Pennsylvania Novice 2016

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



Packet 9 Tossups

1. This man rose to prominence under the tutelage of Johnny Torrio. His headquarters were at 2222 South Wabash Street in the Metropol Hotel. Though pursued by Eliot Ness and the Untouchables for Organized Crime, this man was only sent to jail on a (*) tax evasion charge. This man probably organized the failed assassination attempt on Buggs Moran, which resulted in the seven murders of The Saint Valentine's Day Massacre. For 10 points, name this head of Chicago's South Side Crime Gang in the Prohibition era, nicknamed "Scarface".

ANSWER: Alphonse Gabriel "Al" Capone

2. The enzyme that synthesizes this molecule consists of alpha and beta subunits surrounding a rotating gamma subunit. This molecule is required for kinases to function. Adenylyl cyclase transforms this molecule into the second messenger cyclic AMP. Cellular (*) respiration can produce up to 38 of these molecules. Energy is released from this molecule by removing its third phosphate group. For 10 points, name this high energy molecule used to power many cellular processes.

ANSWER: adenosine triphosphate (or ATP)

3. In this novel, Doctor Livesey enlists the aid of the cheese-craving Ben Gunn. After Black Dog fails to obtain a chest in this novel, Blind Pym hands a "Black Spot" to Billy Bones at the Captain Benbow Inn. Squire Trelawney outfits the (*) *Hispaniola* and hires Captain Smollett along with a crew who had previously served with Captain Flint. At the end of this novel, a map leads to empty treasure chests. For 10 points, name this adventure novel by Robert Louis Stevenson where Jim Hawkins befriends the pirate captain Long John Silver.

ANSWER: Treasure Island

4. Bo Diddley created one of these things from a cigar box. B.B. King rescued one of these from a fire and named every one of these he owned "Lucille." One of these things was "sacrificed" after a performance of "Wild Thing" at the 1967 Monterey Pop Festival. The Fender (*) Les Paul and the Gibson Stratocaster are both varieties of this instrument, which is often paired with an amp to produce sound. For 10 points, name these electronic instruments played by musicians like Eric Clapton and Jimi Hendrix.

ANSWER: electric guitar

5. In Chinese mythology, Wu Gang is doomed to always try to cut down a tree on this object. The Yutu vehicle was named after another mythical creature on this object who is often said to be using a mortar and pestle. That mythical creature was the pet of Chang'e, the Jade Rabbit. Another figure associated with this object was the daughter of (*) Hyperion and sister of Eos who fell in love with the shepherd Endymion as she passed over his flocks at night. For 10 points, name this celestial object represented by the goddesses Selene and Artemis.

ANSWER: The Moon

6. This language was used to chronicle the journeys of two giants who traveled the world, Gargantua and Pantagruel. One work in this language that calls boredom the "worst of miseries" and contains allegedly obscene symbolist poetry has a title that translates as *The Flowers of Evil*. Medieval songs in an earlier form of this language were sung by Occitan (*) troubadours and included the story of wars against the Moors by Paladins in *The Song of Roland*. For 10 points, name this language in which Charles Baudelaire wrote *Les Fleurs du Mal*.

ANSWER: French

7. One leader of this nation employed a group of economic reformers known as the Chicago Boys, and this nation won the War of the Pacific. Formal independence for this country was declared after the Battle of Chacabuco was won by Bernardo O'Higgins and (*) Jose de San Martin. The Popular Unity coalition was headed by Salvador Allende [AY-end-ay] in this nation, where Augusto Pinochet took over in 1973. For 10 points, name this country with capital at Santiago, a long nation on the coast of South America.

ANSWER: Chile

8. Charles Jennens wrote the libretto for this piece, which includes the tenor air "Ev'ry valley shall be exalted" and the soprano singing "I know that my redeemer liveth." At the end of the second section of this work, King (*) George II began the tradition of standing while the choir sings "He shall reign for ever and ever." That movement of this piece is commonly associated with Christmas and is the Hallelujah chorus. For 10 points, name this oratorio by George Friedrich Handel.

ANSWER: Messiah

9. Samples of acetic acid without this compound are termed "glacial." According to the Arrhenius definition, acids and bases are distinguished by their interactions with this compound. This compound's phase diagram has a (*) negatively sloped solid-liquid boundary. One cubic centimeter of this compound at room temperature is equal to one gram, and the Celsius temperature scale was defined using this compound's melting point and boiling point.

ANSWER: <u>water</u> (or $\underline{\mathbf{H}_2\mathbf{O}}$; prompt on <u>ice</u> or <u>steam</u>)

10. Beehive-shaped rock formations are found in this country's Bungle Bungle Range, while crocodile attacks are common in its Kakadu National Park. Rock art in this country often includes images of the Rainbow Serpent. This country's longest river, the Murray, flows into the Indian Ocean just outside Adelaide. A large sandstone (*) rock that appears to glow red at sunset named Uluru is found in this country's arid interior, the Outback. For 10 points, name this country with many native marsupials such as koalas and kangaroos.

ANSWER: Australia

- 11. One character in this novel drinks beer to prevent her expected child from growing too large. Two characters escape across Lake Maggiore [muh-JOR-ae] to avoid one's execution by the military police. This novel ends with the protagonist walking home alone in the rain after a stillborn birth killed his fiancé (*) Catherine Barkley. For 10 points, name this novel about World War I ambulance driver Frederic Henry's desertion from the Italian army, written by Ernest Hemingway. ANSWER: A Farewell to Arms
- 12. This artist depicted two men beating each other with sticks in his painting Fight with Cudgels. That painting was originally done on the wall of the House of the Deaf Man, as was another of his works showing a wild-eyed god fitting a bloodied human corpse into his mouth, Saturn Devouring His Son. This man's most famous painting is lit by a box lantern on the ground, and depicts a man wearing a white (*) shirt raising his arms in a Christ-like pose as he faces down a faceless firing squad. For 10 points, name this Spanish Romantic artist who painted The Third of May, 1808.

ANSWER: Francisco de <u>Goya</u> y Lucentes

13. Removing a non-leaf vertex from a tree results in this many components, and Mersenne primes are defined as being one less than a power of this number. Differentiating a function of this degree will yield a line. Computer memory is commonly measured in (*) powers of this number, with the unit bytes, and it is the only integer besides one whose factorial equals itself. This number is the third in the Fibonacci sequence. For 10 points, identify this number, the degree of a quadratic function and the divisor of all even numbers.

ANSWER: two

14. During China's Great Leap forward, Mao ordered that this good be produced in "backyards." Charles M. Schwab turned Bethlehem, Pennsylvania into a major manufacturing center for this good in the 20th century. Along with (*) coal, the earliest ancestor of the EU regulated trade of this good. Pinkerton detectives put down strikers in this industry during the Homestead Strike. For 10 points, Andrew Carnegie made his fortune in the production of this metal, used to build skyscrapers.

ANSWER: steel

15. This man once refused to escape from prison despite an earthquake having destroyed the building. At the incident of Antioch, he confronted another man about that man's gentile-like behavior. This man frequently traveled with men named Silas and Timothy. His sight was restored by Ananias of Damascus after he had been temporarily blinded, and he had participated in the (*) stoning of St. Stephen before his conversion to Christianity. For 10 points, name this apostle whose letters comprise more than half of the New Testament of the Bible.

ANSWER: St. Paul the Apostle (or Saul of Tarsus)

- 16. During this event, Ken Cuccinelli threw down his badge after being overruled on a voice vote by the chair. A provision expressing supporting for arming rebels in Ukraine was removed during the platform committee meeting at this event, where Silicon Valley investor Peter Thiel said he was "proud to be gay." One speaker at this event was booed for saying, (*) "Vote your conscience" while another claimed, "I am your voice." For 10 points, name this event that took place in Quicken Loans Arena in Cleveland in July 2016 that officially nominated Donald Trump for the presidency.

 ANSWER: The 2016 Republican National Convention (accept answers that include both Republican and Convention; prompt on RNC)
- 17. In 1966, this man pulled his nation's military out of NATO forces due to perceived American domination of his country's foreign policy. He delivered the Appeal of 18 June on BBC radio, invigorating French Resistance to Nazis. While on a state visit to Montreal, he declared, "Long live (*) Free Quebec!" This man negotiated peace with the FLN, leading to Algeria's independence from his country. For 10 points, name this First President of the 5th French Republic and former French general. ANSWER: Charles André Joseph Marie de Gaulle
- 18. George Balanchine added a brief interpolation to this work from its composer's *Sleeping Beauty* in the 1954 performance that popularized it in America. This work begins with a party at the Stahlbaum residence, where an owl transforms into Drosselmeyer. Bonbons emerge from Mother Ginger's dress before (*) Clara and the title character depart in a sleigh drawn by a reindeer after the Dance of the Sugarplum Fairy. For 10 points, name this ballet by Peter Ilyich Tchaikovsky about the namesake toy coming to life, often performed around Christmas.

ANSWER: The Nutcracker

19. One woman in this novel, Remedios the Beauty, is lifted into the sky while doing laundry. Characters in this novel include Melquiades, a gypsy who makes fishes out of gold and demonstrates ice to another character. A matriarch in the novel, Ursula, goes blind and withers with age. Male members of this novel's main family are all named (*) Jose Arcadio or Aureliano. This novel features seven generations of the Buendia family in the town of Macondo. For 10 points, name this magical realist novel by Gabriel García Márquez.

ANSWER: One **Hundred Years of Solitude** (or **Cien años de soledad**)

20. The mass defect describes the difference between this structure's mass and the masses of its individual parts. The charge of this structure is denoted by a capital Z. The force that binds quarks to each other also keeps this structure together, which is the (*) strong force. The experiment that discovered this structure disproved Thomson's plum pudding model by firing alpha particles at a sheet of gold foil. For 10 points, name this structure that contains protons and neutrons, the center of the atom. ANSWER: atomic <u>nucleus</u>

TB. One character in this novel uses the pseudonym "Morris Bolter" to join a gang. Near the end of this book, Monks is revealed to be Edward Leeford, a half-brother of the protagonist. Bill Sikes accidentally hangs himself fleeing a mob after killing his girlfriend Nancy in this novel. A group of (*) boys cast lots in this novel to see who will ask for more gruel. For 10 points, name this novel in which the title orphan falls in with pickpockets led by Fagin, a work by Charles Dickens.

ANSWER: Oliver Twist

Pennsylvania Novice 2016

Packet 9 Bonuses



- **1.** This nation's independence was secured after defeating a seven nation coalition in 1948. For 10 points each:
- [10] Name this Middle Eastern nation, which took possession of the Gaza Strip, the West Bank, and the Sinai during the Six Day War.

ANSWER: Israel

[10] During the Six Day War, Israel also captured this hilly region from Syria. The taking of this region, north of the Sea of Galilee, was not in Israel's original plans for defense.

ANSWER: The Golan Heights

[10] Egypt and Syria launched a sneak attack against the Israelis in 1973 on this Jewish high holiday to try and win back lost territory. Jews would have heard the Kol Nidre prayer at synagogue on this day.

ANSWER: **Yom Kippur**

- **2.** Music set to this type of composition usually opens with a *Kyrie* and ends with an *Agnus Dei*. For 10 points each:
- [10] Name this type of musical composition set to the liturgy of the Catholic church service. J.S. Bach wrote a famous one in B Minor.

ANSWER: mass

[10] This type of mass is usually played at funerals and often includes a "Dies Irae" sequence. Gabriel Faure' composed a popular one of these and Benjamin Britten composed a "War" one.

ANSWER: requiem

[10] This Italian composer wrote a famous 1874 requiem, but is more famous for composing music for operas such as *Aida* and *Rigoletto*.

ANSWER: Giuseppe Verdi

- **3.** This novel, told as a series of Vignettes, focuses on a Latino neighborhood in Chicago and the daily ups and downs of its residents. For 10 points each:
- [10] Name this coming-of-age novel narrated by Esperanza Cordero, written by Sandra Cisneros.

ANSWER: The House on Mango Street

[10] This book by the Trinidadian author V.S. Naipaul concerns Mohun and his attempt to own a house of his own so he can escape the domineering family of his wife.

ANSWER: A House for Mr. Biswas

[10] A series of semi-autobiographical books about "Little Houses" in "The Big Woods" and "On the Prairie" was written by this author, who eventually married Alonzo in *These Happy Golden Years*.

ANSWER: Laura Ingalls Wilder (prompt on just Ingalls or Laura)

- **4.** Two answers required for each part. Answer these questions about pairs in chemistry, for 10 points each.
- [10] Cations have one of these two types of opposing electric charge while anions have the other.

ANSWER: **positive** and **negative** (both required for points, accept in either order)

[10] Molecules can have this property or its opposite depending on its distribution of electric charge. The difference in electronegativity determines which one of this pair of properties is present for a covalent bond

ANSWER: **polar** and **nonpolar** (both required for points, accept in either order)

[10] These two types of isomers refer to the relative position of groups of atoms connected to atom centers with limited bond rotation. For alkenes, they are marked with the E-Z notation.

ANSWER: <u>cis-</u> and <u>trans-</u> isomers (both required for points, accept in either order)

- **5.** One state established after this conflict was the Principality of Antioch. For 10 points each:
- [10] Name this first in a series of medieval Christian military campaigns, which ended with a group of european nobles successfully conquering Jerusalem. Others followed, which were less successful.

ANSWER: The First Crusade

[10] The First Crusade was called for by this Pope at the council of Clermont in 1095.

ANSWER: <u>Urban II</u>

[10] Jerusalem was re-conquered by Muslim forces under this Kurdish general who was also conquered Syria and Egypt. He crushed the Crusaders at the Horns of Hattin in 1187.

ANSWER: An-Nasir Salah ad-Din Yusuf ibn Ayyub or Saladin

- **6.** This author established the Bellweather literary prize to encourage "socially engaged fiction." For 10 points each:
- [10] Name this author of *Pigs in Heaven* and *Animal Dreams* who imagined the effects of climate change on Appalachia in *Flight Behavior*.

ANSWER: Barbara Kingsolver

[10] In this novel by Kingsolver, the Guatemalan immigrants Estevan and Esperanza pose as Native Americans to ensure Turtle's adoption by Taylor Greer.

ANSWER: The Bean Trees

[10] Kingsolver also wrote a novel titled for one of these objects made of Poisonwood that follows a family of American missionaries in the Congo during Congo's independence struggle.

ANSWER: Bible

- 7. This goddess was born dressed in full armor after her father, Zeus, had a splitting headache. For 10 points each:
- [10] Name this Greek goddess of wisdom whose symbol was an owl and who was the dedicatee of the Parthenon in Athens.

ANSWER: Athena (prompt on Minerva)

[10] Athena was challenged to a contest in this skill by Arachne. In most versions of the myth, Arachne lost and was transformed into a spider.

ANSWER: weaving

[10] Athena carried this protective shield of Zeus whose name now refers to any kind of protection or support.

ANSWER: aegis

- **8.** This force is significantly weaker than the other fundamental forces. For 10 points each:
- [10] Name this attractive force dependent on the mass between two objects.

ANSWER: gravity

[10] On the surface of planets, gravity is typically measured by the acceleration it causes on falling bodies. On Earth, this acceleration is equal to 9.8 of these units.

ANSWER: meters per second squared (or meters per second per second)

[10] In order to break free from the gravitational pull of the earth, this speed must be attained by a rocket. At this speed, the kinetic energy equals the potential energy from gravity.

ANSWER: escape velocity

- 9. Traverse City and Green Bay are both found on arms of this lake. For 10 points each:
- [10] Name this third largest Great Lake. This lake separates the "Upper Peninsula" from the mitten-shaped part of its namesake state.

ANSWER: Lake Michigan

[10] This most populous city in Illinois borders Lake Michigan and contains the Willis Tower. It is known for a type of deep dish pizza as well as its "El" light rail system.

ANSWER: Chicago

[10] This other Great Lake is separated from Lake Michigan by the straits of Mackinac and includes Manitoulin Island in Ontario as well as Saginaw Bay.

ANSWER: Lake **Huron**

10. Constantin Brancusi created a symmetrical rectangular sculpture with this title. For 10 points each: [10] Identify this common title. A painting with this title features two figures wearing gold robes decorated with geometric shapes embracing and performing the title action.

ANSWER: The Kiss

[10] The painting *The Kiss* was created by this Austrian artist, who also utilized gold leaf in his depiction of Danae and his portraits of Adele Bloch-Bauer.

ANSWER: Gustav Klimt

[10] Klimt led a "Secession" group of artists named for this city, the capital of Austria

ANSWER: Vienna

11. This process was demonstrated to be reversible with Anfinsen's experiment. For 10 points each:

[10] Identify this process that results in proteins acquiring tertiary structure, one step beyond alpha helix and beta sheet formation.

ANSWER: protein folding

[10] Protein folding is heavily dependent on minimizing contact between nonpolar regions and water, which means the nonpolar regions have this property meaning "water-fearing."

ANSWER: <u>hydrophobicity</u> (or <u>hydrophobic</u> effect)

[10] All proteins are comprised of these kinds of molecules that include cysteine and tryptophan. There are twenty standard members of this group of molecules.

ANSWER: amino acids

12. This psychologist developed the clinical method of psychoanalysis. For 10 points each:

[10] Name this Austrian psychiatrist, who also emphasized the suppression of subconscious desires and discussed defense mechanisms like denial and compensation to cope with negative stimuli.

ANSWER: Sigmund Freud ["froid"]

[10] Freud coined this term to describe a young boy's subconscious desire to have sex with his mother. Its gender flipped compliment is the Electra Complex.

ANSWER: **Oedipus Complex**

[10] Freud also coined this term for the impulsive side of the human psyche that craves instant gratification. It forms a triad with the ego and superego.

ANSWER: <u>Id</u>

13. Architects who worked on this project included Benjamin Latrobe and Charles Bulfinch. For 10 points each:

[10] Name this building. Its dome was finished in 1866, and its rotunda includes the fresco *The Apotheosis of Washington* by Constantin Brumidi.

ANSWER: U.S. Capitol Building

[10] Another building with a famous rotunda is this residence outside of Charlottesville, Virginia. Innovations developed at this home include a spherical sundial and special wine dumbwaiters.

ANSWER: Monticello

[10] This man designed many of the features of his home at Monticello. This man also authored the Declaration of Independence.

ANSWER: Thomas Jefferson

14. Assassinating someone often requires as much luck as skill. For 10 points each:

[10] This stage actor was greatly aided in killing Abraham Lincoln by Lincoln's bodyguard John Parker having stepped away to get a drink.

ANSWER: John Wilkes Booth

[10] Fearing this faith healer's control of the Russian Royal family, conspirators poisoned, shot, and tried to drown him. These all failed, but hypothermia from being thrown in a river did kill him.

ANSWER: Grigory Rasputin

[10] Archduke Franz Ferdinand survived the first grenade thrown at his carriage, but a wrong turn after visiting those hurt in the blast at the hospital took him right by this Black Hand member eating lunch, who shot him on the second try.

ANSWER: Gavrilo Princip

15. This belief is divided into implicit and explicit forms, based on whether the person realizes they adhere to it or not. For 10 points each:

[10] Give this term that indicates a lack of religious belief or a rejection of the existence of God or Gods.

ANSWER: Atheism

[10] This Dutch Philosopher, who rejected Cartesian mind-body dualism in his *Ethics*, was one of the first Europeans to engage in biblical criticism and question religion's authenticity. This got him expelled from Amsterdam's Jewish community.

ANSWER: Baruch **Spinoza** (or Benedict de **Spinoza**)

[10] This German philosopher remarked "God is Dead" as a result of the secularization of Western Society. He also created the concept of the Ubermensch in his work *Thus Spoke Zarathustra*.

ANSWER: Friedrich Wilhelm Nietzsche [NEE-chuh]

16. Over the past two decades, Will Ferrell has played a number of memorable characters. For 10 points each:

[10] In the recurring "Celebrity Jeopardy" skit on Saturday Night Live, Ferrell portrayed this host of Jeopardy! as frustrated with idiotic, inappropriate contestants.

ANSWER: Alex Trebek

[10] In this 2003 comedy, Ferrell played the title character Buddy. In the movie, he attempts to find his father in New York City while reviving the city's Christmas spirit.

ANSWER: Elf

[10] This Ferrell character lives by the motto, "If you're not first, you're last" and battles disloyal family and friends, a cougar, and opponent Jean Girard in the movie *Talladega Nights*.

ANSWER: **Ricky Bobby** (accept either underlined part)

17. One character in this play was discovered as a baby in a handbag in the cloakroom at Victoria Station, and another invents a fake friend named Bunbury to help him escape unwanted social engagements. For 10 points each:

[10] Name this play, in which Jack Worthing attempts to woo Gwendolen Fairfax by assuming the title name.

ANSWER: The Importance of Being Earnest

[10] One of the surprise twists at the conclusion of *The Importance of Being Earnest* is the revelation that Jack Worthing shares this relation to his friend Algernon Moncrieff. Fairy tale compilers Jacob and Wilhelm Grimm shared this relation.

ANSWER: brothers

[10] *The Importance of Being Earnest* was written by this Irish writer, who was jailed for his homosexual relations with Lord Alfred Douglas. This author's only novel was *The Picture of Dorian Gray*.

ANSWER: Oscar Fingal O'Flahertie Wills Wilde

- **18.** This operation is generalized to non-integers with the gamma function. For 10 points each:
- [10] Name this operation that yields the product of all positive integers less than or equal to a particular number. It is denoted with an exclamation point.

ANSWER: factorial

[10] Factorials are useful for determining the number of possible arrangements of a set, which is called this term. Unlike combinations, the ordering does matter for these things.

ANSWER: **permutation**s

[10] If you draw from a deck of cards and replace the card each time, each draw does not influence another, which means each event has this property. Coin flips also possess this property.

ANSWER <u>independence</u> (or obvious equivalents that relate to them being <u>independent</u>)

- **19.** This legislation applied not only to practical paper items, but also to playing cards. For 10 Points each:
- [10] Name this 1765 Act of Parliament that taxed paper items in the American colonies. It irked Americans who did not wish to be taxed without representation.

ANSWER: Stamp Act of 1765

[10] Protests led to the repeal of the Stamp Act. Two years later, Britain passed this set of Acts, named for a Chancellor of the Exchequer, which raised duties on paint, lead, glass, and many other items.

ANSWER: Townshend Acts

[10] Another type of law that colonists despised were Quartering Acts, which allowed Britain to force people to house men of this profession at their own expense. They were commonly called Redcoats.

ANSWER: soldier (accept common knowledge equivalents like people in the military, etc.)

- **20.** This character kills the playwright Clare Quilty at the climax of the novel he narrates. For 10 points each:
- [10] Name this unreliable narrator, a professor who becomes inappropriately infatuated with girls.

ANSWER: Humbert Humbert

[10] Humbert appears in this novel by Vladimir Nabokov, which takes its title from the personal nickname Humbert gives to the 12 year old Dolores Haze.

ANSWER: Lolita

[10] Much of the action of *Lolita* occurs in one of these things, as Humbert and Lolita move around the country covering their relationship. Lolita's mother, Charlotte, is killed by one of these things during the book.

ANSWER: <u>car</u>s (accept clear equivalents like <u>automobile</u>s)

- **TB.** This theory describes the spatial location of lone pairs around central atoms. For 10 points each:
- [10] Name this theory that describes the geometry of molecules in three-dimensions depending on electron-electron repulsion.

ANSWER: <u>VSEPR</u> theory (pronounced "vesper;" accept <u>valence shell electron pair repulsion</u> theory)

[10] In VSEPR theory, the oxygen atom in water has two lone pairs and two single bonds to hydrogen, meaning it has this molecular geometry. Since water has four electron domains, its EDG is tetrahedral.

ANSWER: bent

[10] Compounds of these elements typically form square planar complexes. This group of elements found in the rightmost column of the periodic table has a full octet, so they are very unreactive.

ANSWER: **noble gas**es (or group **18**)