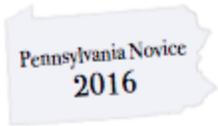


# Pennsylvania Novice 2016

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## Packet 1 Tossups

**1. This state is home to the only American nesting location of the Colima Warbler in its Big Bend National Park. Lady Bird Lake is found in the capital city of this state. German settlers founded the city of New Braunfels in the (\*) “hill country” near this state’s capital. Cities in the western part of this state include Odessa and Midland as well as El Paso, which lies on its border with Mexico on the Rio Grande River. For 10 points, name this state whose capital is Austin.**

ANSWER: Texas

**2. One character in this play is delighted to receive gifts of a gardening hat and tools, and opposes establishments that sell alcohol. Another of this drama’s characters is torn between moving to Nigeria and attending medical school. In this play, Beneatha, Ruth, and (\*) Walter all have different plans for a ten thousand dollar life insurance check to improve their lives in Chicago. For 10 points, name this play about the Younger family attempting to assimilate into a white neighborhood, written by Lorraine Hansberry.**

ANSWER: *A Raisin in the Sun*

**3. One of this monarch’s generals painted facades on poor villages to make the area look richer to aristocrats, whose name was Grigory Potemkin. With Alexander Suvorov, this ruler defeated a serf rebellion led by Yemelyan (\*) Pugachev. This ruler took power in a coup against her husband Peter III. Her frequent correspondences with Voltaire resulted in her being called “The Star of the North.” For 10 points, name this enlightened despot and Empress of Russia who was given the title “the Great.”**

ANSWER: Catherine II of Russia (or Catherine the Great of Russia; prompt on Catherine until “the Great,” afterwards accept Catherine)

**4. Two individuals in this Biblical book go to the land of Gerar while pretending to be siblings so that men will not try to take the woman as their wife. The marriage of Laban’s four daughters takes place in this book. For pointing out his father’s nakedness, (\*) Ham is cursed in this book, which also sees Lot’s wife turn into a pillar of salt after looking back at the ruins of Sodom and Gomorrah. Adam and Eve are cast out of the Garden of Eden in this book. For 10 points, name this first book of the Old Testament in which God creates the world.**

ANSWER: Book of Genesis (prompt on Old Testament before mentioned)

**5. A generalization of this 2-dimensional figure to arbitrary dimension is known as a simplex. Ceva's Theorem can be used to show that their medians, angle bisectors, and altitudes are concurrent at easily-describable points, such as their centroid or circumcenter. These objects always obey the law of (\*) cosines, which reduces to the Pythagorean Theorem for their "right" variety. They also come in scalene, isosceles, and equilateral forms. For 10 points, name these polygons that have three sides.**

ANSWER: triangles (prompt on polygons)

**6. The protagonist of this work writes in his diary in April about viewing a war film. Charrington poses as an antiques dealer who rents a room to the protagonist. Unleashing rats on the protagonist of this novel is part of a punishment in Room 101 for (\*) thoughtcrimes by O'Brien. Posters and telescreens everywhere in this novel display the face of Big Brother. For 10 points, name this dystopian novel about Winston Smith that begins in the title year and was written by George Orwell.**

ANSWER: Nineteen-Eighty Four

**7. Early experts at this activity included André Philidor and Paul Morphy. The Elo rating system was first developed to track skill in this activity. The number sign or hashtag indicates the end of this activity in its notation system, while a blunder is denoted by two question marks. IBM developed (\*) Deep Blue to compete in this activity against Garry Kasparov, the world champion in 1996. For 10 points, name this game played on an eight by eight board that ends in checkmate.**

ANSWER: chess

**8. Tintoretto's depiction of this scene shows spirits emerging from a lamp in the upper left and views it from a diagonal perspective. A better-known version of this scene is found in the refectory of the Santa Maria della Grazie in Milan. In that depiction of this scene, one figure brandishes a knife behind his back, while another rests his arm next to a spilled salt vessel on a (\*) table. Saints Matthew, Jude, and Simon deliberate on the right of that version of this scene. For 10 points, name this scene painted by Leonardo da Vinci, in which Christ eats a final meal.**

ANSWER: Last Supper

**9. This organ is affected by Wolff-Parkinson-White syndrome, one of the pre-excitation syndromes. P-waves and the QRS complex correspond to depolarization of parts of this organ, whose Bundle of His sends signals to Purkinje fibers via gap junctions between cells. Papillary muscles pull chordae tendineae during (\*) systole to open tricuspid and mitral valves in this organ. The pulmonary arteries carry blood from this organ to the lungs to be oxygenated. For 10 points, name this muscular organ that pumps blood throughout the human body.**

ANSWER: human heart

**10. One ruler of this present-day country was deposed by the Derg and replaced by his son Amha. One of the first kingdoms that held power in this modern day country was Axum. In 1993, Eritrea became independent from this country. This country's independence was secured at the 1896 Battle of (\*) Adowa by Menelik II, repelling an Italian invasion. For 10 points, name this African nation ruled for much of the 20th century by Haile Selassie, whose capital is Addis Ababa.**

ANSWER: Federal Democratic Republic of Ethiopia

**11. Shostakovich's two concertos for this instrument were premiered by Mstislav Rostropovich. An E-minor concerto for this instrument, most famously recorded by Jacqueline du Pre, was written by Edward (\*) Elgar. This instrument is the soloist in the penultimate movement of the Carnival of the Animals, where it represents a swan. For 10 points, name this string instrument played by Yo-Yo Ma, larger than a viola but smaller than the bass.**

ANSWER: violoncello

**12. The protagonist of this novel steals a coin from Petit Gervais, but changes his outlook on stealing after Bishop Myriel gives him silver. That reformed thief changes his name to Monsieur Madeleine and adopts the child of a disgraced factory worker, who grows up to wed Marius. Gavroche and (\*) Éponine are killed during the June Rebellion of 1832 in this work. For 10 points, name this novel where Cosette is raised by Jean Valjean while being chased by Inspector Javert, written by Victor Hugo.**

ANSWER: Les Misérables (be generous and prompt on Les Mis)

**13. This city was burned to the ground during a rebellion against William Berkeley. Residents of this city were saved by the arrival of relief ships under Lord De La Warr. Before leading its inhabitants through the "starving time" of (\*) 1609, this settlement's governor was said to have been saved from execution by the Powhatan woman Pocahontas. For 10 points, name this Virginia settlement governed by John Smith, the first permanent English settlement in the New World.**

ANSWER: Jamestown

**14. At the atomic level, this phenomenon is described by the Tomlinson model. This phenomenon generates electric charge by the triboelectric effect, and its namesake coefficient is symbolized by the Greek letter *mu*. When this phenomenon occurs between a solid and a fluid, it is called (\*) drag. This force exists in static and kinetic varieties and can be decreased with lubricants. For 10 points, identify this force that opposes surfaces sliding against each other.**

ANSWER: dry friction (or obvious equivalents; prompt on drag)

**15. This Greek figure gave Aeetes the bulls which Jason yoked to retrieve the Golden Fleece. In one myth, he was thrown out of Olympus and lived on Lemnos where he learned a craft from the Sintians. This god trapped (\*) Ares and Aphrodite during an affair using a fine net of his own creation. Upon being approached by Thetis, this god crafted Achilles's armor. For 10 points, name this son of Zeus and Hera, the lame and ugly Greek god of the forge.**

ANSWER: Hephaestus (prompt on Vulcan)

**16. Priorities USA Action is a major Super PAC supporting this politician. In 2000, this politician defeated Rick Lazio to win a senate seat after Rudy Giuliani withdrew from the race. This politician's tearful speech at a campaign stop contributed to a comeback win in the 2008 (\*) New Hampshire primary. FBI chief James Comey ruled that this politician's e-mail usage as Secretary of State did not warrant further investigation. For 10 points, name this 2016 Democratic nominee for President.**  
ANSWER: Hillary Rodham Clinton (prompt on Clinton)

**17. In this novel, Ezinma is the only one of ten children who survive. The protagonist's son in this novel converts to Christianity and takes the name Isaac. When the town decides to kill (\*) Ikemefuna, his adopted father participates in his murder lest he seem feminine. In this novel, after accidentally killing Ezeudu's son when his gun accidentally explodes, Okonkwo is exiled from Umuofia. For 10 points, name this novel set in Nigeria and written by Chinua Achebe.**  
ANSWER: Things Fall Apart

**18. This man rearranged a Rodgers and Hammerstein tune originally sung by Julie Andrews in a minor key for one of his best-known tracks. A critic claimed that this man produced "sheets of sound," and he used augmented triad chords on an album that featured the songs "Mr. PC" and "Giant (\*) Steps." This artist, who reworked a jazz version of "My Favorite Things," also produced the album *Blue Train*. For 10 points, name this jazz saxophonist, who pioneered modal jazz on his album *A Love Supreme*.**  
ANSWER: John William Coltrane

**19. The entropy of this kind of substance is modelled by the Sackur-Tetrode equation if they are monoatomic. Avogadro's number times Boltzmann's constant equals this type of substance's namesake constant, which is symbolized R and about equal to 8.314 Joules per Kelvin mole. The (\*) van der Waals equation accounts for size and intermolecular forces between particles in these substances. High temperature and low pressure are the best conditions for experimentally observing this kind of substance. For 10 points, name this kind of gas described by the equation "PV equals nRT."**  
ANSWER: ideal gases (prompt on partial answer; prompt on universal gas constant)

**20. Inscriptions at Beit el-Wali commemorate victories by this ruler. A peace treaty this ruler negotiated with Hattusili III is bilingual. This man's chief consort was Nefertari and he was the son of Seti I. This man reigned for 66 years during the 19th Dynasty and made his image adorn the massive (\*) Abu Simbel complex. In the largest chariot battle in history, this pharaoh fought the Hittites to a draw at Kadesh. For 10 points, name this pharaoh, allegedly the villain of *Exodus*.**  
ANSWER: Ramses II (or Ramses the Great; prompt on Ramses)

**TB. snRNPs [snurps] in this organelle enable splicing of pre-mRNA. This organelle contains Cajal bodies, and its namesake pores interact with importin and RanGTP. Ribosomes are assembled in a suborganelle inside this organelle. Its membrane connects directly to the (\*) rough endoplasmic reticulum, and it contains helicases to unwind double-stranded DNA before transcription. For 10 points, identify this organelle that contains the majority of genetic material, and acts as the cell's control center.**  
ANSWER: cell **nucleus** (prompt on nucleolus)

# Pennsylvania Novice 2016

Pennsylvania Novice  
2016

## Packet 1 Bonuses

1. Guy Montag is a fireman in this novel who works not to put out fires, but rather to start them. For 10 points each:

[10] Name this novel by Ray Bradbury named for the autoignition point of paper, depicting a futuristic world in which books have been banned.

ANSWER: ***Fahrenheit 451***

[10] This character in *Fahrenheit 451* has been in hiding for 40 years. He secretly houses books and guides Montag's escape before himself fleeing to St. Louis.

ANSWER: Professor **Faber**

[10] Instead of books, characters use these devices for entertainment in *Fahrenheit 451*. Montag's wife Mildred wants a fourth of these to occupy their last remaining parlor wall.

ANSWER: **televisions** (or **TVs**)

2. This period saw millions of people emigrate from the plains during the Great Depression. For 10 points each:

[10] Name this period of extreme agricultural deprivation in the 1930's, caused by severe drought and vicious wind storms stretching from Missouri to Colorado.

ANSWER: **Dust Bowl**

[10] This 31<sup>st</sup> president was largely blamed for the Great Depression, and disgruntled citizens set up makeshift shantytowns sarcastically nicknamed after him.

ANSWER: Herbert Clark **Hoover**

[10] This group of impoverished veterans set up a huge Hooverville in Washington D.C. to demand extra payment before being forcefully evicted.

ANSWER: **Bonus Army** (or **Bonus Expeditionary Force** or **Bonus Marchers**)

3. A variant of this equation named for Goldman can help describe cell membrane potentials. For 10 points each:

[10] Name this equation governing electrochemical cells, which states that the reduction potential is equal to an expression involving Faraday's constant, the number of electrons per mole, and the reaction quotient.

ANSWER: **Nernst** equation

[10] The two electrodes in electrochemical cells are anodes and this kind of electrode where reduction takes place.

ANSWER: **cathodes**

[10] Individual oxidation and reduction reactions can be written with these expressions which each represent one component of a redox reaction. An example of this expression is written out as solid copper turns into copper two plus and two electrons.

ANSWER: **half-reactions**

4. This game's U.S. release on July 6th was marred by server issues, prompting Niantic to delay the international release. For 10 points each:

[10] Name this Pokémon mobile game that uses GPS data and the camera to simulate Pokémon in real life, referred to as an augmented reality game.

ANSWER: **Pokémon Go**

[10] One of this class of items named "Razz" makes Pokémon easier to catch. In the main series, several these one-use items are held by Pokémon to cure status conditions or restore HP.

ANSWER: Razz **Berry** (or **berries**)

[10] In the games, the Lucky Egg item is found in the possession of this Pokémon in the wild. This Pokémon's evolution has the highest base HP of all Pokémon.

ANSWER: **Chansey**

5. This artist parodied the "Great American Painting" with a cow skull against a red, white, and blue background. For 10 points each:

[10] Name this American artist whose work often featured animal skulls, desert landscapes, and large flowers.

ANSWER: Georgia **O'Keeffe**

[10] O'Keeffe was married to this photographer and founder of the Photo-Secession movement and Gallery 291. His iconic photos of New York include *Winter, Fifth Avenue* and *The Steerage*.

ANSWER: Alfred **Stieglitz**

[10] The backdrop of many of O'Keeffe's works was the landscape of this state, where O'Keeffe lived in towns including Ghost Ranch and Taos.

ANSWER: **New Mexico**

6. A device similar to this one uses exclusively microwaves to produce stimulated emission. For 10 points each:

[10] Name these devices that produce coherent light at a specific point on the electromagnetic spectrum.

ANSWER: **laser**

[10] Lasers work because the molecules in a laser exist in this state, where more of them are in a higher energy state than a lower one.

ANSWER: **population inversion**

[10] Lasers emit light at only one specific point on the electromagnetic spectrum, meaning that this is equal for all of the light. This property of light varies inversely with wavelength.

ANSWER: **frequency**

7. A pair of eyeglasses belonging to Piggy are used to focus sunlight to start a fire in this novel. For 10 points each:

[10] Name this novel about a group of young boys stranded on a remote jungle island, written by William Golding.

ANSWER: **Lord of the Flies**

[10] This object found on the beach becomes a symbol representing order, as it is used to gather the boys together for meetings.

ANSWER: **conch** shell (prompt on **shell**)

[10] These two boys in *Lord of the Flies* are identical twins who are constantly getting confused with one another throughout the story. You can give both names or the single name for the pair of them.

ANSWER: Samneric (or Sam and Eric; or Eric and Sam)

8. This work discusses four unjust constitutions: timocracy, oligarchy, democracy, and tyranny. For 10 points each:

[10] Identify this Platonic dialogue, which discusses good governance in an ideal society.

ANSWER: The Republic

[10] In *The Republic*, Plato discusses the nature of reality using this allegory. In it, humans view the exterior world as a series of shadows projected on a wall until they are educated by experience.

ANSWER Allegory of the Cave

[10] *The Republic* defines goodness as deriving from this concept, which is the state of being correct or in accord with reality. Its opposite is falseness.

ANSWER: truth (accept word forms like “being true,” etc; prompt on synonyms like correct or accurate)

9. This man led the Admirable Campaign and was exiled from Venezuela multiple times before succeeding in his goal of independence. For 10 points each:

[10] Name this “Liberator” of South America, who met José de San Martín at the Guayaquil Conference.

ANSWER: Simon Bolívar

[10] Bolívar was a member of this class at the top of colonial Spain’s *casta* system, which consisted of people of full European descent, but who were born in the Americas. This term also describes a number of synthesized languages spoken in the Caribbean.

ANSWER: Creoles (or Criollo)

[10] Forces under Antonio José de Sucre won this decisive 1824 battle to ensure Peruvian independence. Following this battle, José de Canterac signed a capitulation for the Royalist forces.

ANSWER: Battle of Ayacucho

10. This state has the shortest ocean shoreline of any state at only 18 miles. For 10 points each:

[10] Name this state whose highest point, Mount Washington, lies in its White Mountains. It used to have a rock formation known as “the Old Man of the Mountain” that is shown on its state quarter.

ANSWER: New Hampshire (or NH)

[10] The similarly named Green Mountains are found in this neighboring state, whose capital is Montpelier. Bernie Sanders represents this state in the Senate.

ANSWER: Vermont (or VT)

[10] This other New England state contains the southernmost reach of the Berkshire Mountains. Lyme disease was first reported in and named after a town in this state.

ANSWER: Connecticut (or CT)

11. Transport between this organelle and the ER is mediated by COP1 and COP2. For 10 points each:

[10] Name this organelle with a *cis* and *trans* face, which packages proteins before shipping them off to other organelles.

ANSWER: Golgi apparatus (or Golgi body; or Golgi complex)

[10] The Golgi apparatus packages proteins into these structures, small bubble-like bodies that can move about a cell.

ANSWER: **vesicles**

[10] Another form of intracellular transport is performed by kinesins and dyneins, which “walk” along these filamentous structures. They are the largest components of the cytoskeleton, and centrosomes act as their namesake “organizing center.”

ANSWER: **microtubules**

12. Answer these questions about detectives in fiction, for 10 points each.

[10] This Belgian detective appeared in 33 novels, many short stories, and the play “Black Coffee.” He first appeared in *The Mysterious Affair at Styles* and for the last time in *Curtain*, 55 years later.

ANSWER: Hercule **Poirot**

[10] This English author created such long-running characters as Hercule Poirot and Jane Marple.

ANSWER: Agatha **Christie**

[10] The character of Hercule Poirot drew inspiration from this other fictional detective, created by Arthur Conan Doyle and accompanied by Dr. Watson.

ANSWER: Sherlock **Holmes**

13. A symphony named after this country unusually uses sarrusophone to produce a jarring, military sound. For 10 points each:

[10] Name this country that was also home to composers such as Henryk Gorecki and Wojciech [WOH-chek] Kilar. The mazurka and polonaise are both dances from this country.

ANSWER: **Poland**

[10] Although he was half-French, this composer is Poland’s most famous. All of his compositions, which include mazurkas, polonaises, and four ballades, feature this composer’s instrument, the piano.

ANSWER: Frederic **Chopin**

[10] Chopin is best known for these pieces, which include the “Revolutionary.” They are short pieces primarily designed to improve both musical and technical aspects of playing as their name suggests.

ANSWER: **études**

14. Answer some questions about controversies caused by President Andrew Jackson’s temper, for 10 points each.

[10] Jackson loathed the centralized monetary power of this financial organization run by Nicholas Biddle and vetoed its recharter, leading to the Panic of 1837.

ANSWER: **Second Bank of the United States** (prompt on partial answer; prompt on National Bank or Bank of the United States; do not accept anything mentioning “First Bank”)

[10] The Peggy Eaton Affair led Jackson to fire most of his cabinet. Afterwards, he relied on this unofficial group of advisors, named for a room in the back of the White House.

ANSWER: **Kitchen** Cabinet

[10] This man, Jackson’s second vice president, was one of the few who survived Jackson’s Cabinet purge. He went on to succeed Jackson as the eighth president.

ANSWER: Martin **Van Buren**

15. Answer some questions about films from director Stanley Kubrick's fifty-year career, for 10 points each.

[10] Blacklisted Dalton Trumbo wrote the screenplay for this film starring Kirk Douglas as a gladiator who leads a rebellion against Rome.

ANSWER: **Spartacus**

[10] The artificial intelligence HAL 9000 manages the spaceship *Discovery One* as it travels to Jupiter in this film during the title year. It is often ranked as one of the greatest science fiction films of all time.

ANSWER: **2001: A Space Odyssey**

[10] Kubrick's film *Dr. Strangelove*, a political satire about nuclear warfare, is set during this conflict. Other films set during this conflict include *The Manchurian Candidate* and *From Russia with Love*.

ANSWER: The **Cold** War

16. This character is kicked out of St. Petersburg for his antics after inheriting a large fortune. For 10 points each:

[10] Name this character who fixates on assassinating Napoleon and eventually finds happiness with Natasha Rostova.

ANSWER: Pierre **Bezukhov**

[10] Bezukhov watches the Battle of Borodino in this novel about aristocratic life during Napoleon's invasion of Russia.

ANSWER: **War and Peace**

[10] This Russian author of *War and Peace* also wrote that "Happy families are all alike" in the opening of *Anna Karenina*.

ANSWER: Leo **Tolstoy**

17. Answer the following about violence during the French Revolution, for 10 points each:

[10] This fortress was stormed by an angry mob on July 14, 1789, with the aim of taking ammunition caches held within.

ANSWER: **Bastille**

[10] This "Incorruptible" member of the Committee for Public Safety created the Cult of the Supreme Being as an attempt to establish a new state religion. He was deposed during the Thermidorian Reaction.

ANSWER: Maximilien **Robespierre** (or Maximilien François Marie Isidore de **Robespierre**)

[10] This radical journalist was assassinated in his bathtub by Girondist Charlotte Corday, who was guillotined thereafter. A Jacques-Louis David painting depicts this man's death.

ANSWER: Jean-Paul **Marat**

18. These peoples' creation myth holds that humans were created from maize dough after the creation of animals, clay, and wood. For 10 points each:

[10] Identify this mesoamerican people of the Yucatan peninsula. Some believed that their base-20 Long count calendar predicted the end of the world in 2012.

ANSWER: **Mayans**

[10] That Mayan creation myth was recorded in this document, which translates roughly as "book of councils." It also records the defeat of the Lords of Xibalba.

ANSWER: **Popul Vuh**

[10] Much of the Popul Vuh recounts the story of two heroes, who have this relation to each other. In Classical myth, Castor and Pollux also had this relationship to each other.

ANSWER: **Twins** (prompt on brothers or siblings)

19. This man postulated that two lines would intersect if the interior angles they formed with a third line summed to less than 180 degrees. For 10 points each:

[10] Name this Greek mathematician considered the most important founder of geometry, especially for his mathematical treatise *Elements*.

ANSWER: **Euclid** of Alexandria

[10] Euclid's algorithm finds this value for two numbers. This value is the largest positive integer that can divide two numbers with no remainder.

ANSWER: **greatest common factor** (or **greatest common divisor**; or **highest common factor**; or **GCD**; or **GCF**; or **HCF**)

[10] On the other hand, Euclid's formula finds something completely different. The formula finds these sets of three numbers, which equal the three side lengths of a right triangle.

ANSWER: **Pythagorean triple**

20. The subjects of the Robbers Cave, Little Albert and Bobo doll experiments were in this part of their lifespan. For 10 points each:

[10] Name this period between birth and puberty, before a human has grown into adulthood.

ANSWER: **childhood** (or **adolescence**; prompt on infancy)

[10] During early childhood, humans develop this ability where they understand that things continue to exist even if they can't see them anymore.

ANSWER: **object permanence**

[10] Object permanence is learned towards the end of the sensorimotor stage, which was proposed by this Swiss psychologist who pioneered developmental psychology.

ANSWER: Jean **Piaget**

TB. This man delivered the "Atlanta Compromise" speech, advocating gradual improvement for the lives of blacks through entrepreneurship and education rather than directly challenging law. For 10 points each:

[10] Identify this turn of the century African-American author of *Up from Slavery*.

ANSWER: Booker Taliaferro **Washington**

[10] To help educate blacks, Washington founded the Tuskegee institute in this southern state. In the 1960s it saw Civil rights activists march from Selma to its capital, Montgomery.

ANSWER: **Alabama**

[10] Washington's tactics contrasted with those of this other civil rights leader, who founded the NAACP and advocated directly challenging racist laws. He authored *The Souls of Black Folk*.

ANSWER: William Edward Burghardt "W.E.B" **DuBois**