

Round 4

First Half

(Tossup 1) **Environmental pollution from the Mathura oil refinery has allegedly affected the color of this building. Ustad Ahmad Lahauri was the chief architect of this building which was constructed on the bank of the Yamuna river. A (*) reflecting pool is located in front of this building, which was built to honor Mumtaz, the wife of an emperor. For ten points, name this white mausoleum constructed by Shah Jahan in the city of Agra in India.**

ANSWER: Taj Mahal

(Bonus 1) This Congressman called on James K. Polk to show him where blood had been spilled in his Spot Resolutions. For ten points each,

[Part A] Name this Congressman who would later urge the country to act “with malice toward none, with charity for all”.

ANSWER: Abraham Lincoln

[Part B] Lincoln was a Congressman from this state. This state saw an 1871 fire supposedly started by Mrs. O’Leary’s cow kicking over a lantern.

ANSWER: Illinois

[Part C] Lincoln fought with future rival Jefferson Davis in this Native American war against the namesake chief of the Sauk. This war ended with the Battle of Bad Axe, after which this war’s namesake chief surrendered.

ANSWER: Black Hawk War

(Tossup 2) **One character in this work complains about an ancient sheepdog “stinking up the place” before it is shot. This novel’s two central characters wish to own “a little house and a couple of acres,” which they talk about with (*) Crooks. One of this novel’s characters kills Curley’s wife and dreams of owning a rabbit farm before being shot by his best friend. For ten points, name this novel about George and Lennie by John Steinbeck.**

ANSWER: Of Mice and Men

(Bonus 2) This character's letter of introduction is stolen after he is beaten unconscious by the Comte De Rochefort's companions. For ten points each,

[Part A] Name this character who journeys to Paris to join an elite military unit, a Gascon who eventually helps that unit defeat Milady De Winter.

ANSWER: D'Artagnan

[Part B] D'Artagnan is the main character in what work about a title group which includes Athos, Aramis, and Porthos?

ANSWER: The Three Musketeers

[Part C] *The Three Musketeers* was written by this French author who also wrote *The Count of Monte Cristo*.

ANSWER: Alexandre Dumas

(Tossup 3) **All alkali metals have this number of valence electrons. Since there are seven valence electrons in halogens, they must gain this number of valence electrons to have a (*) full shell. Sodium can lose this number of electrons to become Na⁺. For ten points, how many electrons are needed to cancel out the charge of one proton?**

ANSWER: One

(Bonus 3) One of these structures, named the Ogallala, lies beneath the upper Great Plains. For ten points each,

[Part A] Identify this subterranean feature made of porous rock, sand, or silt which holds large volumes of water.

ANSWER: Aquifers

[Part B] The zone of saturation represents the part of an aquifer in which the rock is maximally saturated with water. This two word term names the top of the zone of saturation, or the surface of the subsurface water.

ANSWER: Water tables

[Part C] Water is commonly extracted from aquifers using this type of structure. These structures are dug into the ground and the water is commonly brought up in a bucket.

ANSWER: Well

(Tossup 4) **In this painting, barely visible vertical strips of column flank the title figure. The shadows around the eyes of this painting's subject are characteristic of the sfumato technique. Marcel Duchamp drew a mustache on a postcard of this painting titled (*) L.H.O.O.Q. Vasari claimed that this painting's subject was the wife of Francesco del Giocondo. For ten points, name this da Vinci painting of a woman with an enigmatic smile.**

ANSWER: Mona Lisa (accept La Gioconda before "Giocondo")

(Bonus 4) One work by this artist depicts a feast with a text on the wall saying “mene, mene, tekel, upharsin”. For ten points each,

[Part A] Name this Dutch artist who painted *Belshazzar’s Feast* and *The Anatomy Lesson*.

ANSWER: Rembrandt Van Rijn

[Part B] This famous work by Rembrandt Van Rijn depicts a company of soldiers led by Captain Frans Banninck Cocq who is dressed in black with a red sash.

ANSWER: The Night Watch (Accept Militia Company of District II under the Command of Captain Frans Banninck Cocq)

[Part C] *The Night Watch* is currently displayed in the Rijksmuseum which is located in this capital of the Netherlands.

ANSWER: Amsterdam

(Tossup 5) **One of these events occurred in 1980 and only affected the FTC for one day. Newt Gingrich led Republican leaders during one of these events in December 1995 which began due to conflicts between Congress and President Clinton. The longest one of these events in history began in (*)** December 2018 due to disagreements over funding for a border wall with Mexico. For ten points, name these events which occur when funding gaps result in federal government agencies to cease operations.

ANSWER: government shutdowns

(Bonus 5) One supporter of this movement wrote a work titled *The Second Sex*. For ten points each,

[Part A] Name this movement which frequently campaigns for women’s rights and is aimed at obtaining equality for women.

ANSWER: Feminism (accept feminist movement)

[Part B] Feminist Simone De Beauvoir wrote a book titled for [this field] of Ambiguity. This philosophical subfield is the study of what is right and wrong.

ANSWER: ethics

[Part C] This other philosopher was a lover of Simone de Beauvoir. This fellow French existentialist described how people identify themselves solely by their occupation or role in society, a concept called bad faith.

ANSWER: Jean-Paul Sartre

(Tossup 6) **This man took the name of “Junker Jorg” during his stay at Wartburg Castle, where he translated the New Testament into his native language. This man was excommunicated by the papal bull Exsurge Domine, issued by Pope Leo X at the (*)** Diet of Worms. This man is famous for nailing a list of demands on a church door in Wittenberg called the 95 Theses. For ten points, name this German monk who inspired the Protestant Reformation.

ANSWER: Martin Luther

(Bonus 6) Saint Patrick was known for driving the snakes from this island. For ten points each,
[Part A] Name this island whose myths include the Fenian Cycle and Ulster Cycle.

ANSWER: Ireland

[Part B] This Irish hero often called the “Hound of Ulster” was known for his battle frenzy.

ANSWER: Cu Chulain

[Part C] Cu Chulain was mortally wounded by a weapon of this type. A weapon of this type was used by Longinus to pierce the side of Jesus as he hung on the cross.

ANSWER: Spear (Accept Lance)

(Tossup 7) **This author discussed the suicide of Judith Shakespeare in an essay declaring that women need money and the title place to write fiction. This author wrote about Septimus Smith’s suicide in a novel in which a woman hosts a party and reflects on her kiss with (*) Sally Seaton. In another novel by her, Lily Briscoe and the Ramsay family travel to the title location. For ten points, name this author of Mrs. Dalloway and To the Lighthouse.**

ANSWER: Virginia Woolf

(Bonus 7) This character’s friend Helen Burns dies at Lowood Institution. For ten points each,

[Part A] Name this character who serves as a governess at Thornfield Hall where she falls in love with Mr. Rochester.

ANSWER: Jane Eyre

[Part B] This character, the insane first wife of Mr. Rochester, commits suicide after setting fire to Thornfield Hall.

ANSWER: Bertha Mason

[Part C] Jane Eyre was written by this author, the older sister of Emily and Anne.

ANSWER: Charlotte Bronte

(Tossup 8) **Julia Swayne Gordon portrayed this woman in a 1912 silent film titled The Victoria Cross, while Anne Neagle portrayed her in a later film. An 1857 poem about this woman by Henry Longfellow was titled Santa Filomena and she served at the (*) Selimiye Barracks in Istanbul. She introduced hand washing and other hygiene practices while working as a nurse during the Crimean War. For ten points, name this “Lady with the Lamp”.**

ANSWER: Florence Nightingale

(Bonus 8) One leader of this country appealed to League of Nations for aid in resisting an Italian invasion, warning “It is us today. It will be you tomorrow”. FTP:

[Part A] Name this country ruled by Emperor Haile Selassie’s Solomonic Dynasty. Axum was the first Christian kingdom in this country.

ANSWER: Ethiopia

[Part B] Ethiopia was invaded by this country, which was part of the main Axis powers during World War II along with Germany and Japan.

ANSWER: Kingdom of Italy

[Part C] Italy was ruled by this fascist leader for most of World War II. This leader was known for “making the the trains run on time”, and he was colloquially referred to as “Il duce”.

ANSWER: Benito Mussolini (or Benito Amilcare Andrea Mussolini)

Sixty-Second Rounds

The categories are ...

1. Ancient Playwrights
2. Alexander the Great
3. Acids and Alkali

ANCIENT PLAYWRIGHTS

Name the...

(1) Ancient country where playwrights like Menander and Aeschylus wrote.

ANSWER: Greece

(2) The language in which the playwright Plautus wrote comedies like Pseudolus.

ANSWER: Latin

(3) First play in Sophocles’ Oedipus Cycle titled for a woman who violates Creon’s edict by burying her brother Polynices.

ANSWER: Antigone

(4) Play written by Aristophanes in which a croaking refrain from a title amphibian can be heard

ANSWER: The Frogs

(5) Mythical figure who names a trilogy of Aeschylus plays who murders Clytemnestra.

ANSWER: Orestes

(6) Euripides play whose title woman kills her children to get back at her husband Jason.

ANSWER: Medea

ALEXANDER THE GREAT

Name the...

(1) Empire that he ruled; a modern European country of this name has capital Skopje.

ANSWER: Macedonia

(2) Roman city destroyed by Mount Vesuvius that contained a mosaic of Alexander winning a battle.

ANSWER: Pompeii

(3) Empire ruled by Darius III that Alexander conquered.

ANSWER: Persian Empire (or Achaemenid Empire)

(4) King he succeeded, his father.

ANSWER: Philip II of Macedon (accept Philip of Macedon; prompt on Philip)

(5) Island city in the Mediterranean that he conquered by building a causeway.

ANSWER: Tyre

(6) Group of friends and allies that, in the pursuit of power, tore his empire apart upon his death.

ANSWER: Diadochi

ACIDS AND ALKALI

Answer the following about acids and alkalis?

(1) How acidic or alkaline a substance is is measured by this scale.

ANSWER: **pH** or Potential of Hydrogen

(2) A neutral substance will measure this number on the aforementioned scale.

ANSWER: **7**

(3) The OH⁻ (pronounced O H minus) ion is also known as a what kind of ion?

ANSWER: **Hydroxide**

(4) Name this chemical reaction that occurs when an acid reacts with a base producing no excess of H⁺ or OH⁻ ions in the solution.

ANSWER: **Neutralization**

(5) A salt and hydrogen are produced when acids react with these objects.

ANSWER: **Metals**

(6) The first modern definition of acids and bases were made by this Swedish scientist.

ANSWER: Svante **Arrhenius**

Second Half

(Tossup 9) **These numbers can be constructed using Dedekind cuts. Cantor showed that this set is uncountable in his namesake diagonal argument. The square root of negative one is not part of this set, necessitating the creation of the (*) imaginary numbers.** These numbers are depicted on the axes of a two-dimensional graph and standard number lines. For ten points, name this set of numbers from negative infinity to positive infinity.

ANSWER: real numbers [prompt on R before mention]

(Bonus 9) These kind of numbers cannot be constructed from ratios or fractions of integers. For ten points each,

[Part A] Name these kind of numbers which are opposed to rational numbers.

ANSWER: irrational numbers

[Part B] An example of irrational numbers is this value, a mathematical constant often approximated to 3.1415.

ANSWER: Pi

[Part C] With the exception of perfect squares, doing this action to any natural number will give you an irrational number.

ANSWER: square root

(Tossup 10) **The most inland port in the world is a city lying on this lake called Duluth. The Ojibwe occupied all of the shores on this body of water, calling it their 'Great Sea'. Isle Royale in the state of Michigan is the largest island in this body of water. Having the highest elevation of the (*) interconnected bodies of water it belongs to, this lake drains into the St Mary's River.** For ten points, name this largest of the Great Lakes.

ANSWER: Lake Superior

(Bonus 10) This country disputes the Southern Patagonian Ice Field with Argentina. For ten points each,

[Part A] Name this narrow coastal South American country home to cities such as Antofagasta and Valparaiso.

ANSWER: Chile

[Part B] This city is the capital of Chile.

ANSWER: Santiago

[Part C] This desert in Northern Chile is one of the driest places in the world and contains large deposits of copper.

ANSWER: Atacama Desert

(Tossup 11) **These cells are underproduced in a “pernicious” condition caused by a Vitamin B12 deficiency. Improper production of a protein found in these cells occurs during thalassemia. A hematocrit test measures the amount of these cells in the body, which assume a (*) curved, elongated shape in patients with sickle-cell anemia. For ten points, name these hemoglobin-containing cells that carry oxygen through the body via blood.**

ANSWER: red blood cells (accept RBCs; accept erythrocytes)

(Bonus 11) When this compound dissolves a solid, its partial positive end attracts negative anions and its partial negative end attracts positive cations. For ten points each,

[Part A] Name this molecule that, because of its special properties, is known as the universal solvent and has formula H₂O.

ANSWER: water

[Part B] Water molecule have these strong intermolecular forces between them. These bonds are named after an element that associates with oxygen, nitrogen, or fluorine.

ANSWER: hydrogen bonds

[Part C] Water can easily break these bonds that occur when one atom gives up electrons and the other accepts them. Salts like sodium chloride are held together with this type of bond.

ANSWER: ionic bonds

(Tossup 12) **This composer wrote a piece for the coronation of George II titled *Zadok the Priest*. To celebrate the end of the War of Austrian Succession, this composer wrote his *Music for the Royal Fireworks*. This composer wrote a piece to be played on a barge in the River Thames, his (*) *Water Music*, which includes a movement titled “Alla Hornpipe”. For ten points, name the composer of the oratorio *Messiah* which includes the “Hallelujah” chorus.**

ANSWER: George Frideric Handel

(Bonus 12) This piece, which was orchestrated by Ferde Grofe, was premiered at the concert “An Experiment in Modern Music.” For ten points each:

[Part A] Name this composition that opens with the clarinet playing a long trill on low F and 17-note rising diatonic scale.

ANSWER: Rhapsody in Blue

[Part B] This other work by the composer of Rhapsody in Blue uses taxi horns to depict the title city. A solo trumpet in this piece represents a “spasm of homesickness.”

ANSWER: An American in Paris

[Part C] This American composer wrote Rhapsody in Blue and An American in Paris with his brother Ira.

ANSWER: George Gershwin

(Tossup 13) **This person served as president of The Ninety-Nines and was a faculty member at Purdue University. It has been speculated that this person was shot down or captured by the Japanese after she failed to reach (*) Howland Island. Fred Noonan accompanied this person on her final flight. For the point, name this first female aviator to fly solo across the Atlantic who disappeared while attempting to circumnavigate the globe?**

ANSWER: Amelia Earhart

(Bonus 13) This civilization created floating gardens called chinampas centered on Lake Texcoco. For ten points each,

[Part A] Name this Mesoamerican civilization from Mexico that thrived in cities such as Tenochtitlan.

ANSWER: Aztec

[Part B] The Aztecs were conquered by this conquistador. This Spaniard killed Emperor Montezuma II and used guns to defeat the inferior weaponry of the Aztec warriors.

ANSWER: Hernan Cortes de Monroy y Pizarro Altamirano, Marquis of the Valley of Oaxaca

[Part C] Cortes was able to communicate with the Aztecs with the help of this woman, who served as a translator. She gave birth to Cortes' child, and she was maligned as a traitor.

ANSWER: La Malinche (accept Malinalli or Malintzin or Dona Marina)

(Tossup 14) **This figure is the twin brother of Iphicles, and this figure spent a whole year chasing after the Ceryneian Hind. This figure was forced to wear women's clothing while working under Omphale. This figure used a rattle and a bow to kill the (*) Stymphalian birds. After murdering his wife Megara, this figure captured Cerberus and killed the Lernaean Hydra. For ten points, name this Greek hero who completed 12 labors.**

ANSWER: Heracles (accept Hercules)

(Bonus 14) Lakshmi is the consort of this deity. For ten points each,

[Part A] Name this Hindu "preserver" deity who forms the Hindu Trimurti with Shiva and Brahma. This god is known for his many avatars.

ANSWER: Vishnu

[Part B] This seventh avatar of Vishnu successfully rescues his wife Sita from Ravana, the demon king of Lanka.

ANSWER: Rama

[Part C] This eighth avatar of Vishnu is a central character in the Hindu epic Mahabharata.

ANSWER: Krishna

(Tossup 15) **A character in this book is surprised that a servant entrusted with a great sum of gold does not steal any. That character, Martin, sails across the Atlantic with this book's protagonist to reunite with his lover and (*)** Cacambo in Venice. In this work, the protagonist visits El Dorado in search of Cunegonde and is told about the “best of all possible worlds” by Pangloss. For ten points, name this satirical novella by Voltaire.

ANSWER: Candide

(Bonus 15) Marianne Moore wrote “I too dislike” works in this genre. For 10 points each:

[Part A] Name this type of writing that usually includes meter and rhyme scheme. Examples of this genre of writing include villanelles and sonnets.

ANSWER: Poems [accept poetry]

[Part B] This author wrote about how the protagonist “strove to resuscitate the dead art of poetry” in his poem “Hugh Selwyn Mauberley.” He translated many of Li Bai’s works and wrote The Cantos.

ANSWER: Ezra Loomis Pound

[Part C] This American poet claimed that poetry comprises “the supreme fiction.” This author wrote “The Emperor of Ice-Cream” and “Thirteen Ways of Looking at a Blackbird.”

ANSWER: Wallace Stevens

(Tossup 16) **The mouth of the Catatumbo River is home to a frequent continuous occurrence of this phenomenon, which is a natural producer of ozone. Fulgurites are formed when this phenomenon compacts and fuses soils with its hot plasma channels. These phenomenon can occur within (*)** clouds, between clouds, and between a cloud and the ground. For ten points, name this discharge of electricity during a storm often accompanied by thunder.

ANSWER: lightning

(Bonus 16) X-shaped structures called chiasmata form during this event. For ten points each:

[Part A] Name this event during prophase I [one] where regions of homologous chromosomes break off to exchange genetic material with each other.

ANSWER: crossing over (accept chromosomal crossover; accept synapsis)

[Part B] Crossing over occurs during the first phase of this process of cell division, which unlike a similar process called mitosis, creates four genetically distinct haploid cells.

ANSWER: meiosis

[Part C] A germ cell divides through meiosis to form one of these female reproductive cells in a process called oogenesis [OH-oh-genesis]. These cells fuse with sperm cells to form a zygote.

ANSWER: egg cells (accept ovum; accept ova)

Tiebreakers

(Tossup 17) **This city grew out of the Vysehrad castle which holds the remains of famous people such as Bedrich Smetana. A preacher from this city, Jan Hus, began the Hussite Wars leading to Sigismund becoming King of (*) Bohemia.** The Hussite featured the first of this city's namesake "defenestrations". For ten points, name this city once home to a namesake "Spring" and which is the current capital of the Czech Republic.

ANSWER: Prague

(Bonus 17) Sweden was ruled by several kings and queens, and it all started with this royal house. For ten points each,

[Part A] Name this Swedish ruling house founded by King Gustav I.

ANSWER: Vasa

[Part B] Name this famous Protestant general and king who led Sweden during the Thirty Years War, nicknamed the "Lion of the North".

ANSWER: Gustavus Adolphus

[Part C] Many Swedish kings ruled from Tre Kronor, a castle in this capital city of Sweden.

ANSWER: Stockholm