

Collective Early Release Entry-level Set (CERES)

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Packet 4

Tossups:

1. **Some scientists have theorized that these gemstones occur naturally in the atmosphere of Uranus and Neptune. These gemstones can often be found in a rock called kimberlite, and they are often used as industrial drill bits due to their ability to cut hard materials. This substance has a (*) Mohs hardness of 10, the highest on the scale. For 10 points, name these highly valuable gemstones composed of carbon.**

ANSWER: **diamonds** <Gollamudi, Science>

2. **Q, R, and S waves are produced by this organ in a complex that measures ventricular depolarization. Purkinje fibers and the SA node help with electrical conduction in this organ. Myocarditis is the inflammation of a layer of this organ. It's not the stomach, but this organ can be the subject of (*) "bypass surgery". An EKG may be used to show the activity of, for 10 points, what organ which pumps blood through the body?**

ANSWER: **heart** <Bhattacharyya, Science>

3. **An amendment with this number was challenged in the case *D.C. v. Heller*. An article of the Constitution with this number details impeachment, and sets the powers of the Executive branch. Members of the House are elected for a term of this many (*) years. An amendment with this number gives people the right to "keep and bear Arms." For 10 points, name this number of chambers of Congress in the US.**

ANSWER: **two** [accept the **Second Amendment** or **Article Two** of the United States Constitution] <A. Gao, Social Science>

4. **Users of this website can celebrate their "cake day" on the anniversary of their account's creation, when a small cake is shown next to their usernames. In February 2021, the price of stocks such as GameStop was manipulated by this website's (*) WallStreetBets community. Users of this website receive karma when someone upvotes their posts. For 10 points, what website is home to communities whose names begin with r/ ("r slash")?**

ANSWER: **Reddit** <Mahendra, General Knowledge>

5. **This artwork's creator made four versions of it from 1893 to 1910, the last of which lacked eyeballs in its central figure. Scholars have debated whether the eruption of Krakatoa inspired the blood-red sky found in this artwork. Two people stand by a guardrail on a bridge behind the central figure of this artwork. A (*) distorted man features in, for 10 points, what Edvard Munch painting showing a figure shrieking?**

ANSWER: **The Scream** [or **Skrik**] <Young, Fine Arts>

6. Every integer can be expressed as an odd number times one of these numbers. A Mersenne prime is equal to one of these numbers minus one. When these numbers are written in binary, they will always consist of a 1 followed by some number of zeroes. The game (*) 2048 involves moving examples of these numbers throughout a 4 by 4 grid. 2, 4, 8, 16, and 32 are the first few of, for 10 points, what type of numbers?

ANSWER: **powers** of 2 <Hagen, Math>

7. The nationalization of one of these structures by Gamal Abdel Nasser sparked a 1956 "crisis." Walter Reed stopped the spread of yellow fever to help build one of these structures which contains Gatun Lake. In 2021, one of these structures was briefly made unusable after the (*) *Ever Given* became stuck in it. The Suez is one of, for 10 points, what artificial waterways, one of which connects the Atlantic and Pacific oceans through Panama?

ANSWER: **canals** [accept Panama **Canal** or Suez **Canal**] <R. Ganeshan, History>

8. King Victor Emmanuel III failed to stop this country's "Blackshirts" from marching on its capital. Haile Selassie gave a failed request for help to the League of Nations after this country invaded Ethiopia in 1935. This country's (*) fascist leader Benito Mussolini signed a "Pact of Steel" with Adolf Hitler. The Axis Powers in World War II were Germany, Japan, and, for 10 points, what country, the site of the March on Rome?

ANSWER: **Italy** [or **Italia**] <Emmanuel, History>

9. Dry Tortugas National Park lies in this body of water, into which rivers such as the Brazos and Atchafalaya drain. This body of water was the site of the Deepwater Horizon oil spill. Cities like (*) Mobile and Tampa lie on this body of water. New Orleans and Houston are on, for 10 points, what gulf, which receives the Mississippi River and borders states like Louisiana and Texas?

ANSWER: **Gulf of Mexico** [accept **Golfo de México**] <A. Gao, Geography>

10. A prediction by this man was confirmed during a solar eclipse, the first observation of gravitational lensing. This man received the Nobel Prize in Physics for his work on the photoelectric effect, and he also was the first to describe mass-energy equivalence. The theories of (*) special and general relativity were developed by, for 10 points, what German scientist best known for the equation "e equals m c squared"?

ANSWER: Albert **Einstein** <Bhattacharyya, Science>

11. A character with this surname is forced to read for the morphine addict Mrs. Dubose, and another is nicknamed "one-shot" after easily killing a rabid dog. A lawyer with this surname who lives in Maycomb, Alabama defends Tom (*) Robinson at trial after he is accused of sexual assault by Mayella Ewell. Jem, Atticus, and Scout are members of, for 10 points, what family central to Harper Lee's *To Kill A Mockingbird*?

ANSWER: **Finch** [accept Jem **Finch**, Atticus **Finch**, or Scout **Finch**] <S. Ganeshan, Literature>

12. A hexagonal storm is one notable feature along the North Pole of this planet, and the Cassini-Huygens probes were sent to visit this planet. Enceladus and Rhea are two moons of this planet, and certain features of this planet are thought to have been asteroids torn apart by its gravity. The most visible (*) rings on any planet are located around, for 10 points, what gas giant, the 6th planet from the Sun?

ANSWER: **Saturn** <Gollamudi, Science>

13. In one novel by this author, Sydney Carton takes Charles Darnay's place at the guillotine. London and Paris are the title "two cities" of that novel, and this author also wrote the semi-autobiographical novel *David Copperfield*. One character created by this author exclaims, (*) "Please Sir, I want some more". For 10 points, what author wrote many novels about orphan boys, including *Great Expectations* and *Oliver Twist*?

ANSWER: Charles **Dickens** <Bodducherla, Literature>

14. A chase scene at the site of this landmark ends the Alfred Hitchcock film *North by Northwest*, and this landmark hides a lost city of gold in *National Treasure: Book of Secrets*. This landmark was protested by the American Indian Movement because its location in the Black Hills is sacred to the Lakota. (*) Gutzon Borglum oversaw the construction of, for 10 points, what giant sculpture in South Dakota depicting four presidents?

ANSWER: Mount Rushmore National Memorial [or Six Grandfathers, or Thunĕkářila řákpe] <Kher, General Knowledge>

15. A play from this modern-day country, in which a god judges a poetry contest while the title animals chant "Brekekekex-koax-koax," is named *The Frogs*. In another play from this country, the Sphinx's riddle is solved by the title character, who is the subject of a (*) prophecy that he will marry his mother and murder his father. *Oedipus Rex* was written by Sophocles in, for 10 points, what country where theater was born in Athens?

ANSWER: Greece [or Hellas or the Hellenic Republic] <Kher, Literature>

16. An election to this post in 1855 took 133 ballots to declare a winner, Nathaniel Banks. James Polk was the only holder of this post to later become president. The *Contract with America* was written by a holder of this post, Newt Gingrich. Holders of this post sign impeachment articles before delivery to the (*) Senate, and are second in the line of succession. For 10 points, name this post currently held by Nancy Pelosi.

ANSWER: Speaker of the United States House of Representatives <A. Gao, History>

17. One goddess was forced to stay in this location for 6 months a year after she accidentally ate pomegranate seeds. One figure was punished in this location by having to eternally push a boulder up a hill. Elysium, the Fields of Asphodel, and (*) Tartarus can all be found here. The ferryman Charon crosses the River Styx in, for 10 points, what mythological location is home to Thanatos and other dead souls?

ANSWER: the Greek underworld [accept Hades; prompt on hell] <Bodducherla, Mythology>

18. One song by this musician claimed that a company "started their business by selling pirated songs" which he says is "right there on Wikipedia." Boyinaband and Roomie are featured in a diss track by this musician. He's not Post Malone, but this musician created a song called (*) "Congratulations." This musician is the most-subscribed independent creator on YouTube. For 10 points, name this Swedish YouTuber.

ANSWER: PewDiePie [accept Felix Arvid Ulf Kjellberg] <Bhattacharyya, Popular Culture>

19. This figure supported a strike of sanitation workers by giving the "I've Been to the Mountaintop" speech. In another speech, this figure wished for his "four little children" to be judged "by the content of their character." On the steps of the (*) Lincoln Memorial at the 1963 March on Washington, this man gave a speech that stated, "I have a dream." For 10 points, what civil rights leader has a day in January named for him?

ANSWER: Martin Luther King Jr. [or MLK] <Kher, History>

20. A cat named Gli became famous for living in one of these buildings in Turkey. These buildings include a faucet where visitors perform *wudu* to wash themselves. People may hear a muezzin's call from atop a minaret summoning them to these places. These places contain a niche called a *mihrab* which points towards (*) Mecca. Worshippers might bring prayer rugs for Friday prayers to, for 10 points, what Muslim places of worship?

ANSWER: mosques [or masjid or masājid] <Kher, Religion>

Bonuses:

1. This planet is sometimes known as Earth's twin sister because of their similar properties. For 10 points each:

[10] Identify this second planet from the Sun.

ANSWER: **Venus**

[10] Venus is known for having a runaway form of this effect, which makes its climate extremely hot. Gases that cause this effect include carbon dioxide and water vapor.

ANSWER: **greenhouse** effect

[10] Venus's atmosphere may have once held free hydrogen, but it was swept into space because Venus lacks one of these entities to protect it. The bow shock is created by this entity deflecting solar wind.

ANSWER: a **magnetic field** [or a **magnetosphere**] <Gollamudi, Science>

2. One of this man's poems describes how "the centre cannot hold". For 10 points each:

[10] Name this Irish poet of "The Second Coming". His poem "Easter, 1916" describes the Easter Rising.

ANSWER: William Butler **Yeats** (rhymes with "gates")

[10] "The Second Coming" opens with one of these kinds of animals "Turning and turning in the widening gyre". Another poem by Yeats describes one of these kinds of animals in its "feathered glory" attacking Leda with its "great wings beating still" and "indifferent beak".

ANSWER: **birds** [accept specific kinds of birds, like **falcons** or **swans**]

[10] "The Second Coming" also describes "a vast image out of *Spiritus Mundi*," which translates to the spirit of this place. In *As You Like It*, William Shakespeare wrote that "all the [this place]'s a stage."

ANSWER: the **world** [accept "all the **world's** a stage"] <C. Gao, Literature>

3. One of these objects can be made by giving a strip of paper a half twist and taping its ends together. For 10 points each:

[10] Name these one-sided objects. A Klein bottle is composed of two of these objects joined together.

ANSWER: **Möbius strip**

[10] A Möbius strip has this many dimensions. Anything that only has length and width, like a square or circle, has this many dimensions.

ANSWER: **two** [accept **2D** or **two-dimensional**]

[10] Another one-sided shape is this donut-shaped mathematical object. A common joke about these objects is that topologists cannot tell the difference between them and a coffee mug.

ANSWER: **torus** <A. Gao, Math>

4. For 10 points each, answer the following about Excalibur:

[10] Excalibur was wielded by this King, who was the son of Uther Pendragon and Igraine. He is better known for leading the Knights of the Round Table.

ANSWER: King **Arthur**

[10] In one story, King Arthur orders Griflet to dispose of the sword by throwing it into one of these places. In other versions of the myth, a Lady of one of these places gives Excalibur to Arthur after he breaks the Sword in the Stone.

ANSWER: a **lake**

[10] In the Mabinogion, Arthur's sword is described as having a design of two of these creatures on the hilt. In Greek mythology, these creatures are part lion, part goat, and part snake, and one was notably slain by Bellerophon while riding Pegasus.

ANSWER: a **Chimera** <Gollamudi, Mythology>

5. For 10 points each, answer some questions about unusual wars throughout history:

[10] This country lost a war against emus that were destroying crops in its outback. James Cook was the first to arrive in this country's Botany Bay, which is now located in the city of Sydney.

ANSWER: Commonwealth of **Australia**

[10] In 1969, El Salvador and Honduras fought a war named after this sporting activity which lasted around 100 hours.

ANSWER: **soccer** [or **football** or **fútbol**; accept **Soccer War** or **Football War** or La guerra del **fútbol**]

[10] A dispute over the northern border of this US state sparked the Pig War of 1859, which was triggered by the shooting of a pig. For the "Space" theme of the 1962 World's Fair in this state's largest city, a 605-foot high observation tower was built overlooking Puget Sound.

ANSWER: **Washington** <Bhattacharyya, History>

6. This river flows through several European capitals, including Bratislava and Budapest. For 10 points each:

[10] Name this second-longest river in Europe. It originates in the Black Forest of Germany, flows into Austria at Passau, and meets the Sava in Belgrade.

ANSWER: **Danube** River [or **Donau**, **Dunărea**, **Doana**, **Dōnaj**, **Dunaj**, **Duna**, **Donava**, or **Dunav**]

[10] Although the Danube starts in west-central Europe, most of its drainage basin is located in this European country where it makes up much of the border with Bulgaria to its south. This country's capital is Bucharest.

ANSWER: **Romania**

[10] The Danube River flows into this sea. This sea is bordered to the south by Turkey and to the north by Ukraine and the Crimean Peninsula, and it is connected to the Mediterranean Sea by the Bosphorus and Dardanelles straits.

ANSWER: **Black** Sea [or **Cherno** More, or **Shavi** Zghva, or Marea **Neagră**, or **Cherno**ye More, or **Karadeniz**, or **Chorne** More] <Sahgal, Geography>

7. Answer some questions about the Fast-Dealing Property Trading Game, for 10 points each:

[10] The Fast-Dealing Property Trading Game is this board game where one can compete to buy properties and charge opponents rent. The most valuable square in this game is "Boardwalk."

ANSWER: **Monopoly**

[10] If you are sent to Jail, you are instructed to not pass this square and not collect \$200. This is also the starting square on the board.

ANSWER: **Go**

[10] The center space on each of the board's four sides is a property of this type, which includes one named for Reading.

ANSWER: **railroads** <A. Gao, General Knowledge>

8. One famous cartoon referencing this legislation shows a snapping turtle symbolizing this legislation biting a merchant. For 10 points each:

[10] Name this 1807 act that prohibited American trade to all foreign countries. It was repealed two years later due to its unpopularity and economic damage.

ANSWER: **Embargo Act** of 1807

[10] The Embargo Act of 1807 was passed by this third president of the United States. This author of the Declaration of Independence served as president when the US negotiated the Louisiana Purchase in 1803.

ANSWER: Thomas **Jefferson**

[10] The Embargo Act worsened America's international standing in the lead-up to this conflict. This war, named for the year in which it began, included the burning of Washington D.C. by the British and the Battle of New Orleans.

ANSWER: War of **1812** <Koutsoukos, History>

9. Due to a jurisdictional quirk, it would be theoretically impossible for a jury to be formed to try any crimes committed in a section of this national park. For 10 points each:

[10] Name this first national park to be created. This national park is mostly located in Wyoming and has features such as the Old Faithful geyser and a namesake supervolcano.

ANSWER: **Yellowstone** National Park

[10] Yellowstone National Park juts into this state, which contains Glacier National Park. This state has the longest border with Canada of any of the lower 48 states.

ANSWER: State of **Montana**

[10] Two of the three headwaters of this river originate from Yellowstone. This longest tributary of the Mississippi River flows through Montana's Fort Peck Dam and passes by cities like Bismarck and Omaha.

ANSWER: **Missouri** River [or **Pekitanoui**, or **Kícpaaruksti**, or **Mnišošē**] <A. Gao, Geography>

10. Christians in Latin America celebrate many unique festivals. For 10 points each:

[10] A celebration originating in Mexico named the "Day of" these people is based on the traditional belief that every November, these people return to their family. During the holiday, these people are honored by home altars called *ofrendas*.

ANSWER: **dead** people [accept clear equivalents; accept **spirits** or **ghosts** or dead **ancestors** or other clear equivalents; accept Day of the **Dead** or Día de los **Muertos**]

[10] Many Latin American countries celebrate Día de los Tres Reyes, during which children receive these things after attaching their wishes to a balloon. In America, children believe that Santa Claus places these things under a tree the night before Christmas.

ANSWER: **presents** [or **gifts** or other clear equivalents]

[10] The Christian festival of Carnival is especially celebrated in this country. During the festival, parades play this country's samba style of music, which grew into its genre of bossa nova.

ANSWER: **Brazil** [or **Brasil**; accept Federative Republic of **Brazil** or **República Federativa do Brasil**] <Kher, Religion>

11. In 2011, this leader was killed in Sirte by a revolt started during his country's civil war. For 10 points each:

[10] Name this man who overthrew King Idris I to become the dictator of an African country for 42 years. This leader took responsibility for a plane bombing that occurred over Lockerbie, Scotland.

ANSWER: Muammar al-**Gaddafi** [or Muammar al-**Qaddafi** or Colonel **Gaddafi**]

[10] Gaddafi led this North African nation from its capital city, Tripoli. In 2012, the militant group Ansar al-Sharia attacked US government buildings in this country's city of Benghazi.

ANSWER: State of **Libya**

[10] Gaddafi outlined his political beliefs in a "Book" named for this color. Libya is one of many majority-Muslim countries to represent Islam with this color on their flag.

ANSWER: **green** [accept The **Green Book**] <Emmanuel, History>

12. For 10 points each, answer the following about Greek letters in science:

[10] The nucleus of a helium atom is also a kind of particle represented by this letter, the first in the Greek alphabet.

ANSWER: **Alpha**

[10] Photons are typically represented by this Greek letter. A type of radiation named after this Greek letter consists of light rays and can appear in namesake "bursts" in outer space.

ANSWER: **Gamma**

[10] Mathematician Bernhard Riemann created a function named for this Greek letter which was the subject of his namesake hypothesis concerning prime numbers.

ANSWER: **Zeta** <Gollamudi, Science>

13. Answer these questions about North American folk music, for 10 points each:

[10] The traditional music of this Canadian province is noted for its call-and-response style and use of instruments such as the mouth harp and hurdy-gurdy. This French-speaking province contains the city of Montréal, Canada's second-largest city.

ANSWER: **Québec**

[10] Bluegrass music, popular in Appalachia, is noted for its use of this five-stringed instrument similar to a guitar but with a circular and open-backed soundbox.

ANSWER: the **banjo**

[10] Many styles of folk music use this instrument, whose performers squeeze the bellows while pressing either buttons or a keyboard to play music. This instrument is a key part of polka music.

ANSWER: the **accordion** [accept **concertina** or **bandoneón**] <Thompson, Fine Arts>

14. Answer the following about literature concerning quizbowl. For 10 points each:

[10] David Levithan's "Quiz Bowl Antichrist" is about a team trip to a quizbowl tournament in this state. Purdue University and Notre Dame University are located in this Midwestern state.

ANSWER: **Indiana**

[10] Evie Allen battles quiz bowl zombies in a work by an author with this surname. This is also the name of a country home to authors such as James Joyce and Seán O'Casey.

ANSWER: **Ireland**

[10] In E.L. Konigsberg's *The View from Saturday*, an Academic Bowl team consisting of all sixth graders becomes the New York state middle school champions. *The View from Saturday* won this award for American childrens' literature, which, unlike the Caldecott Medal, does not include only picture books.

ANSWER: **Newbery** award <Young, Literature>

15. For 10 points each, answer the following about the Earth's mantle.

[10] The mantle of the earth is located between the outer core and this thinnest layer of the earth, which you are currently sitting on.

ANSWER: the **crust**

[10] The mantle is formed primarily from compounds of this element and oxygen. Olivine and garnet are examples of minerals primarily containing oxygen and this element, which is also used in semiconductors.

ANSWER: **silicon**

[10] Since the mantle behaves like a fluid, it often transfers energy through this type of heat transfer. Some ovens use this type of heat transfer to cook food, and it occurs because of warmer substances rising to the top and cooler substances falling down.

ANSWER: **convection** <Gollamudi, Science>

16. For 10 points each, answer some questions about a certain technological advance in World War I:

[10] World War I saw some of the first uses of these vehicles in military combat. The war began eleven years after these vehicles were first used by the Wright Brothers in Kitty Hawk, North Carolina.

ANSWER: air**planes** [or **aeroplanes**]

[10] During the war, Germany used these vehicles to bomb cities like London in a series of raids. A 1937 disaster killed passengers aboard one of these vehicles called the *Hindenburg*.

ANSWER: **zeppelins** [or **rigid airships**; prompt on **airships**; do NOT accept or prompt on "blimps" -- blimps are distinct from rigid airships because they do not maintain their shape when deflated]

[10] Manfred von Richthofen, a Prussian ace pilot who shot down over 80 other airplanes during the war, was given this nickname because of the distinctive color of his airplanes.

ANSWER: the **Red Baron** <Arjunan, History>

17. Answer these questions about video game music, for 10 points each:

[10] Since 2018, videos of people singing the theme of this five-installment video game series in school restrooms have gone viral. In addition to its theme, this series is also known for its protagonist, Master Chief.

ANSWER: **Halo**

[10] One music theme from this video game series is nicknamed "Furret Walk" by fans. A television series associated with these video games is known for its theme song, which proclaims "gotta catch 'em all".

ANSWER: **Pokémon** [accept **Pocket Monsters**]

[10] The main theme of a 2020 installment in this video game series is played mainly by a trumpet, bongos, and guitars. One goal in that game requires you to hold a concert for a guitar-playing dog named K.K. Slider.

ANSWER: **Animal Crossing** [prompt on **New Horizons**] <Heinonen, Popular Culture>

18. Hey kid, want to whitewash a fence, I've heard it's pretty fun! For 10 points each:

[10] Name this novel where the title character tricks other kids into painting Aunt Polly's fence. The title character falls in love with Becky Thatcher and witnesses Injun Joe's murder with his friend Huckleberry Finn.

ANSWER: The Adventures of **Tom Sawyer**

[10] This author of *The Adventures of Tom Sawyer* also wrote *Huckleberry Finn* and was called "the father of American literature" by William Faulkner.

ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**]

[10] In *The Adventures of Tom Sawyer*, Injun Joe is murdered in one of these locations. A Thomas Gray poem describes how the "rude forefathers of the hamlet sleep" in one of these locations.

ANSWER: **graveyard** [accept Elegy Written in a Country **Churchyard**; or synonyms like **cemetery**] <A. Gao, Literature>

19. A philosopher with this last name developed experimental education in his *Democracy and Education*. For 10 points each:

[10] Name this last name shared by a founder of Pragmatism named John and a developer of a library classification system named Melvil.

ANSWER: **Dewey** [accept Melville Louis Kossuth "Melvil" **Dewey**, John **Dewey**, **Dewey** Decimal Classification, or **Dewey** Decimal System]

[10] John Dewey developed Pragmatism with William James, who taught at Harvard University in this state. James's brother Henry wrote *The Bostonians*, which is set in this state.

ANSWER: **Massachusetts**

[10] This earlier American Transcendentalist philosopher wrote about his stay at Walden Pond in Massachusetts, where he also wrote "Civil Disobedience."

ANSWER: Henry David **Thoreau** <Gjesfjeld, Philosophy>

20. This organelle is often known as the "powerhouse of the cell". For 10 points each:

[10] Identify this organelle. A namesake matrix can be found within this organelle and this organelle is the location of the Electron Transport Chain.

ANSWER: **mitochondria** [or **mitochondrion**]

[10] Human mitochondrial DNA is transmitted from this immediate relative.

ANSWER: one's **mother**

[10] Mitochondria are also notable for producing this energy currency of the cell. It is an end product of cellular respiration and its name references an amount of a certain ion it contains.

ANSWER: **ATP** [or **adenosine triphosphate**] <Gollamudi, Science>