

2022 KICKOFF Novice

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Packet 4N: "My brother powered that from Percy Jackson." . . "goddammit rick"

Tossups

1. This location lies south of the Kaibab Plateau, and is home to a group of basement rocks named for Vishnu. This landmark is home to a "house" named for the Hopi people, whose myths described its creation. The Hualapai tribe operates a glass (*) "skywalk" above this location, which formed due to erosion from the Colorado River. Many tourists drive to this location from cities like Flagstaff and Phoenix. For 10 points, name this large gorge in Arizona.

ANSWER: Grand Canyon

<Mundhe, Geography>

2. The Paschen series for hydrogen lies entirely in this part of the electromagnetic spectrum, unlike the shorter-wavelength emissions in the Balmer series. One form of spectroscopy uses light in this part of the spectrum to induce bond vibrations. William Herschel discovered this part of the spectrum by putting a thermometer next to a (*) prism. Night vision goggles and temperature guns both operate by detecting this type of light. For 10 points, name this type of light, with wavelengths just longer than visible light.

ANSWER: infrared [or IR]

<Wu, Chemistry>

3. In a poem by this author, the speaker repeats the refrain "green, how I want you green." The speaker of a poem by this author declares "I will not see it!" about an event that took place "at five in the afternoon." This author of the poem (*) "Lament for the Death of a Bullfighter" also wrote a play in which Leonard and the Groom kill each other after the title event as part of his *Rural Trilogy*. For 10 points, name this Spanish author of *Gypsy Ballads* and *Blood Wedding*.

ANSWER: Federico García Lorca [prompt on partial last name]

<Ganguli, European Literature>

4. The trade of this commodity was opposed by King James I, who wrote a "Counterblaste" against it. Many of the hogsheads used to transport this commodity were destroyed by Cornwallis in its namesake "war" during the American Revolution. As part of the Third Supply, (*) John Rolfe brought this crop to Jamestown. Walter Raleigh popularized this crop in England. For 10 points, name this crop, whose leaves are used in cigarettes.

ANSWER: tobacco [or A *Counterblaste to Tobacco*; or the Tobacco War]

<Riley, American History>

5. **This man appeared to chuckle after a doorman described investigating a possible intruder while vaping at one event. Two dogs were blamed for the presence of human feces in the bed of this person. When questioned by Ben Rottenborn, this (*) actor agreed he would never play a certain role again, even if offered \$300 million and a million alpacas by Disney. For 10 points, name this former husband of Amber Heard, who played Jack Sparrow in *Pirates of the Caribbean*.**

ANSWER: Johnny Depp [or John Christopher Depp II]

<Ganguli, Current Events>

6. **This leader sent the Blue Division to fight on the Eastern Front. This leader probably orchestrated Emilio Mola's death in a plane crash to seize power of the Falange. Since Luis Carrero Blanco was assassinated, this dictator picked (*) Juan Carlos I to succeed him. A German bombing raid carried out on behalf of this leader is depicted in Picasso's *Guernica*. For 10 points, name this fascist ruler of Spain during World War II.**

ANSWER: Francisco Franco (or Francisco Paulino Hermenegildo Teódulo Franco Bahamonde; prompt on El Caudillo)

<Riley, European History>

7. **One of these molecules is bonded to either flavin or nicotinamide in the coenzymes FAD and NAD. A long chain of one of these molecules is post-transcriptionally attached to the 3' ["three-prime"] UTR of an mRNA. These molecules are linked by phosphodiester bonds. These molecules include (*) purines and pyrimidines, and examples include adenine and guanine. These molecules form two or three hydrogen bonds with each other in complementary base pairs. For 10 points, name these molecules, the building blocks of DNA.**

ANSWER: nucleic acids [or nucleotides or nucleosides; accept specific ones like adenine or adenosine]

<Wu, Biology>

8. **One deity from this country takes the Grass Cutter from the body of an eight headed dragon called Orochi. After a flayed horse was thrown at one goddess from this country, she hid in a cave until she was lured out by a mirror and the sound of laughing. This country's (*) emperors claim descent from that sun goddess. Susanoo and Amaterasu are deities from – for 10 points – what country's religion of Shintoism?**

ANSWER: Japan

<Wang, Mythology>

9. **In a novel written in this language, the dentist Dr. Booshy steals false teeth from dead bodies. In addition to *Midaq Alley*, another work in this language sees the slave-girl Morgiana pouring boiling oil on (*) thieves hiding in jars. A group of novels in this language follows three generations of the al-Jawad family in the *Cairo Trilogy*. For 10 points, name this language used by Naguib Mahfouz, which was also used to write *One Thousand and One Nights*.**

ANSWER: Arabic (the unnamed poet is Mahmoud Darwish)

<Ganguli, World Literature>

10. **A former quarterback from this team threw the game-winning pass in this team's 2012 playoff victory against the Pittsburgh Steelers, which was caught by a recently deceased wide receiver on the first play of overtime. One linebacker formerly on this team won (*) Super Bowl MVP after forcing two fumbles against Cam Newton. This team released Tim Tebow after signing Peyton Manning, and they play games at Mile High Stadium. For 10 points, name this NFL team based in Denver.**

ANSWER: Denver Broncos [accept Denver Broncos until "Denver" is read]

<Sareddy, Pop Culture>

11. In one poem, this author cautions “tread softly because you tread on my dreams.” The speaker asks “how can we know the dancer from the dance?” in this author’s “Among School Children.” The speaker of one poem by this author sees “a vast image out of (*) *Spiritus Mundi*.” The speaker of that poem by this author claims “things fall apart; the centre cannot hold” and describes a creature that “slouches towards Bethlehem.” For 10 points, name this Irish poet of “The Second Coming.”

ANSWER: William Butler Yeats

<Ganguli, British Literature>

12. The development of a D major piece in sonata form is typically in this note’s major key, since it is the dominant of the D major scale. The “Verdi pitch” sets this note to a 432 Hertz frequency, instead of the 440 Hertz concert pitch. This note’s minor key does not contain any sharps or flats, as it is the relative minor of C major, while its (*) major key has 3 sharps. An oboe plays this note to help the orchestra tune. For 10 points, name this second note in a G major scale.

ANSWER: A natural [do NOT accept or prompt on “A flat” or “A sharp”]

<Mundhe, Auditory Fine Arts>

13. This quantity can be computed by taking the reciprocal of the apparent movement of an object in arcseconds. Recessional velocity is proportional to this quantity, according to Hubble’s law. This quantity can be measured by observing the (*) parallax of an object. The force between two astronomical bodies is proportional to the inverse square of this quantity. For 10 points, name this quantity, which is measured in parsecs or kilometers.

ANSWER: distance [accept length; accept distance modulus]

<Wu, Astronomy>

14. A nurse born on this island ran the “British Hotel” during the Crimean War. This island, the birthplace of Mary Seacole, faced the Morant Bay Rebellion and wars involving escaped slaves called “Maroons.” From his base on this island, Henry Morgan raided Spanish settlements in Panama. On this island, the nickname (*) “Sodom of the New World” was given to the notorious pirate haven of Port Royal. For 10 points, what Caribbean island has its capital at Kingston?

ANSWER: Jamaica

<Riley, World History>

15. An island separated from this country’s mainland by the Bass Strait is the only native home of a carnivore that has been endangered by DFTD. This country’s eucalyptus trees are commonly used to make a native instrument called the didgeridoo. The (*) Tasmanian devil is endemic to this country, which is also home to most of the world’s marsupial species. For 10 points, name this home country of koalas and kangaroos, whose largest city is Sydney.

ANSWER: Australia

<Sareddy, Geography>

16. This organization attempted to purge CIA records in Operation Snow White. This religion’s founder formulated the concept of “clear” in his *Dianetics*. One story in this religion tells of an alien named (*) Xenu, who killed his own people with hydrogen bombs. For 10 points, name this L. Ron Hubbard-founded religion, which is followed by actors like John Travolta and Tom Cruise.

ANSWER: Church of Scientology

<Palavajhala, Religion>

17. **The most common application of Huygens principle is used to model this phenomenon. The equation “ $2d \sin \theta = n \lambda$ ” describes this phenomenon. Electrons underwent this phenomenon on a silver lattice in the Davidson-Germer experiment. This phenomenon is described by (*) Bragg’s law. A series of thin slits make up this phenomenon’s namesake grating. For 10 points, name this phenomenon, where light bends around an obstacle.**

ANSWER: **diffraction** [prompt on interference]

<Wu, Physics>

18. **One ruler of this modern-day country had his dead body concealed in a fish cart so his chancellor could forge his will. This country adopted Legalism and book-burning under a ruler who was buried with the (*) Terracotta Army. This country was first unified by Shi Huangdi, whose dynasty was overthrown by the Han. For 10 points, name this country, whose Qin dynasty began construction of the Great Wall.**

ANSWER: **China** [or **Zhongguo**; prompt on Qin dynasty before mention]

<Riley, Ancient History>

19. **This band included the lyrics “come from the land of the ice and snow / From the midnight sun where the hot springs flow” on a song in which its lead singer describes going to Valhalla. “A lady who’s sure / all that glitters is gold” buys the title conveyance in a song by this band. This band’s guitarist, (*) Jimmy Page, played a breakdown on “Whole Lotta Love” with a cello bow. For 10 points, name this ‘70s rock band, the authors of “Immigrant Song” and “Stairway to Heaven.”**

ANSWER: **Led Zeppelin** [accept I love AC/DC! from Marvel fans]

<Riley, Pop Culture>

20. **This architect was inspired by Anasazi Cliff Dwellings to design the Mesa Laboratory. One of this architect’s buildings resembles growing bamboo shoots, while another building features a dual-triangular tent that sits on the shores of Lake Erie. This man designed the (*) Bank of China and Cleveland’s Rock and Roll Hall of Fame. For 10 points, name this Chinese-American architect, who designed the glass pyramid for the Louvre.**

ANSWER: I.M. **Pei** [or Ieoh Ming **Pei**]

<Qin, Other Fine Arts>

Bonuses

1. This thinker wrote “what benefits the enemy harms you” in one Socratic dialogue. For 10 points each:

[H] Name this thinker, who echoed Cicero’s belief that many citizens have better judgment than a single dictator in his *Discourses on Livy*.

ANSWER: Niccolo **Machiavelli**

[M] Machiavelli wrote “it is better to be feared than loved” in this political treatise dedicated to Lorenzo de Medici.

ANSWER: *The **Prince***

[E] Machiavelli wrote a treatise titled for the *Art of* [this concept]. Sun Tzu described the use of deception in another work titled for the *Art of* [this concept].

ANSWER: **war** [accept *The Art of **War***]

<Palavajjhala, Philosophy>

2. This country’s Conservative Party went into crisis in July 2022. For 10 points each:

[E] Name this country, whose Prime Minister Boris Johnson resigned after suffering a record 62 cabinet resignations within the span of two days.

ANSWER: **United Kingdom** (or Great **Britain**; prompt on **England**)

[M] This successor to Johnson as Prime Minister was on a plane to Indonesia during the onset of the crisis. This former Foreign Secretary was criticized in 2016 for her opposition to Brexit, though she later supported it.

ANSWER: Liz **Truss** [or Mary Elizabeth **Truss**]

[H] In October 2022, this man became the Prime Minister of the United Kingdom. This former Chancellor of the Exchequer was among the first in Johnson’s cabinet to resign as a result of the Chris Pincher scandal.

ANSWER: Rishi **Sunak**

<Brusilovsky, Current Events>

3. Paintings of these things were thought by Alfred Steiglitz to represent various body parts. For 10 points each:

[E] Name these things, which title paintings such as *Black Iris III* and *Oriental Poppies*.

ANSWER: **flowers**

[M] *Black Iris III* and *Oriental Poppies* were some of the many paintings of flowers by this American artist. This painter was married to the photographer Alfred Steiglitz.

ANSWER: Georgia **O’Keeffe**

[H] O’Keeffe also frequently depicted these body parts belonging to cows. An anamorphic one of these body parts appears in Hans Holbein the Younger’s *The Ambassadors*.

ANSWER: **skulls**

<Mundhe, Visual Fine Arts>

4. One disorder associated with this phenomenon may be caused by a disruption during its deep NREM form. For 10 points each:

[E] Name this phenomenon, which is inhibited in insomnia.

ANSWER: **sleep** [accept word forms like **sleeping**; accept equivalents]

[M] Sleep is stimulated by the secretion of this hormone from the pineal gland, which is also used to treat insomnia. Some people take supplements of this hormone to help them fall asleep.

ANSWER: **melatonin**

[H] Melatonin regulates these 24-hour cycles that control when people feel drowsy. These cycles are regulated by the suprachiasmatic nucleus.

ANSWER: **circadian** rhythm [or **circadian** cycle; accept **sleep-wake** cycle; prompt on **sleep cycle**]

<Wu, Biology>

5. Most of Benedetto Cotrugli's manuscripts about trade were published while he was a diplomat of this kingdom. For 10 points each:

[H] Name this kingdom, which was separated from an island to its south in the War of the Sicilian Vespers. This kingdom names a present-day Italian city on the slopes of Mt. Vesuvius.

ANSWER: Kingdom of **Naples**

[E] Cotrugli's work *Della mercatura e del mercante perfetto* likely contains the first descriptions of the "double-entry" type of this practice. This practice generally involves the tracking of financial transactions.

ANSWER: **bookkeeping** [or double-entry **bookkeeping**; or **accounting**]

[M] Cotrugli was from the Republic of Ragusa, a maritime republic located within this modern-day country's coastal region of Dalmatia.

ANSWER: **Croatia** [or Republic of **Croatia**; or Republika **Hrvatska**]

<Sareddy, European History>

6. Characters in this play play party games such as "Hump the Hostess" and "Get the Guests." For 10 points each:

[H] Name this play, in which the younger couple Nick and Honey visit the home of George and Martha. At the end of this play, Martha exclaims "I am!" in response to the title question.

ANSWER: ***Who's Afraid of Virginia Woolf?***

[M] This author of *Who's Afraid of Virginia Woolf?* depicted a conversation between the humans Nancy and Charlie and the reptiles Leslie and Sarah in *Seascape*.

ANSWER: Edward **Albee**

[E] Jerry asks "Could I have planned all this?" after impaling himself on a knife held by Peter in an Edward Albee play set in this location, a large park in Manhattan.

ANSWER: **Central** Park

<Palavajjhala, American Literature>

7. One ingredient in this substance is meant to be chewed by virgins called *bijinshu*. For 10 points each:

[H] Name this rice-based alcoholic beverage. Three sips are taken from three cups of this drink during one Japanese religious ceremony.

ANSWER: **sake** [prompt on **rice wine**; do not accept or prompt on "wine" alone]

[M] Sake is consumed by the participants in this ceremony. These ceremonies often involve the exchange of vows.

ANSWER: **wedding** [accept **marriage** ceremony]

[E] Sake was traditionally made in shrines of this religion. Gods in this religion are called Kami.

ANSWER: **Shintoism**

<Palavajjhala, Religion>

8. The absolute value function has this property everywhere, except at $x = 0$. For 10 points each:

[H] Name this property that is possessed everywhere by smooth functions, since they have a tangent line at every point. Functions with this property are continuous, but the opposite is not always true.

ANSWER: **differentiability** [accept word forms like **differentiable**; accept anything involving **having a derivative**]

[E] The concept of continuity can be rigorously defined using these constructs. These constructs are values a function approaches as its input approaches some value. They are denoted by "lim."

ANSWER: **limits**

[M] Limits don't exist at the "vertical" examples of these things, which are lines that a function approaches, but never reaches. The graph of a hyperbola has two diagonal examples of these things.

ANSWER: **asymptotes** [accept vertical **asymptotes**]

<Wu, Math>

9. This country's horsemen, called *csikós*, populate much of its Hortobágy National Park. For 10 points each:
[H] Name this European country south of Slovakia, whose namesake "great plain," also known as the Alföld, is part of the Pannonian Basin. This country's native people are known as Magyars.

ANSWER: **Hungary**

[E] Hungary's Hortobágy is also home to a nine-arched one of these structures. One of these structures named for István Széchenyi connects the historic cities of Buda and Pest by spanning the Danube River.

ANSWER: **bridges** [or the Nine-Arched **Bridge**; or the Szechenyi **Bridge**]

[M] *Csikós* also tended to the racka breed of this animal, known for their spiral horns. The presence of these animals in Australia and New Zealand provide them with a stable wool industry.

ANSWER: **sheep**

<Sareddy, Geography>

10. In 1930, native workers under this company cut telegraph lines and forced their managers to flee into the jungle during a revolt partly sparked by being forced to eat American food. For 10 points each:

[E] Name this company, whose founder invented the Model T.

ANSWER: **Ford** Motor Company [accept **Fordlandia**]

[H] Fordlandia was established in this country's state of Pará. Getúlio Vargas served as the dictator of this non-European country during its Estado Novo period.

ANSWER: **Brazil** [or the Federative Republic of **Brazil**; or Republica Federativa do **Brasil**]

[M] Fordlandia sought to harvest resources for this material that Ford Motors used in many of its operations, including to create the tires for their cars.

ANSWER: **rubber**

<Riley, World History>

11. Q-switching allows these devices to emit very short pulses. For 10 points each:

[E] Identify these devices, which emit a monochromatic beam of light. These devices are often used in pointers.

ANSWER: **lasers** [or **laser** pointers; or **light amplification by stimulated emission of radiation**]

[H] Lasers were used to create this state of matter by cooling a gas of rubidium atoms to near absolute zero. This state of matter is formed when particles with integer spin collapse into a low-energy state.

ANSWER: **Bose-Einstein condensate** [or **BEC**]

[M] Lasers output light with this property, which means that all of the light is in phase and has the same frequency.

ANSWER: **coherent**

<Wu, Physics>

12. This ruler's grandmother forced everyone in his empire to agree to his ascension to the throne in the Loyalty Treaty of Naqi'a-Zakutu. For 10 points each:

[H] Name this emperor, who constructed a namesake library in Nineveh.

ANSWER: **Ashurbanipal** [or **Sardanapalus**, or **Assur-bani-apli**]

[M] Ashurbanipal ruled this empire from Nineveh. The Biblical Jonah was forced to visit this empire.

ANSWER: **Assyrian** Empire

[E] Prior to destroying the Elamite capital brick by brick, Ashurbanipal's armies had besieged this city after his brother tried to revolt. This city was once ruled by Hammurabi.

ANSWER: **Babylon**

<Riley, Ancient History>

13. Hello. Are you ready to destroy some evil today? For 10 points each:

[H] The character Nightblood appears in this author's novel *Warbreaker*. This author of the *Stormlight Archive* wrote five books in secret during quarantine, as one does.

ANSWER: Brandon **Sanderson**

[M] Nightblood is a sentient one of these weapons. In Arthurian myths, one of these objects is pulled out of a stone by King Arthur.

ANSWER: **swords**

[E] Shallan Davar's abilities in the *Stormlight Archive* may have been influenced by myths of nensha from this country. Kobo Abe's *Woman in the Dunes* follows a schoolteacher from this country's capital of Tokyo.

ANSWER: **Japan**

<Riley, Pop Culture>

14. This novella begins with the narrator declaring "I am a sick man... I am a spiteful man." For 10 points each:

[H] Name this existentialist novella, in which an unnamed narrator refuses to see a doctor for his liver pain.

ANSWER: **Notes from the Underground**

[E] *Notes from the Underground* is by this Russian author, who also wrote about Raskolnikov's murder of a pawnbroker in his novel *Crime and Punishment*.

ANSWER: Fyodor **Dostoevsky**

[M] Dostoevsky also wrote this novel, in which Smerdyakov kills the father of the title siblings Alyosha, Dmitri, and Ivan.

ANSWER: *The* **Brothers Karamazov**

<Ganguli, European Literature>

15. Name some things about the first name Johann and canons... no not the ones that go boom boom. For 10 points each:

[H] Johann Sebastian Bach dedicated a set of 30 variations to this person. Every third movement of that piece named after this person is a canon.

ANSWER: Johann Gottlieb **Goldberg** [or the **Goldberg Variations**]

[E] Johann Pachelbel's most famous and stupid work is a *Canon in [this key]*. This major key signature has two sharps.

ANSWER: **D** major [or *Canon in* **D**]

[M] The music of Johann Pachelbel and Johann Sebastian Bach are labeled as part of this style. This style typically refers to music from 1600-1750 and preceded the "Classical" period.

ANSWER: **Baroque**

<Qin, Auditory Fine Arts>

16. The second film that this character features in introduces his love interest, Jessie the Cowgirl. For 10 points each:

[M] Name this character, who titles a 2022 film in which he is played by Chris Evans. In another appearance, this character suggests that a friend remain with Bo Peep instead of returning to Bonnie.

ANSWER: **Buzz Lightyear** [accept either underlined part]

[E] Buzz Lightyear first appeared in this first Pixar feature film, in which he forms a rivalry with Woody over being Andy's favorite plaything.

ANSWER: **Toy Story** [accept *Toy Story 3*]

[H] In *Toy Story*, Buzz climbs into a claw machine where green aliens are prizes at this fictional restaurant. A truck containing the name of this restaurant has featured as an Easter Egg in every Pixar movie but *The Incredibles*.

ANSWER: **Pizza Planet**

<Mundhe, Pop Culture>

17. The title character of one play by this author is forgotten by King Dushyanta after she loses a signet ring in a river. For 10 points each:

[H] Name this Indian author of "The Recognition of Shakuntala" and "The Cloud Messenger."

ANSWER: **Kalidasa**

[M] Kalidasa wrote in this ancient Indian language, which was also used to write Hindu texts, such as the *Vedas*.

ANSWER: **Sanskrit**

[E] In "The Cloud Messenger," a yaksha asks a cloud to take a message to his wife after being exiled from his home in this mountain range. This Asian mountain range includes Mount Everest.

ANSWER: **Himalayas**

<Ganguli, World Literature>

18. Ninety percent of this state's farmworkers are of Mexican origin. For 10 points each:

[E] Name this state, whose San Joaquin Valley saw many Mexican laborers go on a strike in 1933 near its capital, Sacramento.

ANSWER: **California**

[M] In this decade, the Bracero program allowed Mexican laborers to work in states like California for short-term labor. The Manzanar internment camp was documented in this decade after the passage of Executive Order 9066.

ANSWER: **1940s** [prompt on the '40s]

[H] This labor activist opposed the Bracero program for its exploitation of Mexican workers. With Dolores Huerta, this man co-founded the United Farm Workers, which conducted the Delano Grape Strike.

ANSWER: Cezar **Chavez**

<Riley, American History>

19. Twelve shields known as the ancilla were wielded by twelve “leaping priests” sacred to this god. For 10 points each:

[E] Name this father of Romulus and Remus, the Roman god of War.

ANSWER: **Mars** [do not accept or prompt on “Ares”]

[M] After being taken from Rhea Silvia, Romulus and Remus were raised by one of these animals. Lycaon is turned into one of these animals after attempting to trick Zeus.

ANSWER: **Wolves** [or word forms, such as a she-**wolf**]

[H] Rhea Silvia was a “virgin” of this goddess of the hearth. The fire sacred to this Roman equivalent of Hestia was not allowed to go out.

ANSWER: **Vesta** [accept **Vestal** Virgins]

<Ganguli, Mythology>

20. This technique was first described by Isidor Rabi. For 10 points each:

[H] Name this technique, which measures a chemical shift measured in parts per million and is commonly measured relative to TMS. This technique commonly uses H-1 or C-13 isotopes.

ANSWER: **NMR** [or **nuclear magnetic resonance**; accept ¹H-**NMR** or ¹³C-**NMR**]

[E] TMS is composed of four methyl groups bonded to a central atom of this element, with atomic symbol Si.

ANSWER: **silicon**

[M] Solvents in NMR often have their hydrogen atoms replaced by this isotope. This heaviest stable isotope of hydrogen has a nucleus consisting of a proton and neutron, and is found in heavy water.

ANSWER: **deuterium** [prompt on **H2**]

<Wu, Chemistry>