

Pennsylvania Novice 2016

Written by Sameer Apte, Eric Barrett, Paul Birch, Greg Cortazzo, Seekin Kara, Aakash Patel, Reed Repasky, Steven Silverman, Srishti Srivastava, and Bill Tressler
Edited by Ryan Bilger, Chris Chiego, Ben Herman, and Victor Prieto

Pennsylvania Novice
2016

Packet 4 Tossups

1. During this battle, the Chateau of Hougoumont was besieged. British troops in this battle protected themselves from artillery fire by lying down on the reverse slope of La Haye Sainte. British infantry squares repeatedly turned back cavalry led by (*) Marshal Ney at this battle. This battle concluded when the British were relieved by a Prussian Army under General von Blucher. For 10 points, name this 1815 battle in Belgium in which the Duke of Wellington defeated Napoleon.

ANSWER: Battle of Waterloo

2. A branch of this type of philosophy which judges based on intentions instead of consequences is called Deontology. The “virtue” type of this philosophy concerns itself with how to make human beings flourish. A form of this type of philosophy which seeks to maximize the good for all people is (*) Utilitarianism. Its “normative” branch concerns how human beings should act in order to live properly. For 10 points, name this branch of philosophy that discusses right and wrong.

ANSWER: ethics

3. This Greek letter represents a quantity equal to negative one over volume times the derivative of volume with respect to pressure. Besides compressibility, a process named for this letter is mediated by the weak force and emits an antineutrino. That form of radioactive decay sees a (*) neutron converted into a proton and an electron, changing the atomic number and not the mass. For 10 points, identify this Greek letter that names a decay which emits an electron, often contrasted with alpha decay.

ANSWER: beta (or beta decay; or beta particle; do not prompt or accept “B”)

4. Agnes Denes planted and harvested a “Wheatfield” in the middle of this city in 1982. It’s not Philadelphia, but one building designed by Frank Gehry in this city at 8 Spruce Street was built atop a public school and features steel “ripples.” Christo installed hundreds of orange-fabric “Gates” in this city, while it also contains the Unisphere at (*) Flushing Meadows. The Art Deco Chrysler Tower is among its many skyscrapers. For 10 points, name this city that is now home to the Freedom Tower at One World Trade Center.

ANSWER: New York City

5. One poem by this author describes drinking “from tankards scooped in pearl” a liquor which “not all the Frankfort Berries yield.” Another poem by this author describes a “stillness in the room, like stillness in the air,” while a third poem by this author states “the carriage held none but (*) ourselves and immortality” after a visitor “kindly stopped for me.” For 10 points, name this Belle of Amherst, the author of such poems as “I heard a Fly buzz- when I died” and “Because I could not stop for Death”.

ANSWER: Emily Dickinson

6. In one scene in this TV series, a painting of a “Rabbit in a Snowstorm” is purchased by a character. Stick kills a child worshipped as “Black Sky” by The Hand in this series, where Karen Page becomes the secretary to the law firm of Nelson and Murdoch. Vincent D'onofrio plays Wilson Fisk, the crime boss (*) Kingpin, in this series set in Hell’s Kitchen. For 10 points, name this Netflix TV series that features the namesake Marvel superhero known for fighting crime both as a lawyer and as a crimson-clad superhero while blind.

ANSWER: *Daredevil*

7. Emission lines corresponding to doubly ionized oxygen were first discovered in the spectra of these objects. The Messier catalog primarily lists galaxies, clusters, and these objects, the most famous of which is M1. One of these objects contains an optical pulsar at its center, which first became visible in (*) 1054. That one is a supernova remnant named for its “crab” shape. For 10 points, name these objects often called "stellar nurseries," which are giant clouds of dust and gas.

ANSWER: planetary nebulae (or HII nebulae)

8. In one story, this figure tricks the Aloadae into killing each other so that they do not continue to grow. In some myths, this figure avenges Hypolitus’ death by having Adonis killed. After being discovered while bathing, she turned Actaeon into a deer which was promptly hunted down by (*) his own dogs. After being forgotten at a dinner by King Oeneus [OY-nee-us], this deity sent the Calydonian Boar. For 10 points, name this Greek huntress and goddess whose twin brother was Apollo.

ANSWER: Artemis (or Diana)

9. One novel by this author concerns the fictional province of Castalia, where the Waldzell school teaches students to play a complex competition. This author of *The Glass Bead Game* included the characters Kamala and Vasudeva in a work set in ancient India. He also wrote a novel whose protagonist seeks the Magic Theater and struggles with aggression similar to a certain (*) animal of the grasslands. For 10 points, Harry Haller was a creation of what German author of *Siddhartha* and *Steppenwolf*?

ANSWER: Hermann Karl Hesse

10. This man served as Secretary of State during Thomas Jefferson’s presidency. Along with John Jay and Alexander Hamilton, he penned the *Federalist Papers*. During the siege of Washington, the Lansdowne Portrait of Washington was saved by this man’s wife, (*) Dolley. His copious notes taken during the constitutional convention have given him the nickname “the father of the Constitution,” and he was president during the War of 1812. For 10 points, name this fourth U.S. President who preceded James Monroe and followed Thomas Jefferson.

ANSWER: James Madison, Jr.

11. Cameron Carpenter, a virtuoso on this instrument, has built an electronic version in foresight of this instrument's "death." Messiaen's *L'Ascension* was originally written for this instrument, as were the majority of works by Cesar Franck and Dietrich Buxtehude. Saint-Saens's third symphony has a solo part for this instrument and is named for it. (*) J.S. Bach's many works for this instrument include the *Toccata and Fugue in D minor*. For 10 points, name this instrument that consists of a keyboard and pipes.

Answer: pipe organ

12. In this book, two characters use the pen names "Locke" and "Demosthenes" to engage in political debates on an online forum. Instead of choosing between two drinks, one character in this novel attacks a giant while playing the mind game. The protagonist of this book is mentored on an (*) asteroid by the war hero Mazer Rackham and uses an ansible to direct fleets against the buggers. For 10 points, name this science fiction novel by Orson Scott Card about the title boy genius, Andrew Wiggin.

ANSWER: Ender's Game (Accept Ender's Shadow before "two drinks")

13. It's not New York City, but this city's U-Street Corridor was once known as the "Black Broadway" and is found south of the historically black Howard University. The Anacostia River divides this city, which was partially built on a swamp, and its neighborhoods include Foggy Bottom and (*) Georgetown. The Tidal Basin in this city abuts the Potomac River and is overlooked by the white marble dome of the Jefferson Memorial. For ten points, name this capital city of the United States.

ANSWER: Washington, D.C. (Accept either underlined portion)

14. A disease that affects the body's regulation of this molecule is also the leading cause of retinal blindness. It's not amylin, but beta cells produce this molecule in the Islets of Langerhans. When released, this hormone stimulates increased nutrient intake in adipocytes. It acts antagonistically against (*) glucagon, which is also produced in the pancreas. For 10 points, name this hormone that stimulates the absorption of glucose from the blood, which is imbalanced in the bloodstream of diabetics.

ANSWER: insulin

15. This man was educated at the Inner Temple in London, after which he established the Tolstoy Farm in South Africa. He supported the use of *khadi* instead of foreign-made textiles. A 1946 photograph by Margaret Bourke-White shows this man at a spinning wheel. This man led a march to (*) Dandi in protest of a tax on salt, and he began a campaign to improve the lives of Untouchables. For 10 points, name this man who told the British to "Quit India," an advocate of nonviolence.

ANSWER: Mahatma Gandhi (or Mohandas Gandhi)

16. This man created a mural from police mugshots entitled "Thirteen Most Wanted Men." That mural was made in a medium this artist also used for a series depicting suicides, car crashes, and other accidents called "Death and Disaster." He designed a wallpaper using a portrait of Mao Zedong, and produced colorful (*) silkscreen portraits of celebrities such as Jackie Kennedy, Elvis, and Marilyn Monroe. For 10 points, name this Pop artist who made prints of Campbell's soup cans.

ANSWER: Andy Warhol

17. A member of this family of elements was used to create the first Bose-Einstein condensate. The decay of one of these elements weighing 40 amu to argon is a common method of radioactive dating. Every element in this group violently reacts with water. A member of this family is the least (*) electronegative element and has the atomic symbol Cs. They all have an oxidation state of plus one. For 10 points, name these elements which are found in the leftmost column of the periodic table and include potassium and sodium.

ANSWER: alkali metals (or group 1; prompt on metals; do not accept “alkaline earth metals”)

18. One of this author’s novels centers on Fanny Price and various relatives at the Bertrams’ estate. Another novel by this author sees Louisa sprain her ankle before being rescued by John Willoughby and Anne Elliot. Along with (*) *Persuasion*, this author wrote of Lydia and Jane’s search for husbands in a work where Elizabeth Bennet eventually marries Mr. Darcy. For 10 points, name this author of *Sense and Sensibility* and *Pride and Prejudice*.

ANSWER: Jane Austen

19. The Hicksian function of this quantity maximizes a consumer’s expenditure over fixed utility. Marketing, Sales, and Service are constituent parts of this quantity’s “chain.” Price elasticity measures this quantity responsiveness to changes in price. Giffen goods are an exception to this quantity’s (*) “law,” which states that as prices drop, this quantity increases. For 10 points, name this economic measurement of willingness of consumers to pay for a good, often paired with supply.

ANSWER: demand

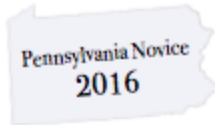
20. In this state’s largest city, a tank of molasses exploded in 1919, killing 21 people. The Springfield Armory was attacked during Shays’ Rebellion in this state. At a battle in this state, William Prescott ordered “don’t fire until you see the whites of their eyes” on (*) Breed’s Hill. This state was represented in the Continental Congress by John Hancock. For 10 points, name this state where the Sons of Liberty protested high taxes by dumping 342 chests of tea into the harbor of Boston.

ANSWER: Massachusetts

TB. This molecule is produced along with H₂ in the water-gas-shift reaction. In the production of quicklime, or calcium oxide, limestone is heated to expel this molecule. It does not contain hydrogen, but carbonic anhydrase controls the concentration of this molecule in the blood, and it is the source of carbon in the (*) Calvin cycle. This molecule’s solid form is dry ice, and passing it through water produces carbonation. For 10 points, name this molecule produced along with water by combustion reactions, with formula CO₂.

ANSWER: carbon dioxide (or CO₂ before mention)

Pennsylvania Novice 2016



Packet 4 Bonuses

1. The 16th and 17th centuries had lots of plays that were not by Shakespeare. For 10 points each:

[10] Christopher Marlowe wrote a play about a man named Barabbas on Malta, who is an adherent of this religion. Barabbas stereotypically goes around poisoning wells until killed by the Maltese.

ANSWER: **Judaism** (accept **Jewish** or **Jew of Malta**)

[10] This other playwright penned a satire of Puritan resistance to merriment in *Bartholomew Fair* and wrote about a Venetian nobleman who fakes terminal illness in *Volpone*.

ANSWER: Ben **Jonson**

[10] Jonson also wrote a play about Face and Subtle, who are con artists that pose as members of this profession. They pretend to have created the Philosopher's Stone, which was sought by these people.

ANSWER: **alchemist**

2. Near the end of this piece, a muted oboe represents a duck swallowed alive as one of the title figures is taken off to the zoo. For 10 points each:

[10] Name this 1936 children's piece where various instruments represent animals and the title boy, who disobeys his grandfather's orders and traps the other title creature.

ANSWER: "**Peter and the Wolf**"

[10] Peter and the Wolf was composed by this Russian, who wrote the opera *Love for Three Oranges* and the *Lieutenant Kije* suite.

ANSWER: Sergei **Prokofiev**

[10] In "Peter and the Wolf," Peter's grandfather is represented by this large woodwind instrument, whose "contra" version has the lowest register of any woodwind.

ANSWER: **bassoon**

3. Throughout U.S. history this state has instigated many secessionist movements. For 10 points each:

[10] Name this first state to secede from the Union in 1860. The Battle of Fort Sumter took place in its Charleston harbor.

ANSWER: **South Carolina**

[10] Then-vice president and South Carolina native John C. Calhoun advocated that state's rights allowed South Carolina to ignore tariff laws that favored the North, which led to a crisis named for this term.

ANSWER: **nullification** (accept word forms like **nullify**)

[10] Almost a century after the Civil War, this segregationist Dixiecrat politician from South Carolina delivered the longest individual filibuster in Senate history in opposition to the Civil Rights Act of 1957.

ANSWER: James Strom **Thurmond**

4. Answer these questions about Earth's atmosphere, for 10 points each.

[10] This second layer of the atmosphere lies below the mesosphere. This layer demonstrates a phenomenon known as thermal inversion, in which temperature increases with altitude.

ANSWER: **stratosphere**

[10] The stratosphere houses a layer of this gas degraded by chlorofluorocarbons, which has led to the formation of a namesake “hole.” This gas has chemical formula O₃.

ANSWER: **ozone** layer

[10] The stratosphere begins at this border between the stratosphere and the layer immediately below it, the troposphere.

ANSWER: **tropopause** (do not accept or prompt on “troposphere”)

5. Dido throws herself onto a funeral pyre when this lover of hers leaves her for Sicily. For 10 points each:

[10] Name this hero of an epic by Virgil, who flees Troy with his father Anchises and eventually settles in Latium, becoming the ancestor of the Romans.

ANSWER: **Aeneas**

[10] When King Latinus offered his daughter Lavinia to Aeneas, she was already engaged to this man. He becomes the antagonist of the second half of the *Aeneid*, and is killed by Aeneas at the climax.

ANSWER: **Turnus**

[10] This goddess conspired with Venus to make Dido and Aeneas fall in love, in order to distract Aeneas from his destiny. She was married to Jupiter.

ANSWER: **Juno** (prompt on Hera)

6. One proposed reform to this process is the Borda Count, in which people rank all possible choices rather than cast ballots for one individual. For 10 points each:

[10] Name this action, which often takes place at community centers, churches, and schools on the first Tuesday of November. Some states have recently passed laws requiring showing ID before doing this.

ANSWER: **voting** (accept word forms or descriptions that indicate people are casting votes)

[10] The smallest geographic area in which votes are tabulated are these units, which may have namesake “captains” assigned by each party. In heavily populated areas, these units may be divided into divisions.

ANSWER: **precincts**

[10] In most states, this statewide elected office is responsible for overseeing, tabulating, and certifying elections. They also often handle licensing and certification.

ANSWER: **secretary of state** or **SOS**

7. This man coined the terms “in medias res” and “purple prose” in writing a book of advice to future writers, the *Ars Poetica*. For 10 points each:

[10] Name this author of the *Carmen Saeculare* for a chorus of 27 women, as well as a number of Epistles.

ANSWER: **Horace**

[10] Horace was a writer in this empire. Many of its writers made a living off patronage from Horace’s patron, Maecenas [MY-cen-as], and wrote in Latin.

ANSWER: Ancient **Rome** or **Roman** Empire

[10] Horace along with Juvenal also wrote many of these works, which ridiculed the follies of Roman society in his day. Ambrose Bierce's *The Devil's Dictionary* is a more contemporary example of this type.

ANSWER: **satire**

8. The model for this painting, Elizabeth Siddal, fell ill after the lamps heating the tub of water in which she posed went out. For 10 points each:

[10] Name this painting by John Everett Millais, which depicts the title Shakespearean figure lying in a creek as she drowns herself.

ANSWER: **Ophelia**

[10] Millais belonged to this group of artists, who sought to return the art of painting to the style it had before the work of a certain Renaissance artist. Other members of this group included William Holman Hunt and Dante Gabriel Rossetti.

ANSWER: **Pre-Raphaelite Brotherhood** (accept **PRB**)

[10] The Pre-Raphaelite Brotherhood was based in this nation, the home of St. Paul's Cathedral, Westminster Abbey, and Buckingham Palace.

ANSWER: **United Kingdom** (accept **UK**; accept **Great Britain**; prompt on **England**, prompt on **Britain**)

9. An event in this empire led to the overthrow of Czar Nicholas II and the ultimate ascendance of a Bolshevik government. For 10 points each:

[10] Name this empire where the Romanov family was overthrown and eventually replaced by a Communist government in Moscow.

ANSWER: **Russian Empire**

[10] This man is considered the father of Russian Communism. After being exiled, he was sent to Russia by a sealed train from Switzerland during World War I to stir up chaos.

ANSWER: Vladimir Ilyich **Lenin**

[10] This man was the chief political rival of Joseph Stalin in the early Soviet Union after Lenin died. He favored a more traditional school of Marxism, and was later assassinated in Mexico City by an ice pick.

ANSWER: Leon **Trotsky**

10. Many forms of mimicry evolved for animals to avoid these organisms. For 10 points each:

[10] Identify these organisms which hunt prey to feed. They may be either carnivorous or omnivorous.

ANSWER: **predator**

[10] Humans may accidentally introduce species to regions where no natural predator exists, upon which they damage the local ecosystem. The introduced organism is called this kind of species.

ANSWER: **invasive** species

[10] Certain predators may play this role in an ecosystem, where their impact is disproportionately large compared to their population. The death of one of these species could cause the collapse of an entire ecosystem.

ANSWER: **keystone** species

11. This country entirely surrounds the small nation of San Marino. For 10 points each:

[10] Name this boot-shaped European nation that is divided down its center by the Apennine Mountains. Its capital city is Rome.

ANSWER: **Italy** (or **Italia**)

[10] Off the "toe" of Italy is this largest island in the Mediterranean Sea. Its architectural history includes ruins of the Greek colony at Syracuse and baroque architecture in cities like Palermo.

ANSWER: **Sicily** (or **Sicilia**)

[10] This major volcano in Eastern Sicily dominates the landscape of Catania Province. One of the world's most active volcanoes, Greek myths attributed its eruptions to the monster Typhon.

ANSWER: Mount **Etna**

12. This series of executive orders and legislative acts focused on three R's: relief, recovery, and reform. For 10 points each:

[10] Name this series of programs proposed by president Franklin Roosevelt to combat the Great Depression in the 1930s.

ANSWER: The **New Deal**

[10] This New Deal program focused on putting unmarried, unemployed men to work completing public works projects such as roads and improvements in national parks.

ANSWER: **Civilian Conservation Corps** (or the **CCC**)

[10] To prevent resistance to his New Deal, FDR proposed a "packing" scheme for this highest part of the Judicial Branch, which would have increased its membership from 9 to 15.

ANSWER: **Supreme Court** of the United States

13. In 2015, this country began building hardened aircraft shelters and runways on locations such as Fiery Cross Reef. For 10 points each:

[10] Name this country that has been reclaiming land on tiny reefs throughout the Spratly Islands, just south of its own island of Hainan.

ANSWER: **China**

[10] China's island expansion efforts have been concentrated in this sea, which has islands claimed by Taiwan and Vietnam in addition to China.

ANSWER: **South China Sea**

[10] China's expansion has been alternately denounced and applauded by Rodrigo Duterte, the current president of this country that also borders the South China Sea. Duterte has called for killing all drug dealers and users who refuse treatment in this country.

ANSWER: **Philippines**

14. This character is captured by Tralfamadorians and placed in a zoo exhibit along with the actress Montana Wildhack. For 10 points each:

[10] Name this survivor of the Battle of Dresden who becomes "unstuck in time," traveling from Luxembourg to New York to Germany in different stages of his life.

ANSWER: **Billy Pilgrim**

[10] Pilgrim serves as the protagonist in this novel, which also features the glory-seeking and vengeance-hungry Roland Weary.

ANSWER: **Slaughterhouse-Five**

[10] This author of *Slaughterhouse-Five* also wrote of the deranged Pontiac salesman Dwayne Hoover's mental breakdown in *Breakfast of Champions*, and of the religion Bokononism in *Cat's Cradle*.

ANSWER: Kurt **Vonnegut** Jr.

15. Diamond has a network of this kind of bond between many carbon atoms. For 10 points each:

[10] Name this type of bond between two atoms, typically nonmetals, that share their electrons.

Molecules with these bonds include methane and carbon dioxide.

ANSWER: **covalent** bond

[10] When atoms undergo covalent bonding, their goal is to acquire the same valence configuration as noble gases. This means atoms will always try to have this many electrons in its outer shell.

ANSWER: **eight** (or **octet** rule)

[10] This kind of bond is formed between two *p* orbitals. One of these bonds are found in double bonds and two in triple bonds.

ANSWER: **pi** bond

16. In 1054, theological differences about the role of the Pope lead to the final separation of this branch of Christianity from Catholicism. For 10 points each:

[10] Name this branch of Christianity, which is the primary Church in countries like Russia and Greece.

Among its symbols is a double barred cross.

ANSWER: Eastern **Orthodoxy**

[10] Orthodox Christians venerate these images, which are paintings of Christ, Mary, or other holy figures. In 8th century Byzantium, a wave of Iconoclasm emerged against them.

ANSWER: **icons**

[10] A person who holds this title of Constantinople is considered “first among equals” in the Ecumenical Council that leads Orthodoxy. The incumbent since 1991 is Bartholomew I.

ANSWER: Ecumenical **patriarch**

17. In February 2016, this man announced Canada would be pulling out of airstrike efforts against ISIL.

For 10 points each:

[10] Name this current Prime Minister of Canada. His father, Pierre, also served as PM.

ANSWER: **Justin Pierre James Trudeau** (prompt on **Trudeau**)

[10] The younger Trudeau replaced this Conservative as PM in 2015. He withdrew Canada from the Kyoto Protocol and slashed Canada’s taxes early in his tenure to a lower corporate rate than the U.S.

ANSWER: Stephen Joseph **Harper**

[10] This man was the first Prime Minister of Canada. He served in two separate terms after resigning due to the Pacific Railway Scandal, which saw Tory politicians bribed to give out prime rail routes.

ANSWER: Sir John Alexander **MacDonald**

18. This piece opens with the drums playing solo before the bass and piano join in, followed shortly by the saxophone. For 10 points each:

[10] Name this piece composed by Paul Desmond in a unique 5/4 time signature that became the best-selling jazz single ever.

ANSWER: “**Take Five**”

[10] “Take Five” was performed by this man’s namesake quartet and appeared on the album *Time Out* along with “Blue Rondo a la Turk.”

ANSWER: Dave **Brubeck**

[10] Brubeck played this instrument on “Take Five.” Other performers on this keyboard instrument include Thelonious Monk.

ANSWER: **piano**

19. The title hare-lipped gardener of one of this author’s novels attempts to bring his mother to her former home in Prince Albert, but she dies during the trip. For 10 points each:

[10] Name this author of *Life and Times of Michael K*, who wrote about Professor David Lurie’s affair with his student Melanie Isaacs in *Disgrace*.

ANSWER: John Maxwell **Coetzee**

[10] Another author from the same nation as Coetzee is this woman. She won the Nobel Prize for Literature in 1991, and her novel *July’s People* describes the title character’s relationship with the Smales family.

ANSWER: Nadine **Gordimer**

[10] Both Coetzee and Gordimer are from this nation. Alan Paton, another author from this nation, set his novel *Cry, the Beloved Country* in and around its city of Johannesburg.

ANSWER: **South Africa**

20. At this temperature, particles are considered to be without kinetic energy and at rest. For 10 points each:

[10] Name the term for the lowest temperature possible as determined by thermodynamics. It cannot actually be reached exactly, but is the benchmark for the Kelvin and Rankine temperature scales.

ANSWER: **absolute zero** (prompt on zero)

[10] This lightest noble gas is the only element that does not solidify at atmospheric pressure when cooled to absolute zero.

ANSWER: **helium**

[10] To the nearest integer, converting from Kelvin to Celsius requires adding this number. Absolute zero is equal to negative this number on the Celsius scale.

ANSWER: **273** (or **273.15**, or negative **273.15**)

TB. This event occurred after James II produced a male heir, sparking fears of a permanent Catholic line of kings for England. For 10 points each:

[10] Name this governmental toppling of 1688, named for the relative lack of bloodshed. It was followed by the passage of the English Bill of Rights.

ANSWER: **Glorious Revolution**

[10] The deposed James II was a member of this house. It had ruled Scotland since the 14th century, and came to rule England in 1603 under James II’s grandfather, James I.

ANSWER: **Stuart**

[10] Two answers required: These new co-regents after the Glorious Revolution were the Prince of Orange and one of the daughters of the deposed James II. A college in Virginia is named after them.

ANSWER: **William** (III (& II)) and **Mary** (II)