

# 2022-23 Solon-Adjacent Novice Set (SANDS)

Edited by Tegan Kapadia, Jacob O'Rourke, Shourjo Ganguli, Grant Maiorana, Vedul Palavajjhala, and Pranav Sivaram  
Written by the editors, Reece Chae, Ethan Feldman, Anish Kodali, Prahalad Rao, and Vishal Sareddy

## Packet 2

1. **Surges from this larger body of water breached the levees of Lake Pontchartrain during a 2005 hurricane. The Deepwater Horizon Oil Spill occurred in this body of water, whose coast is home to popular beaches like Panama City and Destin.** (\*) Hurricane Katrina gained strength on this gulf before it hit New Orleans. This gulf lies west of the Florida Keys. For 10 points, name this gulf that shares its name with a country south of the United States.

ANSWER: Gulf of **Mexico** <Geography–Sareddy>

The Barringer one of these geographical features in Arizona is one of the best preserved ones in the U.S. For 10 points each:

[E] Name these geographical features present at sites where asteroids and meteors strike the Earth's surface.

ANSWER: impact **crater**

[M] The Vredefort Crater, the largest certified impact crater in the world, is located southwest of Pretoria in this African country, which has three capitals.

ANSWER: **South Africa**

[H] The K-T extinction was caused by an asteroid that created the Chicxulub Crater beneath this peninsula. The popular tourist destination Cancún is located on this Mexican peninsula.

ANSWER: **Yucatán** <Geography–Kapadia>

2. **The currently unsolved hierarchy problem describes the discrepancies in aspects of this force and the weak force . Unlike special relativity, general relativity accounts for this force, the weakest of the fundamental forces.** (\*) Waves created by this force are detected by LIGO, and this force is most intense in the singularity of a black hole. Weight can be attributed to, for 10 points, what attractive force between two objects?

ANSWER: **gravity** <Physics–Chae>

Answer the following questions related to factions of the Republican Party in the 19th Century. For 10 points each:

[E] The Radical Republicans pushed for the harshest punishments for supporters and members of this government, which rebelled against the Union in the Civil War.

ANSWER: **Confederate States** of America [accept **CSA** or **Confederacy**]

[H] The Stalwarts favored this system of awarding government positions as favors to supporters and friends rather than based on merit.

ANSWER: **patronage** [or **spoils** system]

[M] Civil service reform was enacted by the Pendleton Act, passed by Chester Arthur after this president was assassinated by a Stalwart supporter in 1881.

ANSWER: James A. **Garfield** <American History–Kapadia>

3. **An officer in this novel calls one group nothing more than “mule drivers” and “mud diggers.” After getting hit on the head by a rifle, the protagonist of this novel is asked by a “tattered soldier” to see the title wound. The death of** (\*) Jim Conklin upsets Henry Fleming in this novel. The Civil War provides the backdrop for, for 10 points, what novel by Stephen Crane?

ANSWER: The **Red Badge of Courage** <American Literature–Ganguli>

Emergency meetings called in this game can result in players being ejected into space. For 10 points each:

[E] Name this social deduction game created by Innersloth in which crewmates are hunted by imposters.

ANSWER: **Among Us**

[M] In addition to killing crewmates and sabotaging, imposters have the ability to perform this action in Among Us. The new Engineer role allows players to perform this action to move around the map.

ANSWER: **venting**

[H] Imposters may fake tasks like swipe card in Admin on this Among Us map. Maps like Polus, MIRA HQ, and the Airship were added after this first map of Among Us, which is set on a spaceship.

ANSWER: The **Skeld** <Popular Culture–Ganguli>

4. **The *paiza* metal pendant was carried by messengers of these people’s Yam postal system. Leaders of these people were elected by a *Kurultai*. A non-Byzantine *Secret History* chronicles the rise of these people’s first leader, who was born with the name (\*) Temujin. These people ruled China through the Yuan dynasty of Kublai. For 10 points, the empire of what East Asian people was founded by Genghis Khan?**

ANSWER: **Mongols** [accept **Mongol** Empire] <World History–Kapadia>

One character in this work urinates on five pillars that are actually fingers. For 10 points each:

[H] Name this classic novel, in which Sun Wukong accompanies the monk Xuanzang on the title trip.

ANSWER: **Journey to the West**

[M] The Monkey King Sun Wukong travels to this country in *Journey to the West*. Another monkey, Hanuman, appears in this country’s Sanskrit epic about the abduction of Sita, the *Ramayana*.

ANSWER: **India**

[E] In *Journey to the West*, Sun Wukong is trapped under one of these objects for 500 years. To save Lakshmana in the *Ramayana*, Hanuman carries one of these geographical features, the tallest of which is Everest.

ANSWER: **mountains** <World Literature–Ganguli>

5. **The book *The Decisive Moment* is a collection of works of art in this medium by Henri Cartier-Bresson, who pioneered its “street” variety. An early process for creating art in this medium was created by Louis Daguerre, and required very long (\*) exposure times. Artists who create work in this medium may utilize a darkroom to develop film. For 10 points, name this artistic medium whose practitioners use cameras to capture images.**

ANSWER: **photography** [accept **Daguerreotype**] <Other Fine Arts–Maiorana>

A 20th-century artist popularized a technique known as “drip” using this substance. For 10 points each:

[E] Name this art material that comes in types such as oil and tempera and is applied using brushes.

ANSWER: **paint**

[H] Drip painting achieved mainstream success during this 20th-century art movement led by artists like Jackson Pollock and Mark Rothko.

ANSWER: **Abstract expressionism**

[M] Helen Frankenthaler, an Abstract expressionist, popularized the “soak stain” technique, which is similar to this common painting technique in which pigments are suspended in water.

ANSWER: **watercolor** [accept **aquarelle**] <Visual Fine Arts–Maiorana>

6. **In one poem, this poet claims “the best lack all conviction, while the worst are full of passionate intensity.” This poet repeats the refrain “a terrible beauty is born” in “Easter, 1916.” This poet notes that (\*) “things fall apart; the centre cannot hold” in a poem that ends by asking what rough beast “slouches towards Bethelhem to be born.” For 10 points, name this Irish poet of “The Second Coming.”**

ANSWER: William Butler **Yeats** <British Literature–Ganguli>

Users of this language must start their documents with the <!DOCTYPE> tag. For 10 points each:

[H] Name this programming language whose users use “tags” such as “<p>” and “<title>”. This language is often paired with CSS.

ANSWER: **HTML** [accept **HyperText Markup Language**]

[E] HTML and CSS are frequently used to design these digital entities, which are accessed via URLs on the World Wide Web.

ANSWER: **websites** [accept **web pages** or other clear equivalents]

[M] HTML websites utilize this “protocol” to communicate with servers. This protocol has a four-letter abbreviation that often precedes “www.” in URLs.

ANSWER: **HTTP** [accept **HyperText Transfer Protocol**] <Other Science–Maiorana>

**7. This organelle is represented by a two-dimensional liquid in the fluid mosaic model. The fluidity in this organelle is maintained by cholesterol. This organelle is mainly composed of a molecule with a polar head and a nonpolar tail, a(\*) phospholipid. Plant cells maintain rigidity by having a solid cell wall around them. For 10 points, name this organelle that contains the interior of the cell.**

ANSWER: **cell membrane** <Biology–Feldman>

Karl Lindner offers money to the central family in this play to convince them not to move into Clybourne Park, a white neighborhood. For 10 points each:

[H] Name this play about the Younger family that takes its title from a Langston Hughes poem.

ANSWER: ***A Raisin in the Sun***

[M] In *A Raisin in the Sun*, Asagai asks Beneatha Younger to move to this African country. The novels *Americanah* and *Half of a Yellow Sun* were written by an author from this country, Chimamanda Ngozi Adichie.

ANSWER: **Nigeria**

[E] In *A Raisin in the Sun*, Beneatha is accused of “mutilating” this physical feature when she straightens it. Beneatha shows off the “natural” form of this feature with her new afro.

ANSWER: **hair** <American Literature–Ganguli>

**8. An opera by this composer names a chord with the notes F, B, D-sharp, and G-sharp and ends with a character singing the “Liebestod” to mourn her lover’s death. In another opera by this composer, the dwarf (\*) Alberich steals the title material from the Rhinemaidens and forges a magical object. Another opera by this composer features “The Ride of the Valkyries”. For 10 points, name this German composer of *Tristan und Isolde* and the Ring Cycle.**

ANSWER: Richard **Wagner** <Auditory Fine Arts–Maiorana>

With a vacuum, a Büchner funnel can be used to execute this technique. For 10 points each:

[M] Name this technique that can separate liquid and solid components. This process often utilizes a semipermeable membrane such as paper.

ANSWER: **filtration**

[H] The optimum velocity and theoretical plate height for this other separation technique can be calculated using the van Deemter equation. In the GC-MS method, its gas type is paired with mass spectrometry.

ANSWER: **chromatography**

[E] Chromatography is sometimes demonstrated using these substances, which can be used to color paper and fabrics. Certain types of them can also be used to change hair color or food color.

ANSWER: **dyes** <Chemistry–Chae>

9. In one speech, this man said that the people had been given a “bad check” for “insufficient funds.” This man claimed to have “seen the Promised Land” from the title location of a speech given to sanitation workers in Memphis. This man envisioned a day where his children would (\*) “not be judged by the color of their skin” in a speech from the steps of the Lincoln Memorial. For 10 points, what civil rights activist gave the “I Have a Dream” speech?

ANSWER: Martin Luther King Jr. [accept MLK] <American History–Kapadia>

After Ampelos was killed, his body was transformed into a vine and his blood was used to make the first of this substance. For 10 points each:

[E] Name this alcoholic substance that is made from fermented grapes. Dionysus is the Greek god of this substance.

ANSWER: wine

[M] During one of their frenzies, Maenads, crazed female followers of Dionysus, tore apart this musician, who journeyed into the Underworld to save his wife Eurydice.

ANSWER: Orpheus

[H] Dionysus is said to have experienced a second one of these events after Zeus saved him by sewing him into his thigh. For Athena, this event occurred when Zeus split his head open to stop painful headaches.

ANSWER: birth [or being born] <Mythology–Kapadia>

10. In this country, Bagram airfield was evacuated in the middle of the night one month before this country’s president Ashraf Ghani fled to the UAE. After reviewing a 2020 peace deal between the U.S. and a group in this country, Joe Biden announced a complete (\*) withdrawal of U.S. troops from this country by the 20th anniversary of the 9/11 attacks. Since August 15, 2021 the Taliban control, for 10 points, what country led from Kabul?

ANSWER: Afghanistan <Current Event–Kapadia>

Answer the following questions related to domestic terrorism in the 1990s. For 10 points each:

[H] A field of empty chairs commemorates what attack on the Alfred P. Murrah Federal building perpetrated by Timothy McVeigh in the capital of a midwestern state?

ANSWER: Oklahoma City Bombing [or OKC Bombing]

[M] McVeigh carried out the bombing to retaliate for the government’s attack on one of these groups in Waco. A “UFO” one of these fanatical religious groups called Heaven’s Gate committed mass suicide in 1997.

ANSWER: cults [accept UFO cults]

[E] In 1996, Eric Rudolph bombed Atlanta’s Centennial Park, while it was hosting the “Summer” one of these international sporting events that occur every four years.

ANSWER: Olympic Games [accept Summer Olympics or Summer Olympic Games] <American History–Kapadia>

11. The protagonist of this story tries to save a picture of a woman in furs. That protagonist of this story dies after his father hits him in the back with an apple and has a sister who wants to attend a conservatory for violin named (\*) Grete. After a night of “uneasy dreams,” a traveling salesman realizes he has become a “monstrous vermin” in this story. For 10 points, Gregor Samsa transforms into an insect in what Franz Kafka novella?

ANSWER: The Metamorphosis <European Literature–Ganguli>

This scientist's namesake thought experiment demonstrates the idea of superposition. For 10 points each:

[E] Name this man who names a thought experiment involving a hypothetical cat which may be simultaneously considered dead and alive.

ANSWER: Erwin **Schrödinger**

[H] Schrödinger proposed his thought experiment to illustrate his problems with this interpretation of quantum mechanics. It is named after a European city.

ANSWER: **Copenhagen** interpretation

[M] In 1927, a proponent of the Copenhagen interpretation introduced this principle, which limits the accuracy at which complementary variables can be measured, such as position and momentum.

ANSWER: Heisenberg **uncertainty** principle <Physics–Chae>

**12. Due to its low crystallization temperature, this mineral is at the bottom of Bowen's Reaction Series. This mineral generates an electric charge with applied stress, an effect called piezoelectricity, and it can be used in namesake (\*) clocks.** This mineral has a value of seven on the Mohs Hardness Scale, and it can consist of silica or silicon dioxide. For 10 points, name this mineral, the second most abundant in the Earth's crust behind feldspar.

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

The most famous photo of this creature, the so-called "surgeon's photograph," was revealed to be an elaborate hoax. For 10 points each:

[M] Name this long-necked, humped cryptid that is named for and supposedly inhabits a lake in the Scottish highlands.

ANSWER: **Loch Ness** Monster [or **Nessie**]

[E] The Patterson-Gimlin film supposedly shows this North American cryptid turning to face the camera as it runs away. This cryptid's name comes from the large tracks it leaves behind.

ANSWER: **Bigfoot** [accept **Sasquatch**]

[H] This reptilian-like cryptid, first purportedly sighted in Puerto Rico, is known for drinking the blood of goats and other livestock.

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

**13. In this book, a dragon loses a war in heaven to Michael and his angels. The number "666" is considered the Number of the Beast in this book. Four figures representing Conquest, War, Famine, and Death are released after the opening of the (\*) seven seals in this book written by John of Patmos. The Four Horsemen of the Apocalypse appear in, for 10 points, what final book of the New Testament?**

ANSWER: Book of **Revelation** <Religion–Ganguli>

A novel by this author follows the Bundren family as they go to bury their matriarch Addie. For 10 points each:

[M] Name this author of *As I Lay Dying*, who wrote another novel that follows the Compson family called *The Sound and the Fury*.

ANSWER: William **Faulkner**

[E] William Faulkner was a leading figure of a "Gothic" movement named after this broad region in the United States, which is composed of states like Mississippi and Virginia, who seceded in the American Civil War.

ANSWER: the **South** [accept **Southern** Gothic; prompt on the **Confederacy** by asking "what general region did the Confederacy encompass?"]

[H] Another Southern Gothic author was Flannery O'Connor, who wrote this short story where the Grandmother encounters The Misfit while on a road trip.

ANSWER: "A **Good Man Is Hard to Find**" <American Literature–Kodali>

14. **The Netherlands fought for independence from this country during the Eighty Years War. During the reign of Philip II, poor winds foiled this country's attempted invasion of England using a namesake "Armada" of ships. This country was unified by the marriage of (\*) Ferdinand II of Aragon and Isabella I of Castile.** For 10 points, name this country on the Iberian Peninsula whose capital is Madrid.

ANSWER: Kingdom of **Spain** [or **Spanish Empire** or **Spanish Armada**] <European History–Rao>

Edward III began the first phase of this conflict by attempting to claim the French throne. For 10 points each:

[E] Name this lengthy conflict between the English and the French that, despite its name, lasted 116 years.

ANSWER: **Hundred Years'** War

[M] During the Hundred Years' War, this woman was inspired by several visions to take up arms and relieve the siege of Orléans. This woman was burned at the stake but canonized hundred of years later.

ANSWER: **Joan** of Arc [or **Jeanne** d'Arc or Saint **Joan**]

[H] The English turned the tides of war after winning this battle on Saint Crispin's Day. English longbows played a crucial role in this victory for Henry V.

ANSWER: Battle of **Agincourt** <European History–Kapadia>

15. **Under ideal conditions, this technique follows Raoult's law, which calculates total vapor pressure. The addition of entrainers allows for the separation of azeotropes during this technique . A "fractional" (\*) form of this process is used to create alcoholic beverages and refine petroleum.** For 10 points, name this lab technique that separates two substances based on their boiling points.

ANSWER: **distillation** [accept fractional **distillation**] <Chemistry–Ganguli>

Celexa and Prozac are examples of SSRIs which are commonly used to treat this condition. For 10 points each:

[E] Name this mood disorder which has symptoms including low self-esteem and loss of interest in normal activities.

ANSWER: clinical **depression** [accept **MDD** or **major depressive disorder**]

[H] SSRIs inhibit the reuptake of this neurotransmitter which is secreted from enterochromaffin cells.

ANSWER: **serotonin** [accept selective **serotonin** reuptake inhibitors; accept **5-hydroxytryptamine** or **5-HT**]

[M] SSRIs prevent serotonin from being absorbed by the cell that precedes this structure. This structure is the gap between two neurons which neurotransmitters travel across to continue the transmission of a nerve signal.

ANSWER: chemical **synapse** [Accept **Synaptic Cleft**] <Biology–Kodali>

16. **These devices typically feature a front and a rear derailleur. The frames of these devices are usually made out of tubular aluminum or carbon fiber. In order to change speeds, these devices may have different-sized sprockets that their (\*) chains can ride on.** These devices have types designed for mountain and road riding, as well as motocross varieties known as BMX. For 10 points, name these two-wheeled vehicles whose riders propel by pedaling.

ANSWER: **bicycles** [accept **bike**s; accept any specific kind] <Other Academic/Miscellaneous–Maiorana>

When asked how to find a job, this leader of *En Marche!* once said “cross the street. I’ll find you something.” For 10 points each:

[H] Name this politician being investigated by NUPES for his links to lobbying after the release of the “Uber Files.” This politician defeated Marine Le Pen for a second term in his current position.

ANSWER: Emmanuel **Macron**

[M] During the 2022 elections, Macron condemned Le Pen for her proposal to ban these objects in public, saying it would “divide the country.” These headcoverings, often worn by Muslim women, are less restrictive than burkas.

ANSWER: **hijabs**

[E] Macron is currently the president of this country. Yellow vest protesters stormed this country’s capital of Paris to demand social justice.

ANSWER: **France** <Current Events–Ganguli>

17. **This character, who kills Alma Coin, is compared to a “dead slug” by Haymitch Abernathy. After the death of Rue, this character sings a lullaby while covering her body with flowers. This character, also known as “The Girl on Fire” and (\*) “the Mockingjay,”** represents District 12 with Peeta Meelark for a competition in which teens fight to the death. For 10 points, name this protagonist of *The Hunger Games* trilogy.

ANSWER: **Katniss Everdeen** [accept either underlined name] <Other Literature–Ganguli>

During this period, religious images are often covered with purple veils. For 10 points each:

[M] Name this approximately 40-day period where Christians fast or give up some luxuries to imitate the 40 days Jesus spent avoiding temptation in the desert.

ANSWER: **Lent**

[H] Lent begins on this day. This day’s namesake substance is used to mark crosses on the foreheads of participants and is accompanied by the phrase “thou art dust, and to dust thou shalt return” from the Book of Genesis.

ANSWER: **Ash Wednesday**

[E] The solemn period of Lent leads up to this Sunday celebration of Jesus’s resurrection.

ANSWER: **Easter** [or **Pascha**] <Religion–Kapadia>

18. **In one song, this artist declares “your memory is ecstasy” and claims to “miss you more than life”. This singer of “Ghost” begins another song with The Kid LAROI saying “I do the same thing, I told you that I never would” in (\*) “STAY”. This singer of “Love Yourself” is featured in a remix of Luis Fonsi’s “Despacito”. For 10 points, name this Canadian singer who became a superstar at fifteen with the release of “Baby”.**

ANSWER: Justin **Bieber** <Popular Culture–Ganguli>

Some of these musical compositions were later harmonized and incorporated into polyphonic music.

[M] Name these monophonic “chants” named for a pope.

ANSWER: **Gregorian** chants

[H] The “church” variety of these musical scales developed from Gregorian chants. Jazz musicians often use scales of this type such as the Dorian or Mixolydian ones.

ANSWER: **modes** [accept Dorain **mode** or Mixolydian **mode**]

[E] Gregorian chants later developed into these religious songs, which in Christianity typically end with “amen”.

Examples of these songs include “Amazing Grace”.

ANSWER: **hymns** <Auditory Fine Arts–Maiorana>

19. **This ruler apocryphally shouted, “Quinctilius Varus, give me back my legions!” after losing the Battle of Teutoburg Forest. This ruler secured power by winning the 31 B.C. Battle of Actium. This ruler formed the Second Triumvirate with Marcus Lepidus and (\*) Mark Antony in order to defeat his uncle’s assassins. For 10 points, name this nephew of Julius Caesar, who became the first Roman Emperor.**

ANSWER: Caesar **Augustus** [or **Octavian**] <Ancient/Other History–Rao>

These compounds can be produced through step-growth and chain-growth reactions. For 10 points each:  
[M] Name these compounds made of repeating units called monomers. Nylon and PVC are examples of these macromolecules.

ANSWER: **polymers**

[E] PVC is a “thermo” one of these materials that can be molded easily. These materials, which are made up of polymers, are used to produce objects like water bottles and straws.

ANSWER: **plastics** [accept **thermoplastics**]

[H] This compound, which is also a thermoplastic, is a polymer composed of tetrafluoroethylene monomers. This compound is often used in non-stick cookware

ANSWER: **Teflon** [accept **PTFE** or **polytetrafluoroethylene**] <Chemistry–Ganguli>

20. **Bellona is a Roman goddess of these events. The Aloadae trapped a god of these events in a bronze jar. During these events, the doors to Janus’ temple are kept open. A god of these events, who fathered (\*) Phobos and Deimos, was caught in a net created by Hephaestus to reveal his affair with Aphrodite. That god of these events has a Roman counterpart called Mars. For 10 points, Ares was a god of what armed conflicts?**

ANSWER: **war**s <Mythology–Ganguli>

This ethnic group names an empire, whose ruler Suryavarman II built a complex meant to resemble Mount Meru. For 10 points each:

[H] Name this majority ethnic group of a certain Southeast Asian country. Pol Pot ruled over a Communist government named after this ethnic group and “Rouge”.

ANSWER: **Khmer** [accept **Khmer** Empire or **Khmer** Rouge]

[E] The Khmer are native to this country. This country’s Khmer Rouge was toppled from its capital of Phnom Penh after an invasion from its eastern neighbor, Vietnam.

ANSWER: **Cambodia**

[M] This was the aforementioned complex built by the Khmer emperor Suryavarman II. This large Hindu temple complex appears on Cambodia’s flag.

ANSWER: **Angkor Wat** <World History–Sareddy>