

Round 1

First Half

(1) **This substance consists of a plasma that carries leukocytes and erythrocytes. Instead of a system using this fluid, arthropods use hemolymph in an open circulatory system. Average adult humans have roughly (*) five liters of this fluid in their bodies. The protein hemoglobin allows oxygen to be carried by, for ten points, what vital bodily fluid that is pumped through arteries and veins by the heart?**

ANSWER: blood

(1) The points at which these processes occur can be modified by exploiting basic colligative properties; one example is the use of rock salt on icy roads in the winter. For ten points each,

Give this general term for processes like melting and freezing that change the physical properties of matter.

ANSWER: phase changes (accept phase transitions and equivalents describing matter being converted from one phase to another)

This phase change takes place when a solid immediately transitions into a gas, as seen in dry ice.

ANSWER: sublimation

Dry ice is the solid form of this compound with chemical formula CO_2 .

ANSWER: carbon dioxide

(2) **This country's philosophy of *songun* emphasizes "military first" politics. On five occasions since 2006, this country has tested a nuclear weapon at Punggye-ri. The Yalu River separates (*) China from this country, which is separated from its southern neighbor by a demilitarized zone set up after a 1950s war. For ten points, name this Asian country, led by dictator Kim Jong-Un from Pyongyang.**

ANSWER: North Korea (accept the Democratic People's Republic of Korea or DPRK; prompt on Korea; do not accept or prompt on "Republic of Korea")

(2) This Missouri-born politician rose to prominence with the aid of Tom Pendergast. For ten points each, Name this man, the last to become President after the death of his predecessor by means other than assassination. This man later won a second term in office over Thomas Dewey.

ANSWER: Harry S. Truman

Due to the untimely death of Roosevelt, Harry Truman oversaw the end of this war. This global conflict started with the invasion of Poland in 1939 and ended with Japan's 1945 surrender.

ANSWER: World War II (accept WWII)

Japan's surrender was hastened by Truman's order to attack these two Japanese cities with nuclear weapons.

ANSWER: Nagasaki and Hiroshima (accept in either order; prompt if only one is given)

(3) **In one poem, this writer “signed away / what portion of me be / assignable” before saying “I could not see to see.” This poet wrote about riding in a carriage that “held but just Ourselves / and Immortality” after a character (*) “kindly stopped for me,” and was known as the “Belle” of Amherst, Massachusetts. For ten points, name this poet of “I heard a Fly buzz—when I died” and “Because I could not stop for Death.”**

ANSWER: Emily Elizabeth Dickinson

(3) Little Nell in *The Old Curiosity Shop* is one of these characters, who appear frequently in the works of a particular Victorian English writer. For ten points each,

Name this kind of character. In another novel, a fatherless student at Salem House becomes one of these characters after his mother dies, as well.

ANSWER: orphans (accept word forms like orphaned children)

This English author wrote about orphans in novels like *The Old Curiosity Shop* and described the plight of the Victorian poor in *A Christmas Carol*.

ANSWER: Charles John Huffam Dickens

In this Dickens novel, the orphaned protagonist lives at Salem House before moving in with his aunt Betsey Trotwood, helping reveal the criminal acts of Uriah Heep, and marrying Agnes Wickfield.

ANSWER: David Copperfield

(4) **This state's Groom Lake is home to a base owned by the Air Force where, according to conspiracy theorists, the bodies of the Roswell aliens were taken. This state shares its name with a mountain range topped by another state's Mount (*) Whitney, and it owns the eastern shore of Lake Tahoe. The “biggest little city in the world,” Reno, is in, for ten points, what western U.S. state, home to Area 51, Carson City, and Las Vegas?**

ANSWER: Nevada

(4) Until 2011, the middle 2 numbers in these numbers were assigned in a weird sequence - starting 01, 03, 05, 07, 09, then 10, 12, etc. - so that by the time all people with 01 numbers were dead, that entire file drawer could be emptied and used for 02. For ten points each,

Name this 9-digit number, used for identification within a governmental program that provides funds to elderly Americans.

ANSWER: Social Security number (or SSN)

Your Social Security number serves as a broad method of identification; in particular, it allows this governmental agency to account for the taxes you paid and/or owe to it.

ANSWER: Internal Revenue Service (or IRS)

Social Security, as well as Medicare, is funded via FICA taxes, which are this type of tax, collected from employers and/or employees from their paychecks. This term also refers, generally, to the list of employees of a company and the total money they make.

ANSWER: payroll (tax)

(5) Peter Fechter **[FECK-ter]** bled to death next to this structure after being shot in its “death strip.” As part of a 1961 crisis, American tanks were stationed at this structure’s (*) Checkpoint Charlie. At a speech given at the Brandenburg Gate, Ronald Reagan told “Mr. Gorbachev” to “tear down” this structure. For ten points, name this barrier that separated the capital of Germany into east and west portions until 1989.

ANSWER: Berlin Wall

(5) Name the following types of forced labor for ten points each.

In this system, laborers are considered chattel, or the personal property of their owners. The 13th Amendment banned this practice in the US.

ANSWER: slavery (accept word forms; accept descriptions of involuntary servitude)

The 13th Amendment banned involuntary servitude, while this related practice persisted for a few years more. In this system, a laborer entered into a contract with an employer, often providing unfree labor for a specific period of time in return for passage to America. After the contract expired, this type of laborer was considered free.

ANSWER: indentured servant (accept word forms)

In the post-slavery South, many former slaves continued to work on plantations under this system, in which a plantation owner gave the farmer land and supplies in exchange for part of the harvest. Like tenant farming, laborers in this system often fell into debt.

ANSWER: sharecropping (accept word forms)

(6) **Bellatrix serves as this constellation's left shoulder, and its other stars include Betelgeuse and Rigel. The Horsehead Nebula is found in this constellation, which also includes Alnitak, Alnilam, and Mintaka, a (*)** row of three stars in roughly a straight line across its center. For ten points, name this constellation, named for a mythological Greek hunter, easily found in the night sky by looking for its "belt."

ANSWER: Orion

(6) Lingonberries can grow in this biome, as its shrub is capable of surviving harsh temperatures. For ten points each,

Name this biome, featuring short shrubs rather than trees. It is found in more extreme climates than the similarly cold taiga.

ANSWER: tundra

Trees cannot grow in the tundra because their roots fail to take hold in this type of frozen soil, which is constantly colder than 32 degrees Fahrenheit.

ANSWER: permafrost

Other organisms that can grow in the tundra include clumped coverings like mosses and these rootless composites, consisting of algae and fungi living together in a symbiotic relationship.

ANSWER: lichen

(7) **Important artists in this artistic form include Lev Ivanov and Marius Petipa, who often collaborated with Tchaikovsky. A common technique in this artform, *en pointe*, requires a (*)** toe box for the performer to support all weight on the tip of the toe. For ten points, name this art form, examples of which include Tchaikovsky's *Swan Lake* and *The Nutcracker*, whose dancers may perform pirouette turns.

ANSWER: ballet (prompt on dance, choreography, and similar descriptions)

(7) This room of the Apostolic Palace features stories of Moses on its southern wall and stories of Jesus on the northern wall. For ten points each,

Name this place of worship in the Vatican City, famous for a series of frescoes on its ceiling.

ANSWER: Sistine Chapel

The ceiling of the Sistine Chapel, as well as *The Last Judgment* on its altar wall, were painted by this Italian artist, who also sculpted a marble *David*.

ANSWER: Michelangelo di Lodovico Buonarroti (accept either or both names)

One painting on the Sistine Chapel ceiling is of *The Creation of* this Biblical man, to whom God reaches out with his arm, their fingers nearly touching. Another painting depicts this figure in the Garden of Eden with Eve.

ANSWER: (The Creation of) Adam

Sixty Second Rounds

The categories are ...

1. Orson Scott Card
2. South America
3. Bones
4. Wolfgang Amadeus Mozart

ORSON SCOTT CARD

In the works of Orson Scott Card, who or what is...

(1) the first of Card's novels about Andrew Wiggin, who wins a war against an alien race?

ANSWER: Ender's Game

(2) Andrew Wiggin's older brother who, with his sister Valentine, becomes a political theorist under the name Locke?

ANSWER: Peter

(3) the nickname given to the insectoid alien race that Andrew defeats?

ANSWER: Buggers (accept Formics)

(4) Andrew's friend at Battle School, a small but brilliant student?

ANSWER: Bean

(5) the mythical creature that Andrew violently kills in a recreational game at Battle School?

ANSWER: giant

(6) the military hero who trains Andrew in the use of a battle simulator?

ANSWER: Captain Mazer Rackham (accept either underlined name)

SOUTH AMERICA

Name the...

(1) Largest country by area in South America.

ANSWER: **Brazil**

(2) Longest river in South America, which flows through the world's largest rainforest.

ANSWER: **Amazon** River (or **Amazon** rainforest)

(3) Country led by Mauricio Macri from Buenos Aires.

ANSWER: **Argentina**

(4) Four thousand mile long mountain range that extends along the western coast of the continent.

ANSWER: **Andes** Mountains

(5) Country in the north of the continent once led by Hugo Chavez from Caracas.

ANSWER: **Venezuela**

(6) Non-precious, conductive metal mined in the Atacama Desert, making Chile the world's largest producer.

ANSWER: **copper**

BONES

Name the...

(1) Structure, actually made up of the cranium and mandible bones, that protects the brain.

ANSWER: skull

(2) Element with atomic symbol Ca that is important in bone growth.

ANSWER: calcium

(3) Type of bone that is called “true” if it directly connects to the sternum.

ANSWER: rib (accept ribcage or other elaborations)

(4) Tissue inside many bones that produces red blood cells and is often transplanted as a cancer treatment.

ANSWER: bone marrow

(5) Joint that is protected by the patella bone.

ANSWER: knee (accept kneecap or other elaborations)

(6) Segmented bones that make up the spine.

ANSWER: vertebrae

WOLFGANG AMADEUS MOZART

Name the...

(1) European country where Mozart was born in Salzburg and lived in Vienna.

ANSWER: Austria

(2) Instrument family, including viola and cello, that plays Mozart's quartet "A Little Night Music."

ANSWER: string instruments (accept string quartet)

(3) Smaller instrument in the same family that Mozart played as a child, also known as a fiddle.

ANSWER: violin

(4) The type of multiple-movement work, of which Mozart's 41st and final is nicknamed *Jupiter*.

ANSWER: symphony

(5) "Magic" instrument that titles Mozart's final opera.

ANSWER: flute (accept The Magic Flute and Die Zauberflöte)

(6) The type of religious music for the dead Mozart left unfinished at his own death.

ANSWER: Requiem mass (prompt on mass)

Second Half

(8) **This Greek god trapped Pirithous for trying to abduct this god's wife, and trapped Tantalus so that he could not reach food or water for eternity. This god's realm contained the rivers Lethe and (*) Styx.** This god fed pomegranate seeds to his wife, Persephone, to trap her in his namesake underworld. For ten points, name this brother of Poseidon and Zeus, the Greek god of the dead.

ANSWER: Hades (do not accept Pluto)

(8) This holiday celebrates the re-dedication of a holy building, when a day's worth of lamp oil lasted for eight days. For ten points each,

Name this Jewish winter holiday that includes the lighting of candles in a specialized nine-branch menorah.

ANSWER: Chanukah

Chanukah celebrates the restoration of this building in Jerusalem. The first building of this type was built by Solomon.

ANSWER: (First or Second) Temple in Jerusalem (accept Holy Temple)

The sides of this top, often played with during Chanukah, are inscribed with Hebrew letters that traditionally stand for "a great miracle happened there."

ANSWER: dreidel

(9) **The Perry Index includes a story by this author in which a small animal gnaws through ropes to free a predator. In another story by this author, a hard-working insect manages to survive the (*) winter, unlike one who sings all summer.** According to some traditions, this author of "The Lion and the Mouse" and "The Grasshopper and the Ant" may have been a slave. For ten points, name this ancient Greek recorder of fables.

ANSWER: Aesop

(9) In a novel by this author, Hank Morgan kills the medieval knight Sir Sagramore with a revolver. For ten points each,

Name this American author of a novel about Hank Morgan and several novels about Huckleberry Finn and his friends.

ANSWER: Mark Twain (accept Samuel Langhorne Clemens)

In this Mark Twain novel, Hank Morgan travels to medieval Camelot and introduces them to fireworks, bicycles, and other modern devices.

ANSWER: A Connecticut Yankee in King Arthur's Court

In *A Connecticut Yankee in King Arthur's Court*, Hank's inventiveness and knowledge of modern mechanics allow him to replace this man as Arthur's adviser and court magician.

ANSWER: Merlin

(10) **Nuclear fusion within stars typically ends at this element's 56-mass isotope. A solid alloy of nickel and this element makes up the inner core of the Earth. The tendency of this element, and others like it, to hold a permanent (*) magnetic charge is known as ferromagnetism.** For ten points, name this metal element with atomic number 26 and atomic symbol Fe which, when it corrodes, becomes rust.

ANSWER: iron (accept Fe before it is read)

(10) Benchmarks on this scale include apatite at 5 and topaz at 8, even though topaz has an absolute hardness four times greater than apatite. For ten points each,

Name this 1-to-10 scale of mineral hardness, named for its German inventor.

ANSWER: Mohs scale of hardness

On the Mohs scale of hardness, this clay-like mineral is the benchmark for 1, the softest mineral. A loose form of this mineral is commonly used as baby powder.

ANSWER: talc (accept talcum powder)

The common benchmark for 9 on the Mohs scale is corundum, a mineral that is commonly used as a gemstone. If the corundum is shaded blue, it's known as a sapphire; if the corundum is shaded red, it goes by this name.

ANSWER: ruby

(11) **While playing for this team, Jacoby Brissett was forced to get surgery after spraining his thumb. The first round of the 2016 NFL draft featured only 31 picks because this team forfeited their pick; this team's quarterback was (*) suspended for four games due to delayed punishment for the 2015 Deflategate scandal.** For ten points, name this Massachusetts-based NFL team which has won five Super Bowls with Bill Belichick and Tom Brady.

ANSWER: New England Patriots (accept either underlined portion)

(11) Answer some questions about Japanese video games released in 2016. For ten points each,

Litten, Popplio, and Rowlet are the three new starting creatures in this massive franchise's Sun and Moon, the first games of its seventh generation.

ANSWER: Pokemon (Sun and/or Moon)

In 2016, this series received its 15th installment after 10 years of development. An HD remake for this series' 7th title, featuring Cloud Strife, is currently in development.

ANSWER: Final Fantasy

Koei-Tecmo released this anime-based video game in which players take control of Eren Jaeger to kill the title large monsters.

ANSWER: Attack on Titan

(12) **This colony's southern border was determined by the Mason-Dixon Line. The Union Fire Company was founded in this colony by Benjamin Franklin, who also founded its namesake university. The Second (*)** Continental Congress met in this colony's Independence Hall during the American Revolution. Philadelphia was the capital of, for ten points, what colony, founded as a refuge for Quakers by William Penn?

ANSWER: Pennsylvania

(12) Battles in this war included Agincourt, where Henry V defeated Charles d'Albret [dahl-bray]. For ten points each,

Name this conflict, which included numerous truces and resumptions of fighting between 1337 and 1453.

ANSWER: Hundred Years' War

These two kingdoms fought each other in the Hundred Years' War. By the end of the war, one of these countries lost most of its possessions on the European continent.

ANSWER: England and France (accept in either order; do not accept descriptions of Great Britain or the United Kingdom)

After having a vision of God, this French peasant girl led forces in the Hundred Years' War, relieving the siege of Orleans. She was captured by pro-English forces, then burned at the stake in 1431.

ANSWER: Saint Joan of Arc (or Jeanne d'Arc)

(13) **These angles are created by the intersection of a line and its normal line; those lines are described as orthogonal. The diagonals of a parallelogram create four of these angles, and two (*)** complementary angles sum to this type of angle. Rectangles have four of, for ten points, what type of angle that is neither acute nor obtuse, because it measures exactly 90 degrees?

ANSWER: right angle(s)

(13) For ten points each, answer the following about mathematical roots.

A root is a solution to a function; that is, when you plug a root into a function, this number is the output.

ANSWER: 0

Because the output of the function is 0, roots will always be graphed on this horizontal line, in the middle of the x - y plane.

ANSWER: x-axis (accept the line $y=0$)

If a function has this property and a root at x equals 4, it's guaranteed that x equals negative 3 is also a root. Numbers with this property are guaranteed to be divisible by 2.

ANSWER: even (function or number)

(14) **This author wrote the poem “The Hunting of the Snark” and included “The Walrus and the Carpenter” in one of his children’s novels. This man defined the terms “gyre” and “gimble” in the poem (*) “Jabberwocky,” which Humpty Dumpty explains to a girl who travels through a mirror to visit Tweedledee and Tweedledum. For ten points, name this English author whose novel *Through the Looking-Glass* about the adventures of Alice.**

ANSWER: Lewis Carroll (accept Charles Lutwidge Dodgson)

(14) A crippled, half-blind man in this novel is traded as a baby for a girl named Agnès [ON-yez], who is raised as a gypsy. For ten points each,

Name this novel by Victor Hugo, in which Quasimodo works in the title Paris cathedral under the guidance of Archdeacon Claude Frollo, whose obsession with Agnès leads him to have her hanged.

ANSWER: The Hunchback of Notre Dame (accept Notre-Dame de Paris)

As a gypsy street dancer, Agnès uses this name, in reference to the imitation gemstone she wears around her neck.

ANSWER: La Esmeralda

Quasimodo performs this job while living in Notre Dame Cathedral. Because he has this job, Quasimodo is mostly deaf.

ANSWER: bell-ringer

Extra Question

Only read if you need a backup or tiebreaker!

(15) **Employees of this ship included Harold Bride and Jack Phillips. In 1985, Robert Ballard used the remote-controlled *Argo* to study this ship. Molly (*) Brown was a passenger on this ship for its maiden voyage, which ended on April 15, 1912 in the middle of the North Atlantic. For ten points, name this “unsinkable” luxury ship which struck an iceberg and sank, killing over 1,500 people.**

ANSWER: RMS Titanic

(15) This system persisted in Russia until the 1861 abolition of serfdom, though the effects of this system persisted long after the peasants were freed. For ten points each,

Name this social system of medieval Europe in which lords provided land to vassals, who then protected the lords.

ANSWER: **feudalism** (accept word forms)

While this term can refer to the property, wealth, and/or rights given by a lord to his vassal, it most often refers to the parcels of a lord's land provided to the vassal.

ANSWER: **fief**dom

In return for being granted a fief, a vassal had to finance an army for the lord. These mounted warriors, commonly depicted wearing suits of armor and following a code of chivalry, were the primary fighters in those armies.

ANSWER: **knights**