

2015-16 PLATO: Perfectly Likeable Academic Tournament Offering

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Round 7

1. This diagram is split into an s-block, p-block, d-block, and f-block. Four new components of this diagram were officially recognized by IUPAC [*eye-you-pack*] in 2015. The second-to-last column in this diagram is known as “halogens.” The first widely recognized version of this diagram was published by Dmitri Mendeleev. For 10 points, name this diagram which organizes 118 chemical elements.

ANSWER: **periodic table** of elements

2. This Mesoamerican god’s name in Nahuatl means “feathered serpent,” and he was said to be responsible for the wind and wisdom. His heart was said to be the morning star, and he had brought corn to mankind. He created the fifth world of mankind. His twin brother, Xolotl, was known as the god of lightning and death. For 10 points, name this deity for whom conquistador Hernan Cortez was supposedly mistaken by the Aztecs.

ANSWER: **Quetzalcoatl**

3. At one battle in this war, a general exclaimed “They shall not pass.” That battle was fought at Verdun during this war. This war was the first to use trench and gas warfare, and it began with Austria-Hungary’s invasion of Serbia after Gavrilo Princip assassinated Archduke Franz Ferdinand. For 10 points, name this “war to end all wars” fought between the Allied and Central Powers that began in 1914.

ANSWER: **World War I**

4. A set of numbers named for this man can be generated by picking positive integers m and n , then finding m squared plus n squared, $2mn$, and m squared minus n squared. He also names a trigonometric identity that sets sine squared plus cosine squared equal to one. 9, 12, 13 and 3, 4, 5 are examples of his namesake triples. For 10 points, name this mathematician whose namesake theorem states that a squared plus b squared equals c squared.

ANSWER: **Pythagoras** [accept **Pythagorean** theorem or **Pythagorean** triples]

5. This author created a character named Princess Ozma who travels across the Deadly Desert. In his most famous work, the main characters want to kill the ruler of Winkie Country and we meet a man who arrived in a hot air balloon from Omaha who gives the main characters brains, courage, a heart, and a way home to Kansas. This man created Auntie Em, Toto, and Dorothy Gale. For 10 points, name this author, best known for the *Wizard of Oz* series.

ANSWER: L. Frank **Baum**

6. Gatun Lake was constructed while building this project, which the French attempted after a successful similar project in Africa. The U.S. acquired the rights to move forward with it, and after successful eradication of the mosquito-borne illnesses common in its climate, it was completed in 1914. For 10 points, name this geographic feature in which locks and dams provide safe passage between the Caribbean Sea and the Pacific Ocean.

ANSWER: The **Panama Canal**

7. The narrator of this book claims to be “haunted by humans” as he watches the events unfold in 1940s Germany. The protagonist is a young girl taken in by foster parents Hans and Rosa after her brother dies. Written by Markus Zusak, the title of this book refers to the protagonist’s penchant for stealing literature. For 10 points, name this book that follows Liesel and her friend Max as they attempt to survive World War II.

ANSWER: *The **Book Thief***

8. This Austrian scientist is known for his theory of the Oedipus Complex, where young boys are drawn to their mothers, and for his theory of the “life drive” and “death drive.” He may be better known for his theory about the three forces of the psyche - the ego, superego and id - or for his work concerning the interpretation of dreams. For 10 points, name this German psychologist and father of psychoanalysis.

ANSWER: Sigmund **Freud**

9. Eric Harris and Dylan Klebold committed suicide after being perpetrators of one of these crimes in Littleton, Colorado. A South Korean national committed one of these crimes in Virginia which may be the deadliest on U.S. soil. Adam Lanza was the perpetrator of one of these crimes not too far from his mother’s home in Sandy Hook. For 10 points, name these tragic events in which armed gunmen wreak havoc at institutions of learning.

ANSWER: **school shootings** [accept other answers which specify **gun**-related violence at **schools**]

10. One superhero with this nickname was Jay Garrick. The hip-hop artist who led the Furious Five was known as Grandmaster *this*. HTML5 has largely replaced Adobe’s product of this name for online video content. Spontaneous dancing is a key feature of “mobs” named for this. Heavy rain can lead to this kind of flooding. For 10 points, give this word that also names the quick burst of light used to take pictures and the superhero Barry Allen.

ANSWER: **flash**

11. One painting by a member of this group depicts the artist standing on an outcropping of rock with poet William Cullen Bryant. Members of this school of painting also created *The Architect’s Dream*, *The Heart of The Andes*, and the *Oxbow*. Members of this group include Frederic Church, Asher Durand, and Thomas Cole. For 10 points, name this American school of painting named after a New York body of water.

ANSWER: **Hudson River** School

12. In *Shirley*, a novel by this author, the mill owner Robert Moore is shot by men he had fired. In her most famous work, the title character leaves Mr. Brocklehurst's school at Lowood and takes a job at Thornfield Hall teaching Adele Varens. In that novel by her, the protagonist is proposed to by St. John [*sin-jin*] Rivers, and later by Edward Rochester. For 10 points, name this author of *Jane Eyre*.

ANSWER: Charlotte Bronte [prompt on Bronte, accept Currer Bell]

13. Al Smith endorsed this man for Governor of New York during the 1928 election. This president attempted to pack the Supreme Court to obtain support for his liberal policies. This president hosted Fireside Chats, during one of which he declared "We have nothing to fear but fear itself." For 10 points, name this president who created the New Deal, and served four terms during the 1930s and 1940s.

ANSWER: Franklin Delano Roosevelt [prompt on Roosevelt; accept FDR]

14. This man's work on digestion won him the 1904 Nobel Prize in Physiology or Medicine, but his contributions to psychology are his best known today. While working at the Russian Institute of Experimental Medicine, this man's studies of "psychic secretions" from dogs when they saw the person who normally fed them transformed his work into studies of reflexes known as classical conditioning. For 10 points, name this Russian scientist who studied dog's salivation.

ANSWER: Ivan Pavlov

15. Many Catholic countries in Europe celebrate this holiday on January 6th with procession and gift giving. In Louisiana, this day marks the beginning of the carnival season and king cakes are first made. In Eastern Orthodox Christianity, this day is centered around Jesus's baptism in the Jordan River. For 10 points, name this Christian holiday that is also known as Three Kings Day as it celebrated when the three magi visited Jesus in the manger.

ANSWER: Epiphany [accept Three Kings Day before mentioned]

16. Mountain ranges found within this desert include the Ahaggar Mountains, the Air Mountains, and the Atlas Mountains. Most of its land is sandless plateaus called "hamada," but large sand dunes called "ergs" are also commonly traversed by nomads in this desert. A region known as the Sahel is a transition zone between this desert and the savannah to the south. For 10 points, identify this desert on the northern half of the African continent.

ANSWER: Sahara Desert

17. The author of this book interrupted a tense part of the storyline by taking nearly a fifty-page diversion into the importance of the Battle of Waterloo in French history. This book's protagonist, who sometimes goes by the name of Monsieur Madeleine, once tried to steal silver from a bishop after his release from prison. For 10 points, what book by Victor Hugo is remembered for the characters of Fantine, Javert, and Jean Valjean?

ANSWER: Les Miserables [prompt on Les Mis]

18. When one of these geologic features is not vertical, it has a hanging wall and a footwall and is known as dip-slip. Slip is a measure of the displacement that occurs when one of these features becomes active. The vertical type of this feature is called strike-slip and they are considered “transform” when they mark a plate boundary. For 10 points, name these geologic features where pieces of crust slide past one another, such as the San Andreas.

ANSWER: **fault** [accept **fault line** or **fault boundary**]

19. A sports team from this city is scheduled to move to City of Champions stadium in 2016. This city is scheduled to host the second presidential debate in October at its Washington University campus. Stan Kroenke moved an NFL football team from this city to Los Angeles, leaving this city’s Edward Jones Dome currently vacant. For 10 points, name this city which was home to the NFL’s Rams until January 2016.

ANSWER: **St. Louis**, Missouri

20. One character in this game, Odus the Owl, only appears in Dreamworld levels. It is one of the most downloaded mobile games world wide, with 6.7 million active players in 2013. Objects in the game include Jelly Fish and Cake Bombs, and the latest incarnation of the game includes soda pieces that alter the gravity of the game board. For 10 points, name this mobile puzzle game which requires players to match colored treats in order to accrue points.

ANSWER: **Candy Crush** Saga

TB. After leading an attack on the Moncada Barracks, this man gave the “History Will Absolve Me” speech. Many individuals fled from this man’s leadership during the Mariel Boatlift. This man, who overthrew Fulgencio Batista during the 26th of July movement, was the target of the Bay of Pigs invasion. For 10 points, name this man who stepped down in 2008 and gave power to his brother Raul as the president of Cuba.

ANSWER: **Fidel Castro**

BONUSES

1. These particles make up hadrons and cannot be found in isolation. For 10 points each:

[10] Name these fundamental particles that come in flavors like up, charm, and bottom.

ANSWER: **quarks**

[10] Quarks can only have values of positive and negative one-half for this quantity, the intrinsic angular momentum carried by elementary particles.

ANSWER: **spin**

[10] Because of their spin, quarks belong to this class of particles with half-integer spin. They are contrasted with bosons.

ANSWER: **fermions**

2. For 10 points each, answer some questions about cities along rivers in the Midwest.

[10] This Ohio city is located at the mouth of the Cuyahoga River, which famously caught on fire several times, most recently in 1969.

ANSWER: **Cleveland**, Ohio

[10] This other Midwestern city is also famous for a river that shares its name; that river was engineered to flow backwards to prevent sewage from flowing into Lake Michigan.

ANSWER: **Chicago**, Illinois

[10] The Humber, Don and Rouge Rivers cut ravines into this Canadian city with a namesake “Harbour.” Those ravines give this city its nickname of “a city within a park.”

ANSWER: **Toronto**, Ontario

3. This school has thirty stories, and each book about it contains thirty chapters. For 10 points each:

[10] Name this school which does not have a 19th floor and where many “sideways stories” happen in a children’s book series.

ANSWER: **Wayside** School

[10] One character in the Wayside School series is this school employee with a multicolored mustache and who is based on the series’ author.

ANSWER: **Louis** the Yard Teacher

[10] In *Wayside School Gets a Little Stranger*, the students are told they should use “goozack” to refer to this object after Mr. Kidswatter runs into one, spilling his coffee.

ANSWER: a **door**

4. The world of high finance is muddled with financial acronyms. For 10 points each, provide the financial term or acronym associated with each description.

[10] This organization led by Janet Yellen is the governing body of 12 national banks.

ANSWER: **Federal Reserve** Board [accept **The Fed** or **FRB**]

[10] This U.S. government organization provides protection to bank depositors of up to \$250,000 per account.

ANSWER: **Federal Deposit Insurance Corporation** [or **FDIC**]

[10] Elizabeth Warren originally proposed the creation of this other organization to protect bank customers by promoting “fairness and transparency.”

ANSWER: **Consumer Finance Protection Bureau** [or **CFPB**]

5. When this country’s president Juvenal Habyarimana was killed in a plane crash, some took advantage of the incident. For 10 points each:

[10] Name this country, where in 1994, Hutus committed genocide against Tutsis [*toot-sees*].

ANSWER: **Rwanda**

[10] Peacekeeping forces, led by Romeo Dallaire, were sent by this organization. Despite the peacekeepers’ plea, this organization neglected to send more help to stop the genocide.

ANSWER: **United Nations** [accept **UN**]

[10] Dallaire was a general in the military of this country, where he later served in the senate in the same party as this country’s current prime minister Justin Trudeau.

ANSWER: **Canada**

6. This quantity is an object’s resistance to changes in its speed and direction of motion. For 10 points each:

[10] Identify this quantity which Newton’s First Law of Motion is named after. Mass is the measure of this quantity.

ANSWER: **inertia**

[10] The moment of inertia is the rotational analogue of mass, meaning multiplying it by angular acceleration gives this quantity, the rotational analogue of force.

ANSWER: **torque**

[10] The direction of the torque can be found by applying this rule to radial distance and force. In general, this rule yields a vector that is perpendicular to the two other vectors.

ANSWER: **right-hand** rule

7. A holiday of this name is celebrated in several countries, usually meant to celebrate the end of the harvest season. For 10 points each:

[10] Name this holiday, whose American version takes place in November and usually features images of Pilgrims and turkeys.

ANSWER: **Thanksgiving**

[10] This country celebrates its version of Thanksgiving by holding a special mass at the Pieterskerk, in its city of Leiden.

ANSWER: The **Netherlands**

[10] This popular Bavarian beer festival occurs in the same month as the German version of Thanksgiving, known as Erntedankfest.

ANSWER: **Oktoberfest**

8. For 10 points each, answer these questions about prepositions.

[10] Which three words in the following sentence make up the prepositional phrase? - “The baseball player hit a homerun into the stands.”

ANSWER: **into the stands**

[10] In Spanish, some prepositions combine with other words. This word is Spanish for the phrase “with me.”

ANSWER: **conmigo**

[10] This branch of linguistics deals with the structure of sentences, such as the rules of word order

ANSWER: **syntax**

9. In this painting, a pink slipper can be seen flying off the subject’s foot. For 10 points each:

[10] Identify this work which depicts a woman in a voluminous pink dress riding on the title device.

ANSWER: *The **Swing***

[10] *The Swing* is part of this art movement which began as a reaction to the Baroque style. It is characterized by ornate designs and light colors and often features playful subjects like cherubs.

ANSWER: **Rococo**

[10] The Rococo movement originated in this country, during the reign of its king Louis XV, where it can be seen in parts of the Palace of Versailles.

ANSWER: **France**

10. For 10 points each, identify the author or playwright of these famous Greek works about literary heroes.

[10] Odysseus took the long way home from Troy in this author’s *The Odyssey*.

ANSWER: **Homer**

[10] In a series of plays by this playwright, Oedipus is rescued by a shepherd, returns to Thebes, kills his father, and marries his mother, Jocasta.

ANSWER: **Sophocles**

[10] This playwright wrote about Oedipus’ children in *Seven Against Thebes* and also wrote *Prometheus Bound* and the *Oresteia*.

ANSWER: **Aeschylus**

11. COMPUTATION: Adam has lots of marbles and lots of jars. For 10 points each:

[10] Adam’s first jar has 3 red marbles, 4 yellow marbles, and 5 blue marbles. How many marbles must he draw without replacement to ensure he draws a red one?

ANSWER: **10** marbles

[10] From that same jar, Adam draws a blue marble and then a red marble without replacement. What is the probability that the next marble he draws is yellow?

ANSWER: **2/5** [or 0.4]

[10] In a different jar, Adam has 24 marbles. He has a 1 out of 8 chance of drawing a pink marble. How many pink marbles are in the jar?

ANSWER: **3** marbles

12. The celebration of Thanksgiving is commonly attributed to an event that took place in this colony. For 10 points each:

[10] Name this colony, which was settled by English separatists that were eventually known as Pilgrims.

ANSWER: **Plymouth** Colony

[10] This man was the governor of the Plymouth Colony for many of its early years. His work, *Of Plymouth Plantation*, documented the founding of the Plymouth Colony.

ANSWER: William **Bradford**

[10] Settlers of the Plymouth Colony wrote this governing document named after the ship they used to travel across the Atlantic Ocean.

ANSWER: **Mayflower Compact** [prompt on **Mayflower**]

13. You can thank this organ for stopping you from turning yellow. For 10 points each:

[10] Name this organ whose dysfunction can cause jaundice. Like the kidneys, this organ's function is to filter blood.

ANSWER: **liver**

[10] The liver is divided into this number of lobes. Each hemisphere of the brain also has this number of lobes.

ANSWER: **four**

[10] This is the term for scarring of the liver, which can be caused by hepatitis or excessive drinking.

ANSWER: **cirrhosis**

14. This man was single-handedly responsible for depressing the price of gold in the Mediterranean region. For 10 points each:

[10] Name this leader who is known for having made an extravagant hajj to Mecca.

ANSWER: Mansa **Musa**

[10] Musa was a ruler of this African empire whose capital was Timbuktu. The same name is shared by a current African country whose capital is Bamako.

ANSWER: **Mali** Empire

[10] Musa built one of these institutions in Timbuktu which was named Sankore. It had a large collection of books and was home to several notable Islamic scholars.

ANSWER: **university** [accept **college** or **madrasah**]

15. For 10 points each, answer the following about African capital cities.

[10] This capital city's Tahrir Square was the site of protests in 2011 that ousted Egyptian president Hosni Mubarak.

ANSWER: **Cairo**, Egypt

[10] The capital city N'Djamena [*un-jah-MAY-na*] of this country is located near a lake which shares its name with this country.

ANSWER: **Chad**

[10] Maseru is the capital of this small landlocked country completely surrounded by South Africa.

ANSWER: **Lesotho**

16. This court case found the Judiciary Act of 1789 to be unconstitutional. For 10 points each:
[10] Name this Supreme Court case that resulted from James Madison's refusal to deliver documents for a Justice of the Peace. It established the principle of judicial review.

ANSWER: **Marbury** v. *Madison* [accept names in either order]

[10] This longest-serving Chief Justice wrote the majority opinions for *McCulloch v. Maryland* and *Marbury v. Madison*.

ANSWER: John **Marshall**

[10] Marshall was a member of this political party that advocated for a strong central government.

ANSWER: **Federalist** Party

17. Large-scale terrorist activities became, sadly, all too common in one week during the month of November 2015. For 10 points each:

[10] On November 13, 2015, 128 people were killed in terrorist bombings and shootings in this city. A common slogan after the incident asked people to "Pray for" this city.

ANSWER: **Paris**, France

[10] 43 people died and 200 people were injured as a result of terrorist acts in this city in Lebanon the day before the massacres in Paris.

ANSWER: **Beirut**, Lebanon

[10] Boko Haram took responsibility for terrorist acts four days after the bombings in Paris which killed 32 people and injured another 80 in this African country.

ANSWER: **Nigeria**

18. This gas is often used in brightly-colored advertising signs, which is why such lights are named after this element. For 10 points each:

[10] Identify this gas with atomic number 10. Its name comes from the Greek word meaning "new."

ANSWER: **neon** [or **Ne**]

[10] Neon is the second lightest of these elements, which form group 18 on the periodic table. They are characterized by their low chemical reactivity.

ANSWER: **noble gases**

[10] Another characteristic of noble gases is that they have a full shell of these outermost electrons.

ANSWER: **valence** electrons

19. In 2012, this singer had the longest run on the US Hot 100 music chart for a Canadian female artist. For 10 points each:

[10] Name this pop singer whose 2015 music video for the song "I Really Like You" included Tom Hanks and Justin Bieber.

ANSWER: Carly Rae **Jepsen**

[10] This chart-topping song marked Jepsen's U.S. debut. Its first line is "I threw a wish in a well."

ANSWER: "**Call Me Maybe**"

[10] Jepsen competed on the fifth season of this reality competition show, but only placed third.

ANSWER: **Canadian Idol**

20. COMPUTATION: For his math homework, Petar has to graph the line $3x + 2y = 12$. For 10 points each:

[10] What is the slope of this line?

ANSWER: $-\frac{3}{2}$ [or -1.5]

[10] Find the y-intercept of this equation.

ANSWER: $y = 6$ [accept $(0,6)$ {pronounced “zero comma six”}]

[10] Petar now draws a line that is perpendicular to the original line. What is the slope of this new line? Give your answer as a reduced fraction.

ANSWER: $\frac{2}{3}$

TB. For 10 points each, identify the work of literature by 1962 Nobel Prize winner John Steinbeck.

[10] This novel chronicles the Joad family’s journey from Oklahoma to California during the Great Depression. Steinbeck won the Pulitzer Prize in 1940 for this work.

ANSWER: *The Grapes of Wrath*

[10] This novel follows George and Lennie, friends and fellow laborers, in search of work and a place to belong in Depression-era California.

ANSWER: *Of Mice and Men*

[10] This group of short stories is about a rancher’s son named Jody and the relationship he builds with a challenging horse named Gabilan.

ANSWER: *The Red Pony*