

Round 10

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Tossups

(1) **This novel’s narrator refuses to trample a crucifix for the emperor of Japan after he encounters an immortal race of *struldbrugs*. Yahoo.com’s name was taken from this novel’s race of savage humans who live among (*) talking horses. This book’s narrator is tied down by ropes by the miniature inhabitants of Lilliput on one of his numerous shipwrecks. For ten points, name this satirical description of an English sailor’s adventures, written by Jonathan Swift.**

ANSWER: Gulliver’s Travels (accept Travels into Several Remote Nations of the World. In Four Parts. By Lemuel Gulliver, First a Surgeon, and then a Captain of Several Ships)

(2) **This location is described as “larger than Libya and Asia put together” in the *Timaeus*. The Egyptians supposedly told Solon that this location “lay over against the Pillars of Hercules” until “great earthquakes and floods” caused it to (*) disappear. Plato’s dialogues discuss the hubris of the lost civilization on, for ten points, what fictional island that modern crackpots search for on the bottom of the Mediterranean Sea?**

ANSWER: Atlantis

(3) **In the music video for a song with this name, Selena Gomez collects frogs instead of these people. Social House and Ariana Grande collaborated on a song with this title, which is also shared by a 2022 single that implores “I don’t need to tell you (*) twice / All the ways he can’t suffice.” Being this title person comes with the upside that “all my clothes would fit” according to, for ten points, what romantically-titled song, Dove Cameron’s breakout hit?**

ANSWER: Boyfriend

(4) **Wilhelmy plates are allowed to sit exactly on the top of these structures. Lenses named for these things have one convex side and one concave side. These things are oriented convex down in columns of mercury, since the force of adhesion is stronger than (*) cohesion. Conventionally, liquid volumes are read out at eye level from the bottom of this structure inside a beaker or graduate cylinder. For ten points, name this curved surface of a liquid in a tube.**

ANSWER: meniscus

(5) **At a competition involving these vehicles, Hypatius was crowned Emperor by a mob of rival fans who came together, chanting “Nika!”; Justinian quickly put down the mob and killed tens of thousands of rioters. The Battle of (*) Kadesh led to the oldest-known peace treaty and is commonly cited as the largest clash of these vehicles in history. The invention of spokes roughly four thousand years ago led to the development of, for ten points, what ancient wheeled vehicles that were pulled by horses?**

ANSWER: chariots

(6) In 1980, a law named CERCLA tasked this agency with projects at the Valley of the Drums and Love Canal. Michael Regan currently leads this agency, which was created by a Richard Nixon executive order. This agency manages various (*) cap-and-trade markets as well as the Energy Star efficiency program. Superfund sites are managed by, for ten points, what US governmental agency that enforces regulations like the Clear Air Act and Clean Water Act?

ANSWER: EPA (accept U.S. Environmental Protection Agency)

(7) In this state in the 2016 Presidential election, 21 percent of the vote was won by third-party candidate Evan McMullin. As an independent, McMullin has pledged to caucus with neither party if he wins this state's 2022 Senate election against Republican incumbent Mike (*) Lee. Mitt Romney is the other current Senator from, for ten points, what traditionally-Republican voting U.S. state whose capital is Salt Lake City?

ANSWER: Utah

(8) In a piece titled for this time period, the viola is told to play “always forte” to represent a dog barking. According to a sonnet written by the composer, “The birds celebrate” the return of this time period in the Allegro movement of a (*) violin concerto that opens *The Contest Between Harmony and Invention*. “La Primavera” is the Italian title of, for ten points, what appropriately first movement of Antonio Vivaldi's *The Four Seasons*?

ANSWER: Spring (accept La Primavera before it is read; prompt on “(the) Four Seasons” or “(le) Quattro Stagioni” until it is read)

(9) After abandoning the guise of a cormorant, this character squats like a toad until he is caught by Zephron. This character leads an army that falls through Chaos for nine days before winding up in a lake of fire. This character reflects that, “The mind is its own place” from his capital of (*) Pandemonium and complains “Better to reign in Hell/than serve in Heaven.” For ten points, name this antihero of John Milton's *Paradise Lost*, a Christian demon.

ANSWER: Satan (accept the Devil; accept Lucifer)

(10) The virus that causes this disease in humans is first classified into A and B subtypes, and then by which of the 18 hemagglutinin and 11 neuraminidase proteins it has on its surface. In 2015, 25 million birds were killed worldwide to avert a (*) pandemic from the deadly avian strain of this virus. A century earlier, an H1N1 strain of this virus emerged in Spain before killed more people worldwide than did World War I. For ten points, name this seasonal respiratory virus.

ANSWER: the flu (accept influenza; accept additional information like bird flu, swine flu, Spanish flu, etc.)

(11) Alexandros of Antioch used this substance to depict a half-nude goddess who may have been hand-spinning or holding an apple, although his work was originally attributed to Praxiteles [prack-SIH-tah-leez], who was a master of this material. This material was used to create (*) *Hermes and the Infant Dionysus* and a sculpture of Aphrodite whose arms have broken off, called the *Venus de Milo*. For ten points, name this material used to create Michelangelo's *David*, a type of white stone.

ANSWER: marble (accept Parian marble; prompt on “stone”)

(12) **Jenny Lind supposedly inspired one of this author’s villains. This author, whose “Thumbelina” was derided for having no apparent moral, wrote a story whose title character becomes an air spirit after she can’t bring herself to kill the (*) prince who refused to marry her.** An honest child doesn’t pretend that a ruler isn’t naked in a story written by, for ten points, Danish author of folk and fairy tales like “The Snow Queen,” “The Emperor’s New Clothes,” and “The Little Mermaid?”

ANSWER: Hans Christian Andersen

(13) **This scientist is the namesake of the ripple-like interference pattern that occurs when a convex lens is placed atop a flat piece of glass, even though it was discovered by his longtime rival, Robert Hooke. In his book (*) *Opticks*, this scientist first explained how the dispersion of light through a prism forms a rainbow. Calculus was explained in the *Principia Mathematica* by, what English physicist who developed three laws of motion?**

ANSWER: Sir Isaac Newton

(14) **As typically used in the four-color theorem, the countries on a map are equivalent to these features of a graph. The formula for the Euler [oiler] characteristic adds the number of faces and these objects together. If a (*) polygon is convex, then every one of these points is an ear, because all of the diagonals of the polygon lie within the polygon as they connect these points.** For ten points, name these geometric points that lie between edges at the corners of polygons.

ANSWER: vertex (accept vertices or vertexes; prompt on “node”; prompt on “corner” until it is read)

(15) **This conflict was sparked when one side blamed the scalping of Joseph de Jumonville on George Washington. The Battle of Fort Necessity triggered this war, which included the Braddock Expedition and a skirmish on the (*) Plains of Abraham outside Quebec City that led to English control of Canada.** For ten points, name this phase of the Seven Years’ War in which the British, with the help of the American colonists, fought against an alliance of two namesake opponents.

ANSWER: French and Indian War (prompt on “Seven Years’ War” before it is read)

(16) **Hundreds of exotic animals are kept in this city’s Bioparco on the Villa Borghese estate. The Federico Fellini film *La Dolce Vita* includes scenes set at this city’s Via Veneto, Baths of Caracalla, and (*) Trevi Fountain.** The Aurelian Walls, built in the 3rd century CE, surround the Campus Martius and all seven hills of this city. The ruins of the Circus Maximus and the Colosseum are found in, for ten points, what city, both the capital of an ancient empire and modern Italy?

ANSWER: Rome (accept Roma)

(17) **In August 2022, Russia announced it would withdraw from this project and establish a replacement for it called *Ross*. Since 2012, *Dragon* craft have been contracted to provide supplies to workers on this project.** (*) *Mir* and *Skylab* were predecessors of this project, which today performs most science experiments done in microgravity. For ten points, name this project that provides long-term, low-Earth orbit housing for astronauts from around the world.

ANSWER: International Space Station (accept ISS)

(18) **This activist has promoted the Middle Way Approach, which seeks cultural protection but not independence. This leader of the Gelug school lives in Dharamshala, having been forced to leave the Potala Palace in 1959 after a (*) pro-Chinese uprising took place in Lhasa. At age four, this bodhisattva was announced as the fourteenth man to hold his title. Tenzin Gyatso is the spiritual name of, for ten points, what exiled Tibetan Buddhist leader?**

ANSWER: Dalai Lama (accept Tenzin Gyatso until it is read; accept Lhamo Thondup; accept Gyalwa Rinpoche)

(19) **This country's fraudulent financial reporting was announced by incoming Prime Minister George Papandreou in 2009. In summer 2015, this country failed to make an IMF loan payment on time, as the Syriza party under (*) Alexis Tsipras launched a referendum about bailout conditions imposed on this country by the Eurozone. Strict austerity has mostly failed to solve a debt crisis in, for ten points, what country where protesters have marched in Athens?**

ANSWER: Greece (accept Hellenic Republic)

(20) **In this literary work, Elizabeth reports to her imprisoned husband about the fate of Isaiah Goodkind and Goody Ballard, and describes "more weight" being piled on Giles Corey to try to force his confession. In this play, (*) Abigail Williams joins a group of girls who accuse Elizabeth and John Proctor and the slave Tituba are of casting evil spells. For ten points, name this play by Arthur Miller about the Salem Witch Trials.**

ANSWER: The Crucible

Bonuses

(1) Heats of reaction are often provided in this unit of energy, rather than kilojoules, because they are convenient to measure in calorimeters. For ten points each,

Name this imperial unit of heat energy that's about 4.18 Joules. Most often, it's used to measure the energy content of foods.

ANSWER: calories (accept cal; accept kilocalories or kcal)

Heats of reactions are convenient to write using calories because calorimeters are often filled with water, and in imperial units, this quantity for water is exactly 1 calorie per gram degree Celsius.

ANSWER: specific heat (accept heat capacity)

If the heat of reaction is measured in one of these devices of fixed volume, you'll probably see it reported in Joules. These calorimeters have intrinsic heat capacities reported by the manufacturer.

ANSWER: bomb calorimeters

(2) In 1996, Billy Bailey became the most recent, and possibly last, person to suffer this fate, which is only legal in Delaware, New Hampshire, and Washington, and only then as a backup method. For ten points each,

Name this punishment. It was once commonly performed via the long drop, but it has largely been replaced by more "humane" methods.

ANSWER: hanging (do not accept "lynching")

Four of this man's conspirators - including Mary Surratt and George Atzerodt - were hanged at the Washington Arsenal on July 7, 1865. This man was, instead, shot in a burning barn on April 26th.

ANSWER: John Wilkes Booth

After the 1862 US-Dakota War, on President Lincoln's orders, 38 Dakota men were hanged in this state's town of Mankato, the largest mass execution in American history. A year later, the Dakota were exiled from this state.

ANSWER: Minnesota

(3) This river flows east-to-west into the Atlantic Ocean and lends its name to two African countries on its banks. For ten points each,

Name this second longest river in Africa.

ANSWER: Congo River

The Congo River separates two national capitals: Brazzaville and this megacity. This capital of the Democratic Republic of the Congo is the largest city in Africa by size.

ANSWER: Kinshasa

The Congo River basin is home to both species of the genus *Pan*: chimpanzees and this smaller relative, whose habitat is south of the river. Scientists speculate that, because these primates can't swim well, the formation of the Congo River may have caused the speciation between chimpanzees and these primates.

ANSWER: bonobos (accept *Pan* paniscus)

(4) In calculus, a line is known by this name if it just barely intersects a curve at one point, as contrasted with a secant line, which cuts through the curve at two nearby points. For ten points each,

Give this mathematical term. In trigonometry, this word names a function that is equal to the sine function divided by the cosine function.

ANSWER: tangent

Finding a tangent line provides a way to calculate this value for a curved line at a given point. For a straight line, finding this value is much simpler; it's always the same, and it is equal to the line's rise over run.

ANSWER: slope

This French mathematician's work on finding tangent lines helped lay the foundation for calculus, but he's better known today for inventing the rectangular coordinate system. Please give the name of the man, not the coordinate system.

ANSWER: René Descartes [day-kart]

(5) A poem by this man opens with the advice "Go home and write / a page tonight. And let that page come out of you- Then, it will be true." For ten points each,

Name this co-leader of an early 20th century cultural movement in New York, a Black American jazz poet who wrote "Theme for English B" and the collection *The Weary Blues*.

ANSWER: Langston Hughes (accept James Mercer Langston Hughes)

Hughes was a dominant figure in the "Renaissance" of this Manhattan neighborhood, which was predominantly Black in the early 20th century. A short Hughes poem named for this place opens by asking "What happens to a dream deferred?"

ANSWER: Harlem

This Hughes poem from *The Weary Blues* notes "I am the darker brother. They send me to eat in the kitchen / When company comes." This poem is a direct response to Walt Whitman's "I Hear America Singing," and its title is the first two words of the poem.

ANSWER: I, Too

(6) *Tref* is, essentially, the opposite of this adjective, which is equivalent to *halal* in Islam. For ten points each,

Name this Hebrew adjective that describes foods that observant Jews will eat.

ANSWER: **kosher** (accept **kashrut**; accept **kashrus**)

Invertebrates are generally not kosher, except for these insects, which conveniently abound in the Bible. These insects terrorize the Egyptians in the eighth plague in Exodus and are consumed by John the Baptist in the wilderness.

ANSWER: **locusts** (prompt on “grasshoppers”)

Observant Jews also refuse to eat this meat, according to a prohibition against eating animals that chew their own cud. This meat is foresworn by Muslims as well.

ANSWER: **pork** (accept **pig** meat; prompt on “bacon”, “sausage”, or other foods that could be made from pork or other sources)

(7) On one particularly deadly day during this decades-long conflict, Lord Mountbatten was assassinated by a bomb planted on his boat and a convoy was ambushed at Warrenpoint. For ten points each,

Name this period of off-and-on sectarian violence and rioting that was largely ended by the 1998 Good Friday Agreement.

ANSWER: the **Troubles** (accept Na **Trioblóidi**)

The Troubles took place in cities like Derry, Belfast, and Dublin on this island, whose Northern region remains part of the United Kingdom.

ANSWER: **Ireland**

In April 1916, a massive rebellion swept through Ireland and was brutally suppressed, with most of its leaders being executed. The rebellion began on the day after this major religious holiday, and thus became known as this holiday’s “Rising.”

ANSWER: **Easter** Rising (accept **Easter** Sunday)

(8) This man reproduced a still image from 1953’s *Niagara* for his *Marilyn Diptych* silkscreen, which features 25 hypercolored copies and 25 smudged black and white copies of Marilyn Monroe’s face. For ten points each,

Name this Pop artist.

ANSWER: Andy **Warhol** (accept Andrew **Warhola**)

Warhol’s most famous silkscreens are likely his depictions of these common grocery items, produced by Campbell’s.

ANSWER: **soup cans** (prompt on partial answers)

In addition to his paintings and silkscreens, Warhol created over 100 of these artworks, including a five-hour-long one titled *Sleep* that depicts John Giorno sleeping and an eight-hour-long one that depicts a slow-motion view of the Empire State Building.

ANSWER: **films** (accept **movies**; accept anti-**films** or anti-**movies**)

(9) Sinkholes are common when groundwater is able to circulate and the underlying ground is made of this rock. For ten points each,

Name this rock that is made up of various forms of calcium carbonate, such as calcite. Metamorphosis of this rock can create marble.

ANSWER: **limestone** (prompt on “chalk”)

The dissolution of limestone can create these empty underground spaces, where stalactites and stalagmites form from dripping mineral water.

ANSWER: **caves** (accept **caverns**)

Caves, sinkholes, and underground rivers are commonly found in this type of limestone-rich landscape with a German name.

ANSWER: **Karst** (accept additional information, like **karst** landscape, **karst** topography, etc.)

(10) The first page of a novel by this author is a bonafide checklist for common tropes in the rest of his writing: a male protagonist is alone in his apartment, cooking pasta and listening to classical music, when he is disturbed by a phone call from a mysterious woman. For ten points each,

Name this modern Japanese author of *The Wind-up Bird Chronicle*.

ANSWER: Haruki **Murakami**

Toru Okada, the protagonist of *The Wind-up Bird Chronicle*, is tasked with finding one of these missing pets, who also appear in almost all of Murakami’s works. Okada eventually finds the pet waiting at home, meowing as though Okada were the missing one.

ANSWER: **cats**

Okada de-stresses by ironing these items of clothing, for which he has a 12-step process that cannot be done out of order. In *The Great Gatsby*, Daisy becomes hysterical at the sight of a closet full of these items in Gatsby’s house.

ANSWER: **shirts**

(11) This man wrote five essays under the name of “Helvidius,” arguing against Alexander Hamilton’s “Pacificus” in essays regarding American neutrality. For ten points each,

Name this American founding father who served as Thomas Jefferson’s Secretary of State and, later, as the fourth US President.

ANSWER: James **Madison**

Madison is known as the “Father of” this foundational American document, having drafted much of the theory behind its seven articles.

ANSWER: **Constitution** of the United States

Before quarreling with Hamilton, Madison and Hamilton joined with John Jay to write the pro-Constitution *Federalist Papers*. The essays were published under this joint pseudonym, meant to evoke a Roman sense of friendliness toward the people.

ANSWER: **Publius**

(12) Christian texts have provided lyrics for many pieces of European music. Answer the following about Christian choral music, for ten points each.

The King James Bible inspired Handel's *Messiah* oratorio, which includes this chorus that celebrates the "King of Kings and Lord of Lords."

ANSWER: Hallelujah Chorus

This Catholic prayer begins "Ellen's Third Song," a work by Franz Schubert in which the singer pleads to the title religious figure to "hear a maiden's prayer." This prayer's full version is addressed to the "Mother of God."

ANSWER: Ave Maria (accept Hail Mary)

Sung texts like the "Credo" [k-ray-doh] and the "Kyrie" [kee-ree-ay] are among the sections of these pieces of Catholic liturgical music. Mozart left a *Requiem* one of these pieces unfinished at his death.

ANSWER: mass (accept requiem mass)

(13) The AvengerCon scene of this show's first episode reveals that, in the world of the MCU, Groot is only known to the general population as "Mr Tree." For ten points each,

After wearing a golden bangle, Kamala Khan becomes the title superhero of this show, whose six episodes premiered in summer 2022.

ANSWER: Ms. Marvel

Kamala Khan is played by this Pakistani-Canadian actress. The show is her first acting credit, and she will reprise the role in an upcoming MCU film.

ANSWER: Iman Vellani

Ms. Marvel premiered on this streaming service, which owns the rights to the MCU, as well as *Star Wars*.

ANSWER: Disney+ (prompt on "Disney")

(14) Women languishing with mysterious or false illnesses appear frequently in fiction. For ten points each,

In an Edgar Allan Poe short story about the "Fall of" this family, Madeline becomes sick and seems to die, only to claw her way out of her tomb to actually die alongside her brother, Roderick.

ANSWER: Usher (accept House of Usher; accept The Fall of the House of Usher)

In this Charlotte Perkins Gilman work, the narrator is locked in her room at a guest-house to help her recover from post-partum depression, only for her to become manically obsessed with the title wall covering.

ANSWER: The Yellow Wallpaper (do not accept or prompt on "Wallpaper")

This novel gets bonus points for having TWO languishing women: Mina Harker and Lucy Westenra. Abraham Van Helsing hangs garlic in their bedrooms when he realizes that the title vampire is draining their strength.

ANSWER: Dracula (by Bram Stoker)

(15) A multidimensional “landscape” named for this quantity plots genotype against it, and generally assumes that successful organisms fall into local minima. For ten points each,

Name this quantity that broadly translates to “evolutionary success,” since individuals with the greatest amount of it survive to reproduce.

ANSWER: biological fitness (accept word forms like ittest)

The concept of survival of the fittest drives this mechanism of evolution, which was postulated by Charles Darwin in *The Origin of Species*.

ANSWER: natural selection (prompt on “selection”)

The notion that natural selection slowly explores rugged fitness landscapes, in which successful adaptations are very shallow local ditches, is challenged by this more radical theory of rapid-bursts of successful trait evolution, proposed by Stephen Jay Gould.

ANSWER: punctuated equilibrium theory

(16) Frisky tourist agencies in this country warn of drop bears, which are predatory marsupials that will fall out of trees and attack visitors. For ten points each,

Name this country whose most dangerous animals tend to look more like taipan snakes or redback spiders, and less like koala bears.

ANSWER: Commonwealth of Australia

By any reasonable set of criteria, the best Australian cryptid is this monster of Aboriginal myth that feasts on unsuspecting humans visiting billabongs. This animal is some sort of linear combination of bird, frog, and alligator.

ANSWER: bunyip (accept Kianpraty)

Aboriginal creation myths speak of a “Rainbow” one of these creatures that inhabited the pre-historic Dreamtime and is associated with rainfall.

ANSWER: serpent (accept snake; accept Rainbow Serpent or Rainbow Snake)

(17) These devices are often crystals of semiconducting material with a p-n junction. For ten points each,

Name these circuit elements that allow current to flow in just one direction.

ANSWER: diodes

For current to flow in one direction in a hypothetically ideal diode, this quantity for the circuit is zero in one direction and infinity in the other. This quantity is measured in ohms.

ANSWER: resistance

Light-emitting diodes can display different colors based on changes in the size of this region that separate occupied and empty energy levels. Semiconductors have small examples of this region, and doping can make them even smaller.

ANSWER: energy band gap

(18) Give the following about spooky stories, for ten points each.

This Henry James novella is a ghost story about Miles, Flora, and the ghost of Peter Quint.

ANSWER: The Turn of the Screw

This author's horror collection *The Last Seance* includes stories featuring Miss Marple and Hercule Poirot, who feature in her more commonly known genre of detective mysteries.

ANSWER: Agatha Christie

The cursed title object of this 1902 W.W. Jacobs short story "twisted [...] like a snake" after Mr White uses it to wish for two hundred pounds. In modern retellings, its fingers often curl to indicate that a wish has been made.

ANSWER: The Monkey's Paw

(19) A 2022 wildfire damaged many of these sculptures in the Rano Raraku crater. For ten points each,

Name or describe these rock figures that were created by the Rapa Nui people on Easter Island.

ANSWER: moai (accept descriptions of large stone heads; prompt on description of human sculptures, as some of the heads feature torsos)

Large stone heads are a common motif in historical art. This Mesoamerican civilization, which invented a ball game popular in later cultures, carved large heads out of boulders in cities like La Venta.

ANSWER: Olmecs

Several Persian and Greek gods are depicted in massive stone heads on Mount Nemrut, which is in this modern-day country. A decidedly older ancient ruin in this country, Çatalhöyük [chat-ull-HOY-ook], dates to nearly 10,000 years ago.

ANSWER: Republic of Turkey

(20) Give the following about 20th century philosophy Martin Heidegger, for ten points each.

Through works like 1927's *Being and Time*, Heidegger was a major influence on this philosophical movement, later championed by Jean-Paul Sartre [sart] and Albert Camus [ca-moo], that studies how a human can "be."

ANSWER: existentialism (accept word forms like existentialist)

Beyond philosophy, Heidegger is best known for his membership in this German political party from 1933 to 1945. Heidegger later distanced himself from this party, but his posthumously-published notebooks include several examples of anti-semitism.

ANSWER: Nazi Party (accept National Socialist German Workers' Party; accept Nationalsozialistische Deutsche Arbeiterpartei; accept NSDAP)

Heidegger's less controversial post-war work includes *The Question Concerning* this concept, an essay that eventually defines it as including the "equipment, tools, and machines, the manufactured and used things themselves." Stone tools and computers are commonly cited on opposite ends of humanity's history of this concept.

ANSWER: technology