

# Scobol Solo 2016

## Packet 4 (Round 4)



1. In a problem named for Regiomantus, the goal is to maximize one of these objects related to a painting on a wall. Squaring the circle, doubling the cube, and trisecting one of these shapes with a compass and straightedge were goals of the ancient Greeks that turned out to be impossible. When two planes form this shape, this shape is called “dihedral” [“die”-HEE-drul]. Two equivalent shapes of this kind, formed within the unit circle, are called co-terminal. Name these shapes that can be measured in radians or degrees.

Answer: angles

2. University of Chicago professor Leo Strauss stated that “the moderns started with” this person, and Strauss’s lectures about this person were published. This person wrote “All armed prophets have been victorious, and all unarmed prophets have been destroyed.” This person explained why ruling a hereditary state is easier than ruling a new principality, and he stated that the only profession of a leader should be war. This writer described leadership lessons learned from the history *Ab urbe condita* in his *Discourses on Livy*. This person praised Cesare Borgia [chay-ZAR-ay BOR-jah] and wrote that leaders should be willing to act immorally. Name this Italian author of *The Prince*.

Answer: Niccolò (di Bernardo dei) Machiavelli

3. A mass by this composer was nicknamed the *Nelson Mass* after Admiral Nelson listened to it, and is called the *Missa Sancti Nicolai*. This composer wrote a section called an “Earthquake” to follow seven sonatas in *The Seven Last Words of Christ*. This composer worked with Johann Tost on some quartets, and others were first published with a sun on their cover. *The Bear* and *The Hen* are two of this composer’s six Paris Symphonies, and he later wrote twelve London Symphonies. He is nicknamed “the father of” both string quartets and symphonies. Name this composer whose over 100 symphonies include the *Farewell* and *Surprise*.

Answer: (Franz) Joseph Haydn

4. This person went to war by request of the Aedui [“eye”-DOO-ee] after they lost the Battle of Mage-to-briga. At the Battle of Munda, this person’s troops killed his former lieutenant Titus Lab-i-enus, who joined the Optimates that fought against this person’s Populares. Titus Labienus helped this person win the Battle of Alesia against Vercingetorix [ver-sin-JET-or-iks], ending the Gallic War. This leader started the Great Roman Civil War when he stated “The die is cast” and brought his troops across the Rubicon. Name this leader whose death was followed by the Second Triumvirate defeating his assassins, Cassius and Brutus.

Answer: (Gaius) Julius Caesar [accept either underlined name]

5. One character in this novel disapproves of two women traveling by themselves, saying she sent two manservants to travel with her niece Georgiana. Another character in this novel moves about a mile from Meryton after being knighted, placing his family within a short walk of Longbourn, and his daughter Charlotte marries a clergyman who is heir to Longbourn, Mr. Collins. The protagonist of this novel, who is the younger sister of Jane and the older sister of Mary, Kitty, and Lydia, falls in love with the master of Pemberley, Fitzwilliam Darcy. Name this novel about Elizabeth Bennet, written by Jane Austen.

Answer: Pride and Prejudice

**Check the score.**

6. This molecule is found in the antenna complex along with xanthophylls [ZAN-thoh-“fills”] and carotenoids [kuh-RAHT-uh-noydz]. This molecule is bound to by trans-membrane proteins CP43 and CP47. The absorbance of this molecule is complementary to that of anthocyanin [an-thoh-“SIGH”-uh-nin] pigments. The two forms of this molecule absorb light at 680 nanometers and 700 nanometers in photo-systems I and II, and are found in thylakoid [“THIGH”-luh-koyd] membranes. This molecule has a magnesium atom at the center of a tetrapyrrole [tet-ruh-“PIE”-role] structure similar to a porphyrin [POR-fuh-rin]. Name this green pigment that absorbs light for photosynthesis.

Answer: chlorophyll

7. This painter showed three women, including one on the right putting on green stockings and one nude in the center looking at the canvas, in front of one of his other paintings in *The Models*. His painting of the Eiffel Tower is missing the top of the tower, probably because it was under construction at the time. Another of his paintings shows a boy in the water on the right side with a red and orange hat appearing to blow into his hands, while yet another painting by this artist shows a woman walking her monkey on a leash in Paris. Name this post-Impressionist painter of *Bathers at Asnières* [an-yair] and *A Sunday Afternoon on the Island of La Grande Jatte* who used pointillism.

Answer: Georges(-Pierre) Seurat [zhorzh soo-rah]

8. A U.S. House candidate from this state is being criticized for his former campaign manager Jeffrey Garcia’s absentee ballot fraud, and is being attacked with the hashtag “Shady Joe Garcia”. Former Ashbritt CEO Randy Perkins is running to replace Patrick Murphy in the House from this state, while Murphy is running to represent it in the Senate. Congressman David Jolly is being challenged by a former governor of this state who switched from the Republican Party to the Democrats, Charlie Crist, who lost the 2014 gubernatorial election to Rick Scott. Name this state where Patrick Murphy is running against Marco Rubio.

Answer: Florida

9. In one novel by this author, several characters hang out in a shed they call “The Palace Flophouse and Grill”. This author portrayed those characters, led by Mack, wanting to thank the marine biologist Doc. In another novel by this author, several men work on a ranch run by Curley’s father, and a very strong mentally disabled man likes rabbits. This author also wrote about a move to California during the Dust Bowl made by the Joad family. Name this author of *Cannery Row*, *Of Mice and Men*, and *The Grapes of Wrath*.

Answer: John (Ernst) Steinbeck (Jr.)

10. In an attempt to stop a war, Ferdinand Cohen-Blind shot this person several times, but the bullets did little damage. Eduard Kullman tried to shoot this person shortly after laws were passed requiring civil registrations of marriages. This leader’s education minister, Adalbert Falk, enforced the May Laws that expelled Jesuits. Those laws weakened the political power of the Catholic Church as part of the Kultur-kampf policy. This person said “The great questions of the time will not be resolved by speeches. . . but by iron and blood.” After King Wilhelm I [VIL-helm “the first”] appointed him as Minister President of Prussia, this man became the first Chancellor of Germany near the end of the Franco-Prussian War. Name this leader of German unification.

Answer: Otto von Bismarck [or Otto Eduard Leopold, Prince of Bismarck, Duke of Lauenburg]

**Check the score.**

11. There is debate about whether one of these events was caused by Marsden and Kracht [“crocked”], or by Machholz [“mock-holes”]; that event of this type occurs in late July and is named for Delta Aquarii [uh-KWAIR-ee-“eye”]. Jupiter made one of these events — caused by Swift-Tuttle — larger than usual this year, when it occurred in mid-August. These events are named for the constellation they appear to come from, and they are caused by Earth passing through the path of a comet that left debris behind. Name these events such as the Leonids and the Perseids, during which bright flashes in the sky are called “shooting stars”.

Answer: meteor showers [or meteor outbursts or meteor storms; do not accept answers containing “meteorite” or “meteoroid”]

12. In this body of water, Cockburn [KOH-burn] Island is between the Mississagi [mis-uh-SAG-ee] Strait and the False Detour Channel. Bruce Peninsula extends into this body of water, separating its Georgian Bay. This body’s North Channel is north of Manitoulin [man-ih-TOO-lin] Island. At the west end of this body of water there is a resort island on which cars are not permitted, and which is famous for fudge, Mackinac [MAK-ih-naw] Island. Its northwestern end is at Sault [soo] Sainte Marie and the St. Marys River. This lake’s Saginaw Bay separates the four fingers from the thumb that make Michigan look like a hand. Name this Great Lake that is east of Superior and Michigan, and northwest of Ontario and Erie.

Answer: Lake Huron [prompt on Lake Huron-Michigan or Lake Michigan-Huron]

13. One poem by this writer depicts a crowd of Hungarians with an accordion, and begins “I asked the professors who teach the meaning of life to tell me what is happiness.” Another poem by this writer asks whether you or your mother is better at arithmetic. In another poem by him, the title object “sits looking over harbor and city on silent haunches.” In addition to writing poetry, this person wrote biographies of Abraham Lincoln and the children’s book *Rootabaga Stories*. Name this writer of “Fog”, who described the title city as “Hog Butcher for the World” and “City of the Big Shoulders” in his poem “Chicago.”

Answer: Carl Sandburg

14. This country shot down an American EC-121 Reconnaissance plane in 1969, killing 31 Americans. A year earlier, this country captured the USS *Pueblo* and tortured some of its crew members. When Japanese Prime Minister Junichiro Koizumi visited this country in 2002, it admitted that it had kidnapped 13 Japanese citizens. The six-party talks were an unsuccessful effort to convince this country to give up its nuclear weapons. Since its creation in 1948, this country has been led by three related men, starting with Kim Il-sung. Name this poor communist country that is now led by Kim Jong-un.

Answer: North Korea [or Democratic People’s Republic of Korea or DPRK; prompt on Korea]

15. This compound serves as a ligand [LIG-und] that displays strong pi-back-bonding, and its 2143-inverse-centimeter vibration decreases to roughly 2000 inverse-centimeters upon binding to a metal. This compound is added to a double bond during a hydro-formyl-ation. A mixture of this compound and water is called “water gas” and can react to form carbon dioxide and hydrogen. This molecule’s extremely high affinity for hemoglobin prevents hemoglobin from binding to oxygen, which is why this gas is poisonous. Name this colorless, odorless diatomic gas whose formula is CO.

Answer: carbon monoxide [accept CO before the end]

**Check the score.**

16. In the Koran, this person is told “Grieve not! for thy Lord has provided a rivulet beneath you.” In the Bible, this person is told “Mine hour is not yet come” and responds by saying “Whatsoever he says to you, do it” during the wedding at Cana [KAY-nuh]. This person was told “For with God nothing shall be impossible” by the angel Gabriel in a discussion called the Annunciation, which was followed by a visit to Elizabeth where this person spoke the Magnificat. The creation of this person inside the womb of St. Anne is the Immaculate Conception. Name this wife of Joseph and mother of Jesus.

Answer: Mary [accept Maryam or Miriam]

17. In a story by this author, a devil gets a promotion after getting a peasant to drink vodka. The character Dmitri Nekhlyudov [nek-l'YOO-dawff] appears in several stories as well as this author's last novel, in which he visits people in prison after serving on a jury that convicts his former lover. In addition to *Resurrection*, this author wrote a novel featuring an unhappy marriage between Hélène Kuragina and Pierre Bezukhov, who believes he will assassinate Napoleon. In another novel by this author, the title character talks to the sisters Dolly and Kitty before committing suicide by throwing herself in front of a train. Name this author of *Anna Karenina* and *War and Peace*.

Answer: (Lev Nikolayevich) "Leo" Tolstoy

18. John Jay convinced this country to loan money to the United States, though it refused to recognize him as an ambassador; later, Washington Irving was an ambassador to this country. The Treaty of Friendship, Limits, and Navigation between this country and the United States — which clarified U.S. borders and reopened New Orleans to American goods — was negotiated by Thomas Pinckney. The U.S. purchased territory from this country in the Adams-Onís [oh-NEESS] Treaty. The U.S. captured Guam from this country during a war that started after the destruction of the USS *Maine*. Name this European country that used to control Florida.

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

19. A famous work by this artist shows a rose from his mother that he placed onto a piece of driftwood he found at a beach. This person became the most famous artist from a group that he formed with Willard Van Dyke, which also included Van Dyke's teacher Edward Weston. One of this artist's works shows Orville Cox wearing a big black hat and looking down while Georgia O'Keeffe looks at Cox. Some of his works are collected in the book *Born Free and Equal: The Story of Loyal Japanese-Americans*. Many of his works were created at Yosemite National Park, including *El Capitan* and his 1960 work *Moon and Half Dome*. Name this landscape photographer.

Answer: Ansel Adams

20. Electromagnetic waves are created whenever this value is not zero for a charged particle. The equivalence principle originally stated in the development of relativity theory compared this quantity for a reference frame to a gravitational field. Galileo demonstrated that the impact of a gravitational field on this quantity is not affected by mass. The formula speed squared divided by radius is used to calculate the centripetal [sen-TRIP-ih-tul] type of this quantity. Name this quantity that is often calculated as net force divided by mass, and which is defined as the rate of change of velocity.

Answer: acceleration

***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.***

- <sup>TB</sup>21. In one story by this writer, Mademoiselle Pertelote [PUR-tih-loht] — who tells her husband not to be afraid of his dreams — is a hen, and her husband is the rooster Chanticleer. This person wrote about a dream in which birds choose their mates in *Parliament of Fowls*. In another story by this writer, a rapist is told that he can spare his life by figuring out what women want. Many of this writer's stories are within a frame of people meeting in Southwark [SUTH-urk] at the Tabard Inn and making a pilgrimage to a shrine of Saint Thomas Becket in Canterbury. Name this author of *The Canterbury Tales*.

Answer: Geoffrey Chaucer [prompt on the Nun's Priest before "Fowls"]

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

- <sup>TB</sup>22. Almost two years after the lynching of Francis McIntosh in St. Louis, this person gave a speech warning against mob rule, which he called "The Perpetuation of Our Political Institutions" but is now usually called his Lyceum Address. He opposed the expansion of slavery into Western territories in his Cooper Union Address, which was given two years after this person started his unsuccessful Senate campaign by stating "A house divided against itself cannot stand." Name this politician who referred to American independence being declared "four score and seven years ago" during his Gettysburg Address.

Answer: Abraham Lincoln

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

- <sup>TB</sup>23. This word refers to a tennis serve that hits the net but still lands where it should. In an idiom, this word precedes the phrase "the cat out of the bag". In a Beatles song title, this word precedes the words "It Be". Give this three-letter synonym of "allow" that starts with the letter 'L'.

Answer: let

***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.***