

2015-16 PLATO: Perfectly Likeable Academic Tournament Offering

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Round 10

1. Quantum mechanics suggests that light has properties of both a particle and one of these things. These things can be transverse or longitudinal. The transverse kind can be modeled by taking a string from both ends and shaking it up and down, and sound is transmitted by the transverse type of these things. For 10 points, name these things that have amplitude, frequency and length, such as ripples on a lake.

ANSWER: waves

2. This god accompanies Thor on a trip to Utgard when the two encounter Skrymir, and this god defeats fire in an eating contest. This shape-shifting god is caught by the Aesir in the form of a salmon. This father of Sleipnir and Fenrir had a snake dripping venom fastened over his face. He is supposed to kill and be killed by Heimdall during Ragnarok. For 10 points, name this Norse trickster god.

ANSWER: Loki

3. This president faced the Nullification Crisis. He had previously been a military leader, having invaded Seminole territory in Florida in 1818. He refused the Supreme Court's decision against the forced moving of Native Americans and went ahead with enforcing the Indian Removal Act through the Trail of Tears. For 10 points, identify this 7th president of the United States who led the winning troops at the Battle of New Orleans.

ANSWER: Andrew Jackson

4. COMPUTATION: Bernie wants to know how many people in the audience support him. There are 40 people in the audience, and he knows that 2 out of every 5 people support him. He can use that ratio to find the answer. For 10 points, how many people in Bernie's audience support him?

ANSWER: 16 people

5. In this novel, the twins Sam and Eric discover the corpse of a dead fighter pilot in a tree. A pair of glasses that belong to a character in this book are the only way to start a fire. A conch, which was meant to give each boy in this book a voice, represents order, but by the end of the book it is destroyed, signaling the descent into chaos. For 10 points, name this novel by William Golding that follows Jack and Ralph as they fight to lead the shipwrecked gang of boys.

ANSWER: Lord of the Flies

6. This city-state led the Delian League in the war against the Persian Empire. It was once run by Cleisthenes, and other famous leaders include Solon, Draco, and Pericles. The agora in this city was the center of thought for philosophers such as Socrates, Plato, and Aristotle. This city lost the Peloponnesian War to its longtime rival, Sparta. For 10 points, name this democratic Greek city-state and home of the original Olympics.

ANSWER: **Athens**

7. In this novel's first section, a girl named Clarisse McClellan goes missing. Later, the protagonist reads the poem "Dover Beach" to a group of women watching television. The protagonist, Guy Montag, keeps a secret stash of books in an air duct as he becomes curious if the books have anything of value. For 10 points, name this novel by Ray Bradbury about firefighters who burn books in order to keep them from the public.

ANSWER: **Fahrenheit 451**

8. The Greek philosopher Democritus suggested these existed, and provided them a name that meant "uncuttable" in Greek. The plum-pudding model tried to explain these, but a later discovery of the positively-charged nucleus of these things disproved that model. There are three of these things in a molecule of water; two of hydrogen and one of oxygen. For 10 points, name this basic unit of every chemical element.

ANSWER: **atoms**

9. This country is currently fighting for control of the Essequibo region with its neighbor Guyana. This country's largest lake is Lake Maracaibo, which is connected to the Caribbean Sea by low-lying sandbars. It contains some of the largest oil reserves in the Western Hemisphere. This country is home to the highest waterfall in the world, Angel Falls. For 10 points, name this South American country with capital at Caracas.

ANSWER: **Venezuela**

10. The ushanka type of these things have flaps. The ones worn by bishops are called miters. One of these things called a fez is common in Arabic countries and has a tassel. One called a mortarboard is often worn at graduations. In Wonderland, Alice meets a character who went mad from making these. Donald Trump has a red one that says "Make America Great Again." For 10 points, name these things you might wear on your head.

ANSWER: **hats**

11. In one painting by this man, the stars in the sky are replaced with dandelions. He painted several works from a mental hospital in Saint-Remy. This painter of *The Potato Eaters* and *The Night Café* is well-known for a self-portrait of his head wrapped in bandages, painted after he cut off his left ear after a fight with Paul Gauguin. He is also known for several paintings of sunflowers. For 10 points, name this Dutch painter of *Starry Night*.

ANSWER: Vincent **van Gogh**

12. This poet wrote “let it be the dream it used to be” in his poem “Let America be America Again.” One of his earliest works is a book of poems called *The Weary Blues*. One poem by this author asks “what happens to a dream deferred?” Another poem by him says “my soul has grown deep like the rivers,” called “The Negro Speaks of Rivers.” For 10 points, name this poet from the Harlem Renaissance.

ANSWER: Langston **Hughes**

13. The last known communication from this person was with the ship *Itasca*. She traveled on her most famous journey with Fred Noonan in the *Electra*, a craft built by Lockheed. Years earlier than this journey, she was the first woman to cross the Atlantic Ocean as a pilot in an airplane. For 10 points, name this famous American pilot who disappeared over the Pacific Ocean while attempting to fly around the world in 1937.

ANSWER: Amelia **Earhart**

14. This organ has cells called alpha, beta, gamma and delta that produce important hormones such as glucagon. This organ’s other major function is producing the enzymes that aid digestion in the small intestine. The Islets of Langerhans are the parts of this organ used to measure and control insulin levels. The immune system attacks this organ in diabetes. For 10 points, name this organ that controls blood sugar levels.

ANSWER: **pancreas**

15. In the Gospel of Luke, the rich man asks that Abraham would send a beggar with this name back to his family to warn them to live a better life, to which Abraham responds, “they will not be convinced even if someone rises from the dead.” Coincidentally, the other person with this name in the New Testament is risen from the dead by Jesus. For 10 points, provide the shared name of these people from the New Testament.

ANSWER: **Lazarus**

16. This country contains the world’s most populous island. This country’s land borders are with East Timor, Papua New Guinea and Malaysia. The resort island of Bali is part of this country, which was devastated by a 2004 tsunami and the eruption of Krakatoa in 1883. It is a Muslim-majority country, with many residing on the island of Java. For 10 points, name this country, an archipelago in the Indian Ocean with capital Jakarta.

ANSWER: **Indonesia**

17. This character’s parents names are Percival and Kendra, and his sister Ariana may have died because of him. This man is the founder of the Order of the Phoenix. He defeated his former friend Grindelwald to become master of the Elder Wand. He is almost killed by Draco Malfoy, but Snape kills this man instead. For 10 points, name this Harry Potter character, the headmaster of Hogwarts whose first name is Albus.

ANSWER: Albus **Dumbledore**

18. These storms are defined by having winds of at least 74 miles per hour, making them stronger than a tropical depression and a tropical storm. They form from low-pressure centers over warm waters. The Coriolis effect determines which direction these storms spin, and as they rotate, they form an “eye” that is relatively calm. For 10 points, name these storms that can destroy coastal areas, such as Katrina in 2005.

ANSWER: hurricanes

19. This singer’s debut album included the song “Chasing Pavements.” One of her recent hits includes lyrics like “let me photograph you in this light.” She was the first person to win an Oscar for a song from a James Bond movie. The biggest hit from her album 25 is a song with lyrics like “I’m in California dreaming about who we used to be.” For 10 points, name this British singer whose recent hit is the song “Hello.”

ANSWER: Adele Adkins

20. The governor of this state, Rick Snyder, declared a state of emergency in January 2016. A team from Lansing in this state assisted in planning a project to replace water lines in another city in this state. Lake Huron, which borders this state, had previously been the source of water for that city until they switched water supplies which caused lead to leach into the water. For 10 points, name this state where Flint is located not too far from Detroit.

ANSWER: Michigan

TB. The Investiture Controversy was about this religion’s control over its own clergy as opposed to individual kings and queens. One head of this religion ordered Michelangelo to paint the Sistine Chapel. The Spanish Inquisition was conducted to ensure orthodoxy in this religion. The Eastern Orthodox church broke from this religion in the Great Schism. For 10 points, name this religion centered in Vatican City.

ANSWER: Roman Catholic Church [accept Catholicism]

BONUSES

1. Genetically modified organisms, or GMOs, have become a hotly debated topic. For 10 points each:

[10] Some GMOs contain genes from other organisms, so they are referred to with this adjective, the opposite of cisgenic [*siss-jin-ik*].

ANSWER: **transgenic**

[10] One interesting application of GMOs uses a green fluorescent protein called GFP derived from one of these animals.

ANSWER: **jellyfish** [accept *Aequorea victoria*]

[10] The first genetically modified food was one of these plants, a red fleshy fruit used to make ketchup and salsa.

ANSWER: **tomatoes**

2. The continent of Europe is home to many notable seas of the world. For 10 points each:

[10] This sea in eastern Europe names the region containing Latvia, Lithuania and Estonia. Stockholm, Sweden, lies on the shores of this sea.

ANSWER: **Baltic** Sea

[10] This politically-important sea contains coastal cities include Sochi in Russia and Sevastopol and Odessa in Ukraine. The peninsula of Crimea juts out into this sea.

ANSWER: **Black** Sea

[10] The Aegean Sea, Adriatic Sea and Tyrrhenian Sea are all arms of this larger sea that separates Europe from Africa.

ANSWER: **Mediterranean** Sea

3. The summer of 1816 was very important for literature. For 10 points each, answer some questions about the events of that summer.

[10] This poet rented a house in Switzerland that summer and invited some friends. He is remembered for the poems “Don Juan” and “Childe Harolde’s Pilgrimage.”

ANSWER: George Gordon **Byron** [accept Lord **Byron**]

[10] One of the friends was this man, another poet whose masterpiece was the play *Prometheus Unbound*.

ANSWER: Percy Bysshe **Shelley**

[10] Shelley’s wife Mary was also present that summer when she worked on writing this novel about a man who breathes life into a creature he built.

ANSWER: **Frankenstein**

4. An account of this event was written by John Hersey and published as an entire issue of *The New Yorker*. For 10 points each:

[10] Name this event, in which the device “Little Boy” was used, that occurred after Japan refused to meet the terms of Harry Truman’s Potsdam Declaration.

ANSWER: **bombing of Hiroshima** [accept “**first use of atomic bomb**” or other equivalents]

[10] The atomic bomb was developed by this government-funded “project.” The group of scientists in this project included Enrico Fermi and Leo Szilard.

ANSWER: **Manhattan Project**

[10] This scientist, sometimes called the “father of the atomic bomb”, remarked “Now I am become death, the destroyer of worlds” after witnessing the Trinity test.

ANSWER: Julius Robert **Oppenheimer**

5. This wildly popular AMC television show is currently in its sixth season. For 10 points each:

[10] Name this television show starring Andrew Lincoln as Deputy Rick Grimes who lives in a world infested by zombies.

ANSWER: *The **Walking Dead***

[10] Another hit cable series was this Disney Channel show starring Ross Lynch and Laura Marano as a talented singer and songwriter duo.

ANSWER: ***Austin & Ally***

[10] This other Disney star found recent success with his band DNCE and the hit song “Cake by the Ocean.”

ANSWER: **Joe Jonas** [prompt on **Jonas**]

6. In December 2015, many countries met in Paris to plan for dealing with this international issue. For 10 points each:

[10] At that conference, called COP21, countries were meeting to work on this issue, which is causing sea levels to rise and unusual weather patterns.

ANSWER: **global warming** [accept **climate change**]

[10] One particular target for reduction is this greenhouse gas, whose concentration recently exceeded 400 parts per million in the atmosphere.

ANSWER: **carbon dioxide** [accept **CO2**]

[10] The ozone layer has also been impacted by climate change. In the 1970s and 1980s, these compounds that destroy ozone were phased out with the Montreal Protocol.

ANSWER: **CFCs** [accept **chlorofluorocarbons**]

7. For 10 points each, identify the following terms from Buddhism.

[10] These are the basic principles that define the human existence through Dukkha, or suffering.

ANSWER: **Four Noble Truths**

[10] Some Buddhists teach that a person can make a series of choices in life that can bring an end to suffering, given this name for the number of factors one must develop.

ANSWER: Noble **Eightfold Path**

[10] This term is used in Buddhism to mean the attainment of samsara, or a release from the cycle of earthly suffering.

ANSWER: **nirvana**

8. The Greek story of the sorceress Medea has captivated readers for hundreds of generations. For 10 points each:

[10] Medea is the jealous wife of this Greek hero, the leader of the Argonauts.

ANSWER: **Jason**

[10] Medea believed that she earned a place of favor in Jason's life by helping him and his Argonauts recover this mythological relic.

ANSWER: the **Golden Fleece**

[10] Medea's story was famously told by this Greek playwright, whose other works include *Orestes* and *Electra*.

ANSWER: **Euripedes**

9. For 10 points each, answer these questions about famous arches in art.

[10] In Paris, the Tomb of the Unknown Soldier lies underneath this 164-foot-tall arch.

ANSWER: **Arc de Triomphe**

[10] This monument designed by Eero Saarinen is a symbol of St. Louis towering over the Mississippi River.

ANSWER: **Gateway Arch**

[10] Although not technically art, the natural arches at Arches National Park in this state are quite beautiful to look at.

ANSWER: **Utah**

10. Name the following people who all have something in common, for 10 points each:

[10] This actor is most famous for playing the role of Rocky Balboa on screen.

ANSWER: Sylvester **Stallone**

[10] This man is one of the most awarded composers in musical theatre, having worked on *Into the Woods* and written the lyrics for *West Side Story*.

ANSWER: Stephen **Sondheim**

[10] This Supreme Court justice is the first Hispanic justice and one of just four women to have ever served on the court.

ANSWER: Sonia **Sotomayor**

11. COMPUTATION: According to her gradebook, Mrs. Pinkerton's students scored [*read slowly*] 71, 82, 80, 93, 77, and 95 points on their history tests. For 10 points each:

[10] What is the range of Mrs. Pinkerton's class's scores on the test?

ANSWER: **24** points

[10] Mrs. Pinkerton discovers an error in her grading and the student who had a 71 now earned a 83. What is the new range of the class's scores on the test?

ANSWER: **18** points

[10] Now that she has the grades updated, what is the median of the scores on Mrs. Pinkerton's test?

ANSWER: **82.5** points

12. This policy was enforced by the Volstead Act. For 10 points each:

[10] Name this policy, which banned the sale or production of alcoholic beverages in the United States between 1920 and 1933.

ANSWER: **Prohibition**

[10] Prohibition was declared in this amendment to the U.S. Constitution. It was later repealed in the 21st amendment.

ANSWER: **18th** amendment

[10] The Volstead Act was vetoed by this president, but that veto was overturned by the legislature.

ANSWER: Woodrow **Wilson**

13. For 10 points each, name these superlative elements.

[10] This element has the highest melting point. Interestingly, this element makes up both one of the softest substances known, graphite, and one of the hardest, diamond.

ANSWER: **carbon**

[10] This element is the heaviest naturally occurring element, with 92 protons.

ANSWER: **uranium**

[10] The heaviest element discovered as of March 2016 has this many protons in its nucleus.

ANSWER: **118**

14. This European country was the original home of the British king William of Orange. For 10 points each:

[10] Name this country, which contains cities like The Hague, Rotterdam, and Amsterdam.

ANSWER: The **Netherlands**

[10] This company, based in Amsterdam, was given a monopoly on Dutch spice trade in 1602 and was one of the first major international corporations.

ANSWER: **Dutch East India** Company [accept **United East Indian** Company]

[10] The Dutch East India Company was this type of company, which issues ownership in the corporation to shareholders.

ANSWER: **joint-stock** company

15. Fairy tales aren't all about fairies. For 10 points each:

[10] These creatures are generally thought of as short with beards. Snow White lives with seven of these creatures.

ANSWER: **dwarves** [accept **dwarf**]

[10] These creatures appear often as villains, such as the one who traps Hansel and Gretel in her gingerbread house.

ANSWER: **witches**

[10] Many fairy tales were collected and told by these German siblings, making them popular even still today.

ANSWER: Brothers **Grimm**

16. For 10 points each, answer some questions about tragic events concerning a certain family:
 [10] This event was captured on the Zapruder film. It occurred on November 22, 1963 in Dallas and its perpetrator was Lee Harvey Oswald.

ANSWER: **assassination of John Fitzgerald Kennedy** [prompt if answer does not clarify which Kennedy]

[10] During the 1968 California primaries, Sirhan Sirhan shot and killed this brother of JFK in a hotel.

ANSWER: **Robert Francis “Bobby” Kennedy** [accept **RFK**]

[10] Though he was not shot, the youngest Kennedy brother Ted died in 2009 from this type of cancer, which he had been fighting for a little over a year.

ANSWER: **brain** cancer [accept **brain tumor**]

17. At one of these events, Donald Trump was criticized for having small hands. For 10 points each:

[10] Name these events, in one of which Jeb Bush admitted to smoking marijuana in high school.

ANSWER: Republican presidential primary **debates** of the 2016 election cycle [accept any reasonable answer that includes the word debates]

[10] At one debate in February, this candidate seemed confused as to whether he should enter the stage. He later dropped out of the race and endorsed Trump.

ANSWER: Ben **Carson**

[10] Carson became famous for his talents in this medical field. While working in this field, Carson separated twins who were conjoined at the head.

ANSWER: **neurosurgery** [accept **brain surgery**; prompt on **surgery**]

18. Simple machines can make our lives much easier. For 10 points each:

[10] Name the simple machine that can be described as an inclined plane wrapped around a wedge.

ANSWER: **screw**

[10] This simple machine has three classes, depending on the location of the fulcrum in relationship to the forces.

ANSWER: **lever**

[10] Screws, levers, and all other simple machines have defined formulas for this property, a measure of how much the force you apply is increased by the machine.

ANSWER: **mechanical advantage**

19. For 10 points each, name these books which inspired Walt Disney films.

[10] The character of Mr. Toad from *The Adventures of Ichabod and Mr. Toad* is from this book by Kenneth Grahame, in which Mr. Toad is visited by Mole and Rat.

ANSWER: **The Wind in the Willows**

[10] The movie *Oliver and Company* is a retelling of this Charles Dickens story where the main character is a cat who joins a gang of dogs.

ANSWER: **Oliver Twist**

[10] *The Lion King* is loosely based on this Shakespeare play and includes the elements of the murderous uncle and the father’s ghost from this play.

ANSWER: **Hamlet**

20. For 10 points each, name these islands that share their name with animals.

[10] An overseas territory of the United Kingdom, these Caribbean islands share a name with reptiles closely related to alligators.

ANSWER: **Cayman** Islands

[10] These Spanish islands off the coast of Morocco are not named after small yellow birds, but actually derive their name from the Latin word for dog.

ANSWER: **Canary** Islands

[10] Technically an island because of a canal, this peninsula in Massachusetts shares its name with a common Atlantic fish.

ANSWER: **Cape Cod**