

Early Release Introductory Set (ERIS)

Edited by: Conor Thompson

Written by: the editor, Evan Cui, Ayush Dahal, Yuti Das, Owen Farra, Rohan Ganeshan, Soren Gjesfjeld, Kaushik Gollamudi, Em Gunter, Brodie Henry, Aadit Juneja, Nathaniel Kang, Michael Karpov, Rohan Kher, Jordan Lee, Benjamin McAvoy-Bickford, Vishal Rameshbabu, Josh Rubel, Samir Sarma, Neil Sethi, Ameya Singh, Colin Stewart, Roxanne Tang, Cade Tisdale, Rohan Venkateswaran, Ethan Xu, Charles Young, and Justin Zhang

Packet 6

Tossups:

1. **The most widely accepted theory of this object's formation involves a collision with a Mars-sized object named Theia. Along with the sun, this object is responsible for Earth's (*) tides, and its synchronized rotation with the Earth means that only one side of it can be observed directly. The Apollo mission sent humans to, for 10 points, what only natural satellite of the Earth?**

ANSWER: the moon [or Luna; accept answers like Earth's moon] <Karpov, Science>

2. **This novel and *Native Son* were criticized by James Baldwin in his essay "Everybody's Protest Novel." Abraham Lincoln called the author of this novel "the little lady who started this great war" because of its perceived effect on the (*) abolition movement. A long-suffering slave dutifully serves his master nonetheless in, for 10 points, what novel written by Harriet Beecher Stowe?**

ANSWER: Uncle Tom's Cabin <Cui, Literature>

3. **The Teapot Dome scandal involved the secret leasing of land containing this resource. An organization of nations that export this resource, formed in 1960, is called OPEC. The *Deepwater Horizon* rig (*) spilled this resource into the Gulf of Mexico in 2010. BP and ExxonMobil produce, for 10 points, what fossil fuel which is drilled for by wells and often turned into gasoline?**

ANSWER: crude oil [or petroleum] <Kher, History>

4. **Online LGBT+ communities often refer to newly realized trans people as these objects. An outline of one of these objects was the default Twitter profile picture until 2017. Kylie Jenner (*) smashed one of these objects after a photo of one of them became the most-liked post on Instagram. Hidden secrets in websites are often called the "Easter" type of, for 10 points, what objects laid by chickens?**

ANSWER: eggs <Kang, Miscellaneous>

5. **This ruler commissioned the construction of St. Basil's Cathedral to celebrate the capture of Kazan. This man created the *oprichniki* secret police, which he used to sack the city of Novgorod and purge the (*) Russian nobility. The "Chosen Council" appointed this man as the first Tsar of Russia. For 10 points, name this 16th-century monarch popularly named for his brutality.**

ANSWER: Ivan IV Vasilyevich [or Ivan Vasilyevich or Ivan the Terrible or Ivan the Formidable or Ivan the Fearsome or Ivan the Awesome or Ivan Grozny; prompt on Ivan] <Rameshbabu, History>

6. **The Basel problem deals with the sum of the reciprocals of these numbers, which Euler proved is equal to pi squared over 6. The differences between these numbers are increasing consecutive (*) odd numbers.** These are the only integers with an odd number of factors. For 10 points, name these numbers that are equal to another number times itself.

ANSWER: square numbers [or perfect squares; prompt on perfect powers] <Farra, Mathematics>

7. **In one story, this deity transformed into a deer to trick the giants Otus and Ephialtes into killing each other. This goddess turned the hunter Actaeon into a stag for spying on her while (*) bathing, and she was born on the island of Ortygia a day before her twin brother, the god of the sun.** For 10 points, name this Greek goddess of the hunt and the moon, the twin sister of Apollo.

ANSWER: Artemis <Gollamudi, Mythology>

8. **This artist founded a movement with Georges Braque, and the suicide of his friend Carlos Casegemas inspired his Blue Period. This artist depicted a melancholy musician in his *The Old (*) Guitarist*.** In another painting, this man depicted a mother grieving her dead son that depicts the bombing of the title town during the Spanish Civil War. For 10 points, name this Cubist who painted *Guernica*.

ANSWER: Pablo Picasso [accept Pablo Diego José Francisco de Paula Juan Nepomuceno María de los Remedios Cipriano de la Santísima Trinidad Ruiz y Picasso] <Young, Fine Arts>

9. **Hindu examples of these events include a ritual called Antyesti, or "last sacrifice". Jews perform kariah by tearing their clothes apart at these events. In these non-calendar events, neither (*) Gloria is recited in the Latin Mass. Catholics might say the Requiem at these events, and in Islam, they must involve burial and not cremation.** For 10 points, what events are observed after someone dies?

ANSWER: funerals [or burials or cremations until mentioned; prompt on death until "dies" is read] <McAvoy-Bickford, Religion>

10. **This quantity is equal to internal energy plus pressure times volume. Hess's law states that the change in this quantity is independent of the steps used in a chemical reaction, and Gibbs free energy is equal to this value minus the product of temperature and (*) entropy.** For 10 points, identify this thermodynamic quantity which represents heat transfer and is written H.

ANSWER: enthalpy [prompt on H or heat until mentioned; do not accept or prompt on "entropy"] <Karpov, Science>

11. **An invasive Burmese species of this animal is threatening Florida's Everglades. Some of these animals use a technique called "sidewinding" to move across loose sand. A desert-dwelling type of these animals can (*) shake their tails to produce a "rattle" for which that type is named. The black mamba is the most venomous type of, for 10 points, what slithering reptiles which include pythons and cobras?**

ANSWER: snakes [accept Serpentes or serpents; accept Burmese pythons, rattlesnakes, or any other species of snake] <Kher, Science>

12. **The narrator of this book ends it by declaring "I am haunted by humans". In this novel, Rudy pretends to be Jesse Owens by covering himself in charcoal and running a hundred meters. This novel's protagonist is the sole (*) survivor of her neighborhood's destruction in an Allied bomb raid. Death is the narrator of, for 10 points, what Markus Zusak book about a girl who steals literary works?**

ANSWER: *The Book Thief* <Gjesfjeld, Literature>

13. **This country's island of Surtsey was formed in the 1980s by a volcanic eruption. This country's largest airport was converted from a U.S. naval base in the town of Keflavík. Air travel in Europe was disrupted by the 2010 eruption of this country's (*) volcano Eyjafjallajökull (EYE-yoff-yaht-lah-yo-kootl).** Numerous geysers are found on, for 10 points, what North Atlantic island country with capital at Reykjavík?
ANSWER: Iceland [or Ísland] <Young, Geography>

14. **In this city, the Etemenanki Temple and the Ishtar Gate were constructed by King Nebuchadnezzar. After a ruler of this city destroyed Solomon's Temple, the Jews suffered a namesake (*) "captivity" in this city. Legal principles like "an eye for an eye" were established in this city by its ruler Hammurabi. For 10 points, name this Mesopotamian city home to some legendary Hanging Gardens.**
ANSWER: Babylon [or Bābilim] <Rameshbabu, History>

15. **Extremely powerful examples of these devices use a beam of electrons rather than light because of their lower wavelength. Specimens can be mounted on transparent glass (*) slides to be viewed using these devices. Antonie van Leeuwenhoek (lay-when-huuk) discovered cell structures and microorganisms using, for 10 points, what devices used to look at very small objects?**
ANSWER: microscopes [or optical microscopes, or electron microscopes] <Sethi, Science>

16. **As mayor of his country's largest city, this politician created a bikeshare program that was nicknamed for him. Sajid Javid resigned from this man's cabinet out of anger at his advisor, Dominic (*) Cummings. In April 2020, this world leader was moved to intensive care after contracting COVID-19. The successor to Theresa May is, for 10 points, what current prime minister of the UK?**
ANSWER: Boris Johnson [or BoJo] <McAvoy-Bickford, Current Events>

17. **The book *And the Band Played On* criticized this president's lack of a response to the HIV/AIDS epidemic, which first became widespread during his administration. This man's administration illegally sold arms to Iran to fund Nicaraguan rebels in the (*) Iran-Contra affair. "Trickle-down economics" was popularized by, for 10 points, what Republican president who served through the 1980s?**
ANSWER: Ronald [Wilson] Reagan <Singh, History>

18. **Thomas Aquinas defined this property as "the adequation of things and intellect", an example of the "correspondence theory" of it. The principle of explosion says that if a contradiction exists, every statement can be proved to have this property. If P (*) implies Q, and P has this property, then Q also has this property. For 10 points, what property is the opposite of being false?**
ANSWER: truth [or true] <Sarma, Philosophy>

19. **An extended simile in one of this man's poems proclaims that its subject is "more lovely and more temperate." One poem by this author proclaims that a woman's eyes are "nothing like the sun." This man's most famous poem begins (*) "Shall I compare thee to a summer's day?" Many sonnets were written by, for 10 points, what British poet and playwright who also wrote *Macbeth*?**
ANSWER: William Shakespeare <Young, Literature>

20. **The Oulipo novel *A Void* by Georges Perec was written entirely without this letter. The major key denoted by this letter uses four sharps. In mathematics, this letter is written backwards to mean "there (*) exists" and in lowercase it represents the base of the natural logarithm. The most commonly used letter in the English language is, for 10 points, what fifth letter of the alphabet?**
ANSWER: e <McAvoy-Bickford, Miscellaneous>

Bonuses:

1. This poet wrote the *Ars Amatoria*, or *The Art of Love*. For 10 points each:

[10] Name this Roman poet who is best known for his narrative poem *Metamorphoses*.

ANSWER: **Ovid** [or Publius **Ovidius** Naso]

[10] Another Roman poet, Horace, wrote many of these poems. Friedrich Schiller wrote one of these poems "to Joy" which was set to music by Beethoven.

ANSWER: **odes**

[10] Ovid and Horace wrote in this language which was spoken in the Roman Empire. This language's phrase "carpe diem" roughly translates as "seize the day".

ANSWER: **Latin** <Young, Literature>

2. Answer some questions about the myelin sheath, for 10 points each: For 10 points each:

[10] The myelin sheath covers some cells in this body system which includes the brain, spinal cord, and its namesake structures, which transmit electrical impulses throughout the body to communicate with the brain.

ANSWER: the **nervous** system

[10] The myelin sheath covers this part of a nerve cell. Each nerve cell has one of these long protrusions which carry electrical impulses, along with many dendrites.

ANSWER: **axons** [prompt on **nerve fiber**]

[10] In this medical condition, the myelin sheath is degraded, inhibiting neurological function. It is typically divided into "progressive" and "relapsing-remitting" types.

ANSWER: **MS** [or **multiple sclerosis**] <Dahal, Science>

3. Answer the following questions about analytic geometry, for 10 points each:

[10] Analytic geometry uses the coordinate plane, which is centered at this point. This point is the intersection of the x - and y -axes and has coordinates $(0,0)$ ("**zero comma zero**").

ANSWER: the **origin**

[10] Pick's theorem states that for a polygon on the coordinate plane, this quantity is equal to the number of lattice points contained inside the polygon plus half the number of lattice points on the boundary. For an ellipse, this quantity is equal to π times the product of the semimajor and semiminor axes.

ANSWER: the **area**

[10] The plane can also be described using this coordinate system, which describes points in terms of a radius r and an angle θ (**theta**). Graphing circles in this coordinate system involves setting the radius to a constant.

ANSWER: **polar** coordinates <Sethi, Mathematics>

4. Answer some questions about Andy Warhol, for 10 points each:

[10] Warhol created a diptych of this actress using silkscreen printing. She was married to Joe DiMaggio, and often appeared as a "blonde bombshell" in movies like *Gentlemen Prefer Blondes*.

ANSWER: Marilyn **Monroe** [or Norma Jeane **Mortenson**]

[10] Warhol created 32 prints of these objects with titles like "Chicken" and "Tomato".

ANSWER: Campbell's **soup cans** [prompt on partial answers]

[10] Warhol also created a series of paintings of the Mercedes-Benz type of these things. He was also commissioned to paint examples of these things manufactured by BMW and Daimler.

ANSWER: **cars** [or **automobiles** or other obvious equivalents] <Gjesfeld, Fine Arts>

5. These wars were fought between two cadet branches of the house of Plantagenet. For 10 points each:
[10] Name this lengthy English civil war between the Houses of York and Lancaster, named for the flowers that formed each house's emblem.

ANSWER: Wars of the **Roses**

[10] The Wars of the Roses were largely decided by this 1485 battle in which the forces of Henry Tudor defeated King Richard III.

ANSWER: Battle of **Bosworth Field**

[10] The House of York was represented by a rose of this color during the Wars of the Roses. Along with blue and red, this color makes up the British flag.

ANSWER: **white** <Rameshbabu, History>

6. For 10 points each, name these African-American poets:

[10] This poet asked "what happens to a dream deferred?" in his poem "Harlem." In another poem, he wrote "my soul has grown deep like the rivers".

ANSWER: [James Mercer] Langston **Hughes**

[10] This poet read her poem "On the Pulse of Morning" at Bill Clinton's inauguration. She wrote an autobiography titled *I Know Why the Caged Bird Sings*.

ANSWER: Maya **Angelou** [or Marguerite Annie **Johnson**]

[10] This African-American poet of "The Bean Eaters" also wrote "We / Jazz June. We / Die soon." in her poem "We Real Cool."

ANSWER: Gwendolyn [Elizabeth] **Brooks** <Young, Literature>

7. For 10 points each, name these Texas cities home to major universities:

[10] This Texas city is home to the state's flagship university and hosts a Formula 1 Grand Prix. It has been the capital of Texas since 1837.

ANSWER: **Austin**

[10] Texas Christian University is located in this North Texas city which makes up the state's largest metro area along with Dallas, which is located just east of it.

ANSWER: **Fort Worth** [accept Dallas-**Fort Worth** metro[politan] area]

[10] Texas Tech is found in this Northwest Texas city which is also known as the birthplace of Buddy Holly and the home of the National College Baseball Hall of Fame. Interstate 27 runs north from this city to Amarillo.

ANSWER: **Lubbock** <Stewart, Geography>

8. This comedian worked on *The Daily Show* as a correspondent with both Jon Stewart and Trevor Noah. For 10 points each:

[10] Name this Indian Muslim comedian who hosted a weekly TV show, *Patriot Act*, on Netflix, before it was cancelled in summer 2020.

ANSWER: Hasan **Minhaj**

[10] Minhaj was the featured speaker at the 2017 edition of this event, where he called Donald Trump the "liar in chief". This annual event is traditionally hosted by a comedian and features the president delivering a routine where he makes fun of himself.

ANSWER: the **White House Correspondents' Dinner** [or **WHCD**]

[10] Perhaps the most famous Correspondents' Dinner speech was this comedian's 2006 roast of George W. Bush. This man hosted a satirical namesake "Report" (**rih-POR**) before replacing David Letterman as the host of *The Late Show*.

ANSWER: Stephen **Colbert** (kohl-BAIR) [accept *The **Colbert** Report*; accept *The Late Show with Stephen **Colbert***] <Sethi, Popular Culture>

9. This man's composition "Lazy Bird" may have been harmonically inspired by the Tadd Dameron standard "Lady Bird." For 10 points each:

[10] Name this jazz saxophonist whose albums include *Giant Steps*, *A Love Supreme*, and *Ascension*.

ANSWER: John [William] **Coltrane** [prompt on "**Trane**"]

[10] On a 1961 album, Coltrane recorded a modal jazz version of "My Favorite Things", a song from this Rodgers & Hammerstein musical about the Von Trapp family.

ANSWER: *The **Sound of Music***

[10] John's wife, Alice Coltrane, was an accomplished jazz musician in her own right who played piano and this other instrument, similar to a lyre. The concert variety of this large stringed instrument has pedals and is played by plucking.

ANSWER: pedal **harp** [or concert **harp**] <Kang, Fine Arts>

10. In 2020, several fan sites dedicated to this author's work announced that they would stop promoting her personally. For 10 points each:

[10] Name this British author who has been criticized recently for transphobic comments she made on Twitter. She used a pseudonym to write about the detective Cormoran Strike.

ANSWER: J. K. **Rowling** [or Joanne [Kathleen] **Rowling**; accept Robert **Galbraith**, which was the aforementioned pseudonym]

[10] Rowling is best known for writing this series, whose title character goes to the magic school Hogwarts and fights the evil Voldemort.

ANSWER: ***Harry Potter*** series

[10] Rowling has also been criticized for her use of anti-Semitic stereotypes in *Harry Potter* to depict the goblin employees of one of these businesses which is revealed to be the location of the Cup of Hufflepuff.

ANSWER: **bank** <Gjesfjeld, Literature>

11. This man was one of the leaders of the capture of Fort Ticonderoga, and he married Peggy Shippen, a Loyalist and close friend of British military leader John André. For 10 points each:

[10] Name this Revolutionary War traitor who intended to surrender West Point to the British in exchange for 20,000 pounds.

ANSWER: Benedict **Arnold**

[10] Arnold led the capture of Fort Ticonderoga with this Vermonter and leader of the Green Mountain Boys.

ANSWER: Ethan **Allen**

[10] After the capture of Fort Ticonderoga, Henry Knox led a team that hauled sixty tons of heavy artillery across New York and Massachusetts to this city, Massachusetts's largest city.

ANSWER: **Boston** <Cui, History>

12. For 10 points each, answer the following about the nation of Lebanon:

[10] Lebanon lies on the east bank of this large sea that divides Northern Africa from Southern Europe. Sicily, Sardinia, Corsica, and Cyprus are large islands in this sea, which is connected to the Atlantic Ocean by the Straits of Gibraltar.

ANSWER: **Mediterranean** Sea

[10] Lebanon's second largest city shares its name with this other Mediterranean city, the capital of Libya.

ANSWER: **Tripoli**

[10] The flag of Lebanon depicts one of these trees, the national emblem of Lebanon. Mesopotamian mythology identified a forest of these trees in modern-day Lebanon as the home of the gods.

ANSWER: **cedar** trees [or the **Lebanon cedar**, or **Cedrus libani**; prompt on **evergreen** or **conifer**; do not accept or prompt on "pine" or "fir" or other specific non-cedar conifers] <Kher, Geography>

13. Answer some questions about chemistry lab techniques, for 10 points each:

[10] This technique separates substances by boiling point and includes fractional, steam, and short-path versions. This process is also used in the manufacture of hard liquor to remove water and increase the alcohol content.

ANSWER: **distillation** [or word forms like **distilling**]

[10] A common lab demo involving separating different dyes in pen ink usually uses this lab technique where a mobile phase flows past a stationary phase. It is derived from the greek word for color.

ANSWER: **chromatography**

[10] Filtration, a technique used to separate suspended solids from liquids, is often achieved with the help of one of these devices. Another kind of these devices are used as household cleaning appliances, and operate by creating a region in which there is no air in order to suck material through them.

ANSWER: **vacuums** [or **vacuum cleaners**] <Karpov, Science>

14. In one story, an Ulsterian hero prevented Queen Medb (**mave**) from stealing one of these animals by fighting her entire army in a series of single combats. For 10 points each:

[10] Name these animals which included Donn Cuailnge (**don cool-nuh**). In Greek mythology, the three-headed Geryon owned a magnificent red herd of these livestock animals.

ANSWER: **cattle** [or **cows**]

[10] This hero defended Ulster during the cattle raid. Born Setanta, this hero wielded the fearsome spear Gae Bolg and received his name after killing a guard dog.

ANSWER: **Cú Chulainn** (**coo KHOO-lin**)

[10] Cú Chulainn is a central figure in the mythology of this island. Fionn Mac Cumhail (**finn mac cool**) consumes the Salmon of Knowledge in another myth from this Celtic island.

ANSWER: **Ireland** [or **Éire**] <McAvoy-Bickford, Mythology>

15. Light is frequently described as the propagation of both this quantity and it's magnetic counterpart. For 10 points each:

[10] Name this vector quantity equal to the gradient of electric potential. Faraday's law states that a change in magnetic field causes this quantity to be nonzero.

ANSWER: **electric field**

[10] Electric field lines are drawn pointing away from charges with this property and towards negative charges.

ANSWER: **positive** charge

[10] Within a conductor, the electric field is always equal to this value.

ANSWER: **zero** <Zhang, Science>

16. For 10 points each, answer some questions about the presidency of John F. Kennedy:

[10] In 1963, Kennedy gave a speech in this city in which he famously declared "Ich bin ein [resident of this city]". During the Cold War, a wall separated the East and West halves of this German capital city.

ANSWER: **Berlin** [accept "Ich bin ein **Berliner**"]

[10] The Kennedy administration approved this failed 1961 invasion of Cuba led by Cuban exiles, which increased tensions, leading to the Cuban Missile Crisis.

ANSWER: **Bay of Pigs** invasion

[10] Kennedy gave a speech in which he compared this action to Rice University playing Texas in football, saying that "we choose to" do this action "and the other things, not because they are easy, but because they are hard".

ANSWER: "we choose to **go to the Moon**" [accept any obvious equivalents like **putting a man on the Moon** or answers about the **Apollo** mission[s]] <Cui, History>

17. Despite its lack of precision, this scale is often used among geologists. For 10 points each:

[10] Name this scale used to measure the hardness of various minerals. It works on a scale of 1 to 10, with 1, the softest on the scale, being talc.

ANSWER: **Mohs** scale

[10] At 9 on the Mohs scale is this mineral, a crystalline form of aluminum oxide. Ruby and sapphire are varieties of this mineral.

ANSWER: **corundum**

[10] This mineral is found at 10 on the hardness scale. Made of pure carbon, its hardness means it is often used in heavy-duty drills and other machinery.

ANSWER: **diamond** <Sethi, Science>

18. This country's imperial family claims to be the oldest continuous hereditary monarchy in the world, dating back to the legendary Emperor Jimmu in 660 BC. For 10 points each:

[10] Name this Asian country whose emperors are said to be the "symbol of the State" by its constitution. In 2019, its emperor became the first since 1817 to abdicate while alive.

ANSWER: **Japan** [or **Nippon**, or **Nihon**]

[10] The Imperial Regalia of Japan consist of a jewel, a mirror, and a "Grass-Cutting" one of these weapons. A traditional Japanese form of this weapon is the *katana*.

ANSWER: a **sword** [or the **Grass-Cutting Sword**, or Kusanagi no **Tsurugi**, or **nihontō**, or **tō**]

[10] Emperor Jimmu is said to have received the Imperial Regalia through his descent from this Japanese sun goddess, who hid in a cave from her brother and was lured out by the mirror and jewel, later being given the sword as an apology gift.

ANSWER: **Amaterasu** [or **Amaterasu-ōmikami**, or **Ōhirume-no-muchi-no-kami**] <Stewart, History>

19. Answer these questions about Samoa, for 10 points each:

[10] This pioneering anthropologist wrote *Coming of Age in Samoa* about sexual repression in Samoan culture, a book that was criticized by Derek Freeman.

ANSWER: Margaret **Mead**

[10] This is the national sport of Samoa, which is regularly ranked among the top 20 nations in the world at this sport. Teams of 15 players compete to score tries and goals in this football-like sport, and New Zealand's "All Blacks" are one of the best national teams in the world at it.

ANSWER: **rugby** union [do NOT accept or prompt on "rugby sevens", as the question explicitly says 15 players a side]

[10] Samoa is the most recent country to change to driving on this side of the road. In Britain and many of its former colonies, people drive on this side of the road, unlike in the United States.

ANSWER: the **left** side of the road <McAvoy-Bickford, Miscellaneous>

20. This religious denomination produces tracts such as *The Watchtower*. For 10 points each:

[10] Name this fringe denomination of Christianity founded by Charles Taze Russell. Its members reject the Holy Trinity, refuse to celebrate holidays with supposed pagan origins like Christmas, and engage in "disfellowshipping" and shunning of members who misbehave.

ANSWER: **Jehovah's Witnesses** [prompt on **Watch Tower** Society or **Bible Student** movement]

[10] Russell founded the Jehovah's Witnesses in this state's city of Pittsburgh.

ANSWER: **Pennsylvania** [or the Commonwealth of **Pennsylvania**]

[10] Jehovah's Witnesses refuse blood transfusions based on their interpretation of this book's fifteenth chapter. Believed to have been written by the same author as the Book of Luke, it is the fifth book in the New Testament and describes the lives of the apostles after Jesus's death, including the conversion of Paul.

ANSWER: Book of **Acts** [or the **Acts** of the Apostles, or **Práxeis** Apostólōn] <Kang, Religion>