

2022-23 Solon-Adjacent Novice Set (SANDS)

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Packet 7

1. **One variety of these substances is used to hydrogenate triple bonds and is named for Herbert Lindlar. When these substances are not in phase with other reactants, they are termed heterogenous. These substances create an alternative transition state and thus reduce the (*) activation energy of a reaction. Organic examples of them are called enzymes. For 10 points, name these substances, which increase the rate of a reaction without being consumed.**

ANSWER: **catalysts** [accept **enzymes** before mention] <Chemistry–Sivaram>

After the Sword in the Stone is broken in a fight, one figure receives this sword from an enchantress. For 10 points each:

[M] Name this magical sword wielded by a King of Camelot who is advised by Merlin.

ANSWER: **Excalibur**

[E] Excalibur is wielded by this mythical British king, who is served by the Knights of the Round Table.

ANSWER: **Arthur** Pendragon

[H] Arthur received Excalibur from this figure. After Arthur is mortally wounded, the sword is thrown back into the water where this figure resides, and this figure helps carry Arthur to Avalon.

ANSWER: **Lady of the Lake** [or **Nimue**] <Mythology–Kapadia>

2. **Early reforms made by this ruler include imposing a beard tax and abolishing the Boyar-controlled Duma. This ruler studied shipbuilding in the Netherlands while on his Grand Embassy to Western Europe. A bronze equestrian statue of this ruler stands in his (*) namesake city on the Gulf of Finland. For 10 points, name this Tsar who modernized Russia in the early 18th century.**

ANSWER: **Peter the Great** [or **Peter I**; prompt on **Peter**] <European History–Rao>

This poem attempts to “justify the ways of God to man.” For 10 points each:

[M] Name this epic poem by John Milton about “man's first disobedience.”

ANSWER: **Paradise Lost**

[H] This character builds the city of Pandemonium in *Paradise Lost*. This character, served by Beelzebub, tricks Uriel into showing him the way to Paradise.

ANSWER: **Satan** [accept the **Devil** or **Lucifer**]

[E] These two characters are expelled from the Garden of Eden in *Paradise Lost*. These two characters are considered the first humans on Earth in Christianity.

ANSWER: **Adam** and **Eve** <British Literature–Ganguli>

3. **During one holiday, the *Ma'Oz Tzur* is sung while using one of these objects called a *shamash*. During that holiday, these objects are placed in one structure from right to left and used left to right. After the destruction of the (*) Temple of Jerusalem, an object holding these things stayed on for eight nights despite having enough oil for only one. For 10 points, name these objects that are lit on a menorah during Hanukkah.**

ANSWER: **candle** [prompt on **menorah** by asking “What objects are held in the menorah?”] <Religion–Kodali>

Dmitri Mendeleev is credited with creating the first version of these things. For 10 points each:

[E] Name this display that sorts elements based on their atomic numbers, organized into groups and periods.

ANSWER: **periodic table**

[H] Along with the actinides, this series of fifteen elements is usually displayed below the other elements in the periodic table. They feature elements 57–71, and all but one of them progressively fill the 4f shell.

ANSWER: **lanthanides**

[M] Lanthanides and actinides are also part of this group of metals, which includes those with partially filled d-shells. Most of these metals have multiple oxidation states.

ANSWER: **transition** metals <Chemistry–Chae>

4. **One character in this novel is forced to read to the morphine addict Mrs. Dubose. In this novel, soap dolls and pennies found in a tree are revealed to be gifts from Boo Radley. After he is accused of rape by Mayella** (*) Ewell, Tom Robinson is defended by the protagonist's father, Atticus, in this novel. For 10 points, name this novel narrated by Scout Finch and written by Harper Lee.

ANSWER: **To Kill a Mockingbird** <American Literature–Ganguli>

Zephyrus blows the central figure of this painting towards the shore. For 10 points each:

[H] Name this painting depicting the creation of the title goddess, who rides a seashell.

ANSWER: The **Birth of Venus** [or **Nascita di Venere**]

[M] This Italian artist painted *The Birth of Venus* as well as various mythological figures frolicking in an orange grove in *Primavera*.

ANSWER: Sandro **Botticelli** [or **Alessandro di Mariano di Vanni Filipepi**]

[E] Botticelli's *Mystical Nativity* is set shortly after the birth of this religious figure, and features the Virgin Mary and Joseph.

ANSWER: **Jesus Christ** [accept either name] <Visual Fine Arts–Maiorana>

5. **The hypogeum beneath this structure contained tunnels to transport exotic animals for venatores to hunt. In this structure, the pollice verso thumb gesture signaled the fate of defeated competitors. Vespasian began building this structure, alternatively called the** (*) Flavian Amphitheater. Mock naval battles and gladiatorial fights were performed in, for 10 points, what large Roman arena?

ANSWER: **Colosseum** [accept **Flavian Amphitheater** until mentioned] <Ancient/Other History–Kapadia>

The speaker of this poem implores the title figure to “get thee back into the tempest and the Night's Plutonian shore!” For 10 points each:

[M] Name this poem, in which the title figure “perched upon a pallid bust of Pallas” and repeats the line “nevermore.”

ANSWER: “The **Raven**”

[H] The speaker of “The Raven” laments this “rare and radiant maiden,” who may have been the author's wife, Virginia.

ANSWER: **Lenore**

[E] “The Raven” is a poem by this American author who wrote the first modern detective story: “Murders in the Rue Morgue.”

ANSWER: Edgar Allan **Poe** <American Literature–Kodali>

6. **This man lost a bet to Kip Thorne regarding the binary star system Cygnus X-1, which he wrote about in *A Brief History of Time*. This man’s work on black holes led him to theorize a process by which they would vanish, his namesake (*) radiation.** Despite suffering from a certain disorder, this man was still able to communicate using a voice synthesizer. For 10 points, name this English physicist, who passed away in 2018 due to complications of ALS.

ANSWER: Stephen **Hawking** <Physics–Sivaram>

In one song, this rapper declares “say that you a lesbian, girl, me too”. For 10 points each:

[M] Name this Canadian rapper who released *Certified Lover Boy* in 2021. His most recent album, *Honestly, Nevermind*, includes songs like “Sticky” and “Massive”.

ANSWER: **Drake** [accept Aubrey **Graham**]

[E] The cover for Drake’s album *Certified Lover Boy* features twelve pregnant women as these pictograms. These small images, often used to express feelings over text, include the “tears of joy” and “thumbs up sign”.

ANSWER: **emojis**

[H] This artist and Project Pat appear on Drake’s song “Knife Talk” in *Certified Lover Boy*. This rapper of “Bank Account” claims that if he was “Will Smith [he] would’ve slapped him with a stick” on “Jimmy Cooks”, a single from *Honestly, Nevermind*.

ANSWER: **21 Savage** [accept Shéyaa Bin **Abraham-Joseph**] <Popular Culture–Ganguli>

7. **A character with super strength in this film sings about “Pressure, like a drip, drip, drip that’ll never stop.” In this film, characters sing about ill prophecies made by a character who “We Don’t Talk About.” In this film, the power-less (*) Mirabel sings about the “gifts” given to her family by a “miracle” in the form of a candle.** For 10 points, name this Disney musical film about the magical Madrigal family.

ANSWER: **Encanto** <Popular Culture–Chae>

This committee is led by Mississippi’s Bennie Thompson and began its first in a series of new public televised hearings on June 9, 2022. For 10 points each:

[M] Name this select House committee formed to investigate the storming of the U.S. Capitol Building, which occurred two weeks before Joe Biden’s inauguration in 2021.

ANSWER: **January 6th** Committee [or United States House Select Committee on the **January 6** Attack]

[H] Adam Kizinger and this woman are the only two Republicans on the committee. This representative from Wyoming was removed as head of the House Republican Conference for supporting Donald Trump’s impeachment.

ANSWER: Elizabeth “Liz” **Cheney**

[E] The hearings revealed that, during the Capitol Riots, Trump’s chief of staff wanted to “kill the narrative” that this man was in charge. This man was Trump’s Vice President.

ANSWER: Mike **Pence** <Current Events–Kapadia>

8. **This artist included scenes such as “Green Car Crash” in his series *Death and Disaster*. In 1968, Valerie Solanas attempted to kill this artist at his New York City studio, which was known as The Factory. This artist used silkscreening to create a (*) Marilyn Diptych as well as a series of thirty-two prints of red-and-white cans.** For 10 points, name this American pop artist known for his *Campbell’s Soup Cans*.

ANSWER: Andy **Warhol** <Visual Fine Arts–Maiorana>

The murders of the “canonical five” victims are believed to be linked and the work of this man. For 10 points each:
[M] Name this unknown serial killer, who committed murders in the White Chapel district of London during the late 1800s.

ANSWER: **Jack the Ripper**

[E] One of the theories regarding Jack the Ripper’s identity claims he was a physician serving this queen. This queen had the longest reign of any British monarch until Elizabeth II recently surpassed her.

ANSWER: Queen **Victoria**

[H] Theories about Jack being a physician are supported by the fact that he removed some of these general items from his victims. Jack attached one of these general items to his “From Hell” letter.

ANSWER: **organ** [accept **kidney** or **uterus**; prompt on **body parts**] <European History–Kapadia>

9. **This city lies opposite Bainbridge Island across the Puget Sound. This city, currently home to the NHL’s Kraken, was once home to the NBA’s Supersonics. Boeing was founded in this city, which contains the headquarters of Starbucks and (*) Amazon. The Space Needle dominates the skyline of this notoriously rainy city in the Pacific Northwest. For 10 points, name this largest city in Washington.**

ANSWER: **Seattle** <Geography–Maiorana>

Deposits from the GCF onto these structures cause the buildup of hardened plaque called tartar. For 10 points each:

[M] Name these anatomical structures, which have canine, molar and incisor types.

ANSWER: **teeth**

[H] This mineralized substance on the teeth is composed primarily of hydroxyapatite and can be degraded by dental caries.

ANSWER: **enamel**

[E] Dental cavities can be prevented by using toothpaste enriched with an anion of this most electronegative element, with symbol F.

ANSWER: **fluorine** [accept **fluoride**] <Biology–Kodali>

10. **In one play by this author, a character throws a radio out the window during a poker game. In another play by this author, a unicorn is broken by a “gentleman caller.” A character created by this author declares she has “always depended on the kindness of strangers” and is assaulted by (*) Stanley Kowalski. The Wingfield family and Blanche Dubois were created by, for 10 points, what author of *The Glass Menagerie* and *A Streetcar Named Desire*?**

ANSWER: Tennessee **Williams** <American Literature–Ganguli>

This geographical region is known as the “fertile crescent.” For 10 points each:

[M] Name this region in the Middle East between the Tigris and the Euphrates, where some of the first civilizations, like Akkad, originated.

ANSWER: **Mesopotamia**

[E] The Tigris and Euphrates are two of these geographical features, whose confluence flows into the Persian Gulf.

ANSWER: **rivers** [accept Tigris **River** or Euphrates **River**]

[H] This Mesopotamian civilization is the earliest known human civilization. This civilization, whose city-states included Ur, developed the *cuneiform* writing system.

ANSWER: **Sumerian** Civilization <Ancient/Other History–Sareddy>

11. A genre this composer created was inspired by the poetry of Adam Mickiewicz. *Études* by this composer include ones nicknamed “Winter Wind” and “Revolutionary”. The notes A-flat and G-sharp are repeated in a prelude by this composer nicknamed (*) “Raindrop”. This composer’s other solo piano works include a *Fantasia-Improvisata* and the *Minute Waltz*. For 10 points, name this Polish composer of many nocturnes and ballades.

ANSWER: Frédéric Chopin <Auditory Fine Arts–Maiorana>

One person with this last name participated in the Rainbow Tour and was nicknamed Evita. For 10 points each:

[H] Give this last name of Isabel and Juan, two leaders of a South American country.

ANSWER: Perón [accept Eva Perón or Isabel Perón or Juan Perón]

[M] Juan Perón was the president of this South American country. This country fought against the British over control of a nearby archipelago in the Falklands War.

ANSWER: Argentina

[E] In 1973, Left-wing supporters of Perón awaiting his return from exile were massacred while his plane landed at the Ezeiza International one of these locations.

ANSWER: airports <World History–Sareddy>

12. These works often contain a “cutting word” and “seasonal reference.” Many of these works are collected in the travelogue *The Narrow Road to the Deep North*, and they were derived from *renga*. One of these works describes the sound of a (*) frog jumping into a pond and was by a master of this form of poetry named Matsuo Basho. For 10 points, name this Japanese form of poetry that follows a 5-7-5 syllable scheme.

ANSWER: haiku <World Literature–Ganguli>

This man’s namesake diagrams can help visualize subatomic interactions. For 10 points each:

[M] Name this Caltech professor, who worked on quantum electrodynamics.

ANSWER: Richard Feynman

[E] In Feynman diagrams, antiparticles are displayed as moving backwards with respect to this quantity. This quantity is measured in seconds.

ANSWER: time

[H] Feynman proposed a parton model of these particles, which are composed of two or more quarks. These particles include mesons and baryons.

ANSWER: hadrons <Physics–Chae>

13. A leader of this county committed suicide with an AK-47 in the La Moneda palace. In 1973, a CIA-backed coup overthrew that socialist leader, Salvador Allende, after he nationalized this country’s copper mines in the (*) Atacama Desert. Dissidents were brutally suppressed during the dictatorship of Augusto Pinochet in, for 10 points, what South American country led from Santiago?

ANSWER: Republic of Chile <World History–Kapadia>

At the end of one novel, a member of this family breastfeeds an old starving man. For 10 points each:

[H] Name this fictional family that includes Rose of Sharon. One member of this family, Tom, is friends with the former preacher Jim Casy.

ANSWER: Joad family

[M] The Joad family appears in this author’s novel *The Grapes of Wrath*. This author also wrote about the migrant workers George and Lennie in *Of Mice and Men*.

ANSWER: John Steinbeck

[E] The Joad family travels from Oklahoma to this state in *The Grapes of Wrath*. Salinas Valley is the setting of many works by Steinbeck in this state, which was the site of an 1849 gold rush and has its capital at Sacramento.

ANSWER: California <American Literature–Ganguli>

14. **This antagonist’s daughter Delphini attempts to resurrect him in a work titled for a “cursed child.” This character who kills Grindelwald while searching for the Elder Wand splits his soul into seven (*) horcruxes.** This leader of the Death Eaters leaves a lightning-bolt shaped scar on the forehead of one character who kills him at the Battle of Hogwarts. For 10 points, name this archenemy of Harry Potter who “must not be named.”
ANSWER: Lord **Voldemort** [accept either underlined part **Tom Riddle**] <Other Literature–Ganguli>

This creature had the strongest bite force of any terrestrial animal ever. For 10 points each:

[M] Name this carnivorous dinosaur from the Cretaceous period, whose name translates to “King of the Tyrant Lizards.”

ANSWER: **Tyrannosaurus rex** [or **T. Rex**]

[H] One of the most complete T. Rex skeletons, named Sue for its discoverer, resides in this natural history museum in Chicago.

ANSWER: **Field** Museum of Natural History.

[E] Despite their depiction in films, the skin of the T. Rex and most dinosaurs were covered in these features, which cover the skin of their modern descendants, birds.

ANSWER: **feathers** <Other Academic/Miscellaneous–Kapadia>

15. **In this biome, aluminum and iron form chelates and move to a deeper level in the process to create podzol. A layer of ice underneath the active layer in this biome is called permafrost. Animals like the Pine Marten, Pileated Woodpecker, and (*) Caribou live in this biome. Evergreen trees like spruce pine and fir trees are common in this biome. For 10 points, name this biome located between tundras and deciduous forests.**

ANSWER: **Taiga** <Biology–Feldman>

One religion requires its members to follow this kind of diet to comply with its principle of non-violence called ahimsa. For 10 points each:

[E] Name this kind of diet that excludes meat.

ANSWER: **vegetarian** [or **vegan** or lacto-**vegetarian**]

[H] The aforementioned religion is this one originating from India, which venerates *tirthankaras*. This religion’s two major schools are Digambara and Svetambara.

ANSWER: **Jainism**

[M] Since Digambara translates to “sky-clad,” some Digambara Jains do not own or use these items. Their practice of not using these items violates India’s public indecency laws in most places.

ANSWER: **clothes** [or **clothing**] <Religion–Kapadia>

16. **Stocks of this man’s company dropped nearly 12% the Friday after this man tweeted that its stock prices were “too high imo.” That same company’s stock price dropped after this man smoked marijuana on a podcast with (*) Joe Rogan. In April of 2022, this man terminated his deal to purchase Twitter for 44 billion dollars. For 10 points, name this founder of SpaceX and CEO of Tesla.**

ANSWER: Elon **Musk** <Current Events–Chae>

After this character receives \$1,000 of “Mom Bucks,” he decides to buy some heavy-metal magazines. For 10 points each:

[M] Name this character who “rules” in one novel. This character is the drummer and founder of the band Löded Diper.

ANSWER: **Rodrick** Heffley [prompt on Heffley]

[E] Rodrick appears in this book series by Jeff Kinney. Greg Heffley is the protagonist of this book series that includes *Dog Days* and *Cabin Fever*.

ANSWER: **Diary of a Wimpy Kid**

[H] In *Diary of a Wimpy Kid*, this character is the main love interest of Greg. This character asks if Greg is named “Fregley” and is considered the most popular girl in her grade.

ANSWER: **Holly** Hills [prompt on Hills] <Other Literature–Ganguli>

17. A practitioner of these disciplines, who was taught by Ip Man, encouraged his students to “Be water, my friend.” One of the oldest one of these disciplines was developed by Buddhist monks from the Shaolin temple.

(*) Chuck Norris founded one of these disciplines called Chuck Kuk Do, and the Wing Chun one of these disciplines was practiced by Bruce Lee. Tae Kwon Do, Kung Fu, and Karate are examples of, for 10 points, what fighting disciplines?

ANSWER: **martial arts** [accept wushu] <Other Academic/Miscellaneous–Kapadia>

This composer critiqued music under the pseudonyms Florestan and Eusebius and was editor-in-chief for the New Journal For Music for ten years. For 10 points each:

[H] Name this composer, who included those pseudonyms as characters in his piece *Carnaval*. Symphonies by this composer include the “Spring” and “Rhenish” ones.

ANSWER: Robert **Schumann**

[E] In 1840, Schumann married Clara Wieck, a composer and player of this instrument, which contains 88 black and white keys.

ANSWER: **pianoforte**

[M] The Schumanns engaged in the “War of the Romantics”, during which they sided with this other German composer, who composed *A German Requiem* and a famous lullaby.

ANSWER: Johannes **Brahms** <Auditory Fine Arts–Maiorana>

18. Evidence from NASA's Dawn spacecraft suggests that Ceres could be home to an ice type of this geologic feature. Io has an abundance of these features, which are responsible for its surface color. The largest one of these features in the solar system is the Martian (*) Olympus Mons, which is of the “shield” variety and could be active. For 10 points, name these geologic features that can erupt with lava.

ANSWER: **volcanoes** [accept more specific answers like cryovolcano or shield volcano] <Other Science–Chae>

This woman took the name Rebecca after converting to Christianity and later married John Rolfe. For 10 points each:

[M] In a heavily embellished account, John Smith credited what daughter of Chief Powhatan with saving him from an execution?

ANSWER: **Pocahontas** [accept Matoaka]

[E] John Rolfe and John Smith were both men from this Virginia colony, the first permanent English settlement in the Americas.

ANSWER: **Jamestown**

[H] John Rolfe introduced this cash crop to Jamestown. King James I wrote “A Counterblaste to [this crop]” to express how much he despised it.

ANSWER: **tobacco** <American History–Kapadia>

19. **One of these creatures gives up his immortality in exchange for Prometheus' freedom. These creatures, who are rivals of the Lapiths, include Nessus, whose poisoned blood causes the death of Heracles. Another of these creatures, who was the (*) instructor of many heroes including Achilles and Jason, is Chiron.** For 10 points, name these half-human, half-horse creatures from Greek mythology.

ANSWER: **centaur** <Mythology–Ganguli>

In 1978, Arno Penzias and Robert Wilson were awarded the Nobel Prize in Physics for discovering this “relic radiation.” For 10 points each:

[H] Name this remnant radiation dating back to the early ages of the universe. It has a temperature of around 2.7 Kelvin.

ANSWER: **Cosmic Microwave Background** Radiation [accept **CMBR**]

[E] The CMBR provides evidence for this event that occurred 13.8 billion years ago, which is thought to mark the beginning of the universe. This event's namesake theory is the prevailing model in explaining the origin and development of the early universe.

ANSWER: **Big Bang**

[M] After the Big Bang, the universe is thought to have begun undergoing this process, which causes galaxies to become more distant from one another. Dark energy may cause the acceleration of this process.

ANSWER: cosmic **expansion** [do not accept **inflation**] <Other Science–Chae>

20. **To oppose this process, Senator Harry Byrd headed a campaign of “Massive resistance.” This process was ordered to be carried out “with all deliberate speed” following a 1954 Supreme Court case that ruled that the notion of “separate but equal” was unconstitutional. The ruling in (*) *Brown v. Board of Education* called for,** for 10 points, what process that ended the separation of education institutions based on race?

ANSWER: **school desegregation** [or **school integration**; prompt on **desegregation** or **integration**] <American History–Kapadia>

Many buildings in the Arab-Norman style can be found in this island's largest city, Palermo. For 10 points each:

[H] Name this island, which is separated from the region of Calabria by the Strait of Messina. This is the largest island in the Mediterranean Sea.

ANSWER: **Sicily**

[E] Both Sicily and Calabria are part of this peninsular European country. This country's capital, Rome, completely surrounds Vatican City

ANSWER: **Italy**

[M] Sicily is also home to one of the most active of these geographical features, Etna. One of these geographical features called St. Helens caused major damage in northwestern Washington.

ANSWER: **volcanoes** [prompt on **mountains**] <Geography–Sareddy>