

2016 SOLON

PACKET 08:

TOSSUPS:

1. **One explorer from this country captured Socotra in 1507. Another explorer from this country was the first to reach the Indian Ocean by navigating around the Cape of Good Hope. A third explorer from this country met with the (*) Zamorin of Calicut, and was the first to establish contact with India. Henry the Navigator sparked the Era of Exploration for this nation. FTP, name this country of Bartolomeu Dias and Vasco da Gama, who sailed from Lisbon.**

ANSWER: Portugal [The other explorer is Alfonso de Albuquerque] [HP]

2. **A book from this country inspired John Cage's *Music of Changes*. In this country, Eight Model Plays were made to "proletarianize" a genre developed from *kunqu* [kun-KOO]. A princess from it orders "Nessun dorma" until a man is found. Busoni and (*) Puccini both wrote a *Turandot* [TOO-ran-dough] set in this country, which is home to The Bird's Egg opera house. FTP, name this homeland of composer Tan Dun, the *Turandot* characters Ping, Pang, and Pong, and Beijing opera.**

ANSWER: China [The book mentioned is the *I Ching*] [CS]

3. **In one of this author's works, the mentally challenged Stevie Verloc is frightened by a cab driver's hook hand. Another of this author's works is set in the fictional nation of Costaguana; that work is (*) *Nostramo*. This author's most famous work features Charles Marlow and an ivory trader whose last words are "The horror! The horror!" For ten points, which author of *The Secret Agent* created Mr. Kurtz in *Heart of Darkness*?**

ANSWER: Joseph Conrad (or Józef Teodor Konrad Korzeniowski) [TB]

4. **A heap named for these numbers perform unions in constant time. Binet's [Bin-AY's] formula can be used to find these kinds of numbers, and Lucas Numbers follow the same pattern. By dividing these numbers by their predecessors, one approaches the (*) golden ratio. Pinecones' seed pods are naturally arranged according to this sequence. FTP, what sequence of numbers, named for an Italian mathematician, begins "1,1,2,3,5,8...?"**

ANSWER: Fibonacci Numbers [SM/HP]

5. **This event is observed at the approach of the vernal equinox on the full moon day of the Bikram Sambat Calendar. This festival is associated with a cannabis-infused beverage called *bhanga*, and it is named for the evil (*) sister of the demon king Hiranyakashipu [HEE-ran-YAH-kah-SHEE-poo]. This festival involves namesake bonfires and is mainly observed in Nepal and India. FTP, name this rambunctious Hindu spring festival in which participants throw colored powders at one another.**

ANSWER: Holi [OL/TB]

6. **Before this battle, Admiral Graves lost the Battle of the Chesapeake, which prevented the loser's escape. During this battle, Alexander Hamilton famously stormed Redoubts 9 and 10. French forces led by the Comte de (*) Grasse laid siege to the namesake town during this battle, and the losing side's band may have played "The World Turned Upside Down" after it. FTP, name this battle in which Cornwallis surrendered to Washington, ending the Revolutionary War.**

ANSWER: Battle of Yorktown [GP/HP]

7. **A Frank Stockton story is titled for a choice between "The Lady" and this animal. A poem about this animal describes when "the stars" "water'd the heavens with their tears," and "threw down their spears;" That poem asks what "could (*) twist the sinews of thy heart," as well as "Did he who made the lamb make thee?" FTP, what animal that is "burning bright" titles a William Blake poem, an example of which is The Jungle Book's Shere Khan?**

ANSWER: Tiger(s) (accept "The Lady, or the Tiger?" or "The Tyger") [CS]

8. **The Chikyu Hakken project attempts to dig a hole into this region. Seafloor spreading is explained by convection that occurs in this region, which also explains tectonic plate movement. This region is bounded by the (*) Mohorovicic discontinuity and the Gutenberg Discontinuity. This layer contains the asthenosphere in its "upper" portion. FTP, name this largest layer of the earth which is located between the outer core and the crust.**

ANSWER: Mantle [HP]

9. **This director used ground-breaking camera techniques to film such scenes as Danny riding his tricycle through the Overlook Hotel. During a scene in one of this man's movies, President Muffley says, "Gentlemen, you can't fight in here! This is the war room!" In another, a team of scientists discover a large (*) monolith on the moon; that movie features David Bowman trying to escape from the malfunctioning HAL 9000. FTP, name this director of *The Shining*, *Dr. Strangelove* and *2001: A Space Odyssey*.**

ANSWER: Stanley Kubrick [HP]

10. **This theory explains why a muon's half-life is increased when spun through a particle accelerator, and this theory led to the formulation of the twin paradox. The Michelson-Morley experiment led to the discovery of this theory. This theory explains that as an object (*) approaches an extremely large speed, it experiences length contraction and time dilation. FTP, name this theory created by Einstein that states that the speed of light is constant in a vacuum.**

ANSWER: Special Theory of Relativity (Prompt on partial answer, do not accept "general relativity") [HP]

11. In this novel, a man shoots himself on a bridge after claiming to be “going to America.” The central character falls in love with a prostitute who reads him the story of Lazarus in this work. Porfiry Petrovich hunts that lover of (*) Sonya, who believes himself to be like Napoleon, and thereby justified in killing Lizaveta and the pawnbroker Alyona. FTP, name this novel about Raskolnikov by Fyodor Dostoevsky.

ANSWER: **Crime and Punishment** [The first character is Svidrigailov] [CS]

12. Churches in this city include Santa Maria Maggiore and San Giovanni Laterano. This capital of the Lazio province contains Capitoline and Palatine as two of its seven hills. One structure in this city was built under (*) Vespasian and housed gladiator fights. Attractions in this city include the Trevi Fountain and the Colosseum, and the Vatican is enclosed within this city. Situated on the Tiber River--FTP--what is this capital of Italy?

ANSWER: **Rome**, Italy [PP]

13. During this man’s second term, his government dealt with the Mau Mau rebellion. He resigned as First Lord of the Admiralty after the Gallipoli campaign, and he gave a speech in Fulton, Missouri that coined the term (*) Iron Curtain. In one address, he declared “we shall fight on the beaches...we will never surrender.” while stating “I have nothing to offer but blood, toil, tears, and sweat.” FTP, name this Conservative prime minister of England best known for his leadership during World War II.

ANSWER: Winston **Churchill** [TB]

14. In one of this composer’s works, Lieschen [LEE-shen] obsesses over the title drink. His “Be still, stop chattering” is usually called the *Coffee Cantata*. This composer of *Six Sonatas and Partitas for Solo Violin* wrote one work to help Count Kaiserling (*) sleep. He wrote the *Christmas Oratorio*, and used a theme by Frederick the Great for his *Goldberg Variations*. FTP, name this composer of the *Brandenburg Concertos* and a Toccata and Fugue in D minor.

ANSWER: **Johann Sebastian Bach** (prompt on “Bach” alone, but do not accept or prompt on any other Bach) [CS]

15. This man clashed with Turnus for the love of Lavinia, and he visited the underworld with the help of the Cumaean Sibyl and a golden bough. He carried his father, Anchises, from the ruins of Troy, and this son of (*) Venus is continuously vexed by Juno during his travels. His tragic affair with the queen of Carthage, Dido, ends in her suicide. For ten points, name this legendary founder of Rome, the title character of an epic by Virgil.

ANSWER: **Aeneas** (prompt on “Aeneid”) [TB]

16. The Fenske equation is used in one form of this technique to determine the necessary number of theoretical plates. Raoult's Law governs this technique. Without entrainers, this technique will not work on azeotropes. The fractional variety is used to separate (*) hydrocarbons from crude oil, and this technique often uses a separation flask and a water-cooled condenser jacket. FTP, identify this laboratory process used to separate liquid mixtures based on their boiling points.

ANSWER: Distillation (accept Fractional Distillation before “fractional”) [SM]

17. During this battle, German troops executed American prisoners in the Malmedy Massacre. The losers of this battle retreated to the Siegfried Line, where they were further pushed back. Commander Anthony McAuliffe reportedly shouted (*) “NUTS!” in response to a German message sent during this battle. George Patton led troops to liberate the city of Bastogne during this battle. FTP, name this 1944-1945 battle, the last major offensive of World War II.

ANSWER: Battle of the Bulge [HP]

18. This man wrote “I am the doubter and the doubt” in his poem “Brahma,” and coined “the shot heard round the world” in “Concord Hymn.” One work by this author declares “to be great is to be misunderstood.” This man used the image of a transparent eyeball in his (*) “Nature,” and claimed “a foolish consistency is the hobgoblin of little minds,” encouraging readers to “trust thyself.” FTP, name this American essayist of “The Over-Soul” and “Self-Reliance.”

ANSWER: Emerson (accept Ralph Waldo Emerson or George Emerson) [CS]

19. This artist created *The Mystic Nativity* under the influence of Savonarola [Sah-vuh-nah-ROH-lah], who allegedly caused him to burn a great deal of his old works. Another painting by this artist portrays the Three Graces dancing to celebrate the arrival of the namesake (*) season. His most famous work depicts Chloris escaping Zephyr while Hora rushes to cover the nude title figure with a pink blanket. FTP, name this Florentine painter of *La Primavera* and *The Birth of Venus*.

ANSWER: Sandro Botticelli (accept Alessandro di Mariano di Vanni Filipepi)[CS/RM]

20. This organelle is the site of GAG synthesis, and failure of proteoglycan glycosylation in this organelle can result in I-cell disease. Proteins are marked with COPII [“COP” “two”] and are transported to this organelle’s cis face from the (*) rough ER. It tags proteins bound for the lysosome with mannose-6-phosphate and is composed of flattened disks called cisternae. FTP, name this organelle which packages and sorts molecules for transport around the cell.

ANSWER: Golgi Body (accept Golgi Apparatus) [RM]

Tiebreaker:

21. Matthew Arnold defined this concept as a “study of perfection” in an essay contrasting Hebraism and Hellenism titled for “[this thing] and Anarchy.” Ruth Benedict called this “personality writ large” and later contrasted the (*) “shame” and “guilt” forms of this concept in an ethnography on the Japanese one. Franz Boas developed the namesake relativism of--FTP--what "complex" of "knowledge, belief, art, morals [and] custom" of a people, whose namesake “shock” results if moving to a new one?

ANSWER: Culture (accept “Culture and Anarchy”) [CS]

BONUSES:

1. For 10 points each, name these gas laws:

This law establishes a direct relationship between Volume and Temperature by describing how balloons tend to expand when heated

ANSWER: Charles’s Law

This law, named for the Anglo-Irish chemist who discovered it, states that in a closed system, the pressure and volume of a gas are inversely proportional

ANSWER: Boyle’s Law

This doubly eponymous gas law states that temperature and pressure are directly proportional. It, along with Charles’s and Boyle’s Law, form the Combined Gas Law.

ANSWER: Gay-Lussac’s Law [EF]

2. This institution was known for its *auto-da-fé*’s [auto-dah-FAYZ], which most often included being burned at the stake. For 10 points each:

[10] Name this institution that carried out the persecution of Jews and Muslims during the Reconquista.

This institution forcibly converted many “moriscos” and “marranos” to Catholicism.

ANSWER: Spanish Inquisition

[10] This Grand Inquisitor led the Spanish Inquisition during the Reconquista. He compared letting Jews to stay in Spain to Judas’s betrayal of Jesus.

ANSWER: Tomas de Torquemada

[10] This queen of Castile was responsible for the creation of the Spanish Inquisition along with her husband Ferdinand II. This queen also supported Christopher Columbus’s 1492 expedition.

ANSWER: Isabella I [HP]

3. This art movement’s important predecessor was surrealism, which emphasized spontaneous creative and almost subconscious creation. For 10 points each:

[10] Name this genre of art exemplified by works of Willem de Kooning that flourished in New York after World War II.

ANSWER: Abstract Expressionism

[10] Name this painter of Blue Poles, No. 5, and Autumn Rhythm who primarily used the technique of drip painting and action painting.

ANSWER: Jackson Pollock

[10] This work of Jackson Pollock was one of his first. It shows black and silver paint with blue highlights, and it also holds cigarettes, coins, and keys in the paint. Its title is derived from *The Tempest*.

ANSWER: Full Fathom Five [RM]

4. A novel titled for this place asks “which of us is happy in this world?” and one character in that novel throws an autographed copy of a dictionary out of a carriage. For 10 points each:

[10] Name this place that titles a William Thackeray novel “Without a Hero” about Becky Sharp. Lord Hate-Good orders Faithful’s execution in this place.

ANSWER: Vanity Fair

[10] Faithful travels with Christian to Vanity Fair in this allegorical work about Christian salvation.

ANSWER: The Pilgrim’s Progress *From This World to That Which Is to Come*

[10] This author of *The Life and Death of Mr. Badman* wrote religious allegories like *The Pilgrim’s Progress* while in jail for violating the Conventicle Act.

ANSWER: John Bunyan [CS]

5. This man wrote his theorems in the corners of Diophantus’s *Arithmetica*. For 10 points each:

[10] Name this man, whose famous Last Theorem states that there do not exist three positive integers a , b , and c such that $a^n + b^n = c^n$, where n is a positive integer greater than two.

ANSWER: Pierre de Fermat

[10] This theorem states that for a right triangle with legs of length a and b , and hypotenuse of length c , $a^2 + b^2 = c^2$. This theorem is a specific case of Fermat’s Last Theorem, where the exponent of each of the terms is two.

ANSWER: Pythagorean Theorem (Accept Pythagoras’s Theorem)

[10] Along with his student Richard Taylor, this man was the one to prove Fermat’s Last Theorem after fixing a flaw in his previous proof.

ANSWER: Sir Andrew John Wiles [EF]

6. This country’s rivers include the Lena and the Ob, and its Ural Mountains separate Europe and Asia. For 10 points each:

[10] Name this country, which contains Mt. Elbrus and Lake Baikal and disputes the Kuril Islands with Japan.

ANSWER: Russia (accept Russian Federation)

[10] This lake located northeast of St. Petersburg drains into the Gulf of Finland through the Neva River, and its namesake canal connects the Neva to the Svir.

ANSWER: Lake Ladoga

[10] Lake Ladoga also connects this river to the Baltic Sea. This longest river in Europe flows past Nizhny Novgorod and Samara before draining into the Caspian Sea.

ANSWER: Volga River [PP]

7. The Great Depression was a real drag and that’s bad for Americans. For 10 points each:

[10] Name this set of reforms and programs that Franklin Roosevelt tried to implement to make life better for the average American. This set of programs included the Tennessee Valley Authority.

ANSWER: The New Deal

[10] Name this New Deal program meant to give young men outdoor jobs. Members of this program were responsible for planting 17 million trees.

ANSWER: CCC (accept Civilian Conservation Corps)

[10] Pushing through the New Deal was tricky, since some programs were deemed unconstitutional by judicial review. FDR tried this scheme to counter the opposition in a namesake branch of government.

ANSWER: Court-packing plan (accept Judicial Procedures Reform Bill of 1937, accept “scheme” instead of plan or equivalents) [GP]

[NOTE TO MODERATOR: Accept any of the following pairs in either order]

8. For 10 points each, name the following pairs in Aesop’s Fables:

[10] One of this pair of insects works and stocks up food, but the other only plays music, and ends up hungry when winter comes.

ANSWER: The Ant and the Grasshopper

[10] One of these characters stops and naps because the other is very far behind, but loses the race in the end because they did not go slow and steady like the other animal.

ANSWER: The Tortoise and the Hare

[10] These two get in an argument over who is stronger, and decide it based on who can get a man to take off his coat. One tries to force the coat off the man, but the other makes it warmer outside, and wins.

ANSWER: The Wind and the Sun [CS]

9. Advantages of this trait include having a greater field of vision and access to deeper waters. For Ten Points Each,

[10] Name this type of locomotion in which an organism moves using two rear legs

ANSWER: Bipedalism

[10] Members of this bipedal genus include erectus and rudolfensis. This genus’s “sapiens” species is also known as “modern humans.”

ANSWER: Homo (accept Homo erectus, Homo rudolfensis, or Homo sapiens)

[10] This extinct genus of hominids includes a specimen called “Lucy.” Some scientists want to split this genus into two genera and call the new one *Paranthropus*.

ANSWER: Australopithecus (accept Australopithecine) [RM]

10. He won an Academy Award for the song “Lose Yourself.” For 10 points each:

[10] Name this rapper who sometimes calls himself Slim Shady. This rapper collaborated with Rihanna on “Love the Way You Lie” and sampled a Dido track for his song “Stan.”

ANSWER: Eminem (accept Marshall Mathers)

[10] Exact two-word answer required. In “Lose Yourself,” Eminem describes a character with “vomit on his sweater already,” the remnants of this homemade pasta meal.

ANSWER: mom’s spaghetti

[10] “Lose Yourself” was featured in the movie *Eight Mile*, a semi-autobiographical film about Eminem’s childhood in this city. This city was also home to Berry Gordy’s Motown Records until 1972.

ANSWER: Detroit [OL]

11. This quantity is equal to k times the charge Q of a point charge over r . For 10 points each,
[10] Name this quantity whose negative gradient is the electric field and has units of joules per coulomb. It is also known as electromotive force, or EMF.

ANSWER: Electric Potential (do NOT accept Electric Potential Energy)

[10] The difference in electric potential between two points can be referred to with this quantity, which is also equal to current times resistance.

ANSWER: Voltage

[10] According to Kirchhoff's loop rule, the sum of voltage around a closed loop equals this number, the spin of a Higgs boson and mass of a photon.

ANSWER: Zero [EF]

12. This man's studies on the Kwakiutl [**Kwa-KEE-OO-till**] people's potlatch system provided research for Marcell Mauss' *The Gift*. For 10 points each:

[10] Name this anthropologist, who founded the first anthropology department in the United States at Columbia University. He taught Ruth Benedict, Alfred Kroeber, and Margaret Mead.

ANSWER: Franz Boas

[10] Boas measured the differences in size of this body part between immigrant mothers and children, and like Ruth Benedict, argued it did not reflect intelligence. Its size is also measured in phrenology.

ANSWER: head (or **cranium**)

[10] As curator of The American Museum of Natural History, Boas presented perhaps the first of *these* ever, showing the Hamatsa dance. In a very general sense, this term describes any 3D models.

ANSWER: diorama [CS]

13. In this work, a pair of gravediggers engage in a mock-legal argument about whether a character drowned herself willingly or whether the water "came after her." For 10 points each,

[10] Name this Shakespeare play, in which the title prince of Denmark seeks to avenge his father's death.

ANSWER: Hamlet

[10] This poem by T.S. Eliot features the line "No, I am not Prince Hamlet, nor was meant to be." The speaker of this poem later asks "Shall I part my hair behind? Do I dare to eat a peach?"

ANSWER: "The Love Song of J. Alfred Prufrock" (generously prompt partial title)

[10] Tom Stoppard wrote a play titled for these two friends of Hamlet. In Stoppard's play, these characters see a coin come up heads 92 times in a row.

ANSWER: Rosencrantz and Guildenstern (need both answers, but accept in either order, accept **Rosencrantz and Guildenstern are Dead**) [TB]

14. A common rhyme associated with this event urges listeners to "remember, remember, the 5th of November." For 10 points each:

[10] Name this event. Robert Catesby and Guy Fawkes were conspirators associated with this assassination attempt.

ANSWER: Gunpowder Plot (or **Gunpowder Treason Plot**, or **Jesuit Treason**; prompt on answers such as "blowing up Parliament")

[10] This British king was the primary target of the Gunpowder Plot. The conspirators intended to install this man's daughter Elizabeth as a Catholic monarch after staging a revolt in the Midlands.

ANSWER: James I (or **James VI** of Scotland, prompt on “James” alone)

[10] James I was a member of this royal house. This house originated in Scotland and succeeded the Tudor monarchs on the throne of England.

ANSWER: (House of) Stuart [TB]

15. This monument was built at the Jefferson National Expansion Memorial. For 10 points each:

[10] Name this monument, a large catenary meant to symbolize the starting point of Lewis and Clark’s expedition.

ANSWER: Gateway Arch

[10] The Gateway Arch was designed by this Finnish architect who also designed the TWA terminal at JFK International Airport.

ANSWER: Eero Saarinen (do NOT accept or prompt on “Eliel Saarinen”)

[10] Saarinen also designed the Kresge Auditorium for this university. He also designed this university’s namesake “chapel.”

ANSWER: Massachusetts Institute of Technology (Accept **MIT**) [HP]

16. Because he disobeyed God’s orders about how to get water from a rock, this man was forbidden from entering the Promised Land. For 10 points each:

[10] Name this Old Testament figure who led the Israelites out of Egypt by parting the Red Sea. This man received the Ten Commandments on Mount Sinai.

ANSWER: Moses (accept **Moshe** or **Musa**)

[10] This Jewish holiday commemorates the Israelites’ escape from slavery. Rituals associated with this holiday include a special meal called a *seder*.

ANSWER: Passover (accept **Pesach**)

[10] This text outlines the order of the Passover seder. This text includes Passover songs like “Dayenu” and “Chad Gadya” as well as four questions to be asked by the youngest child present.

ANSWER: Haggadah (accept **Haggadot**) [TB]

17. He wrote that “good fences make good neighbors” in “Mending Wall.” For 10 points each:

[10] Name this American poet. In one of his most famous works, the speaker ponders the significance of “The Road Not Taken.”

ANSWER: Robert (Lee) Frost

[10] This Frost poem begins “Whose woods these are I think I know. / His house is in the village though.” It closes with the repeated line “And miles to go before I sleep.”

ANSWER: “Stopping by Woods on a Snowy Evening”

[10] In another Frost poem, the speaker ponders in which of these two elements the world will end. These two elements are linked to “hate” and “desire” in that poem.

ANSWER: fire and **ice** [accept in either order, prompt on just one] [TB]

18. The premiere of this piece saw riots at its performance in Paris. For 10 points each:

[10] Name this ballet, whose story was based off of “Pictures in Pagan Russia.” It was choreographed by Vaslav Nijinsky.

ANSWER: The Rite of Spring (accept **Le sacre du printemps** or **Vesna svyashchennaya**)

[10] *The Rite Of Spring* was composed by this avante-garde Russian composer of *Petrushka*.

ANSWER: Igor **Stravinsky**

[10] This other Stravinsky ballet focuses on the title creature emerging from its ashes. It is notable for a bassoon solo following an “Infernal Dance.”

ANSWER: *The Firebird* (accept *L’oiseau de feu* or *Zhar-ptitsa*) [HP]

19. Give the following about mythological humans for 10 points each:

[10] Ask and Embla are humans who fill this role in Norse Myth. In Egyptian myth, these people are either molded by Khnum or spring from the tears of an aspect of Ra. Pandora is one in Greek myth.

ANSWER: **First humans** (or equivalents like **first people**)

[10] Utnapishtim was a Sumerian who did this thing. Bergelmir founds Jotunheim after doing this thing, which Matsya allows Manu to do. Deucalion and Pyrrha entered a chest to do it, but most use a boat.

ANSWER: **Survive the flood** (or clear-knowledge equivalents)

[10] Lif and Lifthrasir hide in a tree to survive this specific event, which most other than Vali and Vidar don’t. The three-year-long Fimbulwinter precedes this event, and this event begins with the crowing of three roosters.

ANSWER: **Ragnarok** [CS]

20. Artemisia I of Caria fought for the losing side of this naval battle, whose ruler built a throne on Mount Aigialos to watch it. For Ten Points Each:

[10] Name this ancient naval battle named for an island near Athens. The Greeks defeated the fleet of Xerxes I at this 480 BC battle.

ANSWER: **Salamis**

[10] Themistocles, the commander of the Greek forces at Salamis, visited this oracle before the battle. This oracle said that only wooden walls would save Athens, so Themistocles built a navy.

ANSWER: (Oracle of) **Delphi** (accept **Pythia**)

[10] The battle of Thermopylae was fought simultaneously with this naval battle, at which both sides suffered heavy losses, but the Greeks retreated to Salamis after the news that Thermopylae was lost.

ANSWER: **Artemisium** [CS]

Tiebreaker:

21. Most of these objects are small fragments from asteroids or comets. For 10 points each,

[10] Name these small rocky objects that form namesake showers and are colloquially known as “shooting stars.”

ANSWER: **Meteors** (accept **Meteorites** and **Meteoroids**)

[10] Meteors burn up and mostly disintegrate when they enter this region which is composed mostly of nitrogen and oxygen gas.

ANSWER: Earth’s **Atmosphere** (antiprompt on specific answers)

[10] The atmosphere also protects life on Earth with the absorption of harmful UV rays, which are absorbed by this allotrope of oxygen that forms a namesake layer in the stratosphere.

ANSWER: **Ozone** (accept **O3**) [EF]