

2020 US Academic Bowl National Championships

Round 6

First Half

(Tossup 1) A man with this surname gave the 1910 “Man in the Arena” speech and advocated the “strenuous life.” A woman with this surname wrote the syndicated column “My Day” in the 1940s and arranged for African-American singer Marian Anderson to perform at the Washington (*) Monument. That woman’s husband gave weekly radio addresses called “Fireside Chats” to inspire confidence during the Great Depression and World War II. For 10 points, what surname was shared by Eleanor, Franklin Delano, and Theodore?

Answer: Roosevelt

(Bonus 1) Answer some questions about the civil rights movement. For 10 points each:

Part 1: This Alabama city was the site of a bus boycott led by Martin Luther King, Jr. and Ralph Abernathy that protested segregated seating.

Answer: Montgomery, Alabama

Part 2: That bus boycott began after this woman refused to give her seat to a white person. She died in 2005 and became the first woman to lie in honor in the Capitol Rotunda.

Answer: Rosa Parks

Part 3: This other city in Alabama was the beginning point of three protest marches that ended in Montgomery. Just outside this city, Alabama State troopers attacked civil rights marchers in an incident known as “Bloody Sunday.”

Answer: Selma, Alabama

(Tossup 2) **End-plate potentials in this tissue bind to nicotinic acetylcholine receptors. This tissue's fast twitch fibers contain large amounts of sarcoplasmic reticulum which allow for fast but short term movements. This tissue also contains slow twitch fibers. This tissue is sometimes called (*) striated.** For ten points, name this type of muscle tissue, that is contrasted with smooth and cardiac types.

Answer: skeletal muscle (accept striated muscle before read; prompt on muscle)

(Bonus 2) Answer the following about cysteine, for ten points each.

Part 1: Cysteine is one of these molecules that make up the building blocks of proteins.

ANSWER: **amino acids**

Part 2: Cysteine and methionine are the only two amino acids to contain this essential element, which is found within the reactive thiol side chain.

ANSWER: **sulfur**

Part 3: Bonds between cysteine are switched around by PDI, an enzyme found in this organelle that is continuous with the outer nuclear envelope and comes in both "rough" and "smooth" types.

ANSWER: **endoplasmic reticulum** (or **ER**)

(Tossup 3) **The *Suraj Prakash* of this faith compiles miraculous feats done by such holy men as Lakshman Da. Built by Arjan, this faith's holy site of the Golden Temple leads to adherents taking pilgrimages to Amritsar. Followers of this faith, known as the *Khalsa*, must keep an iron dagger on them named the (*) *Kirpan* as mandated by Guru Gobind Singh. For ten points, name this Indian faith whose holy text is the Adi Granth.**

Answer: **Sikhism**

(Bonus 3) The nightly feast during this period is called *iftar*. For ten points each,

Part 1: Name this Muslim holy month. Observers undertake *sawm*, or fasting, from sunup to sundown during this month.

ANSWER: **Ramadan**

Part 2: This populous country has the largest number of Ramadan observers. Before the introduction of Islam, the predominant religions in this country were Buddhism and Hinduism.

ANSWER: **Indonesia**

Part 3: The end of Ramadan is celebrated by this holiday, which usually involves a great feast. This holiday, which occurs on 1 Shawwal, requests an act of charity from adherents.

ANSWER: **Eid** al-Fitr

(Tossup 4) **The Sem Priest oversees a ritual in this culture called the Opening of the Mouth. In one myth from this culture, a goddess uses snake poison as leverage to discover a god's secret name. This culture used the myth of (*) Nut winning five "Demon Days" on which to give birth to even out their solar calendar. This culture believed that the Feather of Truth was used to weigh hearts in the afterlife by Anubis. For ten points, name this culture that worshipped pharaohs.**

ANSWER: Ancient **Egypt**

(Bonus 4) This hero released a dove through the Clashing Rocks to test if he would be able to sail through. For ten points each,

Part 1: Name this hero who led the Argonauts in their quest for the Golden Fleece. This hero was eventually killed by his wife Medea.

ANSWER: **Jason**

Part 2: Jason retrieved the Golden Fleece from King Aeëtes, who was a son of this god. Odysseus's ship was smited after his men ate the sacred cattle of this god.

ANSWER: **Helios**

Part 3: Aeëtes tasked Jason with sowing a field using these objects, which turned into hostile warriors. Athena instructed Cadmus to sow a field with these objects when he founded Thebes.

ANSWER: **dragon's teeth** (prompt on "teeth")

(Tossup 5) **The *quena* is an instrument of this type often used in the "love genre" of the indigenous Andean people, the Harawi. The duck, represented by the oboe, and the bird, represented by this instrument, are stalked by a young Soviet boy's cat in *Peter and the Wolf*. Tamino uses the (*) "Magic" one of these instruments in a Mozart opera to turn sorrow to joy. For ten points, name this reedless woodwind instrument similar to its smaller cousin, the piccolo.**

Answer: **Flute** (prompt on woodwind before mention)

(Bonus 5) This man's works have been banned on Israeli air waves. For ten points each,

Part 1: Name this German composer of the *Ring Cycle*, that included pieces like *Das Rheingold* and *Siegfried*.

Answer: Richard **Wagner**

Part 2: Wagner's *Ring Cycle* includes this work, named for the warrior women of Norse myth.

Answer: *The* **Valkyrie**

Part 3: This other composer claimed the Ring Cycle was "divinely inspired" after an 1877 showing. This man created music to accompany countryman Henrik Ibsen's play *Peer Gynt*.

Answer: Edvard **Grieg**

(Tossup 6) **The tendency of forms of this substance to expand is measured by the shrink-swell capacity. High amounts of this material make up Vertisols. Smectite, kaolinite, and talc are some of the minerals that comprise this material. Silt, sand, (*)** and this material make up the three sides of a soil texture triangle. With a small particle size, For ten points, name this material that can be molded and fired in a kiln to create pottery.

ANSWER: **clay** (prompt on soil)

(Bonus 6) This fixture had the codename "Freedom" while the plan for it was being synthesized by the Reagan administration. For ten points each:

Part 1: Name this artificial satellite that orbits earth, a multi-national effort to have an inhabited station.

Answer: **ISS** [Accept International Space Station]

Part 2: The first modular artificial satellite meant for habitation was created by the USSR, and it deorbited in 2001. This station takes its name for the Russian word for "Peace."

Answer: **Mir**

Part 3: An astronomer with a namesake constant names this space telescope, which during the "Cosmic Evolution Survey" discovered over 2 million galaxies.

Answer: **Hubble** Telescope

(Tossup 7) **This man's only comedic play, which is set on the Fourth of July, is titled *Ah, Wilderness!* At the climax of a play by this man, Evelyn's husband, Theodore "Hickey" Hickman reveals that he killed her before going to (*) Harry Hope's saloon. In another play, this author described the morphine addiction and alcoholism of the characters Mary and Jamie Tyrone. For ten points, name this American playwright of *The Iceman Cometh* and *Long Day's Journey into Night*.**

Answer: **Eugene O'Neill** (accept Eugene Gladstone **O'Neill**)

(Bonus 7) This novel's author, Upton Sinclair, claimed that "I aimed at the public's heart, and by accident I hit it in the stomach." For ten points each,

Part 1: What novel was supposed to depict the plight of the Lithuanian immigrant Jurgis Rudkus, but instead gained fame for exposing unsanitary practices in the meatpacking industry?

Answer: ***The Jungle***

Part 2: *The Jungle* exposed the practices in the stockyards of this large Illinois city on Lake Michigan.

Answer: Chicago

Part 3: Upton Sinclair's *The Jungle* established his reputation as a muckraker. Muckrakers were people who held this profession in addition to often being authors and social activists.

Answer: journalists (or reporters)

(Tossup 8) A man nicknamed "General China" helped lead an uprising in this country. This country's second president, Daniel arap Moi, was replaced by Mwai Kibaki following the 2002 elections. The Kikuyu people in this country waged the (*) Mau Mau rebellion against colonial rule in this country. For ten points, name this East African country, a former British colony whose first president was Jomo Kenyatta.

Answer: Kenya

(Bonus 8) This politician led the Coup of 18 Brumaire, which overthrew the Directory and led to his establishment as First Consul. For ten points each,

Part 1: Name this leader who became the Emperor of France in 1804. This man conquered much of Europe before being defeated at the Battle of Waterloo.

Answer: Napoleon I (or Napoleon Bonaparte)

Part 2: Napoleon was born on this island off of the coast of France, where he was born in the city of Ajaccio.

Answer: Corsica

Part 3: Before it was annexed by France, Corsica was controlled by this Italian city-state. This home city of Christopher Columbus also controlled the city of Caffa, which is where the Black Death is believed to have entered Europe.

Answer: Republic of Genoa

Category Rounds

The categories are...

1. The John Marshall Court
2. Hydrogen
3. *The Odyssey*

The Marshall Court

Name the...

Part 1: 1803 case in which John Marshall established the doctrine of judicial review.

Answer: Marbury v. Madison

Part 2: President nicknamed "Old Hickory" who Marshall infuriated with his decision in *Worcester v. Georgia*.

Answer: Andrew Jackson

Part 3: Clause that allows Congress to regulate trade whose power Marshall upheld in *Gibbons v. Ogden*

Answer: Commerce Clause

Part 4: 1819 decision in which Marshall upheld the constitutionality of the National Bank.

Answer: McCulloch v. Maryland

Part 5: New Hampshire college whose charter was upheld in an 1819 decision.

Answer: Dartmouth College

Part 6: Justice who was impeached during the Marshall Court, the only time it has been done.

Answer: Samuel Chase

Hydrogen

The Hydrogen atom...

Part 1: has a value of -13.6 eV for its ground state value of what quantity which comes in potential and kinetic forms.

ANSWER: ground state **energy** [accept potential **energy**; accept kinetic **energy**]

Part 2: is used as a toy model in the notably complex “mechanics” described by what word which refers to single units of energy?

ANSWER: **quantum** mechanics [accept **quanta**]

Part 3: is held together by the electrostatic force which is named for what French physicist who names the SI unit for charge?

ANSWER: Charles-Augustin de **Coulomb**

Part 4: was studied by what Danish physicist whose namesake model of the atom pictures electrons in circular orbit at distinct energy levels around the nucleus?

ANSWER: Niels Henrik **Bohr**

Part 5: has an exact solution to an equation named for what German physicist who devised a thought experiment about a cat which is “both dead and alive?”

ANSWER: Erwin **Schrödinger**

Part 6: is described by the n, l, and m quantum numbers as well as a number describing what intrinsic angular momentum which equals plus or minus $\frac{1}{2}$ for an electron?

ANSWER: **spin**

The Odyssey

Identify the following people and things from the epic poem *The Odyssey*.

Part 1: The war that Odysseus tries for ten years to return from.

Answer: Trojan War

Part 2: Odysseus's wife, who weaves and unweaves a burial shroud so she doesn't have to marry someone else.

Answer: Penelope

Part 3: The sacred animals that Odysseus's men eat, angering Helios and the witch Circe

Answer: cattle (accept cows)

Part 4: The kind of animal that Circe turns Odysseus's men into when they reach her island.

Answer: pigs (accept swine)

Part 5: The nymph with whom Odysseus spends seven of the ten years of his journey home.

Answer: Calypso

Part 6: The enormous whirlpool that Helios sends Odysseus's ship toward, which sits across a strait from the monster Scylla.

Answer: Charybdis

Second Half

(Tossup 9) **This poet wrote that some birds "paddle in the cold / companionable streams or climb the air; / their hearts have not grown old" in "The Wild Swans at Coole." This poet inspired the title of Achebe's (uh CHAY-bay's) (*) *Things Fall Apart* with a poem about a "rough beast" that "slouches toward Bethlehem to be born," and described an Irish rebellion in another poem. For ten points, name this Irish poet of "The Second Coming" and "Easter, 1916."**

Answer: William Butler Yeats

(Bonus 9) This author wrote the poetry collection *Lyrical Ballads* with his close friend Samuel Taylor Coleridge. For ten points each,

Part 1: Name this English Romantic poet who wrote "I Wandered Lonely as a Cloud."

Answer: William Wordsworth

Part 2: In "I Wandered Lonely as a Cloud," Wordsworth describes "a crowd / a host of" these "golden" flowers, which he sees "tossing their heads in a sprightly dance."

Answer: daffodils

Part 3: This other Wordsworth poem says that "five summers, with the length / of five long winters" have passed since the last time he visited the title monastery on the banks of the river Wye.

Answer: "Tintern Abbey" (accept Lines Composed a Few Miles above Tintern Abbey, on Revisiting the Banks of the Wye During a Tour July 13, 1798)

(Tossup 10) **This force causes objects to become charged in the tribo-electric effect. Amonton's law states that this force is independent of surface area. This force is described by a namesake coefficient, represented with the letter mu [mew], and comes in dynamic and kinematic varieties. Examples of this force include (*) drag, and it causes your hands to warm up when you rub them together. For ten points, name this force that resists an object's motion.**

Answer: friction (prompt on "drag" before mentioned)

(Bonus 10) This technique comes in both "transmission" and "scanning" types, For ten points each.

Part 1: Name this analytical technique that uses an accelerating beam of negatively-charged particles to image a sample.

ANSWER: electron microscopy (accept EM; prompt on microscopy, or microscope)

Part 2: For better imagery, samples in electron microscopy can be labeled with a suspension of nanoparticles made from this precious metal symbolized Au.

ANSWER: gold

Part 3: This prefix denotes a type of electron microscopy that rapidly freezes samples before imaging them at subzero temperatures. This prefix generally refers to conditions that are very cold.

ANSWER: cryo- (accept cryo-EM)

(Tossup 11) **After resigning from the senate, this man was replaced by his longtime adviser Ted Kaufman. As chairman of the Senate Judiciary Committee, this man has been criticized for his handling of the (*) Anita Hill testimony during Clarence Thomas' confirmation hearing. For ten points, name this former senator from Delaware, who served as vice president under Barack Obama.**

Answer: Joe Biden

(Bonus 11) John Stuart Mill called this man's "Law of Rent" the "pons asinorum" of economics. For ten points each:

Part 1: Name this English economist who outlined the concept of "Comparative Advantage" in his work *On the Principles of Political Economy and Taxation*.

ANSWER: David Ricardo

Part 2: In the Theory of [this economic concept], Ricardo states as this surplus of cash decreases as wages increase.

ANSWER: Profit

Part 3: Ricardo's primary example of "Comparative Advantage" is the international trade between England, which produces cloth, and Portugal, which produces this alcoholic drink.

ANSWER: Wine

(Tossup 12) **In one series of paintings, a holder of this position is shown with a face inspired by the nurse who was killed on the Odessa Steps in the movie *Battleship Potemkin*. The painting *Head VI* shows a holder of this position wearing a purple top and surrounded by the shape of a glass cube. (*) Francis Bacon created a series showing the holder of this position "screaming" that were inspired by a Diego Velasquez portrait. For ten points, what position was held by Innocent X?**

Answer: pope

(Bonus 12) This artist included a Latin inscription translating as "Charles I, King of Great Britain" in his painting of the English king "at the Hunt." For ten points each,

Part 1: What Dutch painter lends his name to a distinctive style of facial hair featuring a moustache and a goatee?

Answer: Anthony van Dyck

Part 2: This British queen had been reigning for over forty years when she was depicted wearing an orange gown in the *Rainbow Portrait*, which is usually credited to Marcus Gheeraerts the Younger.

Answer: Elizabeth I (or Elizabeth Tudor)

Part 3: Charles Robert Leslie, John Martin, and Alfred Chalon were among the many artists to depict the coronation of this other British queen. This woman and her family posed on the Isle of Wight for the first ever royal photograph.

Answer: Victoria

(Tossup 13) A poet wrote that this object "will make three men" with the poet's shadow when he sees "its reflection and mine in the wine cup." This object, "alas, is no drinker of wine" in a pailu poem written during the (*) Tang Dynasty by a friend of Du Fu. Li Bai wrote "amongst the flowers, I am alone" in a poem about "drinking alone by" the light of, for ten points, what celestial object that orbits the Earth?

Answer: moon (accept Drinking Alone by Moonlight)

(Bonus 13) In this collection's frame story, a group of pilgrims to the shrine of Thomas Becket stop at the Tabard Inn and tell stories to each other. For ten points each,

Part 1: Name this collection of stories told by characters like the Knight, the Miller, and the Nun's Priest.

Answer: The Canterbury Tales

Part 2: This Middle English author wrote *The Canterbury Tales* and *The Parlement of Foules*.

Answer: Geoffrey Chaucer

Part 3: This pilgrim from *The Canterbury Tales* has a gap in her front teeth, has had five husbands, and tells a story about a knight who learns what women want.

Answer: the Wife of Bath (accept Alysoun; accept Alys; prompt on partial answer)

(Tossup 14) This island's most active volcano is Mt. Merapi and this island's western portion includes the Parahyangan highlands. This island is linked to the island of Madura by a bridge at the port of Surabaya. This island's Buddhist religious sites include Borobudur and Prambanan. This island is separated from (*) Sumatra by the Sunda Strait. For ten points, name this most populous island on Earth, an Indonesian island that contains Jakarta.

Answer: Java

(Bonus 14) In exchange for recognition of Zanzibar as sovereign British territory, one nation gained this region crossed by rivers like the Okavango and the Kwando Rivers. For ten points each:

Part 1: Name this region surrounded by Zambia, Angola and Botswana. It takes its name from a German chancellor of Italian descent.

ANSWER: Caprivi Strip

Part 2: The Caprivi Strip is in the northeastern portion of this African nation with the city of Walvis Bay and capital of Windhoek.

ANSWER: Republic of Namibia

Part 3: Namibia is the locale of multiple examples of this biome, including one which names the nation and another named the Kalahari.

ANSWER: Desert

(Tossup 15) This leader wrote the book *The Permanent Revolution* in order to critique his rival's concept of "socialism in one country." This leader ordered the suppression of the Kronstadt Rebellion while he was the head of the (*) Red Army. While living in Mexico, this leader was murdered with an ice axe. For ten points, name this Russian Marxist and revolutionary, a rival of Joseph Stalin.

Answer: Leon Trotsky

(Bonus 15) British bombers attacked an airfield at this location during the "Black Buck" raids. For ten points each,

Part 1: Name this island chain that was invaded by the forces of Leopoldo Galitieri in 1982. Margaret Thatcher's British forces ended a conflict in this location by recapturing its capital of Stanley.

Answer: Falkland Islands (or the Malvinas)

Part 2: A military junta in this nation attempted to capture the Falkland Islands from Britain. The "Dirty War" occurred in this nation under the reign of Jorge Videla, who controlled this country from Buenos Aires.

Answer: Argentina

Part 3: This other leader of Argentina was supported by many *descamisados*, or "shirtless ones," during his three terms as president. This man's second wife was an actress nicknamed "Evita."

Answer: Juan Peron

(Tossup 16) **Integration can be simplified by using decomposition into "partial" types of these constructs. Egyptian ones of these entities are sums of their unit types, and can express all rational numbers. A "continued" one of these entities that contains all (*) ones is equivalent to the golden ratio. All rational numbers can be expressed as, for 10 points, what entities with numerators and denominators such as one-third?**

ANSWER: fractions

(Bonus 16) Relative frequency distribution can be shown on these graphs. For 10 points each:

Part 1: Name these graphs similar to bar graphs that are used for continuous data. Unlike bar graphs, they commonly do not have gaps between bins.

ANSWER: histograms

Part 2: A histogram of this distribution will peak in the middle. This distribution, sometimes named for Gauss, takes the shape of a bell curve.

ANSWER: normal distribution

Part 3: 68% of the data in a normal distribution falls within this many standard deviations of the mean. This number is the sum of the heights of a histogram when normalized to relative frequency, and is also the highest possible probability.

ANSWER: one [or 100%]

Tiebreaker / Backups

(Tossup 17) **Seneca reports that this leader created a local grain famine after he appropriated grain boats to build a pontoon bridge. The Senate attempted to restore the Republic after this man's death until the hiding Claudius was elevated to the emperorship by the Praetorians. This crazed Emperor made plans to give the (*) title of consul to his horse, Incitatus. For ten points, name this Julio-Claudian Emperor, who followed Tiberius, killed by his own Praetorian Guard.**

Answer: Caligula

(Bonus 17) This effect explains the concentration of methylmercury in large fish like tuna. For ten points each:

Part 1: Name this biological effect that leads to an increase in toxins the higher up an organism is on the food chain.

Answer: **Biomagnification** [Accept Bioaccumulation]

Part 2: The biomagnification of DDT led to the thinning of eggshells of this national symbol of the US, partially causing its ban.

Answer: **Bald Eagle**

Part 3: The harm of DDT came to the forefront of national attention due to this Rachael Carson work that speaks to the harm of pesticides on wildlife.

Answer: **Silent Spring**