

# CEESA Bowl Round 1

## First Half

(Tossup 1) **This type of location sits at the center of a model created by economist Johann Heinrich von Thünen, a landowner from Germany. The Power Broker deals with Robert Moses, who supposedly led to the title downfall (\*)** of one of these locales. Georges-Eugène Haussmann modernized the layout of one of these places in the 19th century with funding from Napoleon III. For ten points, name these densely populated settlements made up of urban and suburban areas.

ANSWER: **City** [Accept New York City; Accept Urban Center before mentioned; prompt on "Capital"]

(Bonus 1) The city of Batumi is known as the "Las Vegas of [this body of water]." For ten points each:

[10] Name this body of water which includes the resort town of Sochi. The Crimean Peninsula juts into this body of water.

ANSWER: **Black Sea**

[10] Batumi is in this nation with two breakaway republics, Abkhazia and South Ossetia. While they are known by their Greek name worldwide, this nation's people call themselves Kartvelians.

ANSWER: Republic of **Georgia** [Accept **Saqartvelo**]

[10] To the southeast of Mt. Elbrus is this tallest mountain of Georgia, the final point to complete the legendary undertaking named the Bezengi Wall.

ANSWER: **Shkhara**

(Tossup 2) **A literary work of this type claims "from fairest creatures we desire increase," and is addressed to a "Fair Youth." Poems of this type claim that "music hath a far more pleasing sound" than (\*)** a "Dark Lady's" voice and say a lover is "more lovely and more temperate" than a day in May. "My Mistress' Eyes Are Nothing Like the Sun" and "Shall I Compare Thee to a Summer's Day?" are two of, for ten points, what fourteen-line poems written by Shakespeare?

Answer: **Sonnets** by Shakespeare (accept Elizabethan sonnets; prompt on "poem" before mentioned)

(Bonus 2) For ten points each answer the following about the novel *Robinson Crusoe*:

[10] This British author of *Moll Flanders* wrote *Robinson Crusoe*.

Answer: Daniel **Defoe**

[10] Crusoe befriends this captive who escapes from a group of cannibalistic natives. Crusoe names him after the day of the week on which this man is first encountered.

Answer: **Friday**

[10] *Robinson Crusoe* so directly inspired this author's moral tale *The Swiss Family Robinson* that this writer named the book after Crusoe's first name.

Answer: Johann David **Wyss**

(Tossup 3) **Because it lacks these bonds, hydrochloric acid has a lower boiling point than hydrofluoric acid. Adenine and thymine are held together with two of these bonds, and (\*) guanine and cytosine are held together with three of them. These bonds give water its very high specific heat. For ten points, name these bonds that occur between fluorine, nitrogen or oxygen and this bond type's namesake lightest element.**

Answer: **hydrogen bonds**

(Bonus 3) The "ballistic" type of these objects can be used to measure a bullet's speed, For ten points each,

[10] Name these oscillators that consist of a mass suspended on a string from a single pivot point.

ANSWER: **pendulums**

[10] Two pendulums suspended end from end display this unpredictable kind of behavior, which is defined as being highly sensitive to initial conditions as seen in the "butterfly effect."

ANSWER: **chaos** (accept **chaotic** motion)

[10] At low values for the amplitude, the period of a pendulum can be estimated using this approximation represented by the equation "sine theta equals theta."

ANSWER: **small-angle** approximation

(Tossup 4) **In one myth, an old woman gives her grandson a magic object meant to capture these animals, which he uses to lasso the sun. This animal was the form of Vishnu's first avatar, Matsya. Finn MacCool burns his finger (\*) cooking one of these animals, allowing him to gain all the world's knowledge. In Chinese myth, these creatures turn into dragons by crossing the Dragon Gate. Jonah is swallowed by one of these animals in his Biblical book. For ten points, name this animal depicted in the Christian "ichthys" symbol.**

ANSWER: **Fish**

(Bonus 4) This goddess's offer to the Trojan prince Paris was political power, but he chose to marry Helen instead. For ten points each,

[10] Name this wife of Zeus and queen of the gods. This goddess repeatedly tried to kill Heracles out of jealousy through methods like putting snakes in his crib.

ANSWER: **Hera**

[10] Another mortal troubled by Hera was this one, who was disguised as a cow to avoid the goddess' wrath. Hermes killed the hundred-eyed Argus to help this mortal escape.

ANSWER: **Io**

[10] After Hera caused his mother Semele's death by convincing her to gaze upon Zeus's true form, this god was born out of Zeus' thigh. This god's crazed followers were called maenads.

ANSWER: **Dionysus**

(Tossup 5) **Expressing operations in this field can be done using dot notation and Lagrange's notation, which uses the prime symbol. Fluxions were an early construct in this field. (\*)** Approximations of an operation in this field can be done using Simpson's rule or a Riemann sum. The "fundamental theorem" of this field connects differentiation and integration. For 10 points, name this field that studies continuous change, developed by Newton and Leibniz.

ANSWER: **Calculus**

(Bonus 5) This formula gives the roots of a parabola. For 10 points each:

[10] Name this formula that states that  $x$  is equal to negative  $b$  plus or minus the square root of  $b$  squared minus four  $ac$ , all over two  $a$ .

ANSWER: **Quadratic** formula

[10] The quadratic formula concerns polynomials of this degree, which is the degree of a parabola because it is the highest power of  $x$  found in the formula.

ANSWER: **Two** (Accept **Second**)

[10] This method of deriving the quadratic formula moves the constant term and another term to the other side of the equation, which makes the left-hand side factorable.

ANSWER: **Completing the square**

## Category Rounds

The categories are...

1. South Africa
2. Radioactive Substances
3. Adventures of Alice

## South Africa

Name the...

Part 1: System of "Separateness," a form of legalized segregation in South Africa

Answer: **Apartheid**

Part 2: The 20th century pope who condemned the South African "Separateness" at the International Court of Justice

Answer: Pope **John Paul II**

Part 3: The activist who would spend 27 years in prison and later on become the country's first black President.

Answer: Nelson **Mandela**

Part 4: South African President, who with the man from Part 3 earned a Nobel Peace Prize for ending the system of "Separateness"

Answer: F.W. **de Klerk**

Part 5: Law preceding the system of "Separateness" that left 13 percent of the territory of South Africa for Blacks

Answer: **Native Lands Act**

Part 6: Architect of the system of "Separateness", a Prime Minister from the Nationalist Party

Answer: D.F. **Malan**

## Radioactive substances

Name the ...

Part 1: Type of electromagnetic radiation with the shortest wavelength, often emitted from nuclear fission.

Answer: **Gamma** rays

Part 2: SI unit of radioactivity, named after a French engineer.

Answer: **Becquerel**

Part 3: Element extracted from pitchblende, discovered by Marie and Pierre Curie and the cause of their death.

Answer: **Polonium**

Part 4: Type of decay characterised by plus and minus, caused by the weak force.

Answer: **Beta**

Part 5: Most reactive metal in Group I of the Periodic table, located below rubidium.

Answer: **Caesium**

Part 6: German scientist who discovered X rays.

Answer: Wilhelm **Roentgen**

## The Adventures of Alice

In relation to novels about Alice, a girl who goes Through the Looking-Glass, who or what is...

Part 1: The magical world where Alice has her adventures?

Answer: **Wonderland** (accept **Alice's Adventures in Wonderland**; accept **Alice in Wonderland**)

Part 2: The author of the Alice novels?

Answer: **Lewis Carroll** (accept **Charles Lutwidge Dodgson**)

Part 3: The frequently-late animal who leads Alice into the magical world?

Answer: the **White Rabbit** (prompt on "rabbit")

Part 4: The mysterious, disappearing animal with a mysterious smile who advises Alice on her travels?

Answer: the **Cheshire Cat** (prompt on "cat")

Part 5: The sleepy animal who tells stories with the March Hare and Mad Hatter at a tea party?

Answer: the **Dormouse** (prompt on "mouse")

Part 6: The sorrowful animal who dances the Lobster Quadrille with a Gryphon and sings about "Beautiful Soup?"

Answer: the **Mock Turtle** (do not accept or prompt on "turtle")

Huckleberry Finn

## Second Half

(Tossup 6) **The OHD method hydrates artifacts made of this mineral to determine their age. Water mixes with this mineral to form perlite. This extrusive mineral forms from (\*) rapid cooling of felsic lava without formation of any crystals. Conchoidal fracture produces curved sharp edges from this mineral, making it useful for surgical blades. For ten points, name this shiny black form of volcanic glass.**

ANSWER: **Obsidian**

(Bonus 6) This polymath was called "The Father of Modern Science" by Einstein, and he was formally reconciled by the Catholic Church in the 90s by Pope John Paul II. For ten points each:

[10] Name this Italian scientist who wrote the satirical Dialogue Concerning the Two Chief World Systems. An apocryphal tale tells how he tested gravity by allowing cannonballs to fall off the Leaning Tower of Pisa.

ANSWER: **Galileo Galilei** (Accept either)

[10] During Galileo's house arrest, he wrote *Two New Sciences* in which he posited the basic structure of this physics concept, the resistance applied to an object that changes its velocity.

ANSWER: **Inertia**

[10] Part of Galileo's house arrest was caused by his rejection of this model often named for Ptolemy.

ANSWER: **Geocentric** Model

(Tossup 7) **A character in this novel translates a note from Arne Saknussemm that leads him to discover a giant shepherding a herd of mastodons. This novel's protagonist witnesses a battle between an ichthyosaur (\*) and a plesiosaur in an enormous cavern after descending into an Icelandic volcano with Hans and Axel. For ten points, name this novel by Jules Verne in which Professor Lidenbrock leads an incredible underground expedition.**

Answer: **Journey to the Center of the Earth** (accept A Journey to the Center of the Earth; accept A Journey to the Interior of the Earth; accept Voyage au centre de la Terre)

(Bonus 7) This character supervises the placement of fifty boxes of earth throughout London that act as graves and as the source of his power. For ten points each,

[10] Name this Transylvanian nobleman who earlier and held the lawyer Jonathan Harker captive in his castle in eastern Europe.

Answer: Count **Dracula**

[10] This author wrote the vampire novel Dracula.

Answer: Bram **Stoker**

[10] In Dracula, the Count uses vampirism to control this woman, who then has a telepathic link with Dracula that the main characters use to track him across Europe. At the end of the novel, this woman marries Jonathan Harker.

Answer: **Mina** (prompt on Wilhelmina Murray; prompt on Harker)

(Tossup 8) **This general invaded modern day Kuwait after raiders attacked his people's camel train in the Badr Expedition. In the Battle of the Trench, this general led the defense (\*)** of a town known at the time as Yathrib from Confederates led by Banu Nadir. This general led a prolonged campaign against his own people, the Quraysh, and later captured Mecca. For ten points, name this 7th century founder of Islam.

ANSWER: **Muhammad**

(Bonus 8) One character in this book is a shepherd from Midian named Jethro. For ten points each,

[10] Name this second book of the Bible. During this book, God smites the Egyptians with the Ten Terrible Plagues.

ANSWER: Book of **Exodus**

[10] In Exodus, this Hebrew leader parts the Red Sea and receives the Ten Commandments from God on Mount Sinai. This leader communes with God at the burning bush.

ANSWER: **Moses**

[10] While Moses is on Mount Sinai, his brother Aaron makes this idol out of the Israelites' jewelry. Moses forced the Israelites to drink this idol in liquid form after crushing it into powder.

ANSWER: The **golden calf**

(Tossup 9) **A king of this name, the last king of the House of York, likely murdered the "Princes in the Tower." That man, the third king of this name, rose to power after the death of his brother (\*)** Edward IV [the fourth]. An earlier king with this name clashed with Saladin during the Third Crusade. For ten points, give this name shared by three English kings, including one known as "the Lionheart."

Answer: **Richard**

(Bonus 9) After this event, Jan Palach set himself on fire to protest a foreign invasion. For ten points each,

[10] Name this event in 1968 Czechoslovakia that began when Alexander Dubcek was elevated to power. It continued until the Soviet Union and four other Warsaw Pact nations invaded the country to stop reforms.

Answer: **Prague Spring**

[10] This Soviet leader ordered the invasion of Czechoslovakia to end the Prague Spring reforms. He justified the assault using a namesake doctrine that called for the invasion of any socialist state facing threats.

Answer: Leonid **Brezhnev** (accept **Brezhnev Doctrine**)

[10] The Brezhnev Doctrine followed existing Soviet policy that Nikita Krushchev used to invade this nation during a 1956 revolution. The revolt began as a student protest in this country's capital, Budapest.

Answer: **Hungary** (or Hungarian People's Republic)



(Tossup 10) **This structure's rear two thirds are innervated by the trigeminal nerve, while the rest of this structure is innervated by facial nerves 7 and 9. This structure can be affected by a "geographic" condition (\*) which causes the death of this structure's papillae. This structure contains the hyoglossus and styloglossus muscles. For ten points, name this muscular structure in the mouth that detects taste.**

Answer: **Tongue**

(Bonus 10) Hox genes were discovered in this model organism. For ten points each,

[10] Name this insect whose taxonomic name is *Drosophila melanogaster*. Thomas Hunt Morgan analyzed eye color in this organism to show the existence of sex-linked genes.

ANSWER: **Fruit fly** (accept **fruit flies**; prompt on fly)

[10] *Drosophila* fruit flies are commonly used for genetic experiments because they only have this many pairs of chromosomes. This is the number of different nucleotides found within DNA.

ANSWER: **Four**

[10] Fruit flies have "puffy"-looking polytene chromosomes within exocrine glands that produce this bodily substance, which also contains the enzymes amylase and lipase.

ANSWER: **Saliva** (accept **salivary glands**)

## Tiebreaker

(Tossup 11) **With the help of Phillippe Halsman, Salvador Dali placed his face over this title figure in a 1954 photomontage. Marcel Duchamp made a "readymade" named L.H.O.Q., which was a postcard of this painting (\*) with a mustache added to the title woman. Vincenzo Peruggia, a museum worker at the Louvre, orchestrated a theft of this painting in the early 20th century. For ten points, name this Leonardo da Vinci portrait of an Italian woman with an enigmatic smile.**

ANSWER: **Mona Lisa** [Accept **La Gioconda**]

(Bonus 11) Leon Escudier called this man "the creator of a school of piano and [the] school of composition." FTPE:

[10] What Polish-French composer evoked a dog chasing its tail in his "Minute Waltz?"

ANSWER: Frederic **Chopin**

[10] Chopin composed numerous works in this form, meant to focus on a skill to practice and learn. Chopin's include "Tristesse" and the "Revolutionary."

ANSWER: **etude**

[10] Along with Mazurkas, Chopin composed many works in this Polish folk dance form, including his Drum and Military compositions.

ANSWER: **Polonaise**