

Scobol Solo 2019

Packet 4 (Round 4)



1. If the size of these objects is measured by the region of space disturbed, then the largest one is McNaught. The brightest one of these objects seen from Earth may be Ikeya-Seki [ih-KAY-uh SAY-kee], which at one point was visible in the daytime sky. Tempel-Tuttle, which is also one of these objects, is responsible for the Leonids meteor shower. These objects look the way they do because of sublimation, meaning that part of them becomes a gas. Conditions in the Oort cloud create the “long-period” examples of these objects. Many of these objects are seen once every several decades. Name these objects that have tails pointing away from the Sun.

Answer: comets

2. This person was criticized for relieving the debts of Yolande de Polastron, which started rumors of an affair between them. This person’s popularity dropped when Jeanne [zhahn] de la Motte wrote letters she claimed this person had written to get Cardinal de Rohan to buy a diamond necklace. This person’s parents were Maria Theresa and Francis I, which could explain this person’s unpopularity in France. Name this woman who was guillotined a few months after her husband Louis XVI [16] and who probably never actually said “Let them eat cake.”

Answer: Marie-Antoinette(-Josèphe-Jeanne d’Autriche-Lorraine) [or Maria Antonia Josepha Joanna von Österreich-Lothringen]

3. At the beginning of this play, a father says of his daughter “As she is mine, I may dispose of her: Which shall be either to this gentleman or to her death.” That father, Egeus [EE-jee-us], appears again in act 4 scene 1 of this play, which ends with a character stating that Peter Quince should arrange a new play about Pyramus. In that scene of this play, the encouragement by Egeus, Theseus, and Hippolyta [hih-PAH-lih-tuh] to have huntsmen blow their horns causes Lysander, Demetrius, Helena, and Hermia to wake up. Name this William Shakespeare play in which some characters are controlled by fairies such as Puck, who are led by Oberon and Titania [tih-TAHN-yuh].

Answer: *A Midsummer Night’s Dream*

4. This person wrote the books *The War on Normal People* and *Smart People Should Build Things*. In 2011, this person started a nonprofit that places college graduates in urban startups, called Venture for America. This person has stated that many Americans are losing their jobs to technology, and his proposed solution is for all adults to receive a universal basic income of 1,000 dollars per month. Name this candidate in the 2020 Democratic primaries who claims to be the opposite of President Trump because he’s “an Asian guy who’s good at math”.

Answer: Andrew Yang

5. This person worked with John Warren and Norman Foster to build a structure with many holes in it, with the idea that the holes could be used for solar panels or water collection. That project was this person's Fly's Eye Dome. This person designed a house that could be mass-produced and shipped in metal tubes. He combined the words "dynamic", "maximum", and "tension" to name that house *Dymaxion*. This person took advantage of the structural stability of triangles to design a dome that he promoted, and he inspired the creation of Spaceship Earth at Disney's EPCOT. Name this designer who promoted geodesic [jee-oh-DEZ-ik] domes.

Answer: R(ichard) Buckminster Fuller

6. In a conservative field, dividing the opposite of the potential energy gradient by mass gives this quantity. For an object sliding down an inclined plane without friction, this quantity equals the gravitational field strength times the sine of the angle of inclination. Because inertial and gravitational masses are the same, this value is the same for all objects in the same gravitational field. By Newton's second law, when mass is constant this quantity equals net force divided by mass. Name this quantity which can be measured in meters per second squared and that equals the rate of change of velocity.

Answer: acceleration

7. This current state's first territorial governor was Andrew Reeder, who was fired and eventually had to leave the territory in disguise after a petition was sent to the U.S. president by the so-called "Bogus Legislature". In this state, Franklin Coleman murdered Charles Dow, leading to the Wakarusa [wah-kuh-ROO-suh] War. Before going to Virginia to raid Harpers Ferry, John Brown fought in this state's Battle of Osawatimie [ah-sah-WAH-toh-mee]. Pro-slavery forces in what would become this state wanted its capital to be in Lecompton. Name this state that was described as "Bleeding" and that was made an official U.S. territory in 1854 along with its northern neighbor, Nebraska.

Answer: Kansas

8. A recent version of this poetry collection states on its cover "Be happy for this moment. This moment is your life." One poem in this collection states "The Moving Finger writes: and, having writ, moves on." According to the second translation by Edward FitzGerald, another poem in this collection states "A Jug of Wine, a Loaf of Bread—and Thou." The writer of these poems referred to his name and his other occupations by saying that he "stitched the tents of science". Name this collection of quatrains originally written in Persian during the 11th and 12th centuries by Omar Khayyam.

Answer: the *Rubáiyát of Omar Khayyám*

9. This god took on two servants after one of them sucked the marrow out of a goat's leg bone. That servant, who is very fast but loses races to Hugi [HOO-yeē], is Tjalve [shol-VEH]. The world's flint comes from the time a giant threw a whetstone at this god's head, causing the whetstone to shatter. That giant, who had raced Odin, was Hrungnir [ROONG-neer]. This god's enemy was Jörmungandr [yor-mun-GAHN-der], the Midgard Serpent; they kill each other during Ragnarök. This god wore the belt Megingjord [meg-in-YORD] to increase his strength, and his primary weapon was Mjölnir [mee-YOHL-neer], a powerful hammer. Name this Norse god of thunder.

Answer: Thor [or Donar or Dunraz]

10. This composer worked with Robert Schumann and Albert Dietrich [DEE-trik] on the *F-A-E Sonata*, which was a gift to the violinist Joseph Joachim [yo-AH-keem]. 34 years later, this composer used an "A-E-F" motif in a piece he alone wrote for Joachim, the *Double Concerto* for violin, cello and orchestra. This composer stated "one laughs while the other cries" in reference to the two overtures he wrote in 1880, the *Tragic Overture* and the *Academic Festival Overture*. Name this composer whose "Wiegenlied" [VEEG-en-lee] is known in English as his "Cradle Song" or "Lullaby".

Answer: Johannes Brahms

11. This leader controlled the country that Mursili III [MUR-suh-lee "the third"] fled to; soon after that, this leader and Hattusili III [hat-too-SEE-lee "the third"] signed a document sometimes considered the world's first peace treaty. This leader ordered the construction of the Abu Simbel [ah-boo "symbol"] temples that much later had to be moved when the Aswan High Dam was built. This third pharaoh of the 19th Dynasty also completed temples that were started under his father, Seti I. His first wife was Nefertari. Name this Egyptian leader who defeated the Hittites at the Battle of Kadesh and who is commonly considered to be the pharaoh from the Book of Exodus.

Answer: Ramses II or Ramses the Great [prompt on Ramses]

12. The breakup of this kind of structure can be classified as homolysis [hoh-MAH-luh-siss] or heterolysis [het-uh-RAH-luh-siss] depending on how the electrons are divided up. Alternating between different types of these entities creates a stable system that is called "conjugated". If there is more than one way to represent these structures under the same system, there is resonance. Depending on how many lobes overlap, these entities can be classified as phi, delta, pi, or sigma. The two most common types of these entities are formed by electron transferring and electron sharing. Name these entities that are typically ionic or co-valent and that connect atoms.

Answer: chemical bond [prompt on molecule or compound; accept ionic bond or covalent bond]

13. In a novella by this author, a woman enters a bathroom while her adult son is taking a bath so that he can have some new toothpaste. That son, who is the title character of this author's novella, had just read an old letter from his brother Buddy. This author published *Zooey* with the short story "Franny"; both are about the Glass family. A novel by this author begins with the protagonist saying he is bored by "all that David Copperfield kind of crap". This author has that character describe his expulsion from Pencey Preparatory Academy. Name this author who wrote about Holden Caulfield in *The Catcher in the Rye*.

Answer: J(erome) D(avid) Salinger

14. In 1912 in Paris, one painter from this country made a portrait of another painter from this country in a work in which the space is fractured by several diagonal lines. Another artist from this country made a painting showing a ladder on the side and the colors of Mardi Gras, entitled *The Harlequin's Carnival*. A large sculpture by that artist is in a park in this country named for him, the Parc de Joan Miró [zhoo-AHN mih-ROH]. A bombing during this country's civil war was depicted with a light above a screaming bull, horse, and woman in *Guernica*. Name this country that was home to Juan Gris [greez] and Pablo Picasso.

Answer: (Kingdom of) Spain [or (Reino de) España]

15. This person wrote "If Moses, Cyrus [SY-russ], Theseus [THEE-see-uss], and Romulus [RAHM-yoo-luss] had been unarmed, they could not have enforced their constitutions for long" before contrasting those people with Savonarola [sah-VAH-nah-ROH-lah]. In another book, this person wrote that wars on a commonwealth are made either to subjugate it, or out of fear of being subjugated by it. That book consists of this person's commentary on an ancient historical text. This person's name is used as an adjective to describe acts "marked by cunning, duplicity, or bad faith", especially in the political realm. Name this Florentine [FLOR-en-teen] author of *Discourses on Livy* [LIV-ee] and *The Prince*.

Answer: Niccolò (di Bernardo dei) Machiavelli [neek-koh-LOH "mock"-ee-ah-VELL-lee]

16. In 1911, Otto Toeplitz [TEP-lits] asked whether every simple closed curve in a plane contains the vertices of one of these shapes; the question has not yet been answered. One of the three classic problems from Greek mathematics was to create one of these shapes with the same area as a given circle. Equilateral triangles, regular hexagons, and this shape are the only regular polygons that tessellate the plane. In this shape, the ratio of the diagonal length to any side length is the square root of 2. If a rhombus has congruent diagonals, then it is this more specific shape. Name this quadrilateral that has four congruent sides and four congruent angles.

Answer: square [prompt on regular quadrilateral or regular quadrangle]

17. In this novel, an uncle comforts his nephew by pointing out that the uncle has lost five out of six wives and 22 children. That speech is given to the protagonist of this novel after his gun explodes during a funeral, causing him to be exiled from his village. The uncle, Uchendu [uh-CHEN-doo], lives in Mbanta [um-BAHN-tuh] in this novel. This novel is about a wrestling champion who for a time acts as the father of Ikemefuna [ih-keh-MAY-fuh-nuh] and who normally lives in Umuofia [oo-MOH-fee-uh]. Name this Nigerian novel about Okonkwo [oh-KAHN-kwoh], written by Chinua Achebe.

Answer: Things Fall Apart

18. This war started after a diplomatic mission by John Slidell was refused. Just before this war was declared, troops were killed during the Thornton Affair, and the use of that encounter to justify this war led to the Spot Resolutions. That fighting took place in disputed territory south of the Nueces [noo-“ACE-ace”] River. Early during this war, Pedro de Ampudia’s [ahm-POO-dee-ah’z] forces were defeated by Zachary Taylor, who went on to victory at the Battle of Buena Vista over General Santa Anna. This war ended with the Treaty of Guadalupe Hidalgo [gwah-dah-LOO-pay ee-DAHL-goh]. Name this war, supported by President James Polk, which expanded the U.S. border to the Rio Grande River.

Answer: Mexican-American War [or Intervención estadounidense en México or Guerra de 1847 or Guerra de Estados Unidos a Mexico]

19. This body of water contains the Pelagic [pel-AH-jay] Islands, which include Lampedusa [lahm-pay-DOO-suh] and have ferry service to Porto Empedocle [em-PAY-doh-klay]. The Gulf of Gabès [gah-BESS] is on the south side of this body of water, which has an ancient Jewish population on its island of Djerba [JEER-bah]. The west end of this body of water has a set of islands that recently voted to maintain a tradition of nude beaches, the Balearics [bal-ee-AIR-ik], which include Mallorca [my-YOR-kah]. The Knights of St. John once controlled this body’s island of Malta. Name this sea whose arms include the Tyrrhenian [tir-EE-nee-un] and Ionian [“eye”-OH-nee-un] Seas and which is between Africa and Europe.

Answer: Mediterranean Sea

20. A part of this molecule can be damaged by the formation of a cyclo-butane ring, which can be reversed by photo-reactivation. This molecule can be cut by the protein Cas9 [kas “nine”]. Part of this molecule alternates between phosphate and a sugar whose chemical formula is C₅H₁₀O₄, and this molecule is used to create a molecule with a similar alternation but whose sugar has an extra oxygen atom. This molecule incorporates thymine [THY-min] and not uracil [YUR-uh-sill]. Based on crystallography work by Rosalind Franklin, the structure of this molecule was determined by Francis Crick and James Watson. Name this carrier of genetic information that has a double-helix structure.

Answer: DNA [or deoxyribonucleic acid; do not prompt on “ribonucleic acid”]

This is the end of regulation. Check the score. If it is tied, proceed to overtime tossups. If it is not tied, the game is over.

^{TB}21. When publishers repeatedly rejected this poet's works, he published them himself using the title *No Thanks*. This poet wrote "there's a hell of a good universe next door; let's go" at the end of his poem "pity this busy monster, man-unkind". Another poem by this writer is almost vertical and has the letters of the word "loneliness" containing a parenthetical "a leaf falls". Another poem by this writer lists the four seasons three times, starting with a different season each time. In that poem, "Women and men cared for anyone not at all." Name this author of "anyone lived in a pretty how town" who often used unconventional capitalization.

Answer: E(dward) E(stlin) Cummings

If the score is still tied, continue. If it is not tied, the game is over.

^{TB}22. This U.S. president sent a letter to the Touro Synagogue in Rhode Island stating that the U.S. government does not sanction bigotry. During this person's presidency, the United States clarified its border by signing the Treaty of San Lorenzo with Spain, which became known as Pinckney's Treaty. This president's farewell address stated "It is our true policy to steer clear of permanent alliances with any portion of the foreign world." After this president instituted an excise tax on whiskey, he led troops to Pennsylvania to stop a rebellion. This president's cabinet included Henry Knox, Thomas Jefferson, and Alexander Hamilton. Name this first U.S. president.

Answer: George Washington

If the score is still tied, continue. If it is not tied, the game is over.

^{TB}23. Denver's main place of this type has a statue of a Blue Mustang nicknamed Blucifer near it, and takes up 33,000 acres. Eero Saarinen designed part of one of these places that is in New York City and is named for John F. Kennedy. One of Chicago's places of this type is named for a World War II hero; Chicago also has a smaller place of this type that is named for a World War II battle. Those places are O'Hare and Midway. Name this type of place used by people traveling by plane.

Answer: airport(s) [accept airport terminal(s) before "hero"]

There are no more overtime questions available. If the score is still tied, contact the control room for further instructions. If it is not tied, the game is over.