

2022-23 Solon-Adjacent Novice Set (SANDS)

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Packet 9

1. **At the professional level, this activity is governed by the IFBB, which bans substances like “gear” and “tren.” “Classic” and “Men’s” physique are among the divisions in this activity’s Mr. Olympia competition, which (*) Arnold Schwarzenegger won seven times. At this activity’s “shows,” competitors apply a tan and oil before executing poses on a stage. For 10 points, what activity involves competitors showcasing their muscles?**
ANSWER: **bodybuilding** [prompt on weight **lifting**; accept **physique** until mentioned; DO NOT ACCEPT OR PROMPT ON “powerlifting”] <Other Academic/Miscellaneous–Kapadia>

The Meissner effect involves the expulsion of a magnetic field from a material with this property. For 10 points each:

[H] Name this property described with Cooper pairs in BCS theory. Materials with this property are separated in type I and type II varieties.

ANSWER: **superconductivity** [accept **superconductor**]

[E] Superconductors have a value of zero for this quantity, which is measured in Ohms. This quantity measures a circuit’s opposition to the flow of electrical current.

ANSWER: **resistance**

[M] Ohm's law states that this quantity equals resistance times current. This quantity can be measured in Joules per Coulomb and is defined as the difference in electric potential between two locations.

ANSWER: **voltage** <Physics–Chae>

2. **In one speech, this man used the term “axis of evil” to describe countries like Iran and North Korea. This man gave the “Mission Accomplished” speech after the conclusion of the invasion of Iraq. During this president’s tenure, the (*) Twin Towers were destroyed on September 11th, 2001, leading to the war in Afghanistan. For 10 points, Bill Clinton was succeeded as president by, what man, the son of a former president?**
ANSWER: George **Walker Bush** [accept George **Bush the Younger** or “**Dubya**”; prompt on **Bush**, DO NOT ACCEPT OR PROMPT ON George **Herbert Walker Bush** or George **Bush the Elder**] <American History–Rao>

To become members of this force, candidates must pass BUD/S training at this force’s West Coast base in Coronado, California. For 10 points each:

[E] Name this primary special operations force of the U.S. Navy. This force’s name indicates their ability to fight on the seas, land, and in the air.

ANSWER: Navy **SEALs**

[M] In 2011, SEAL Team Six carried out Operation Neptune Spear to take out this al-Qaeda terrorist, who was hiding in Abbottabad, Pakistan.

ANSWER: Osama **Bin Laden**

[H] This Navy SEAL became the deadliest sniper in U.S. military history during his service in the Iraq War. This man was the subject of the autobiography *American Sniper*.

ANSWER: Chris **Kyle** <Other Academic/Miscellaneous–Kapadia>

3. **This organ contains a cup-like sac called Bowman's capsule, which contains the glomerulus. The U-shaped portion of the connecting tubule between the functional units of this organ is called the loop of Henle. The functional units of these organs are called (*) nephrons.** Dialysis filters the blood and prevents sepsis when these organs fail. For 10 points, name these organs that produce urine.

ANSWER: **Kidney** <Biology–Feldman>

These substances display the Tyndall effect when light is scattered within them. For 10 points each:

[M] Name these cloudy substances, in which insoluble particles are suspended in another substance.

ANSWER: **Colloids**

[H] Because colloids often appear as cloudy mixtures, they often have high values for this quantity . This quantity describes the relative clarity of a liquid

ANSWER: **Turbidity**

[E] Another type of mixture, solutions, involve a solute being dissolved in this other type of substance. Water is considered the “universal” type of this substance because of its ability to dissolve solutes.

ANSWER: **solvent** <Chemistry–Chae>

4. **In a Supreme Court ruling about this practice, a concurring opinion called for eliminating “substantive due process.” In response to a Texas law fining anyone who aided this practice, Governor Newsome declared California a (*)“safe haven” for this practice.** The right to this practice was protected by the ruling in *Roe v. Wade*. For 10 points, name this practice, which deliberately ends a pregnancy.

ANSWER: **abortion** <Current Events–Feldman>

Oberon and Titania are considered the king and queen of these beings in one play. For 10 points each:

[E] Name these mythical beings. J.M Barrie created one of these beings, named Tinker Bell, in *Peter Pan*.

ANSWER: **fairy** [or **fairies**]

[M] The fairies Oberon and Titania appear in this play by William Shakespeare. This play ends with the double wedding of Hermia and Lysander and Helena and Demetrius.

ANSWER: A ***Midsummer Night's Dream***

[H] This mischievous fairy from *A Midsummer Night's Dream* serves as Oberon's jester. This character transforms Nick Bottom's head into that of a donkey.

ANSWER: **Puck** <British Literature–Ganguli>

5. **This novel, which ends with the lines “after all, tomorrow is another day,” features a party hosted at the Twelve Oaks plantation by Ashley Wilkes. In order to get money to save Tara plantation, the protagonist of this novel looks to marry Frank Kennedy and (*) Rhett Butler.** The antebellum South is romanticized in this novel by Margaret Mitchell. For 10 points, name this novel that focuses on the southern belle Scarlett O'Hara.

ANSWER: ***Gone with the Wind*** <American Literature–Ganguli>

A revolt of members of this religious group ended with a mass suicide in the Masada fort. For 10 points each:

[E] Name this oft-persecuted religious group that led multiple revolts against Roman rule. This religious group preceded Christianity and Islam as the first Abrahamic religion.

ANSWER: **Jews** [accept **Judaism**]

[M] During the reign of this emperor, the siege of the Masada ended the First Jewish Revolt. This emperor is said to have fiddled during the Great Fire of Rome.

ANSWER: **Nero**

[H] Simon Bar Kokhba led another major Jewish revolt during the reign of this Roman emperor, who named a defensive wall south of the Antonine Wall that separates Scotland and England.

ANSWER: **Hadrian** [accept **Hadrian's** Wall] <Ancient/Other History–Sareddy>

6. **This quantity for a liquid falling out of a tank is equal to the square root of $2gh$ by Torricelli's theorem. Centripetal acceleration is equal to this quantity squared over radius. An object in free fall will accelerate until it reaches a “terminal” (*) type of this quantity.** Because this quantity has a magnitude and a direction, it is differentiated from speed. For 10 points, name this quantity which equals the rate of change in displacement.

ANSWER: **velocity** <Physics–Sivaram>

Former Japanese Navy member Tetsuya Yamagami confessed to murdering this man. For 10 points each:

[H] Name this former Japanese Prime Minister, who was assassinated on July 8, 2022, while campaigning for a fellow LDP party member in Nara.

ANSWER: Shinzo **Abe**

[E] The assassin claimed his actions were motivated by Abe's connection to the South Korea-based “Unification” one of these religious institutions, whose beliefs differ from the more mainstream Roman Catholic one of these institutions.

ANSWER: **church**

[M] Due to Japan's strict gun control laws, the gun used to kill Abe had this quality, evidenced by the fact that it was composed of two pipes strapped together with electrical tape.

ANSWER: **homemade** [or **makeshift** or **DIY** or **improvised**] <Current Events–Kapadia>

7. **One author with this surname describes a “traveler from an antique land” in a poem that warns “Look on my works, ye mighty, and despair!” In addition to the author of “Ozymandias,” an author with this surname wrote a novel subtitled “The Modern Prometheus,” in which (*) Henry Clerval is killed by the creation of the protagonist.** For 10 points, name this surname shared by Percy and Mary, the latter of whom wrote *Frankenstein*.

ANSWER: **Shelley** [accept **Percy** Bysshe **Shelley** or **Mary** Wollstonecraft **Shelley**] <British Literature–Ganguli>

Answer the following about the number one-half. For 10 points each:

[H] This mathematician's namesake “zeta function” has nontrivial roots with a real part of one-half.

ANSWER: Georg Friedrich Bernhard **Riemann**

[E] Raising a number to an exponent of one-half is the equivalent of using this other function. This function undoes multiplying a number by itself.

ANSWER: **square root** [prompt on just **root**]

[M] Heron's formula uses the semiperimeter, or one-half of a polygon's perimeter, to calculate the area of this shape.

ANSWER: **triangle** <Other Science–Chae>

8. **“Hunter” led a mutated group of these people called the “Bad Batch.” These people were born in Tipoca city on the watery planet of Kamino. Inhibitor chips forced these people to turn on their masters when given (*) Order 66.** Jango Fett was the template for these people, who made up the Grand Army of the Republic and fought against Separatist droids in their namesake wars. For 10 points, name these genetically identical soldiers from Star Wars.

ANSWER: **clone** troopers [or **CT**; accept The **Clone** Wars; prompt on **Republic Troopers**] <Popular Culture–Kapadia>

After losing the 1800 election, John Adams attempted to appoint dozens of pro-Federalist examples of these people to newly created positions. For 10 points each:

[E] Commissions were not delivered in time to the so-called “midnight” type of what people, who preside over a court?

ANSWER: **judge** [accept **justice of the peace**]

[M] The issue of the “midnight judges” led to this 1803 Supreme Court Case that struck down the Judiciary Act of 1789 and established the principle of judicial review.

ANSWER: **Marbury v. Madison**

[H] The majority opinion in *Marbury v. Madison* was written by this man, the longest-serving Chief Justice of the Supreme Court.

ANSWER: John **Marshall** <American History–Kapadia>

9. **This battle ended the losing ruler’s “Hundred Days” period. One side’s forces in this battle were saved by the arrival of a Prussian Army under Gebhard von Blucher. After this battle, the leader of the losing side was permanently exiled to the island of (*) St. Helena.** For 10 points, the Duke of Wellington won what 1815 battle, the final defeat for Napoleon Bonaparte?

ANSWER: Battle of **Waterloo** <European History–Rao>

This author recited her poem, “On the Pulse of Morning,” at the inauguration of Bill Clinton. For 10 points each:

[H] Name this author who describes her life in the town of Stamps, Arkansas in *I Know Why the Caged Bird Sings*.

ANSWER: Maya **Angelou**

[E] *I Know Why the Caged Bird Sings* is one of these works. Authors typically describe the story of their life in this type of work.

ANSWER: **autobiography** [accept **memoir**]

[M] Despite its title, an autobiography of this man, which details how he changed his last name, was written by Alex Haley. This civil rights activist was assassinated after breaking away from the Nation of Islam.

ANSWER: **Malcolm X** [or Malcolm **Little**; or El-Hajj Malik El-**Shabazz**] <American Literature–Ganguli>

10. **Certain types of these devices suffer from the memory effect, which causes a decrease in efficiency over time. Those devices use electrodes made of nickel and cadmium to create a rechargeable circuit. The 2019 Nobel Prize in chemistry was awarded for the creation of the (*) lithium-ion type of these devices, which have succeeded their alkaline counterparts.** For 10 points, name these devices that produce electrical energy and come in AAA and AA varieties.

ANSWER: **batteries** <Chemistry–Sivaram>

The Umrah is a “lesser” form of this practice, which can be undertaken at any point in the year. For 10 points each:

[M] Name this annual pilgrimage to Mecca, which all Muslims must complete at least once in their lifetime.

ANSWER: **hajj**

[E] A common ritual during the hajj is the “Stoning of [this figure].” This evil figure, called Shaitan or Iblis by Muslims, tempted Ibrahim to disobey Allah.

ANSWER: **Devil** [or **Satan**; accept **Shaitan** or **Iblis** before mentioned or The Stoning of the **Devil**]

[H] Another hajj ritual, running between the hills of Safa and Marwa, symbolizes Hajar’s search for this substance. The angel Jibreel provided this substance to Hajar by striking the ground with his heel.

ANSWER: **water** <Religion–Kapadia>

11. **This collection includes one character who is carried out of a valley of diamonds by a giant bird called a roc. The magic words “Open Sesame!” are used in a story from this collection, in which Morgiana pours boiling oil on thieves hiding in jars to save (*) Ali Baba. Scheherazade relates one story per night in this work. For 10 points, name this collection of stories featuring characters like Sinbad and Aladdin.**

ANSWER: **One Thousand and One Nights** [or **The Arabian Nights**; Entertainment; or Kitāb **Alf laylah wa-laylah**] <World Literature–Ganguli>

This conflict started when Francisco Solano Lopez invaded the Mato Grosso region of a neighboring country. For 10 points each:

[H] What 19th century conflict saw a coalition of South American countries defeat Paraguay?

ANSWER: War of the **Triple Alliance** [accept **Paraguayan** War until mentioned]

[M] With the fighting-age population depleted, Lopez sent these people into battle with fake beards. The use of these people as soldiers is most prevalent in Africa militias.

ANSWER: **children** [or **kids**; accept **youths** before “young”]

[E] For arbitrating in their favor in the war’s aftermath, Paraguay named the Hayes Department after a holder of this position, Rutherford B. Hayes.

ANSWER: **U.S. President** [or **American President**; prompt on **President** with “of what country?”] <World History–Kapadia>

12. **The concerto for this instrument nicknamed “The Cuckoo and the Nightingale” was composed by G.F. Handel. A toccata and fugue in D minor for this instrument were written by Johann Sebastian Bach. Players of this instrument use (*) stops to control its sound and may operate a *pedalclavier* with their feet. For 10 points, name this large keyboard instrument often found in churches, which produces sound by moving air through pipes.**

ANSWER: pipe **organ** <Auditory Fine Arts–Maiorana>

While the wave-particle duality of light is now accepted, this experiment’s namesake believed the wave theory of light to be true. For 10 points each:

[H] Name this experiment where light was shone through its namesake openings. It helped disprove the corpuscular theory of light.

ANSWER: Young’s **double-slit** experiment

[M] A pattern due to this phenomenon appears in Young’s double-slit experiment. It has constructive and destructive types.

ANSWER: **interference**

[E] While Young’s double-slit experiment was typically reproduced using beams of light, Claus Jönsson used a beam of these negatively charged particles which orbit the atomic nucleus.

ANSWER: **electrons** <Physics–Chae>

13. **Mark Twain recounted becoming a “pilot” of this technology in his memoir *Life on the Mississippi*. The first commercially successful example of this technology was Robert Fulton’s *Clermont*. It’s not trains, but this technology was made practical by improvements to James Watt’s designs of an (*) engine powered by water vapor. For 10 points, river transportation in the 19th century was revolutionized by what kind of boat?**

ANSWER: **steamboat** [prompt on **boat** until mentioned] <American History–Kapadia>

A man freezes to death after failing to complete the title action of this author's "To Build a Fire." For 10 points each:
[M] Name this author, who wrote about Buck in *The Call of the Wild*.

ANSWER: Jack **London**

[E] Buck is one of these canine animals that pulls a sled for John Thornton in *The Call of Wild*.

ANSWER: **dogs**

[H] The dog Lip-Lip torments the protagonist of another novel by London about a wolfdog. That novel is titled for a "fang" of this color.

ANSWER: **white** [accept **White Fang**] <American Literature–Ganguli>

14. **Two atoms of this element, along with ammonia, bind a central platinum metal in the chemotherapy agent cisplatin. A precursor to mustard gas was a diatomic gaseous form of this element. Compounds made entirely of Carbon, Fluorine, and (*) this element are responsible for the destruction of the ozone layer. Common uses for this element include bleach and pool disinfectants. For 10 points, name this element with atomic number 17 and chemical symbol Cl.**

ANSWER: **Chlorine** <Chemistry–Sivaram>

The first of the "retro" type of these buildings that were built as part of a 1990s architectural movement is located in Camden Yards. For 10 points each:

[H] Name these buildings. One of these buildings in Boston is home to a wall called the "Green Monster".

ANSWER: **baseball stadiums** [or **baseball parks**; prompt on just "stadiums" with "of what sport?"]

[M] The Orioles retro baseball stadium in Camden Yards is located near this city's Inner Harbor. This city on Chesapeake Bay is located just northeast of Washington D.C.

ANSWER: **Baltimore**

[E] Baltimore is the largest city in this state, whose capital is Annapolis. This state is the "M" in the DMV region.

ANSWER: **Maryland** <Geography–Sareddy>

15. **This thinker wrote *Beyond the Pleasure Principle*, in which he theorized the love and death drives: Eros and Thanatos. This thinker conceptualized a complex where young sons show sexual drive towards their (*) mothers in his work *The Interpretation of Dreams*. The Oedipus complex was formulated by, for 10 points, what psychologist, who developed the id, ego, and superego and founded psychoanalysis.**

ANSWER: Sigmund **Freud** <Social Science–Sareddy>

A man appears slumped over in a bathtub in one painting created during this event. For 10 points each:

[H] Name this general historical event, which inspired paintings such as *The Death of Marat* and *Liberty Leading the People*.

ANSWER: **French Revolution**

[M] *Liberty Leading the People* was painted by this artist, whose other historically-inspired paintings include *The Death of Sardanapalus* and *The Massacre at Chios*.

ANSWER: Eugène **Delacroix**

[E] The central figure in *Liberty Leading the People* holds one of these objects, the *tricolour*. One of these objects nicknamed the "Stars and Stripes" waves in the wind in *Washington Crossing the Delaware*.

ANSWER: **flags** [accept more specific answers] <Visual Fine Arts–Maiorana>

16. **Two Van Allen belts are held in place by this entity. Convection in the outer core is responsible for this entity according to dynamo theory. Scientists study the "stripes" in mid-ocean ridges to date the "reversals" of this entity. The (*) "north pole" determined by this entity lies southwest of the geographic North Pole. For 10 points, name this entity that causes compasses to point north on the third planet from the Sun.**

ANSWER: **Earth's magnetic field** [accept logical equivalents or **geomagnetic field**; prompt on just "magnetic field" with "of what planet"] <Other Science–Sareddy>

Two of these beings, Brokkr and Eitri, competed against another group of them, the Sons of Ivaldi, to see who could forge the best items. For 10 points each:

[M] Name these diminutive master craftsmen from Norse mythology.

ANSWER: **Dwarves**

[E] Brokkr and Eitri made Draupnir, one of these items that could self-replicate. These round metal bands are worn as jewelry on fingers.

ANSWER: **rings**

[H] For Odin, the Sons of Ivaldi crafted one of these weapons called Gungnir that never misses its target.

ANSWER: **spear** <Mythology–Kapadia>

17. A park in this city was designed by Frederick Law Olmsted and Calvert Vaux. A museum in this city named for Solomon R. Guggenheim features a white spiraling ramp and was designed by Frank Lloyd Wright. An Art Deco-style building in this city passed another one named for an (*) automobile manufacturer to claim the title of tallest in the world. For 10 points, name this city home to Central Park, the Chrysler Building, and the Empire State Building.

ANSWER: **New York** City [accept **NYC**] <Other Fine Arts–Maiorana>

Answer the following questions related to the Seven Years' War. For 10 points each:

[E] The Diplomatic Revolution, a reversal of traditional alliances prior to the war, allied this country with France. This country was ruled by the Hapsburgs from Vienna.

ANSWER: **Austria**

[H] The so-called “Miracle of the House of Brandenburg” saved this ruler’s country from defeat during the war. This Prussian ruler was an enlightened despot and known for his military successes.

ANSWER: **Frederick** the **Great** [or **Frederick II**; prompt **Frederick**]

[M] The American theater of the Seven Years' War is commonly known by this name, which references the two main enemies that the British colonists fought during the war.

ANSWER: **French and Indian** War <European History–Rao>

18. This leader issued the Decree of War to the Death during his Admirable Campaign. At the Guayaquil Conference, this leader met with his southern ally, José de San Martín. This leader formed the state of Gran Colombia after winning the (*) independence of New Granada. The nickname *El Libertador* was given to, for 10 points, what revolutionary, who freed much of South America from Spanish rule?

ANSWER: Simón de **Bolívar** <World History–Kapadia>

This virus attaches to the ACE2 receptor on type II alveolar cells, causing a cytokine storm. For 10 points each:

[M] Name this respiratory virus which can be detected through an RT-LAMP procedure obtained from a nasal swab. This virus is a strain of another one that caused an outbreak in 2002.

ANSWER: **SARS-Cov-2** [accept equivalents like **coronavirus 19**; accept **COVID-19** or **COVID** even though it's the disease; prompt on **coronavirus** alone by asking “what specific strain of coronavirus?”]

[H] This largest glycoprotein on the SARS-Cov-2 virus is responsible for the rise of the delta and omicron variants of COVID-19. Many mRNA COVID vaccines, like Pfizer, use a modified RNA that encodes this protein.

ANSWER: **spike** glycoprotein

[E] Type II alveolar cells are located in this respiratory organ which is responsible for gas exchange.

ANSWER: **lungs** <Biology–Kodali>

19. **This goddess created a serpent out of saliva to trick Ra into telling her his secret name. Along with Nephthys, this goddess was a daughter of Geb and Nut. After her husband is murdered by Set, this goddess searches across Egypt for the (*) fourteen pieces of his body. This goddess of magic was the mother of Horus.** For 10 points, name this Egyptian goddess who was the wife of Osiris.

ANSWER: **Isis** <Mythology–Ganguli>

The official video for this song opens with the seemingly disembodied heads of its four singers asking “Is this the real life? Is this just fantasy?” For 10 points each:

[H] Name this nearly 6-minute song. 180 separate overdubs were used in this song’s operatic section, in which the word “Galileo” is repeated in alternating high and low octaves.

ANSWER: **“Bohemian Rhapsody”**

[M] “Bohemian Rhapsody” is a song by this British band led by Freddie Mercury. This band also wrote songs like “We Are the Champions” and “Another One Bites the Dust.”

ANSWER: **Queen**

[E] The ballad and operatic sections of “Bohemian Rhapsody” are bridged by a Brian May solo on the “electric” variety of this six-stringed instrument.

ANSWER: **guitar** <Popular Culture–Kapadia>

20. **The Sands Corporation controls many centers for this activity, such as Marina Bay in Singapore and multiple locations in the suburb of Paradise. Macau is a popular destination for this activity, which the economies of multiple (*) Native American reservations are built around. Tourists primarily visit the Las Vegas Strip to engage in this activity.** For 10 points, name this activity done in casinos.

ANSWER: **gambling** <Geography–Sareddy>

In one opera by this composer, Prince Calaf must complete three riddles to marry the title figure. For 10 points each:

[M] What Italian composer wrote the music for *Turandot* and *Madama Butterfly*?

ANSWER: Giacomo **Puccini**

[E] Both *Turandot* and *Madama Butterfly* both take place on this continent. *Turandot* uses several traditional Chinese melodies, such as “Mò Li Hūa,” to emulate music from this continent.

ANSWER: **Asia**

[H] This aria from *Turandot* became popular following a performance during the 1990 World Cup by Luciano Pavarotti. The title of this aria means “None shall sleep.”

ANSWER: **“Nessun Dorma”** <Other Fine Arts–Maiorana>