

Early Release Introductory Set (ERIS)

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Packet 5

Tossups:

1. **The chemical symbols for these elements are used as abbreviations when writing electron configurations, because these elements have a full valence shell. These elements exist in nature as monoatomic gases. Fluorescent lighting often uses tubes containing these elements, most commonly (*) neon.** The rightmost column of the periodic table contains, for 10 points, what group of unreactive elements?

ANSWER: noble gases [or group 18, or inert gases] <Karpov, Science>

2. **One character in this musical describes "knobs on the doors" and "wall-to-wall floors" as attractions of moving from Puerto Rico to New York in the song "America". This musical's song "I Feel Pretty" is sung by Maria, who holds her lover (*) Tony as he dies.** For 10 points, name this musical inspired by *Romeo and Juliet* about a gang war between the Jets and the Sharks, composed by Leonard Bernstein.

ANSWER: West Side Story <Young, Fine Arts>

3. **Two wolves named Geri and Freki follow this deity around, and he owns a horse named Sleipnir. With his brothers Vili and Ve, this deity helped create the world by killing Ymir. Hugin and Munin are two (*) ravens that help this deity receive information from around the world.** He is often known as the Allfather, has just one eye, and is the father of Thor. For 10 points, name this chief Norse god.

ANSWER: Odin [or Óðinn or Wóden or Wuodan or Wuotan or basically anything that sounds like Wodan] <Gollamudi, Mythology>

4. **For surviving this event, criticism was directed at J. Bruce Ismay, a chairman of White Star Lines. Robert Ballard searched the remains of this event, in which "Nearer, My God, To Thee" was played by a doomed (*) orchestra.** The *Carpathia* rescued survivors of this event, in which a lack of lifeboats led to extra deaths. For 10 points, name this 1912 event in which an "unsinkable" ship hit an iceberg.

ANSWER: sinking of the RMS Titanic <Kher, History>

5. **One common proof of this theorem places four congruent triangles inside each side of a square, forming a smaller square. The law of cosines is a generalization of this theorem, which can be applied to find the Euclidean (*) distance between two points.** The length of a triangle's hypotenuse may be found with, for 10 points, what theorem about the squares of the side lengths of right triangles?

ANSWER: Pythagorean theorem <Karpov, Mathematics>

6. A mercury thermometer is one object in this artist's *Why Not Sneeze, Rose Selavy?*. This man drew a mustache and goatee on the *Mona Lisa* in his *L.H.O.O.Q.*. Many people have attempted to (*) pee in his most famous artwork. For 10 points, name this French Dadaist artist who created *Fountain* by writing the name "R. Mutt" on a urinal.

ANSWER: Marcel Duchamp <Young, Fine Arts>

7. New Haven, Connecticut is known for a distinctive variety of this food, including one type made with white clams, while the St. Louis style of this food is noted for its use of Provel cheese. Giordano's and Lou Malnati's are known for making the (*) deep-dish variety of this food popular in Chicago. For 10 points, what Italian food's New York style is characterized by a thin, foldable crust?

ANSWER: pizza [accept apizza; prompt on za] <Kher, Geography>

8. This country was invaded by the Soviet Union in 1979, prompting a 1980 boycott of the Olympics. This country's massive Bamiyan Buddha statues were destroyed by a terrorist group based in it called the (*) Taliban. It's not Iraq, but the United States has been fighting in this country since 2001. For 10 points, name this Asian country led from Kabul.

ANSWER: Islamic Republic of Afghanistan <Young, History>

9. This character discovers that an old man he killed was actually King Laius. This character solves the riddle of the Sphinx, defeating it and becoming king of Thebes. This man stabs his eyes out with pins after realizing that his wife, Jocasta, is actually his (*) mother. For 10 points, what Theban king depicted in a trilogy of Sophocles plays was prophesied to marry his mother and kill his father?

ANSWER: Oedipus <Ganeshan, Literature>

10. In Frank Lloyd Wright's Robie House, these objects have 30 and 60 degree lines to imitate plants. James Stewart starred in an Alfred Hitchcock mystery film named for a "Rear" one of these objects. Vista and XP were versions of an (*) operating system named for these objects and made by Microsoft. For 10 points, what objects are often made of stained glass in churches and let sunlight into buildings?

ANSWER: windows <Sarma, Miscellaneous>

11. Seymour commits suicide at the end of this author's short story "A Perfect Day for Bananafish". The Glass family appears in many stories by this author, whose most famous work centers on a Pencey Prep (*) dropout who visits his sister Phoebe while in New York City. For 10 points, the "phony"-hating Holden Caulfield is the protagonist of what author's novel *The Catcher in the Rye*?

ANSWER: J. D. Salinger [or Jerome David Salinger] <Kang, Literature>

12. Air resistance is caused by the air exerting this force on objects moving through it. This force is equal to the product of the normal force and its namesake coefficient, symbolized mu. This force can be "kinetic" or (*) "static", depending on whether its objects are already moving. Lubricants counteract, for 10 points, what force which can prevent objects from moving or slow them down?

ANSWER: friction [accept static or kinetic friction; prompt on drag or resistive force] <Karpov, Science>

13. An 1885 massacre targeted coal miners of this ethnicity in Rock Springs, Wyoming. The term "coolie" was disparagingly applied to laborers of this ethnicity on the Transcontinental Railroad. In 1882, a namesake (*) "Exclusion Act" barred members of this ethnicity from immigrating to the United States. For 10 points, identify these people who came to America from cities like Fuzhou or Shanghai.

ANSWER: Chinese people [or Chinese-Americans or similar answers; prompt on Asian-Americans or Asians] <McAvoy-Bickford, History>

14. In addition to writing many of the Psalms, this man committed adultery with Bathsheba, producing his son, Solomon, who would succeed him. This man slew a Philistine giant near the Valley of Elah. A six-pointed (*) star named for this man is often used as a symbol of Judaism. For 10 points, name this king of Israel who used a slingshot to kill Goliath.

ANSWER: King David [or Dawid or Dawud] <Tisdale, Religion>

15. Oliver Hazard Perry won the Battle of Lake Erie during this war, and a freak tornado stopped the British army from continuing to set fire to one city during it. During an attack on Fort McHenry in this war, Francis Scott Key composed "The (*) Star-Spangled Banner". Washington, DC was burned during, for 10 points, what 19th century war between the US and Britain named for the year in which it began?

ANSWER: War of 1812 <Young, History>

16. The warming of this layer is the cause of polar vortex warming and weakening. A temperature inversion causes temperature to unusually *increase* with altitude in this layer of the atmosphere, thanks to a high concentration of (*) ozone, which also absorbs harmful radiation. Commercial aircraft cruise in the lower part of, for 10 points, what 2nd atmospheric layer, above the troposphere?

ANSWER: stratosphere <Sethi, Science>

17. The rock-carved Abu Simbel temples had to be relocated to higher ground thanks to a dam on this river creating Lake Nasser. This river's "Blue" and "White" branches merge at Khartoum. The (*) Aswan High Dam lies along this river, whose delta contains most of Egypt's population and agriculture. For 10 points, identify this African river, the longest in the world.

ANSWER: Nile River [or an-Nil, or Piāro, or Hapī, or Iteru, or Āman Dawū] <Juneja, Geography>

18. This author created Fanny Price, who is sent by her poor family to live at the title estate in her novel *Mansfield Park*. This author wrote a book whose main character is lifelong friends with Mr. Knightley called *Emma*. Elizabeth (*) Bennett, one of five daughters, is the main character of another of this woman's novels. For 10 points, name this author of *Pride and Prejudice*.

ANSWER: Jane Austen <Lee, Literature>

19. It's not the mitochondrion, but this organelle is believed to have originated through endosymbiosis. "Light" and "dark" reactions are part of a process that takes place in this organelle and converts carbon dioxide and water into (*) glucose. The presence of a pigment in these organelles is responsible for plant leaves' green color. For 10 points, in what plant organelles does photosynthesis occur?

ANSWER: chloroplasts <Young, Science>

20. A minor character in this film claims he robbed the second-largest bank in France using only a ballpoint pen. In this film, Peter O'Toole plays a notoriously stingy critic named Anton Ego. This film's protagonist, who idolizes Auguste (*) Gusteau (goose-TOE), teams up with Linguini and is inspired by the motto "anyone can cook." For 10 points, name this Pixar animated film about a rodent who becomes a chef.

ANSWER: Ratatouille (rat-a-TOO-ee) <Kang, Popular Culture>

Bonuses:

1. This novel takes its title from a speech from the Shakespeare play *Julius Caesar*. For 10 points each:

[10] Identify this John Green novel about Hazel Lancaster and Augustus Waters, who fly to Amsterdam to meet the author Peter Van Houten.

ANSWER: *The **Fault In Our Stars***

[10] Hazel and Augustus meet at a support group for sufferers of this disease, from which Augustus dies at the end of the book. An Eleanor Coerr book describes Sadako Sasaki folding a thousand paper cranes while undergoing treatment for leukemia, one kind of this disease.

ANSWER: **cancer** [accept specific forms of cancer]

[10] Augustus also has this physical condition as a result of his bone cancer, which ended his basketball career. In Wendelin Van Draanen's *The Running Dream*, Jessica acquires this physical condition in a car accident.

ANSWER: he is an **amputee** [accept any obvious equivalents like he has **only one leg**] <Gjesfjeld, Literature>

2. For 10 points each, name these poets who liked birds:

[10] This Frenchman included "The Albatross" and "To the Reader" in his most famous collection, *Les Fleurs du Mal*.

ANSWER: Charles **Baudelaire**

[10] This man wrote the poem "To a Skylark," in addition to his more famous "Ozymandias." His wife Mary, who shares his surname, wrote *Frankenstein*.

ANSWER: Percy Bysshe **Shelley**

[10] This man wrote of leaving the world "unseen" in his "Ode to a Nightingale". This author also penned "Ode on a Grecian Urn".

ANSWER: John **Keats** <Young, Literature>

3. This man used Zacuto's charts to predict a February 1504 eclipse in Jamaica. For 10 points each:

[10] Name this Genoese explorer who left Spain for the New World in 1492.

ANSWER: Christopher **Columbus** [or Cristobal **Colon**]

[10] Columbus sailed on behalf of these two Catholic monarchs whose marriage to each other unified Spain through joining their respective kingdoms, Castile and Aragon.

ANSWERS: **Ferdinand** II of Aragon [or **Ferdinand V of Castile**, or **Ferdinand I of Spain**, or **Ferrando** II, or **Ferran** II, or **Errando** II, or **Fernando** II] AND **Isabella** I of Castile [or **Isabel** I]

[10] This was the largest boat of the three in Columbus's fleet. It ran aground due to incompetent piloting and was dismantled to build the first Spanish settlement in the New World.

ANSWER: **Santa María** <McAvoy-Bickford, History>

4. The Locofocos opposed this organization, whose leaders were known as "Grand Sachems" (**SAY-chuhmz**). For 10 points each:

[10] Name this corrupt political machine associated with the Democratic Party that dominated New York state politics during the 1800s. Its most infamous leader was "Boss" Tweed.

ANSWER: **Tammany** Hall [accept Society of St. **Tammany**]

[10] Tammany Hall successfully elected their leader Fernando Wood to this political office on two separate occasions. This position was also held by Fiorello LaGuardia.

ANSWER: **Mayor** of **New York City** [or **Mayor** of **NYC** or **Mayor of the City of New York** or other obvious equivalents; accept "**New York**, New York" in place of "New York City"; prompt on **mayor** alone by asking "of what city?"]

[10] As one of its early leaders, this U.S. Vice President transformed Tammany Hall from a social club into a political machine. He is better known as the man who fatally shot Alexander Hamilton in a duel.

ANSWER: Aaron **Burr** [Jr.] <Kang, History>

5. In a series of iconic paintings by C. M. Coolidge, several dogs perform this activity while smoking cigars. For 10 points each:

[10] Name this hobby. Paul Cézanne painted two "Players" performing this activity seated at a table.

ANSWER: playing **cards** [or **card games**, or playing **poker**; accept *The **Card Players*** or ***Dogs Playing Poker***; prompt on **gambling**]

[10] *Excluding* the two jokers, a standard poker deck contains this many playing cards.

ANSWER: **52**

[10] Besides poker, another popular game at casinos is this card game in which players compete against the dealer and try to avoid causing a "bust". "Card-counting" is a strategy that can eliminate the house's advantage in this game.

ANSWER: **blackjack** [prompt on **21**, **Vingt-Un**, or **Vingt-et-Un** (VAHN-tay-ah)] <Kang, Miscellaneous>

6. Rolle's theorem is a special case of a calculus theorem partially named for this type of value. For 10 points each:

[10] Name this quantity computed by adding all the values in a data set and then dividing by the number of values.

ANSWER: **mean** [accept **average**]

[10] The arithmetic mean, or average, of two values is always greater than this other mean, which is calculated by multiplying two numbers by each other and taking the square root.

ANSWER: **geometric** mean

[10] This other statistical measure of an "average"-like value is the most common value in a data set.

ANSWER: **mode** <Karpov, Mathematics>

7. Answer these questions about the food chain, for 10 points each:

[10] These organisms hunt, kill, and eat prey for food. On a food chain, these organisms are usually located directly above their prey, and the "apex" type of these species are located at the top of the food chain.

ANSWER: **predators** [accept apex **predators**]

[10] Isle Royale, an island and national park in Michigan, is home to a unique ecosystem where there is only one species of large predator and one species of large prey animal. Name either.

ANSWER: grey **wolves** [or ***Canis lupus***] OR Western **moose** [or ***Alces alces andersoni***]

[10] In addition to predators, some carnivores are this other type of organism that eats dead animals that have died of natural causes or been left behind by predators. Vultures and flesh flies are examples of this feeding behavior.

ANSWER: **scavengers** [do not accept or prompt on "decomposer" or "detritivore"] <Kher, Science>

8. One of these objects in Rome was closed during peacetime, and open during wartime. For 10 points each:
[10] Name these edifices which can be closed to seal off the entrance to temples or other buildings. Examples of them allowed people to pass through the walls of Rome.

ANSWER: **gates** [or **doors** or other synonyms]

[10] The Romans believed that this two-faced deity was the God of Gates. The aforementioned gate in Rome was named for him.

ANSWER: **Janus**

[10] The Gates to the Underworld, meanwhile, were said to be guarded by this three-headed dog.

ANSWER: **Cerberus** [or **Kerberos**] <Sethi, Mythology>

9. This opera includes the aria "Ritorna vincitor", and its title character and her love interest are sealed inside a vault at its end. For 10 points each:

[10] Name this opera whose title Ethiopian princess falls in love with Radamès, the Captain of the Guard.

ANSWER: **Aida** (eye-EEH-duh)

[10] This Italian composer of *Rigoletto* and *La traviata* composed *Aida*.

ANSWER: Giuseppe **Verdi**

[10] *Aida* is set in this African country during its Old Kingdom period. The premiere performance of *Aida* took place in this country's capital city of Cairo.

ANSWER: Arab Republic of **Egypt** [or Jumhūrīyat **Miṣr** al-‘Arabīyah, or Gomhoreyyet **Masr** el-‘Arabeyya] <Young, Fine Arts>

10. This planet is tidally locked with the Sun in a 3-to-2 ratio, meaning that its day is twice as long as its year. For 10 points each:

[10] Name this smallest and closest planet to the Sun.

ANSWER: **Mercury**

[10] Mercury's orbit has the largest value of this quantity among all planets. This quantity measures the ratio between the closest and furthest distances from the Sun; more elliptical orbits have higher values of it.

ANSWER: orbital **eccentricity**

[10] Mercury's Caloris Basin is one of the largest of these structures in the Solar System. A large one of these structures has caused Saturn's moon Mimas to be nicknamed the Death Star.

ANSWER: **impact basins** [or impact **craters**] <Sethi, Science>

11. This leader and his mistress Claretta Petacci were allegedly hung on meathooks. For 10 points each:

[10] Name this former Socialist and fascist world leader. He was nicknamed "Il Duce" (**eel doo-chay**) and was supported by the paramilitary Blackshirts.

ANSWER: Benito **Mussolini** [or Benito Amilcare Andrea **Mussolini**]

[10] Benito Mussolini led this country, whose other former leaders include Sergio Mattarella and Giuseppe Conte.

ANSWER: **Italy** [or the **Italian Republic**, or the **Kingdom of Italy**, or **Italia**, or **Repubblica Italiana**, or **Regno d'Italia**]

[10] Another European fascist leader was this Spanish *generalísimo*, a dictator who led the Nationalists during the Spanish Civil War and ruled until the 1970s.

ANSWER: Francisco **Franco** <Gjesfjeld, History>

12. For 10 points each, answer the following about the global response to the COVID-19 pandemic:

[10] A UN investigation found that the novel coronavirus originated in this Central Chinese city, possibly from a wet market. This city is the capital of Hubei Province.

ANSWER: **Wuhan**

[10] Public health authorities in this country released a remix of the pop song "Ghen" to inform the public about coronavirus precautions, which achieved worldwide popularity.

ANSWER: the Socialist Republic of **Vietnam** [or Cộng hòa Xã hội chủ nghĩa **Việt Nam**]

[10] This renowned American physician and immunology expert has been a prominent figure in the coronavirus response. This man has been the director of NIAID since 1984, in which capacity he has advised every president since Ronald Reagan on matters of public health.

ANSWER: Dr. Anthony **Fauci** (rhymes with "ouchie") [or Anthony Stephen **Fauci**] <Kang, Current Events>

13. This state is represented in the Senate by Patrick Leahy and Bernie Sanders. For 10 points each:

[10] Name this northeastern state nicknamed the "Green Mountain State" and located between New York and New Hampshire.

ANSWER: **Vermont**

[10] This capital of Vermont is the least populous state capital in the U.S., with fewer than ten thousand inhabitants.

ANSWER: **Montpelier**

[10] This most populous city in Vermont lies on Lake Champlain. Bernie Sanders was elected mayor of this city in 1981.

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

14. This son of Akhenaten ruled with the assistance of the vizier Ay ("**eye**"), who eventually succeeded him after his death. For 10 points each:

[10] Name this "Boy Pharaoh" of Egypt, whose tomb was famously discovered nearly intact by Howard Carter.

ANSWER: **Tutankhamun** [or **Tutankhaten**, or King **Tut**, or **Twt-nh-jmn**, or **Tawat Sanhu Aman**]

[10] During his reign, Tutankhamun moved Egypt's capital from Amarna back to this other city. This city shares its name with a city-state in Greece that was legendarily founded by Cadmus.

ANSWER: **Thebes** [or **Thebai**; accept **Waset**, even though this name technically only applies to the Thebes in Egypt and not the Thebes in Greece]

[10] According to one theory, Tutankhamun's premature death may have been caused by an accident involving one of these vehicles. In ancient Rome, spectators could watch these vehicles at the Circus Maximus.

ANSWER: **chariots** [accept **quadriga**] <Kang, History>

15. One poem by this author laments "Water, water, everywhere / Nor any drop to drink." For 10 points each:

[10] Name this English Romantic poet known for "The Rime of the Ancient Mariner" and the unfinished "Kubla Khan".

ANSWER: Samuel Taylor **Coleridge** [do NOT accept or prompt on "Samuel Coleridge-Taylor"]

[10] Coleridge claimed to have composed "Kubla Khan" in a dream while high on this drug. Britain fought two wars with China over this drug, which is produced from poppies.

ANSWER: **opium**

[10] "The Rime of the Ancient Mariner" follows a frame narrative in which the story is told to a guest at one of these events. Federico García Lorca wrote about a "Blood" one of these events in which the Groom and the Bride's lover kill each other.

ANSWER: **weddings** [or **marriages**; accept *Blood* **Wedding**] <Young, Literature>

16. Gell-Mann and Zweig proposed the existence of these particles, which Gell-Mann named after a line from James Joyce's *Finnegans Wake*. For 10 points each:

[10] Name these elementary particles that come in 6 "flavors", such as the down and up types, and make up protons and neutrons.

ANSWER: **quarks**

[10] Quarks belong in a class of particles along with leptons named after this Italian scientist, who also formulated a thought experiment asking "where are the aliens?"

ANSWER: Enrico **Fermi**

[10] Fermions are contrasted with this other type of subatomic particle named for an Indian physicist and whose types include W, Z, and one named for Higgs.

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

17. Answer the following about fine art and popular music, for 10 points each:

[10] A 2016 album by Swedish djent band Meshuggah is titled *The Violent Sleep of Reason*, a reference to this Spanish artist's *The Sleep of Reason Produces Monsters*, one of his *Los Caprichos* etchings. He also painted *The Third of May, 1808*.

ANSWER: Francisco [José de] **Goya** [y Lucientes]

[10] This American musical artist sang "And how you suffered for your sanity / And how you tried to set them free" in "Vincent", a song addressed to Vincent van Gogh. He is better known for singing about "the day the music died" in "American Pie".

ANSWER: Don **McLean**

[10] The pioneering pop artist Richard Hamilton designed the album cover for this band's "White Album". John Lennon and Paul McCartney were both members of this rock band from Liverpool.

ANSWER: The **Beatles** <Young, Miscellaneous>

18. The "stadium effect" commonly occurs in the center of large examples of these storms. For 10 points each:

[10] Name these cyclonic storms formed over warm oceans and measured by the Saffir-Simpson scale, which rates them from Category 1 to Category 5.

ANSWER: **hurricanes** [or **tropical storms**, or **typhoons**, or **cyclones**]

[10] Hurricanes in the Northern and Southern hemispheres rotate in different directions as a result of this inertial effect. Contrary to popular belief, this effect does not cause toilets to flush in opposite directions in different hemispheres.

ANSWER: **Coriolis** effect [or **Coriolis** force]

[10] The aforementioned "stadium effect" causes the wall of this part of a hurricane to be slanted. This part of a hurricane typically has no cloud cover and low winds.

ANSWER: the **eye** [of the hurricane] <Sethi, Science>

19. For 10 points each, answer these questions about the categorical imperative:

[10] This Enlightenment philosopher developed the categorical imperative to argue that actions are moral only if they can be treated as universal law. He's also known for his critiques of "pure" and "practical" reason.

ANSWER: Immanuel **Kant**

[10] According to the categorical imperative, it is always impermissible to take this action because if everyone did this, nobody could be trusted.

ANSWER: **lying**

[10] A common critique of the categorical imperative questions the morality of telling the truth to someone who arrives at your door and asks where he can find your children so that he can do this action to them. The trolley problem is often formulated as doing this to one person to save a greater number of people.

ANSWER: **kill**ing them [or **murder**ing them; accept any answers which get across the point of **ending their life**] <Sarma, Philosophy>

20. During the Night Journey, this man traveled to the seventh heaven and spoke with Moses and God. For 10 points each:

[10] Identify this founder of an Abrahamic religion. His sayings are known as *ahadith* by followers of that religion.

ANSWER: **Muhammad** [or **Mohammed** or **Mehmet** or **Mahomet** or any of the various other pronunciations of his name]

[10] The Qur'an, the holy text of Islam, was revealed to Muhammad by this archangel.

ANSWER: **Gabriel** [or **Jibril** or **Jibra'il**]

[10] After a period of time in Medina, Muhammad and his followers captured this holiest city in Islam in the year 630. Muslims must perform *haji*, a pilgrimage to this city, once in their lifetime.

ANSWER: **Mecca** [or **Makkah** al-Mukarramah, or **Makkat**] <Sethi, Religion>