of its type to bypass the thalamus and instead directly connect to the forebrain. This sense is modified by OR6A2, a receptor that affects aversion to the herb cilantro, and by viral illness such as COVID-19, which can cause anosmia. For the point, name this sense that, in humans, is processed by the olfactory bulb.

ANSWER: **smell** (accept **scent**; accept **olfaction** or **olfactory** before mentioned)

(26) Frederic Melcher proposed the creation of this award, which was first won in 1922 by Hendrik Willem van Loon. This award is named for an Englishman who published *A Little Pretty Pocket-Book* with rhymes for the letters of the alphabet, as well as *The History of Little Goody Two-Shoes*. Multiple recipients of this award include Katherine Paterson, Kate DiCamillo, and Lois Lowry. For the point, name this literary award, which, like the Caldecott Medal, honors the creators of children's literature.

ANSWER: John **Newbery** Medal

(27) The northern portion of this island is connected via a narrow isthmus bounded by the Hauraki Gulf. This island's coastline is indented by Hawke's Bay and the Bay of Plenty. This island is the most populated island in Polynesia and includes major cities such as Hamilton, Rotorua, and Whangārei. This island is home to the world's southernmost national capital, which is bounded by the Cook Strait. For the point, name this more populated and smaller of New Zealand's two main islands.

ANSWER: **North** Island (or Te **Ika-a-Māui**)

(28) Members of the genus *Euprymna* have been observed hiding among “ropes” of this substance, possibly camouflaging themselves as sea grass. The amount of mucus contained in this substance determines if it acts as a decoy or a “smoke screen.” With the exception of members of the order Cirrina and nautiluses, this melanin-rich substance is produced by all cephalopods. For the point, identify this black substance released by cuttlefish, squid, and octopuses as a defense mechanism.

ANSWER: **ink** (accept **ink** ropes)

(29) This artist's namesake "Cartoons" were a series of tapestry designs depicting scenes from the lives of Peter and Paul. This artist created a painting with a self-portrait next to Zoroaster as part of a work that is located across from this artist's fresco titled *Disputation of the Holy Sacrament*. The best-known painting by this artist depicts a man holding the *Timaeus* while extending a finger upward. For the point, name this artist who included Plato and Aristotle in *The School of Athens*.

ANSWER: **Raphael** (or **Raffaello** Sanzio da Urbino; accept **Raphael** Cartoons)

(30) This country expanded southwards during the occupation of Araucanía against the Mapuche [[mah-POO-chay]]. Many economists in this country were trained under Milton Friedman and nicknamed the "Chicago Boys." This country, which expanded its coastline northwards during the War of the Pacific, administers an island that is home to the *rongorongo* script and many *moai* statues. For the point, name this country that was subject to a dictatorship under Augusto Pinochet [[PEE-noh-shay]].

ANSWER: Republic of **Chile** (or Republica de **Chile**)

(31) This entertainment form was popularized by Viola Spolin and Paul Sills at The Second City. This entertainment form was often used on variety shows such as *The Carol Burnett Show* and *Monty Python's Flying Circus*. This entertainment form is central to a Lorne Michaels-created show, which holds the record for most Primetime Emmy Award nominations. For the point, name this entertainment form seen on *Saturday Night Live*, in which short scenes are performed by comic actors, often using improvisation.

ANSWER: **sketch** comedy (accept **skit**; accept **improv** or **improvisation** before mentioned)

(32) The first American example of this type of work was authored in 1796 by Amelia Simmons. A 1961 work of this type was co-written by Simone Beck and Louisette Bertholle, along with an author who previously helped the OSS to develop a type of shark repellent. One of these works partially titled for *The Joy of* a certain activity was written by Irma Rombauer, a homemaker. For the point, name this type of written practical work, which was popularized by Julia Child.

ANSWER: **cookbook** (accept **recipe** book or equivalents)

(33) After one of these people beheaded a white snake, an elderly woman turned into smoke as a good omen. While serving under one of these people, a scholar with four eyes named Cangjie [[KONG-jyuh]] invented the oracle bone script. A "Flame" holder of this position is sometimes identified with a tea and herb god named Shennong. Five holders of this position are deified alongside the Three Sovereigns, the first of which was Huangdi, the Yellow example. For the point, name this position held by rulers of the Qin [[“CHIN”]] and Han Dynasties.

ANSWER: **emperor of China** (prompt on “emperor;” prompt on “sage” or “sovereign” before mentioned; do not accept “king”)

(34) Accelerator mass spectrometry can help with this technique, in which the "fraction modern" ratio is calculated before the number 8,033 is multiplied by the negative of the logarithm of the calculated ratio. Willard Libby created this technique, which depends on the creation of an isotope when cosmic rays interact with nitrogen, creating a molecule that is absorbed by plants. For the point, name this technique for finding the age of organic materials by using a radioactive isotope of an element with atomic number six.

ANSWER: **carbon dating** (or radio**carbon dating**; or **carbon-fourteen dating**)

(35) In a short story set in this country, the theft of a sink leads to accusations against a stair sweeper who sleeps in front of a building. In another story set in this country, a young boy is rescued from a monkey attack by a tour guide who also works as a translator in a medical clinic. In a magical realist novel, Saleem Sinai gains telepathy after being born during this country's independence. For the point, name this country, the setting of "The Interpreter of Maladies" and *Midnight's Children*.

ANSWER: Republic of **India** (or **Bharatiya** Ganarajya)

Extra Question

(1) A "mad" form of this product appears red due to the presence of grayanotoxin. Mellivory is a term for the consumption of this product, which is also used in a branch of alternative medicine called apitherapy. In Jewish tradition, this product is served alongside apples for Rosh Hashanah, and a certain species of badger that eats this product is known for its fearlessness. The character Winnie-the-Pooh frequently seeks, for the point, what sweet product made by bees?

ANSWER: **honey** (accept mad **honey**; accept **honey** badger)