# 2020 US Academic Bowl National Championships Round 3 

## First Half

(Tossup 1) A vegan subset of this faith named Bobo Ashanti uses the term "Empress" to refer to matriarchs in their commune. This faith's texts outright reject western Christianity, blaming Christian missionaries for expediting the African diaspora. This faith's theologians are divided on whether (*) Haile Selassie is the Second Coming of Christ or simply Jah's prophet. For ten points, name this Afrocentric faith that originated in Jamaica whose ceremonies include the ritual consumption of marijuana.

## ANSWER: Rastafarianism

(Bonus 1) The Avodah recounts rituals that can no longer be performed on this holiday due to the destruction of the Second Temple. For ten points each,
Part 1: Name this Jewish day of atonement. This day occurs on the 10th day of Tishrei and often involves a day-long fast.
ANSWER: Yom Kippur
Part 2: Yom Kippur takes place just nine days after Rosh Hashanah, which is the Jewish holiday for this occasion. In Asian cultures, the "Lunar" version of this celebrates a fresh start. ANSWER: New Year's Day

Part 3: This Aramaic prayer meaning "all vows" is used to begin services on Yom Kippur. This prayer begins with a recitation inviting sinners to pray with the congregation. ANSWER: Kol Nidre
(Tossup 2) Legg-Calves-Perthes disease can cause necrosis of the upper end of this bone by cutting off blood supply. This bone forms a ball and socket joint with the acetabulum. Fractures to this bone may be deadly due to the ability of the (*) quadriceps to pull this bone into its namesake artery. For ten points, name this longest and strongest bone in the human body, which makes up the thigh.
Answer: femur
(Bonus 2) Wolff-Parkinson-White syndrome can be diagnosed from a shortened P-R interval on this type of diagram. For ten points each,

Part 1: Name this type of diagram that visualizes cycles of polarization and depolarization that begin at the sinoatrial node and move through Purkinje fibers.
Answer: electrocardiogram (accept electrocardiograph; accept EKG; accept ECG)
Part 2: An EKG is used to analyze the electrical activity of this organ, which pumps blood through its two atria and two ventricles.
Answer: heart

Part 3: This largest artery in the human body extends from the left ventricle and delivers oxygenated blood to the body.
Answer: aorta
(Tossup 3) This composer's final work adapted a Jean-Baptiste Lully opera about the Muslim Princess of a King of Damascus who falls in love with a crusader named Rinald. Inspired by Brahms' Hungarian Dances, a series of orchestral pieces by this composer incorporated genres like polka and mazurkas as a successor to his (*) Moravian Duets. After being hired as director of the National Conservatory in New York, this composer premiered his symphony From the New World. For ten points, name this Czech composer of Slavonic Dances.

## ANSWER: Antonin Dvorak

(Bonus 3) Don Alfonso, an old philosopher, claimed that a woman can never be faithful while speaking to two engaged soldiers in a coffeehouse. For ten points each:
Part 1: Name this opera, which translates to "So do they all," an Italian language work by an Ausrian composer.
ANSWER: Cosi Fan Tutte

Part 2: Cosi Fan Tutte is by this Vienna based composer of The Marriage of Figaro and Don Giovanni. ANSWER: Wolfgang Amadeus Mozart

Part 3: Vilified in the film Amadeus, this contemporary of Mozart himself attempted a version of Cosi fan tutte but never completed it.
ANSWER: Antonio Salieri
(Tossup 4) This ruler married his half-sister Ankhesenamun who may have attempted to marry a Hittite prince after his death. The state worship of Aten, which had been started by his father, was ended by this man. The vizier Ay succeeded this man after his (*) sudden death which may have been due to a chariot accident. For ten points, name this Egyptian pharaoh whose tomb was rediscovered by Howard Carter.

## Answer: Tutankhamun (accept King Tut)

(Bonus 4) During this action, Zhou Enlai reorganized the leadership of the Red Army at the Zunyi Conference. For ten points each,

Part 1: Name this action by which the opponents of Chiang Kai-shek repositioned their forces into northwestern China during 1934 and 1935.
Answer: Long March

Part 2: This man gained prominence for his leadership during the Long March, and eventually defeated Chiang to rule China in the years after World War Two.
Answer: Mao Zedong (accept either portion in bold)

Part 3: Mao Zedong and his forces supported this political ideology in opposition to Chiang's Republicans. This ideology traces its roots back to the writings of Karl Marx.
Answer: communism (prompt on Maoism or Marxism)
(Tossup 5) The title character of this play uses a poisoned sword to kill Laertes in a duel after accidentally stabbing Polonius through a curtain. This play's protagonist pretends to be insane and accidentally drives (*) Ophelia to suicide while trying to confirm whether King Claudius killed Gertrude's first husband. For ten points, name this Shakespeare play in which the title prince of Denmark tries to avenge his father's death.
Answer: Hamlet (accept The Tragedy of Hamlet, Prince of Denmark)
(Bonus 5) This author's unnamed narrators witness the slow advance of a red weed across England during an invasion and talk with a scientist who travels into London's far future. For ten points each,

Part 1: Name this English science fiction author who wrote The War of the Worlds and The Time Machine.
Answer: H.G. Wells (accept Herbert George Wells)

Part 2: In another by H.G. Wells, an unnamed narrator is shipwrecked near a remote island, where he is horrified to find that this title doctor is creating bizarre human-animal hybrids.
Answer: Doctor Moreau (accept The Island of Doctor Moreau)

Part 3: Unusually, this H.G. Wells novel doesn't include an anonymous narrator. Instead, this novel focuses on Griffin, a scientist who creates a potion that stops his body from refracting or reflecting light, making him hard to see.
Answer: The Invisible Man (do NOT accept or prompt on "Invisible Man" - that's a different work)
(Tossup 6) This man encouraged the destruction of synagogues in his anti-semitic tract On the Jews and Their Lies. This man promised to become a monk after being caught in a storm and praying to Saint Anna. Johann (*) Tetzel was sent to debate this reformer over his opposition to the sale of indulgences by the Catholic Church. For ten points, name this German leader of the protestant reformation, who authored the 95 Theses.

Answer: Martin Luther
(Bonus 6) Edward the Black Prince helped lead British troops to victory at Battle of Crecy during this war. For ten points each:

Part 1: Name this war between England and France that contained Henry V's victory at Agincourt. Answer: Hundred Years' War

Part 2: This Frenchwoman was burned at the stake by the British for heresy. She lead the French to victory at Orleans.
Answer: Joan of Arc

Part 3: The Battle of Castillon, the last of the war, took place during the reign of a French King of this name. An English king of this name was executed following the English Civil War.
Answer: Charles
(Tossup 7) In 2015, this company announced a mile-long hyperloop outside of their Hawthorne, California headquarters. This company's Falcon 9 vehicle is used to launch the Dragon 1 Pod, which resupplies the (*) International Space Station. Like Tesla, this company is overseen by Elon Musk. For ten points, name this private rocket company.

## Answer: Space-X

(Bonus 7) Stromboli, as are many of the Aeolian Isles, are this type of distinct island cluster. For ten points each:
Part 1: Name this type of rocky island common in the South Pacific, often contrasted with Coral Islands.
ANSWER: Volcanic Islands [Accept High Island]

Part 2: Volcanic islands like Hawaii are formed by these subsurface features that do not lie on tectonic plates.
ANSWER: Hotspots

Part 3: This Pacific region, known for its high frequency of earthquakes, contains 75 percent of the world's volcanoes.
ANSWER: Ring of Fire [Accept Rim of Fire]
(Tossup 8) This state's city of Battle Creek is famously the origin of corn flakes. This state's city of Dearborn is home to a large population of Arab-Americans. This state's flagship university is located in the city of ( ${ }^{*}$ ) Ann Arbor. Other major cities in this state include Kalamazoo and Grand Rapids. This state's capital city is Lansing. For ten points, name this Midwestern American state, whose largest city is Detroit.

## Answer: Michigan

(Bonus 8) A governor of this state, Pete Ricketts, oversaw the 2017 summer solstice at this state's imitation of Stonehenge made of vintage cars. For ten points each:
Part 1: Name this Great Plains state with the cities of Alliance and North Platte, also the site of Carhenge
ANSWER: Nebraska
Part 2: Another tourist trap in Nebraska is a ball made of these tiny pieces of paper used to mail items. ANSWER: Stamps
Part 3: Panorama Point is a Nebraska site to see these creatures of the Great Plains which were nearly driven to extinction in the 1800s
ANSWER: Bison [Accept Buffalo]

## Category Rounds

The categories are...

1. Lightbulbs
2. Old Kingdom Egypt
3. The Great Gatsby

## Lightbulbs

Incandescent lightbulbs ...

Part 1: were made commercially viable by what American inventor, who developed the phonograph and direct current?
ANSWER: Thomas Alva Edison

Part 2: typically operate at 40 or 60 of what unit, the SI unit for power?
ANSWER: Watt

Part 3: exemplify a heating effect named after what English physicist, the namesake of the SI unit of energy?
ANSWER: James Prescott Joule

Part 4: are contrasted with light-emitting examples of what circuit elements which ideally only allow current to flow in one direction?
ANSWER: diodes

Part 5: operate using resistive coils known by what term which begin to glow when current flows through them?
ANSWER: filaments

Part 6: emit what form of thermal electromagnetic radiation named for materials which absorb all incoming light?
ANSWER: blackbody radiation [accept blackbodies]

## Old Kingdom Egypt

Name the...

Part 1: city where one can find its namesake "Great Pyramid," one of the Seven Wonders of the Ancient World
Answer: Giza

Part 2: Pharaoh who ordered the building of the previously mentioned Great Pyramid Answer: Khufu [Accept Cheops]

Part 3: legendary Pharaoh who united Upper and Lower Egypt
Answer: Menes

Part 4: capital of Old Kingdom Egypt
Answer: Memphis

Part 5: name given by historians to the period between the Old and Middle Kingdom, a period of chaos and decentralization
Answer: Intermediate Period

Part 6: Pharoah whose 90 year long reign led to the period of chaos known as the 1st Intermediate Period Answer: Pepi II

## The Great Gatsby

In the novel The Great Gatsby, who or what is...

Part 1: The novel's narrator, who lives next-door to Gatsby in West Egg.
Answer: Nick Carraway (accept either name in bold; accept Nicholas Carraway)
Part 2: The narrator's cousin, the focus of Gatsby's romantic obsession.
Answer: Daisy Buchanan (prompt on "Buchanan")

Part 3: That woman's racist husband, who has an affair with Myrtle Wilson.
Answer: Tom Buchanan (accept Thomas Buchanan; prompt on "Buchanan")

Part 4: Myrtle's husband, who shoots Gatsby after Myrtle's death.
Answer: George Wilson (prompt on "Wilson" alone)

Part 5: The narrator's casual girlfriend, an amateur golfer.
Answer: Jordan Baker (accept either name in bold)

Part 6: The object that Myrtle's husband finds in her dresser, which convinces him she was having an affair before her death.
Answer: dog leash (do not accept or prompt on "dog collar")

## Second Half

(Tossup 9) This goddess comforts a sheep herder on Mount Ida after sleeping with him by listing some non-tragic mortal-god relationships. This lover of Anchises (ann-KYE-zeez) also pursued a man who gets killed by a wild boar, Adonis. This goddess gave (*) Hippomenes golden apples so that he could win a footrace with Atalanta. This goddess arose from sea foam and the remains of Ouranos. This goddess was trapped in a golden net with Ares after her husband Hephaestus discovered their affair. For ten points, name this Greek goddess of love.

## ANSWER: Aphrodite

(Bonus 9) The Rx pharmacy symbol may originally have been a representation of this object. For ten points each,
Part 1: Name this object with healing properties that a certain god lost in his battles against Set. This object's curved tail and teardrop are supposed to represent human senses.
ANSWER: the Eye of Horus
Part 2: Horus sacrificed his eye to bring this deceased father of his back to life.

## ANSWER: Osiris

Part 3: Another eye in Egyptian mythology is the Eye of Ra, which was equated with this lion goddess. This goddess may have been a form of Hathor, and her consort is the craft god Ptah.
ANSWER: Sekhmet (accept Sachmis)
(Tossup 10) Bandura ran an experiment to see if aggression can be learned in these people in the Baby Doll experiment. Modelled on the Hawthorne Experiments, Jean Piaget conducted semi-formal interviews with these people where he asked them standardized questions. Walter Mischel studied delayed gratification in these people by placing a (*) marshmallow in front of them and instructing them that not eating it in the immediate will lead to a bigger reward. for ten points, name these subjects of experiments like "Little Albert."
ANSWER: Children [Accept Kids or Infants; prompt on "Humans" before mentioned]
(Bonus 10) This figure said "I am a libertarian with a small 'l' and a Republican with a capital 'R.' For ten points each:
Part 1: Name this classically liberal economist who served as the financial advisor of Barry Goldwater and Ronald Reagan. A series of lectures at Wabash College became the book Capitalism and Freedom. ANSWER: Milton Friedman
Part 2: Friedman and George Stigler led an economic school named for this private university. Augusto Pinochet used economic advisors known as "The Boys" from this Mid-western university.
ANSWER: University of Chicago
Part 3: Milton Friedman reinterpreted this economist's "Consumption Function" while developing the government spending multiplier. This Englishman published The General Theory of Employment, Interest and Money during the Great Depression.
ANSWER: John Maynard Keynes
(Tossup 11) A failed assault on Cemetery Ridge during this battle is sometimes called the "high water mark" of the Confederacy." George Meade was victorious at this battle following the failure of (*) Pickett's Charge. One speech named for this battle contains the line "four score $^{*}$ and seven years ago." For ten points, name this 1863 battle, the deadliest battle of the American Civil War, which names a famous "Address" given by Lincoln.

Answer: Battle of Gettysburg
(Bonus 11) Early in this war some of the colonies met at the Albany Congress, where Benjamin Franklin drew the Join or Die cartoon. For ten points each:

Part 1: Name this war, the North American Theatre of the Seven Years' War.
Answer: French and Indian War

Part 2: The Treaty of Paris signed in this year ended the French and Indian War. A Proclamation issued in this year by King George III prohibited colonists from settling land past the Appalachian Mountains.
Answer: 1763

Part 3: Early in the French and Indian War this general built Fort Necessity before surrendering there to the French. He later led the colonists against the British in the American Revolutionary War.
(Tossup 12) A section of this novel describes a man in a pickup truck swerving to hit a turtle trying to cross Route 66. Connie Rivers abandons his pregnant wife, Rose of Sharon, in this novel, in which Tom takes leadership of his family from ( ${ }^{*}$ ) Ma and Pa and witnesses the murder of the preacher Jim Casy. For ten points, name this novel by John Steinbeck in which the Joad family travels to California during the Dust Bowl.

## Answer: The Grapes of Wrath

(Bonus 12) This literary character bunks with the harpooner Queequeg, and floats to safety on Queequeg's coffin after his ship is destroyed. For ten points each,

Part 1: Name this fictional sailor who asks the reader to "call me [this name]" before boarding the Pequod to help Captain Ahab on a mad quest for revenge.
Answer: Ishmael

Part 2: Ishmael helps Captain Ahab on the title white whale in this novel.
Answer: Moby-Dick; or, The Whale
Part 3: Moby-Dick is by this American author, who also wrote Billy Budd.
Answer: Herman Melville
(Tossup 13) In his best known book, this author described a tree who gives up its fruit, shade, and wood to a boy, before serving as a stool to sit on. This author wrote a poem about a group of men who flew away in a shoe named (*) Ickle Me, Tickle Me, and Pickle Me. That poem appears in this author's book Where the Sidewalk Ends. For ten points, name this author of The Giving Tree

## Answer: Shel Silverstein

(Bonus 13) French fabulist Charles Perrault collected European folktales in Tales from Past Times, which attributed stories like "The Sleeping Beauty" to this fictional woman. For ten points each,

Part 1: Name this friendly, fictional storyteller who is depicted as a kind, old woman or as her namesake bird.

Answer: Mother Goose (accept The Tales of Mother Goose; accept Les Contes de ma Mère l'Oye)

Part 2: In this Mother Goose tale, the title child is rescued by a woodcutter, who chops open the belly of a wolf who had eaten the title girl and her grandmother.
Answer: "Little Red Riding Hood" (accept Le Petit chaperon rouge)

Part 3: In this other Mother Goose tale, a miller's son inherits the cunning title animal, who battles an ogre and sets his master up with a princess.
Answer: "Puss in Boots" (accept Master Cat; accept The Booted Cat; accept Le Maître chat; accept Le Chat botté)
(Tossup 14) This operation for quaternions is anticommutative. In order to perform this operation on matrices, the number of columns of the first matrix must equal the number of rows of the second matrix. The identity element of this operation is one. The result of this (*) operation is a product. For ten points, name this operation that is repeated in exponentiation and is repeated addition, symbolized by a dot or an x.
ANSWER: multiplication
(Bonus 14) Euclid's Elements defined these figures as a "breadthless length." For 10 points each: Part 1: Name these straight objects in geometry that go on forever and exist on a two dimensional plane. "Segments" of these objects are bounded by two endpoints.
ANSWER: lines
Part 2: This type of line segment on a circle connects two points on its circumference. The longest of these in a circle is the diameter.
ANSWER: chord
Part 3: These objects are similar to chords but are lines instead of line segments. A function named for these objects is the reciprocal of cosine.
ANSWER: secant
(Tossup 15) Jones' Reagent can be used to oxidize this group into a carboxylic acid and ketones. Esters can be produced by reacting this group with carboxylic acids. Members of this group consist of an $\mathbf{0 - H}$ group bonded to a carbon. ( ${ }^{*}$ ) One member of this group can be produced by fermenting sugar with yeast. For ten points, name this group, examples of which include isopropyl and ethanol.

Answer: alcohols (prompt on hydroxyl grop of -OH group)
(Bonus 15) This quantity is proportional to the natural log of the number of microstates, For ten points each.
Part 1: Name this quantity symbolized $S$ that represents the amount of disorder in a system. ANSWER: entropy
Part 2: According to this law, the entropy of an isolated system such as the universe will always increase over time.
ANSWER: second law of thermodynamics (prompt on partial answer)
Part 3: One type of these theoretical machines might indefinitely convert thermal energy into mechanical work, though in reality, they cannot exist because this would violate the second law of thermodynamics.
ANSWER: perpetual motion machines
(Tossup 16) Johann Wolfgang Goethe said "Without having seen [this structure], one can form no appreciable idea of what one man is capable of achieving. A diptych on this building's ceiling depicts Eve reaching for the fruit of knowledge and then being expelled from Eden. 20 years after this building's construction, Pope Julius commissioned (*) the 30 year old artist Michelangelo to paint this building's ceiling. For ten points, name this Chapel named for Pope Sixtus, the site of The Creation of Man.
ANSWER: Sistine Chapel
(Bonus 16) A woman dressed in blue with a blue hat stands to the left of a large map as she poses for a portrait in this artist's The Art of Painting. For ten points each,

Part 1: Name this artist whose paintings The Little Street and View of Delft depict the cityscape of his home town.
Answer: Jan Vermeer
Part 2: A 1665 Vermeer painting shows a girl wearing a blue and yellow turban as well as this oversized title jewel.
Answer: pearl earring (prompt on partial answers; accept Girl with a Pearl Earring)
Part 3: Vermeer's hometown of Delft is in this country. The Rijksmuseum in this country's city of Amsterdam houses several Vermeer paintings.
Answer: The Netherlands (or Holland)

## Tiebreaker / Backups

(Tossup 17) This substance is released from the canaliculi through openings in the papilla. In mammals this substance is released by the lacrimal glands. This substance's reflex form helps clear (*) irritants from a certain organ while the basal form is used in lubrication. For ten points, name this bodily fluid released from the eyes in response to pain or strong emotions like sadness.

## Answer: tears

(Bonus 17) A character from this play says ""Our watch, sir, have indeed comprehended two auspicious persons" in an early use of literary malapropisms. For ten points each:
Part 1: Name this Shakespeare play that features the constable Dogberry. Benedick and Beatrice are tricked into confessing their love to each other in this play.
ANSWER: Much Ado About Nothing
Part 2: The Claudio/Hero relationship in Much Ado about Nothing is likely based on a similar relationship in this Edmund Spencer epic poem.
ANSWER: The Faerie Queene

Part 3: Much Ado About Nothing is set on the city of Messina on this island. Playwright Luigi Pirandello is a native of this Italian island.
ANSWER: Sicily

