

Pennsylvania Novice 2016

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Packet 10 Tossups

1. One character in this play remarks, “I Go, I go, look how I go! Swifter than an arrow from a bow!” This work features a play-within-a-play in which Peter Quince and the “rude mechanicals” perform *Pyramis and Thisbe*. In this play, Lysander and (*) Hermia flee into the woods to elope. While in those woods, the trickster Puck uses love potion on various character's eyes. For 10 points, name this Shakespeare comedy which sees Bottom turned into a Donkey, and features the fairy royals Oberon and Titania.

ANSWER: *A Midsummer Night's Dream*

2. One painting by this artist depicts several figures crossing swords with a one-eyed Batavian general. In addition to *The Conspiracy of Claudius Civilis*, a painting by this artist depicts the corpse of the criminal Aris Kindt on a table as the black-hatted Dr. Nicolaes Tulp lectures and points to some exposed tendons. Another of this artist's works includes a girl in a golden dress with a (*) chicken attached to her belt, a man waving a blue and yellow flag, and several militiamen led by Captain Frans Banning Cocq. For 10 points, name this Dutch Golden Age painter of *The Anatomy Lesson* and *The Night Watch*.

ANSWER: Rembrandt Harmenszoon van Rijn

3. During this century, Zanzibar was defeated in a 38 minute war, history's shortest. In this century the Mfecane [mmm-fec-KYNE], a migration of displaced peoples such as the Sotho, occurred following the conquests of (*) Shaka Zulu. This century saw many worker's hands cut off at rubber plantations for not meeting production quotas in the personal colony of Leopold II of Belgium, the Congo Free State. For 10 points, name this century when the Congress of Berlin organized European claims as part of the “Scramble for Africa.”

ANSWER: 19th Century (or 1800s)

4. In one play by this man, a former railroad porter escapes to a Caribbean Island and becomes the title Emperor Jones until being shot by a silver bullet. This playwright drew on Aeschylus' Oresteia trilogy in a three act work about the Mannon family, *Mourning Becomes Electra*. A group of drunks at Harry Hope's saloon reminisce about their unfulfilled pipe dreams in this man's (*) *The Iceman Cometh*. For 10 points, name this American author of *Long Day's Journey Into Night*, the first American playwright to win the Nobel Prize in Literature.

ANSWER: Eugene O'Neill

5. These phenomena begin when increased rainfall causes a rear flank downdraft, which drags a mesocyclone towards the ground. Hail or debris commonly accumulates in a “hook echo” seen on radar prior to these events. One of these phenomena, whose destructive ability is measured on the (*) Fujita scale, is called a waterspout when it forms over water. For 10 points, name these rotating columns of air that frequently occur in the Midwestern United States in a namesake “Alley.”

ANSWER: tornado

6. An early test piece for this program was called Little Joe II. Early in this program, a latch sealed by design would not open, so fire in a pure oxygen atmosphere caused the deaths of White, Chafee, and Grissom. Gene Kranz’s work as flight director prevented an electrical failure from killing Fred (*) Haise, Jack Swigert, and Jim Lovell during the 13th of these missions. For 10 points, name this series of three-man 1960s space missions, the 11th of which took Buzz Aldrin and Neil Armstrong to the Moon.

ANSWER: Apollo Program (or Project Apollo)

7. One music video by this artist shows him eating popcorn as his date runs out of a movie theater before Vincent Price provides a voice-over. In another music video, a fedora-wearing man in a trenchcoat searches for this man, who causes squares on the sidewalk to light up while singing that the title figure is (*) “not my lover.” Van Halen provided a guitar solo on a track by this artist that says “It doesn’t matter who’s wrong or right.” In addition to “Beat It,” this man performed a moonwalk at *MoTown 25* in 1983. For 10 points, name this pop singer of “Billie Jean” and “Thriller.”

ANSWER: Michael Jackson

8. This property is explained by BCS theory through the existence of pairs of electrons known as Cooper pairs. Materials with this property can be called Type I or Type II depending on whether they are a pure metal or an alloy. When a material transitions to having this property, it expels all magnetic fields from its interior via the (*) Meissner effect. Heike Kamerlingh Onnes discovered it by cooling mercury to 4.2 Kelvin, when electrical resistance suddenly disappeared. For 10 points, name this property exhibited by conductors at extremely low temperatures.

ANSWER: superconductivity (or superconductor)

9. The oldest known texts used by this religion are found in the Pali canon. Pithy sayings involving paradoxes called koans are used in the teachings of this religion. The practice of Dana, charitable giving primarily to monks, is critical in this faith’s Mahayana sect. (*) Dukka, the pain resulting from the craving for permanent things, is the first of this religion’s four noble truths. To cease Dukka, practitioners of this faith follow the noble eightfold path. For 10 points, name this faith, whose founding is attributed to Siddhartha Gautama.

ANSWER: Buddhism

10. The Cori cycle describes lactic acid's conversion into this compound in the liver. Hexokinase IV (four) phosphorylates this molecule in the first step of an important metabolic pathway that ends with the conversion of PEP to pyruvate. Amylase breaks down polymers of this (*) monosaccharide, which include cellulose and starch. This molecule and galactose are linked together in lactose. For 10 points, identify this molecule with formula C₆H₁₂O₆, commonly referred to in the human body as blood sugar.

ANSWER: **glucose** (prompt on C₆H₁₂O₆ or blood sugar before mention)

11. A sculpture by this artist depicting the prophet Habakkuk is commonly known by a nickname meaning "pumpkin head." This sculptor of *Zuccone* created a work located in Padua that depicts the *condottiere* Erasmo da Narni on horseback, his *Gattamelata*. Another sculpture by this artist shows its subject wearing (*) only a flower-draped hat and a pair of boots while holding a sword, and was the first free-standing nude sculpture created since antiquity. For 10 points, name this Florence-based Italian Renaissance sculptor of a bronze *David*.

ANSWER: **Donatello** di Niccolo di Betto Bardi

12. Vitamin B12 deficiency causes these cells to become megaloblasts, which are unusually large immature versions of them. Pulse oximeters measure the absorbance of an important protein in these cells, which can bind extremely tightly to carbon monoxide. (*) Erythropoietin controls the production of these cells in the bone marrow. These cells, which lack nuclei, are shaped incorrectly in sickle-cell anemia. For 10 points, name these cells that contain hemoglobin, which make up almost half of the cells in blood.

ANSWER: **red blood** cells (or RBCs; or erythrocytes)

13. In this book, a character is forced to read to a racist morphine addict named Mrs. Dubose as punishment. Another character in this novel walks around town in a ham costume and disperses a mob by speaking to Mr. Cunningham. Two siblings and their friend (*) Dill explore a spooky house in Maycomb whose mysterious resident leaves them gifts in a tree. For 10 points--Jem and Scout are protected by Boo Radley in what novel about Atticus Finch's family by Harper Lee?

ANSWER: ***To Kill a Mockingbird***

14. One ruler of this Empire was known as "the Bulgar Slayer." It went into permanent decline after Crusaders sacked its capital in 1204. During the reign of this Empire's best known ruler, Belisarius reconquered Italy, and the Nika riots broke out between the (*) Blues and the Greens at the chariot races in the capital's hippodrome. Its capital was defended through the use of a chain boom across the Golden Horn as well as Greek Fire, and it constructed the Hagia Sophia. For 10 points, Justinian the Great ruled what Empire, a successor to Rome in the East?

ANSWER: **Byzantine** Empire (or Byzantion, accept Eastern Roman Empire before end of tossup; prompt it afterward)

15. This country contains the ruins of Çatalhöyük [cha-tal-ho-yuuk], a Neolithic city north of the Taurus Mountains. Mount Arafat, the traditional landing site of Noah's Ark, is in this country. The northwestern tip of this country is separated by the Dardanelles and the (*) Bosphorus from the rest of this country on the Anatolian Plateau in Asia Minor. Bordered on the north by the Black Sea and on the south by the Mediterranean Sea, for 10 points name this country that spans two continents, and whose most populous city is Istanbul.

ANSWER: **Turkey**

16. These people call themselves the Dine' and traditionally lived in dried mud houses called hogans. Kit Carson forced these people to undertake the "Long Walk" to the Bosque Redondo. Several of these Athabaskan-speaking people provided unbreakable (*) radio communications during the Battle of Iwo Jima and their major reservation completely surrounds the Hopi Reservation. For 10 points, name this Native American people of the Four Corners region who provided "code talkers" in World War II.

ANSWER: **Navajo**

17. This work begins with the protagonist lying in bed after missing his train to work. A violin performance by Grete [GRE-tuh] in this novella is interrupted when three tenants see its protagonist. Its protagonist hides under a sofa when others enter his room to avoid being seen and loses a desire for milk. In this novel, a character is paralyzed after an (*) apple is lodged in his back and his death is welcomed by his family since he had become "thin and flat." For 10 points, name this Franz Kafka work in which Gregor Samsa undergoes the title transformation into an insect.

ANSWER: The **Metamorphosis** (or Die **Verwandlung**)

18. This group runs the Hisbaah police force and believes in a prophecy that a final battle will take place near Dabiq. This group attacked Mount Sinjar in a 2014 offense that captured many Yazidi women. The Temple of Bel in Palmyra was damaged by this group, which is pejoratively called (*) Daesh. This group at one time controlled the Libyan city of Sirte and currently holds the Iraqi city of Mosul as well as its Syrian capital, Raqqa. Led by Abu Bakr Al-Baghdadi, for 10 points name this terrorist group that in 2014 declared itself a caliphate.

ANSWER: **Islamic State** or **IS** or **ISIS** or **ISIL** (accept **Daesh** before mention; accept **Islamic State of Iraq and Syria** or **Islamic State of Iraq and the Levant**)

19. One of this composer's works uses massive intervals of 10ths and 12ths to sound jumpy. This composer of the *Grosse Fuge* used a theme from his suite "The Creatures of Prometheus" in the finale to his third symphony, which was originally dedicated to Napoleon. In addition to the (*) Eroica Symphony, another of his symphonies opens in C minor with a short-short-short-long pattern representing fate. For 10 points, name this composer whose setting of "Ode to Joy" is sung over the final moments of his 9th symphony.

Answer: Ludwig van **Beethoven**

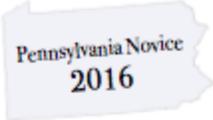
20. This disorder was first named by Leo Kanner in 1943. Two treatment plans for this disorder are abbreviated EIBI and ABA. Affected individuals are usually identifiable by the age of three, and sometimes it is divided into low, middle, and (*) high functioning forms. This disorder is similar to Asperger's Syndrome, but involves more delays in developing communication. For 10 points, name this disorder, found on a namesake spectrum and characterized by impaired social or verbal interaction.

ANSWER: autism

TB. The human spinal column contains vertebrae labeled S, L, T and this letter. The hepatitis virus with this letter lacks a vaccine and often causes chronic symptoms. It is the abbreviation for the only sulfur-containing amino acid. In the electron transport chain, a protein that shuttles an electron from complex III to complex IV is called (*) "cytochrome" this letter. Guanosine pairs with a nucleotide with this letter in DNA, which is made up of A, T, G and that nucleotide. For 10 points, identify this letter that marks a vitamin found in many citrus fruits.

ANSWER: C (or hepatitis C; or cytochrome c; or vitamin C)

Pennsylvania Novice 2016



Packet 10 Bonuses

1. This period succeeded the Tokugawa Shogunate. For 10 points each:

[10] Name this period of rapid industrialization and modernization under a namesake emperor from 1869 to 1912 in Japan. The goals of the Emperor, restored to full power, were outlined in the Charter Oath.

ANSWER: **Meiji** Restoration (or **Meiji** Ishin)

[10] Under the Meiji Restoration, the capital of Japan was moved from Kyoto to this city, Japan's current capital. It is also currently the most populous city in the world.

ANSWER: **Tokyo**

[10] This man was the Emperor of Japan during World War II. After Japan's defeat, he renounced the imperial claim to divinity and became a figurehead monarch as the country democratized.

ANSWER: **Hirohito** (or the **Showa** Emperor)

2. The WMAP mission determined this event occurred thirteen point seven seven billion years ago. For 10 points each:

[10] Identify this cosmological event that caused the universe to expand extremely rapidly from an infinitesimally small point.

ANSWER: the **Big Bang**

[10] The age of the universe is roughly equal to the inverse of this man's namesake constant. By examining redshifted objects, this man discovered that most objects in deep space are moving away from each other.

ANSWER: Edwin **Hubble**

[10] A more accurate value for the age of the universe was calculated by studying the CMB, which is background radiation left over from the Big Bang in this part of the EM spectrum.

ANSWER: **microwave** (or cosmic **microwave** background radiation)

3. Using "fighter" versions of these objects to attempt to cut the string of another of them was banned under the Taliban. For 10 points each:

[10] For 10 points, name this flying object, consisting of fabric tied to string.

ANSWER: **kites**

[10] This author of *The Kite Runner* chronicled the coming of age of Amir, whose friend Hassan gathers Kites for him. Amir's cowardice defending Hassan from the bully Assef drives his emotional arc.

ANSWER: Khaled **Hosseini**

[10] The Kite Runner is set in this Asian nation. Its temporal span covers its invasion by the Soviet Union and the rise of the Taliban.

ANSWER: **Afghanistan**

4. This piece of music was inspired by the dancer Ida Rubinstein. For 10 points each:

[10] Name this one-movement composition which opens with a flute playing over a snare drum ostinato. The main theme is passed from instrument to instrument throughout the piece.

ANSWER: **Bolero**

[10] Bolero's central conceit is that it gradually increases in volume as the work progresses, making the entire piece one long example of this musical term meaning to get louder.

ANSWER: **crescendo** (do not accept or prompt on "decrescendo")

[10] This French composer of Bolero also wrote the piece *Daphnis et Chloé* and the piano suite *Gaspard de la Nuit*. His impressionistic style is often compared to that of his compatriot Claude Debussy.

ANSWER: Joseph Maurice **Ravel**

5. Peter O'Toole voiced restaurant critic Anton Ego in this 2007 animated film. For 10 points each:

[10] Name this film, in which a rodent named Remy helps Alfredo Linguini cook delicious food in a famous restaurant.

ANSWER: **Ratatouille**

[10] *Ratatouille* was directed by this animation veteran, who also wrote and directed *The Iron Giant* and *The Incredibles*, as well as 2015's live action *Tomorrowland*.

ANSWER: Brad **Bird**

[10] *Ratatouille* and *The Incredibles* were both made by this animation studio that was bought by Disney in 2006. Its most recent movies include *The Good Dinosaur* and *Finding Dory*.

ANSWER: **Pixar** Animation Studios

6. Identify the following about the odes of John Keats, For 10 points each.

[10] This ode describes the artifact as a "still unravish'd bride of quietness" that can teach you that "Beauty is truth, truth beauty."

ANSWER: Ode **On a Grecian Urn**

[10] Keats' ode to this season describes it as a "season of mists and mellow fruitfulness," which "fill[s] all fruit with ripeness to the core."

ANSWER: **autumn** (accept **fall**)

[10] This Keats ode is addressed to a "light-winged Dryad of the trees," a creature who he claims "wast not born for death."

ANSWER: Ode **to a Nightingale**

7. This monster was created because a curse made Queen Pasiphae have insatiable lust for a wooden bull. For 10 points each:

[10] Name this half-man, half-bull creature that received an annual sacrifice of seven men and seven women from Athens. Theseus kills it.

ANSWER: **Minotaur**

[10] The Minotaur is kept inside this structure to make sure it never escapes. It lends its name to any complex maze today.

ANSWER: **Labyrinth**

[10] Both the wooden bull and the Labyrinth were designed by this master architect. He also built wax wings upon which to escape Crete.

ANSWER: **Daedalus**

8. This state's senator, Robert LaFollette Sr., received 16.6% of the vote in the 1924 Presidential election running as the Progressive Party Candidate. For 10 points each:

[10] Name this midwestern State, which in 2012 elected Tammy Baldwin, America's first openly LGBT senator.

ANSWER: **Wisconsin**

[10] Another Wisconsin senator was this man, who led an zealously aggressive anti-communist crusade in the 1950s. He claimed to have a list of communists in the State Department, which was almost certainly untrue.

ANSWER: Joseph Raymond "Joe" **McCarthy**

[10] Ironically, while McCarthy served, this largest city in Wisconsin had a socialist mayor, Frank P. Zeidler. This city has a long history of beer brewing as the home of Pabst and Schlitz.

ANSWER: **Milwaukee**

9. Over 90% of China cannot properly digest this molecule, its namesake "intolerance." For 10 points each:

[10] Name this sugar formed by combining a molecule of galactose with a molecule of sucrose. It is found in foods such as cheese and milk.

ANSWER: **lactose**

[10] Lactose is this type of sugar, which consist of two monosaccharides combined through a condensation reaction. Other examples of these sugars include maltose and sucrose.

ANSWER: **disaccharide**

[10] In *E. coli*, lactose can be used as a secondary source of energy by activating one of these genetic systems called *lac*. These structures are sections of DNA that are all controlled by one genetic promoter.

ANSWER: *lac* **operon**

10. This painting gets its title from a building in the background that features a pointed arch. For 10 points each:

[10] Name this painting, set at the Dibble House in Eldon, Iowa. This painting depicts the artist's sister Nan standing next to his dentist, Byron McKeeby, who holds a pitchfork.

ANSWER: **American Gothic**

[10] *American Gothic* is the most famous work by this American Regionalist artist of *Death on the Ridge Road* and *The Midnight Ride of Paul Revere*. He was a founder of the failed Stone City art colony.

ANSWER: Grant DeVolson **Wood**

[10] Wood depicted this figure with a child's body and holding an axe in *Parson Weems' Fable*. His painting *Daughters of Revolution* depicts three women standing in front of a reproduction of a painting showing this man *Crossing the Delaware*.

ANSWER: George **Washington**

11. In 2015, this man attempted to introduce a state-run media agency that was withdrawn after being labeled the "Pravda of the Plains." For 10 points each:

[10] Name this current governor and former Republican Congressman who was selected to be Donald Trump's running mate.

ANSWER: Mike **Pence**

[10] Pence currently governs this state, where he signed a controversial religious freedom act in March

2015. This state is found between Ohio and Illinois.

ANSWER: **Indiana**

[10] Pence was chosen for Trump's VP instead of this former Congressman from Georgia who led the 1994 "Contract with America" GOP takeover of the House.

ANSWER: Newt **Gingrich**

12. This man gets into an argument with a charioteer at a three-way crossroads before being attacked by and subsequently killing the passenger of that chariot, King Laius. For 10 points each:

[10] Name this king of Thebes who solved the riddle of the sphinx but ended up killing his father and marrying his mother after being abandoned as a youth to avoid that very fate.

ANSWER: **Oedipus**

[10] The third part of Sophocles' Oedipus trilogy is named for this daughter of Oedipus who is condemned to death by Creon and hangs herself in a cave.

ANSWER: **Antigone**

[10] Antigone was sentenced to death for burying Polyneices, with whom she had this type of relationship.

ANSWER: **sister** (accept **brother-sister** or similar equivalents that make it clear they are **siblings**)

13. This type of radioactive decay causes the atomic number to decrease by two. For ten points each:

[10] Name this process that results in the release of the namesake particle, a helium nucleus.

ANSWER: **alpha** decay

[10] After undergoing alpha decay or beta decay, an excited nucleus may undergo a secondary decay, emitting this type of electromagnetic radiation. It was discovered in 1900 by Paul Villard.

ANSWER: **gamma** rays (or **gamma** radiation)

[10] Five years earlier, this scientist used X-rays to take a photograph of the bones in his wife's hand. A unit for radioactive exposure is named for this Nobel laureate.

ANSWER: Wilhelm **Roentgen**

14. Archaeobacteria in this national park's Grand Prismatic Spring produce vibrant red and orange colors. For 10 points each:

[10] Name this first national park of the United State, which covers much of northwestern Wyoming. Its location over a large magma chamber produces many hot springs and mud pots.

ANSWER: **Yellowstone** National Park

[10] This famously reliable geyser near the Yellowstone Lodge attracts crowds to watch it erupt on average every 91 minutes.

ANSWER: **Old Faithful** Geyser

[10] This other national park is located entirely inside Wyoming just south of Yellowstone. It is centered around its namesake jagged mountain range, which has a French name.

ANSWER: **Grand Teton** National Park

15. In addition to being a British Prime Minister, this man also wrote novels. For 10 points each:

[10] This man rose to power when his party was divided over the decision to repeal the Corn Laws, and was the only British Prime Minister of Jewish birth.

ANSWER: **Benjamin Disraeli**

[10] Disraeli served as PM under this Queen. Her reign of 64 years coincided with Great Britain's high water mark, and she was married to Prince Albert.

ANSWER: Queen **Victoria**

[10] Disraeli, a conservative, opposed this party led by William Gladstone.

ANSWER: **Liberal** Party

16. This artist and his big band popularized several jazz standards, such as “One O’Clock Jump” and “Swing Swing Swing.” For 10 points each:

[10] Name this bespeckled Big Band leader who was known as the “King of Swing.”

ANSWER: Benjamin David “Benny” **Goodman**

[10] Goodman played this instrument. This single reed woodwind instrument looks like a straight black tube, and is a common lead instrument in Klezmer music.

ANSWER: **clarinet**

[10] A concert by Goodman’s band at this location in 1938 is considered by music historians a major step towards jazz becoming “respectable” music. Located on 57th street in New York City, a joke says the way to get here is “practice.”

ANSWER: **Carnegie Hall**

17. A famous high-temperature superconductor contains this element along with yttrium, copper and oxygen. For 10 points each:

[10] Name this alkaline earth element found between strontium and radium on the periodic table. In flame tests, it burns pale green.

ANSWER: **barium** (or **Ba**)

[10] Barium carbonate can be used in carburization to improve the quality of this iron alloy, which almost always contains carbon.

ANSWER: **steel**

[10] Stainless steel is an alloy containing at least eleven percent of this transition metal element, by far its most important use. Its symbol is Cr.

ANSWER: **chromium**

18. The cost of building this waterway was paid in nine years by tolls. For 10 points each:

[10] Jesse Hawley was a major proponent of this 363 mile-long waterway, built in 1817 to connect New York City to the namesake Great Lake.

ANSWER: **Erie** Canal

[10] The Erie Canal ran from Buffalo to this capital city of New York.

ANSWER: **Albany**

[10] Hawley persuaded this governor of New York to acquire funding for the Canal. The project was derided as this man’s “ditch,” and he was the first to sail the Canal, doing so in the *Seneca Chief*.

ANSWER: DeWitt **Clinton**

19. Some theologians believe this book cannot be truly translated out of its native language, Arabic. For 10 points each:

[10] Name this primary Holy text of Islam, which was dictated to the Prophet Muhammad by Gabriel over the course of 23 years.

ANSWER: The **Quran**

[10] The Quran is divided into 114 chapters, called by this name. They vary greatly in length, from only 3 verses to 286.

ANSWER: **Suras**

[10] Someone who has done this action to the entire Quran is called a Hafiz. Young Christian and Jewish children often do this action to the 10 commandments as part of religious schooling.

ANSWER: **memorizing** (accept equivalents that indicate they have **memorized** it)

20. This novel recounts the quest of a man who seeks revenge against the title whale. For 10 points each:

[10] Captain Ahab is the captain of the *Pequod* in this Herman Melville novel.

Answer: **Moby-Dick** (or **Moby-Dick; or, The Whale**)

[10] This only surviving sailor of the *Pequod* narrates the novel, which begins with the words “Call me [this name]”

Answer: **Ishmael**

[10] This harpooner from the island Kokovoko is the first character Ishmael interacts with in the novel; Ishmael ultimately survives by clinging to a coffin he built until another ship rescues him.

Answer: **Queequeg**

TB. This movement’s leader, Hong Xiaquang, believed himself to be the younger brother of Jesus. For 10 points each:

[10] Name this rebellion by the Christian millenarian movement Heavenly Kingdom of Peace in 1850s and 60s China. This rebellion may have left as many as 70 million dead.

ANSWER: **Taiping** Rebellion

[10] China also saw this 1899 rebellion against western influence. Many of those involved in this rebellion were members of the Brotherhood of Righteous and Harmonious Fists.

ANSWER: **Boxer** Rebellion (or **Yihequan** Movement)

[10] The Boxer Rebellion was put down by an alliance of this many nations, which included the main Western Powers and Japan. Cut up pirate coins are called “Pieces of” this number.

ANSWER: **eight**