

Academic Bee – Final Round (6th-8th)

Regulation Tossups

(1) This company produced its first car with the chassis of a Lotus Elise, and one of its vehicles became the first production car to be launched into space aboard a Falcon Heavy Rocket. That car made by this company, the Roadster, was also among the first production cars to be powered exclusively by (+) lithium-ion battery cells, and this company is known for its Autopilot and Full Self-Driving (*) technology. For the points, name this company that produces electric cars and is led by Elon Musk.

ANSWER: Tesla, Inc. (accept Tesla Motors; accept Tesla Roadster)

(2) In Act Two of this opera, a stage band plays music from Vicente Martín y Soler's *Una cosa rara* before quoting music from its composer's own *The Marriage of Figaro*. In Act One, the protagonist of this opera tries to woo Zerlina, and Leporello serves the title character of this opera, who is eventually (+) dragged to the underworld by the stone statue of the Commendatore. Centering on the title Italian (*) nobleman, for the points, what is this Mozart opera?

ANSWER: Don Giovanni (or *Il dissoluto punito, ossia il Don Giovanni*)

(3) One soldier with this surname, alongside Samuel Prescott and Paul Revere, warned Minutemen of a British approach to Concord. This surname was also borne by a man whose support for the McNary-Haugen Farm Relief Bill led Charles Curtis to be chosen over him as a running mate. (+) That man of this name won the 1925 Nobel Peace Prize for his plan to stagger German war reparations. Belonging to a man who proposed an 1887 act to subdivide Native (*) American landholdings, for the points, what is this surname?

ANSWER: Dawes (accept William Dawes, Charles Gates Dawes, Dawes Plan, Henry Laurens Dawes, or Dawes Act)

(4) Regions crucial to the formation of this cellular structure are known as NORs and can be found on acrocentric chromosomes. If this structure becomes too prominent, it is a sign of cellular atypia and can be indicative of cancerous transformation. A region of dense chromatin, (+) this structure contains genes that encode ribosomal RNA and is involved in ribosome assembly. The largest structure within the nucleus (*) of a eukaryotic cell, for the points, what is this cellular component?

ANSWER: nucleolus (accept nucleoli; do NOT accept or prompt on "nucleus")

(5) In this work, the author's vision of a model human being is thought to be depicted through the character Konstantin Levin. This novel opens by claiming, "All happy families are alike; each unhappy family is unhappy in its own way," and the title character of this work has a relationship with a cavalry (+) officer named Count Vronsky before throwing herself in front of a train. Released in serial in the 1870s in *The Russian Messenger*, (*) for the points, what is this novel by Leo Tolstoy?

ANSWER: Anna Karenina

(6) Members of this ethnic group inhabited the "homelands" of Transkei and Ciskei and many residents of East London are members of this ethnic group. Though part of the Bantu family, the language of this ethnic group is known for its heavy use of click sounds. Port Elizabeth was renamed (+) Gqeberha [[kuh-eh-BEHR-hah]], the name of the Baakens River in the language of these people. Nelson Mandela (*) was a part of, for the points, what second-largest ethnic group of South Africa?

ANSWER: Xhosa [[KHOH-sah]] (or AmaXhosa; accept answers that soften the "KH" sound)

(7) Notes from lectures by this man at the University of Cambridge were compiled in the *Blue and Brown Books*. In one of this man's most important works, he distinguished the concepts of "seeing that" and "seeing as" through the now famous duck-rabbit illusion. (+) The author of the *Tractatus Logico-Philosophicus* and *Philosophical Investigations*, (*) for the points, who was this Austro-British philosopher of language?

ANSWER: Ludwig Wittgenstein [[VIT-gun-shtine]] (or Ludwig Josef Johann Wittgenstein; accept phonetic pronunciations and pronunciations that drop the "G" sound)

(8) In this 1952 novel, one character drops his glass eye into a tumbler during a fierce debate, and the narrator of this work is hospitalized after Lucius Brockway triggers a boiler explosion at Liberty Paints. Uncovering the betrayal of the Brotherhood, the protagonist of this novel adopts the disguise of (+) Rinehart before retreating to a cellar lit by 1,369 light bulbs. An unnamed African-American (*) character titles, for the points, what Ralph Ellison novel?

ANSWER: Invisible Man (do NOT accept or prompt on "The Invisible Man")

(9) The final campaign of this conflict can be translated as "Campaign of the Hills," at which the Count of Eu [[OOH]] led an allied victory at the Battles of Piribebuy [[pee-ree-beh-BOO-ee]] and Acosta Ñu [[NYOO]]. Earlier, the Duke of Caxias [[kah-SHEE-ahsh]] successfully besieged and captured the strategic fort of Humaitá (+) during this conflict, and one side's president was killed at the Battle of Cerro Corá [[SEH-roh koh-RAH]]. Fought from 1864 to 1870 against a landlocked South (*) American country, for the points, what is this deadliest war in Latin American history?

ANSWER: War of the Triple Alliance (or Paraguayan War; prompt on "Paraguay")

(10) This functionality is the last part of the interactive toplevel sequence, which begins with reading, then evaluating, and ends with producing output. Typesetting programs have the "pretty" form of this functionality, nicely formatting mathematical expressions, and in "C," a method for this functionality uses a (+) format string, with symbol specifiers for integers and strings. Allowing a programmer to output strings like "hello world," (*) for the points, what is this functionality?

ANSWER: printing function (accept Read-eval-print loop or cycle; accept output before it is mentioned; prompt on "language shell" or "REPL")

(11) In 2002, this structure had post-tensioning cables installed by Robert Silman to arrest the progressive deflection of its lowest concrete terrace. During construction, Walter Hall added additional steel reinforcement in the main floor beams of this structure, beyond the orders of the architect. (+) Commissioned by the owner of a Pittsburgh department store in Stewart Township, Pennsylvania, (*) for the points, what is this cantilevered Frank Lloyd Wright-designed residence?

ANSWER: Fallingwater (prompt on answers such as "Edgar J. Kaufmann Residence")

(12) This empire was established following the Ghurid conquest of northern India by its first ruler, Qutb ud-Din Aibak, after the Second Battle of Tarain, and one of the few female rulers in Islamic history was this empire's Razia Sultana. Reaching its prominence under Muhammad bin Tughluq, (+) this empire's eponymous capital was sacked by Tamerlane in 1398, leading to the rise of the Vijayanagara Empire. Conquered by the Mughals (*) after the First Battle of Panipat, for the points, what is this empire?

ANSWER: Delhi Sultanate (or Sultanate of Delhi)

(13) This rotational quantity is decreased for a grain of dust due to the Poynting-Robertson effect, and the change in this quantity is related to its time derivative and torque. This quantity can be written as the position vector crossed by another vector equal to mass times velocity, (+) and it is equal to the moment of inertia times a type of velocity measured in radians per second. Conserved when there is no external torque, (*) for the points, what is this quantity, symbolized "L"?

ANSWER: angular momentum (or moment of momentum; prompt on "rotational momentum"; do NOT accept or prompt on "linear momentum" or "momentum")

(14) An early work by this author, titled *Freshwater*, depicted Alfred, Lord Tennyson, and featured the author's great-aunt Julia Margaret Cameron as its protagonist. This woman co-founded the Hogarth Press, which published a work based on lectures this author gave at women's colleges, titled *A Room of One's Own*. (+) and this writer is named in the title of an Edward Albee play. The author of *Mrs. Dalloway* and *To the Lighthouse*, (*) for the points, who was this influential feminist author?

ANSWER: Virginia Woolf (or Adeline Virginia Woolf; or Adeline Virginia Stephen; accept *Who's Afraid of Virginia Woolf*)

(15) Following the resignation of a predecessor, this politician participated in a leadership election, defeating Shinjiro Koizumi. Following that victory, this politician lost the support of Komeito party leader Tetsuo Saito, resulting in that party leaving its government coalition. (+) This politician's country has been in a diplomatic crisis with China since 2025 after this woman (*) made comments about Chinese attacks on Taiwan. Assuming office in October 2025, for the points, who is this prime minister of Japan?

ANSWER: Sanae Takaichi (accept in either order)

(16) This process is commonly used in complexometric forms of this laboratory process, and graphs used in this process are often analyzed using Gran plots. This process was popularized after an invention by Antoine-Henri Descroizilles [[deh-skwah-ZEE-yuh]] was redesigned into simpler form by Karl Friedrich Mohr. (+) This process, also known as volumetric analysis, often makes use of a burette. Used to find the concentration of an analyte, (*) for the points, what is this process?

ANSWER: titration (or titrimetry; accept volumetric analysis before mentioned; accept complexometric titration)

(17) A young boy in this painting who brandishes two pistols inspired Victor Hugo's Gavroche in Les Misérables. Housed in the Louvre, this painting depicts figures climbing over a (+) barricade strewn with the bodies of revolutionaries, while the central figure is depicted with a tattered dress, wearing a Phrygian cap while holding the French tricolor. (*) For the point, name this Eugène Delacroix [[yoo-ZHEN deh-lah-KWAH]] painting commemorating the July Revolution of 1830.

ANSWER: Liberty Leading the People

(18) This man oversaw the implementation of Plan Dalet in 1948, and during his country's first elections, this man's Mapai Party won the largest number of legislative seats. This man implemented Operation Magic Carpet to facilitate immigration to his country and helped establish the political dominance of Labor (+) Zionism. Overseeing his country's participation in the Suez Crisis as the first prime minister of (*) Israel, for the points, who was this man?

ANSWER: David Ben-Gurion (or David Grün; prompt on "Gurion")

(19) The descending slab in this process creates deep trenches and fuels explosive volcanic arcs like the Aleutians and the Andes. This process also generates powerful earthquakes along zones like the Wadati-Benioff zone and can create back-arc basins. (+) This kind of convergent plate boundary forms where a more dense oceanic plate moves beneath (*) another plate. Central to plate tectonics and creating namesake "zones," for the points, what is this process?

ANSWER: subduction (accept word forms; accept subduction zone; accept Izu-Bonin-Mariana subduction system; accept Aleutian Arc or Andean subduction zone; prompt on "arc-trench")

(20) This character claims that he will sink with his "nose to the sunrise" if he does not reach one location. This character challenges Eustace Scrubb to a fencing duel, and this character, who is remembered as a valiant combatant during the Second Battle of Beruna, sails aboard the (+) *Dawn Treader*. This character's ancestors were blessed with speech after gnawing away the ropes binding Aslan (*) to the Stone Table. For the points, name this chivalrous Chief Mouse of Narnia.

ANSWER: Reepicheep

(21) Following this rebellion, College of William and Mary president Thomas Roderick Dew published a defense of slavery, and many slave states further restricted laws against literacy for African-Americans. Preparations for this rebellion began after its leader saw a solar (+) eclipse, and this rebellion was suppressed in Virginia's Southampton County. The deadliest revolt by enslaved persons (*) prior to the Civil War, for the points, what is this rebellion?

ANSWER: Nat Turner's Rebellion (accept Southampton Rebellion before "Southampton" is mentioned; accept "insurrection" in place of "rebellion")

(22) This scientist collaborated with Frederick Soddy at McGill University to develop the theory of radioactive disintegration, which explained radioactive decay and defined the half-life. This scientist proposed that radioactive elements transmute into other elements over time and differentiated between (+) alpha and beta radiation by studying their penetrating power. The plum pudding model was disproved by and a namesake experiment with (*) gold foil was held by, for the points, what New Zealand scientist?

ANSWER: Ernest Rutherford (or First Baron Rutherford of Nelson; accept Rutherford gold foil experiment, Rutherford scattering, or Rutherford atomic model)

(23) This artist's only sculpture used Marie van Goethem [[HUH-tum]] as inspiration and was titled *Little Dancer of Fourteen Years*. This artist was a leading member of a circle that included Édouard Manet and Camille Pissaro, and during the Reconstruction era, this man depicted his uncle Michel Musson's cotton (+) firm in *A Cotton Office in New Orleans*. Frequently depicting horses in paintings like *Before the Race* and known for his images of (*) dancers, for the points, who was this Impressionist?

ANSWER: Edgar Degas [[deh-GAH]] (or Hilaire-Germain-Edgar De Gas; accept phonetic pronunciations)

(24) On the shores of this lake, the *Dodi Princess* was the only cruise ship in its country, and Albert Kitson advocated for development of the basin of this lake for resource extraction. Created by the Akosombo Dam, this lake is the largest situated on the prime meridian and is formed from "Black" (+) and "White" rivers that share its name. Supplying a large portion of Togo's energy and the largest reservoir (*) in the world by surface area, for the points, what is this lake in Ghana?

ANSWER: Lake Volta (accept Black or White Volta)

(25) These devices, due to a 1905 patent, are considered to have been invented by Alfred Büchi, and early examples of these devices were made to compensate for reduced power of planes at higher altitudes. Intercoolers are often used alongside these devices, and the use of twin-scrolls can reduce "lag" (+) associated with these devices, powered via turbine driven by exhaust gas. Used to force induction to an engine and often found in modern automobiles, (*) for the points, what are these devices?

ANSWER: turbocharger (or turbosupercharger; accept turbo lag; prompt on "engine"; prompt on "supercharged" and similar word forms)

(26) Planned to include eight books, this series will have its sixth book released in October 2026, and when this book series was written, the Book of Exodus inspired the character Miryam, while Rhysand and the Night Court draw on broader mythological influences. In the first book of this series, the main character, (+) Feyre [[FAY-ruh]], is taken to the land of the faerie, Prythian, where she becomes High Fae. Growing in popularity due to *TikTok*, (*) for the points, what is this fantasy romance series by Sarah J. Maas?

ANSWER: A *Court of Thorns and Roses* (or *ACOTAR*)

(27) This group was legally established by the *Lex Titia* [[TISH-ee-ah]] and was earlier disputed by a sibling of one of its members, Lucius Antonius, during the Perusine [[peh-ROO-sine]] War. This group began dissolving after the last strong opposition to them, Sextus Pompey, (+) was defeated by one of its members, and this group earlier avenged an assassination by winning the Battle of Philippi. Formed by allies of (*) Julius Caesar to avenge his death and consolidate power, for the points, what is this group?

ANSWER: Second Triumvirate (prompt on "Triumvirate"; do NOT accept or prompt on "First Triumvirate")

(28) This author composed *Responsio ad Lutherum* in response to Martin Luther's attack on the *Assertio Septem Sacramentorum* of the king of England. The setting of another work by this author was originally supposed to be called "Nusquama," (+) but this author later changed it to the Greek-influenced term "Utopia." Becoming a saint after being executed by Henry the (*) Eighth for treason, for the points, who was this writer and theologian?

ANSWER: Thomas More

(29) During this historical period, Gongsun Du declared independence in a regime in Liaodong, and the Sima clan gained influence as regents in one state. The Shu Han and Eastern Wu emerged following the fragmentation of central Han authority in this period, which is the subject of a historical (+) "romance" written by Luo Guanzhong. Ended by the ascension of the Jin dynasty following the collapse of the Han, (*) for the points, what is this numerically named period in Chinese history?

ANSWER: Three Kingdoms Period (accept *Romance of the Three Kingdoms*)

(30) According to the *Gylfaginning*, this deity married Nanna, with whom he is said to have a son, Forseti. That work also states that nothing is more beautiful than this deity's hall, Breidablik, and that no ship is larger than his *Hringhorni*. Váli, (+) a brother of this deity, was born at the end of his life to avenge his murder. Killed by a mistletoe (*) arrow in a scheme by Loki, who tricked Hodr, for the points, who is this Norse deity?

ANSWER: Baldr

Extra Questions

(1) This author's Isaac Bickerstaff persona served as the basis for Ben Franklin's "Poor Richard," and a relationship with Esther Vanhomrigh inspired this author to coin the now-common name "Vanessa." To help alleviate poverty in Ireland, this author satirically proposed that they sell their (+) children to the rich as food in an essay titled *A Modest Proposal*. Creating the fictional island of Lilliput (*) for *Gulliver's Travels*, for the points, who was this English author?

ANSWER: Jonathan Swift

(2) This composer's life was saved during a duel with Johann Mattheson when his opponent's sword struck a large metal coat button. This man composed *Zadok the Priest* for George the Second, which has been performed at every British coronation since 1727. (+) Later commissioned to write *Music for the Royal Fireworks*, this composer also wrote the "Hallelujah" chorus. (*) The composer of the oratorio *Messiah*, for the points, who was this German-born Baroque composer?

ANSWER: George Frideric Handel (accept "Georg" in place of "George" and "Friedrich" or "Frederick" in place of "Frideric"; accept Handel's *Messiah*)

(3) This scientist wrote the *Flora Lapponica* during an expedition to the Lapland region, where he discovered one of his favorite flowers, the twinflower, the genus of which was later named after this man. Publishing early ideas in the *Fundamenta Botanica*, this biologist later expounded on (+) binomial nomenclature in *Philosophia Botanica*, helping establish systematics. Considered the father of modern (*) taxonomy, for the points, who was this Swedish scientist?

ANSWER: Carl Linnaeus (or Carl von Linné; or Carolus Linnaeus; or Carolus a Linné; prompt on "Linnaea borealis")