

Don't Underestimate Our Set (DUOS) Packet 9

Head Editors: Sinecio Morales, Aarya Singh

Edited by: Justin Abel, Alexander Crowell, Rohan Ganeshan, Kaushik Gollamudi, Rohan Kher, Sinecio Morales, Aarya Singh, Shiva Tegulla, Charahc Young

Written by: Aatreya Bhattacharyya, Samuel Go, Vishnuu Gopi, James Healy, Zainab Memon, Shardul Parthasarathy, Anirudh Prasanna, Jason Wang, Allie Yang

1. **It's not a quilt, but a Faith Ringgold painting of one of these objects was returned by the Chase Manhattan Bank after representatives of the corporation noticed its patterns formed a racial slur. Late in his career, Childe Hassam depicted many of these objects in paintings such as *Avenue in the Rain*. A dream of one of these objects supposedly inspired another artist to paint over newspaper collage with (*) encaustic; that artist layered three of these objects in one work and used beeswax in a monochrome "white" depiction of one of these objects. A boat crossing an icy river carries James Monroe as he holds one of these objects in a painting by Emanuel Leutze. Oft-painted by Jasper Johns and featured prevalently in *Washington Crossing the Delaware*, for 10 points, name these patriotic symbols adorned with stars and stripes.**

ANSWER: **American flags** [or **flags** of the **United States** of **America**; prompt on just **flags**] <Crowell - Visual Fine Arts>

2. **A character in this city buys a "magic suit" which allegedly will attract women after another character dreams of three hobos offering him a candle and a blue robe. A character in this city buys furniture on credit from the Devil for 15 years and sings about the dog "old Blue." In this city, the death of four men in a boxcar burning serves as the origin of spirits named "The Ghosts of the Yellow Dog." A believed angel in this city sounds his trumpet three times to enter heaven after Alberta dies while giving birth to Raynell. A truck full of watermelons is driven by Lymon in this city where the protagonist attempts to purchase (*) Sutter's land. Cory is prevented from applying for a football scholarship in this city where ex-baseball player Troy Maxson becomes a garbage man. *The Piano Lesson* and *Fences* are set in, for 10 points, what Pennsylvania city that titles a "cycle" by August Wilson?**

ANSWER: **Pittsburgh** [accept The **Pittsburgh** Cycle] <Ganeshan - American Literature>

3. **The chelate effect increases an analogue of this quantity for multidentate complexes called the stability constant. Two types of this quantity with subscripts p and c are related by the product of RT to the power of change in gaseous moles. Values used to solve for this quantity are computed in the last row of an ICE ["ice"] table. Calculating this quantity involves multiplying species' concentrations by their stoichiometric coefficients, according to an expression provided by the law of (*) mass action. Le Chatelier's principle predicts shifts in this quantity for changes in parameters such as temperature or pressure. When this quantity exceeds the reaction quotient, products are favored. The point in a reaction at which there is no net change in products or reactants is represented by, for 10 points, what constant which is symbolized K?**

ANSWER: **equilibrium** constant [accept **K** and **Keq** until mentioned] <Tegulla - Chemistry>

4. **Paul Lunde translated the final volumes of the history *The Meadows of Gold*, which focuses entirely on life in this city. A ruler of this city fought an insurrection called the Zanj Revolt. The *mihna* court was based in this city, which was the home of a "Transliteration Movement" that translated Greek texts. This capital was established after Marwan II was defeated at the Battle of the (*) Zab, and it contained a scholarly institute home to the creation of algebra. Harun al-Rashid led the "Golden Age" of this city, which was sacked in 1258 by Hulagu Khan's Mongol forces. The House of Wisdom was located in, for 10 points, what capital of the Abbasid Caliphate and modern-day Iraq?**

ANSWER: **Baghdad** <Ganeshan - World History>

5. **A referendum vote during this election year allowed Mississippi to change their old Confederate battle flag to one depicting the magnolia. During one debate in this year, one candidate remarked that his opponent had graduated near the bottom of his class from Syracuse Law School after being offended by the use of the word "smart." Sidney Powell falsely claimed that Venezulean leadership has partially owned a piece of technology used for this year that was invented by (*) Dominion Voting Systems. Two Senate runoff elections in Georgia, which were won by progressives Raphael Warnock and Jon Ossof, were held during this year's election cycle. The nomination of Supreme Court Justice Amy Coney Barrett was a main issue during, for 10 points, what election year in which Joe Biden became President of the United States?**

ANSWER: **2020** election <Tegulla - General Knowledge>

6. **The Phong model is typically applied to 3-D rendering by interpolating three forms of this process; one of those forms of this process occurs isotropically for substances whose luminous intensity obeys Lambert's cosine law. The coefficients for transmittance and this process are calculated using the Fresnel equations. A form of this process that occurs within fiber optic cables creates evanescent waves. A polarized ray avoids this process if it is incident to an interface at (*) Brewster's angle. The critical angle is an angle at which light will experience the "total internal" type of this process. For a light ray, the angle of incidence equals its angle of this process when undergoing this process' specular form. For 10 points, name this process in which light bounces off of a surface.**

ANSWER: **reflection** [accept total internal **reflection**; accept **reflectance**; accept all other word forms] <Tegulla - Physics>

7. **The fifth in a set of six concertos named for this word by Vivaldi is in B flat major and opens with an *Allegro ma poco poco* movement. The *La Reine* symphony quotes in its first movement an earlier symphony by the same composer titled for this word whose movements are all marked in triple meter. The two-part finale of that symphony ends with a 3/8 *Adagio* coda opening with arpeggios in the symphony's unusual key of F-sharp minor. "Lebewohl," a German translation of this word, is written above the first three notes of a (*) Beethoven piano sonata nicknamed for it. In a symphony nicknamed for this word, the performers take turns blowing at candles before leaving the stage. For 10 points, give this nickname of Haydn's 45th symphony, another word for goodbye.**

ANSWER: **farewell** [accept "**Farewell**" Symphony, "Les **Adieux**," or any answer indicating **goodbye** or **departure** before "goodbye" is read] <Morales - Auditory Fine Arts>

8. **This figure was revealed to be illiterate when he said he could not read upon being commanded to in a cave. This figure's importance was foreseen when he was twelve by a Christian monk named Bahira. This figure resolved an issue between clans by placing The Black Stone in the center of a cloth and telling them to carry it. This figure was an orphan of a noble family and was left in the care of his grandfather and then his uncle, Abu Talib. This figure rode a winged horse named (*) al-Buraq on his "Night Journey." Supporters of this man suggested for him to escape persecution for his beliefs by traveling on the hijra from Mecca to Yathrib. For 10 points, name this final prophet of Islam who received the Quran and whose sayings and actions are recorded in hadith.**

ANSWER: **Muhammad** <Memon - Religion>

9. **US forces committed a massacre in a crater in this country at the First Battle of Bud Dajo. A ten-year transition period to autonomy in this country was laid out by the Tydings-McDuffie Act. A man who dressed as a Macabebe Scout to capture a leader in this country was satirically defended by Mark Twain; that man was Frederick Funston. Leonard Wood served as a Governor-General in this country, a post also once held by (*) William Howard Taft. This country's independence movement was led by Emilio Aguinaldo This country was the largest of the territories acquired by America after the Spanish-American War. For 10 points, name this country which American colonizers led from Manila.**

ANSWER: The **Philippines** <Kher - American History>

10. **An adaptation of a play in this language added an argument involving a nurse over the dog Puff. A sentry in that play describes catching sight of the title character after a dust storm settles. In one play in this language, the protagonist is shocked when hearing that one character dipped a flea's legs in melted wax to measure its jump length. Citizens bring in wool wrapped branches to offer supplication at two altars at the beginning of a play in this language. One play in this language features a school called (*) "The Thinkery" which is eventually burned down. One playwright who wrote in this language chronicled the title character killing his father and marrying his mother Jocasta in his Oedipus Trilogy. For 10 points, name this language used by Sophocles and Aristophanes who had many works premiere in Athens.**

ANSWER: Ancient **Greek** <Morales - Other Literature>

11. **Metabolism by pathogens of this disease can be observed by the formation of crystalline hemozoin [“hee-moh-ZOH-in”]. Tu Youyou’s team isolated a class of drugs used to treat this disease from sweet wormwood plants. Individuals who do not express the Duffy antigen receptors for pathogens of this disease are less likely to contract it. The most common variants of the pathogen that causes this disease are the *ovale*, *vivax* and (*) *falciparum* species. Drugs like artemisinin and quinine are used to treat this disease. In one example of heterozygote advantage, having sickle-cell trait grants extra immunity against this disease. For 10 points, name this disease that is spread by mosquitoes that contain the *Plasmodium* parasite.**

ANSWER: **malaria** <Tegulla - Biology>

12. **A man in this novel spends his fortune in 20 days, eventually ending up with a “notable church singer on Sundays”. An object in this novel that depicts Spyglass Hill eventually leads to the death of Israel Hands, who is revealed to be plotting a rebellion. A character in this novel criticizes the allies of George Merry when an object is made from the bible of Dick Johnson. The protagonist and his mother are forced to flee at the sound of (*) Blind Pew’s cane in this novel that features a central curse known as the “black spot.” After his cheese is stolen, Doctor Livesey figures out the purpose of the central object of this novel. In this novel, Long John Silver’s crew is defeated and Jim Hawkins returns home to manage the Admiral Benbow Inn. For 10 points, name this novel about the quest for Captain Flint’s riches, by Robert Louis Stevenson.**

ANSWER: **Treasure Island** <Yang - British Literature>

13. **This deity tricks a demon into killing itself by getting it to place its hand on its head. During an event involving a female form of this deity, a divine discus is used to decapitate Rahuketu. Kalki, another form of this deity, will appear at the end of the current era to slay Kali, a personification of evil. This deity, who is sometimes depicted reclining on Shesha, uses (*) Garuda, the king of all birds as his *vahana*. The Hindu goddess of wealth serves as the consort of this deity, and is named Lakshmi. The most famous avatar of this Hindu god is usually depicted with a peacock feather in his hair and is named Krishna. For 10 points, name this preserver deity who makes up the Trimurti with Brahma and Shiva.**

ANSWER: **Vishnu** [prompt on Mohini] <Gollamudi - Mythology>

14. **Paul the Deacon authored the *Historia Langobardorum* under the patronage of this ruler. A southern boundary at the Eider River was established when this ruler signed the Treaty of Heiligen with King Hemming. This monarch’s son conquered the “Ring of the Avars.” This ruler, who created the Spanish March as a buffer from the Umayyads, crushed Widukind’s army in a revolt where he beheaded 4,500 Saxons, the (*) Massacre at Verden. This ruler’s court included such men as the biographer Einhard and the scholar Alcuin of York. This monarch, whose grandsons divided his empire through the Treaty of Verdun, ruled during the “Carolingian Renaissance.” For 10 points, name this Frankish ruler crowned Holy Roman Emperor by Pope Leo III on Christmas Day, 800 CE.**

ANSWER: **Charlemagne** [or Charles the Great or Charles I or Carolus Magnus, or Karl der Grosse; prompt on partial answer] <Ganeshan - European History>

15. **The Haley Farm in Clinton, Tennessee is the site of a library designed by this artist dedicated to Langston Hughes. This artist created a series of seven earthworks chronicling exchanges between European settlers and indigenous peoples along the Columbia River in the Confluence Project. In another work by this artist, a Martin Luther King quote is engraved onto a wall behind a memorial table that documents historic advances in civil rights. The names of female students at (*) Yale University are engraved onto a slab of black granite in this artist’s *Women’s Table*. Her most famous work is located near *The Three Soldiers* monument in Washington D.C. and descends gradually on a gradient; that work lists the names of 58,000 deceased soldiers along two granite walls that form a “V.” For 10 points, name this Chinese-American architect of the Vietnam Veterans Memorial.**

ANSWER: Maya **Lin** <Crowell - Other Fine Arts>

16. **The speaker of a poem by this author concludes with the statement that “there’s only order, beauty: abundant, calm, voluptuous.” Another poem by this author opens “Nature is a temple in which living pillars / Sometimes give voice to confused words” and compares the sweetness of “oboes” to perfumes. A poem by this author compares a creature “reproaching God” to the fall of Andromache while another poem by him addressed to the “wisest and fairest of the angels” cries out (*) “take pity on my long despair!” This author of “Correspondences” and “The Litanies of Satan” introduced a collection of his by addressing the “Hypocritical reader, my fellow, my brother.” That collection by this author containing poems such as “The Swan” is divided into sections such as “Death,” “Wine,” and “Spleen and Ideal.” For 10 points, name this French Symbolist poet of the collection *The Flowers of Evil*.**

ANSWER: Charles Baudelaire <Ganeshan - European Literature>

17. **One application of the Stone-Weierstrass [“VYE-er-shtrahs”] theorem involves using these objects to approximate closed-interval, continuous functions. A problem arising when interpolating types of these entities can be resolved by using a set of them named for Chebyshev. A matrix’s eigenvalues are defined using the (*) characteristic types of these entities. Types of these entities may result from truncating a Taylor or MacLaurin power series. The Abel-Ruffini theorem states that there exists no general solution for types of these entities with a degree of five or higher. Taking the square root of b-squared minus four ac yields these entities’ discriminant, which decides how many roots it has. For 10 points, name these functions, whose second degree types are called quadratics.**

ANSWER: polynomials <Tegulla - Other Science>

18. **This ruler built a new capital near the city of Avaris that archaeologists referred to as “Pi-[this man’s name].” Temples built by this ruler are home to inscriptions of texts like *The Bulletin* and the *Poem of Pentaur*, and a relief of the two Shasu spies that tricked him. After defeating the Sherden sea pirates, this ruler incorporated them into his army. Temples this ruler built were (*) relocated in 1968 for the construction of the Aswan High Dam from the complex of Abu Simbel. After fighting Hattusili III in history’s largest chariot battle, this man signed the first peace treaty in history with the Hittites. For 10 points, name this Egyptian pharaoh who fought at the Battle of Kadesh.**

ANSWER: Ramses II [or Ramses the Great or Ramesses II or Ramesses the Great; prompt on Ramses] <Gollamudi - Ancient/Other History>

19. **One form of this concept results from the intersection of literary elements with certain tropes like “emplotment” and “argument”; that “meta-” form of this concept is developed in a namesake book by Hayden White. Georg Hegel argued that philosophy cannot be truly impactful because this concept precedes the flight of the metaphorical owl of Minerva; he also proposed that a *weltgeist* advances this concept worldwide, giving rise to the argument that (*) pre-colonial Africa had not yet possessed this concept. Francis Fukuyama claimed that the spread of liberal democracy from the West would predicate “the end” of this concept. Thomas Carlyle theorized that so-called “great men” have had the greatest impact on this concept. For 10 points, name this subject that studies past events.**

ANSWER: history [accept *The Idea of History* and *The End of History and The Last Man*; prompt on answers like the past] <Tegulla - Philosophy>

20. **A ritual in this place involved a competition to collect the first sooty tern egg, the winner of which was eventually told “Go shave your head.” Natives of this place divided into “long-ears” and “short-ears” created an indecipherable script named Rongo-rongo. Jacob Roggeveen [“Row-gee-vehn”] was the first westerner to discover structures in this place, which were sometimes finished with a *pukao*. Makemake [“mah-kay mah-kay”] was a cult-like god who was worshipped by natives of this island, whose deforestation was detailed in (*) Jared Diamond’s book *Collapse*. Leaders of natives on this island were depicted in sculptures containing a platform base called an *ahu*. Thor Heyerdahl [“hi-er-dahl”] noted similarities between Peruvian statues and sculptures created by this island’s Rapa Nui people. Those inward facing multiton stone heads on this island are known as *moai*. For 10 points, name this Chilean island in the South Pacific named for a holiday.**

ANSWER: Easter Island [or Isla de Pascua, accept Rapa Nui until mention] <Ganeshan - Geography>