

Scobol Solo 2016

Packet 5 (Round 5)



1. Supporters of this person killed several employees of the American Smelting and Refining Company. This man and three of his staffers were later killed while driving through Parral. State Legislator Jesús [hay-ZOOSS] Salas Barraza took the blame for the assassination, though it was planned by an administrator of the town Canutillo [kah-noo-TEE-yoh], Melitón Lozoya, probably with the knowledge of President Alvaro Obregón. This person's attack on Columbus, New Mexico in 1916 caused Woodrow Wilson to order the Punitive Expedition, in which General John Pershing tried to capture this person. Name this commander in the Mexican Revolution who became a hero despite his losses.

Answer: (Francisco) Pancho Villa [or José Doroteo Arango Arámbula]

2. Attempts to find arc lengths of this shape led to the study of integrals of the ratio of two polynomials divided by the square root of another polynomial. Niels Abel ["kneels" AH-bul] used the inverses of those integrals to create functions that solve differential equations that involve curves based on this shape; in turn, those curves were used to prove Fermat's [fair-mah'z] Last Theorem. Rotating this shape in three dimensions forms a spheroid. For this shape, the focal length squared equals the semi-major axis length squared minus the semi-minor axis length squared. This shape has an eccentricity greater than zero but less than one. Name this conic section that looks like an oval.

Answer: ellipse

3. In this country, the town Juodkrante ["YOU-owed"-KRAHN-"tie"] is on the northern half of the Curonian Spit, which is at the western end of the Curonian Lagoon, while the town Smiltynė [smil-TEEN-yai] is at the northern end of the spit, across from the city of Klaipėda [kly-PAY-dah]. Much of this country's town Rumsiskes [room-SHEE-skehs] was moved to make room for the Kaunas Reservoir next to its second-most populous town. The Neman [nay-mahn] River forms part of this country's southern border, separating it from Russia's Kaliningrad oblast. That river and the Neris River both start in neighboring Belarus. Name this Baltic country that is south of Latvia, whose capital is Vilnius.

Answer: (Republic of) Lithuania [or Lietuvos (Respublika)]

4. This person wrote “the love unseen and the love unheard and the love unsaid: the love in love” in a work that blends prose and poetry, his *Proem*. One of his works is “dedicated to those women / Whose beauty is in their charm” and is called “No More Clichés”. One of this writer’s poems has 584 lines to match the 584 days of the orbit of Venus, and refers to a river that “goes roundabout, arriving forever”. This person also wrote a book-length essay on national identity and the impact of politics on intellectuals, *The Labyrinth of Solitude*. Name this Mexican poet who was inspired by Aztec astronomy to write *Sunstone*.

Answer: Octavio Paz (Lozano)

5. The American Academy of Arts and Letters re-created this man’s studio and gives out scholarships named for him. This composer planned to write a series of pieces called “Men of Literature,” but he quit after being unsatisfied with his *Robert Browning Overture*. In 1999, recordings of this composer playing his own music from 1933 to 1943 were released, including many transcriptions from his *Emerson Concerto*, which he turned into his *Concord Piano Sonata*. The movement “Old Folks Gatherin’” begins his third symphony, which is called *The Camp Meeting*. Name this composer from Connecticut who wrote *The Unanswered Question* and *Three Places in New England*.

Answer: Charles (Edward) Ives

Check the score.

6. This person took ice samples at a weather station in 1912 and 1913 on an expedition with Johan Peter Koch [YOH-hahn pay-tur “Coke”], who had broken his leg. This person died in a 1930 expedition to set up more stations in Greenland. This person used the data collected from kites and tethered balloons to write his book *Thermodynamics of the Atmosphere*. Another book by this scientist put forth a theory that was supported by studying the history of Earth’s magnetic field by examining rocks, which produced evidence that India used to be in the Southern Hemisphere. Name this author of *The Origin of Continents and Oceans*, a book arguing for his theory of continental drift.

Answer: Alfred Wegener [VAY-guh-nur]

7. Shortly after this man returned to his home country, Ali Murad Davudi was kidnapped and never seen again as part of a repression of Bahá’ís. This person’s popularity grew when he lived in exile in Neauphle-le-Château [noof-’l l’-shat-oh] near Paris, which he moved to after Saddam Hussein made him leave Najaf. This person later led a war against Hussein that had hundreds of thousands of casualties and lasted eight years. After this person came to power, his supporters stormed the U.S. Embassy and held hostages there for over a year. Name this person who took power in 1979 when Mohammad Reza Shah Pahlavi left Iran.

Answer: Ayatollah Ruhollah Khomeini [or Ruhollah Musavi]

8. References to these people in the Colorado State Constitution could be removed by Amendment T this year. The only federally funded memorial for these people is “The President’s House” in Philadelphia. In 2016, Georgetown University announced that it will rename two of its buildings to memorialize these people, and that some applicants with links to these people will face eased admissions criteria. President Obama referred to these people when Donald Trump said “African-American communities are absolutely in the worst shape that they’ve ever been in before.” Name these people whose status in the United States was outlawed by the 13th Amendment.

Answer: slaves [or slavery]

9. One character in this novel accuses his wife Clara of giving his sister Jane a “base return” after Clara does not appreciate Jane doing the housework. When that man twists this novel’s title character’s head under his arm, the title character bites his hand. In this novel there are rumors of an affair between Jack Maldon and Annie Strong, the wife of the headmaster of Canterbury. After the deaths of the title character’s wife, Dora, and dog, Jip, this novel’s title character marries Agnes Wickfield. Name this Charles Dickens novel in which Agnes Wickfield’s father is cheated out of his money by Uriah Heep.

Answer: David Copperfield

10. Levels of this element are controlled by a stem-loop structure known as its namesake response element. This metal is central to the co-factor required for the function of cytochromes [“SITE-oh-chromes”]. This metal is found in a cubic cluster in the Krebs cycle enzyme aconitase [uh-“CON-it-ace”], where it is found with sulfur. This element is found in the center of a co-factor that is responsible for bonding to di-atomic gases, but has especially high affinity for cyanide and carbon monoxide. Name this element that is found in the center of heme groups, and which allows hemoglobin to transport oxygen.

Answer: iron [accept Fe]

Check the score.

11. For the city of Baltimore, this architect designed the Highfield House Condominium and a building with dark bronze aluminum columns, One Charles Center. For a house designed by this architect, Lilly Reich designed the Brno [“BURN-oh”] chair and the Tugendhat [toog-EN-daht] chair. This architect used non-structural bronze I-beams in a 1958 New York City building whose interior was designed largely by Philip Johnson, the Seagram Building. This architect’s work in Illinois includes the Dirksen Federal Building and a mostly-glass house on the bank of the Fox River in Plano, the Farnsworth House. Name this architect who often used phrases such as “God is in the details” and “Less is more.”

Answer: Ludwig Mies van der Rohe [LOOT-veek meess van dair ROH-uh] [prompt on Ludwig van der Rohe]

12. In 2011, many weapons made from this material were found in Boughton Malherbe [BAW-ton MAL-ur-bee], England. When use of this material declined quickly, it marked the end of Harappa in what is now Pakistan, as well as the end of Mycenaean [my-SEE-nee-un] Greece and the Hittites. The decline in the use of this material happened because it is difficult to sharpen weapons made from it, and started around 3000 BCE. The quality of this material improved after people took advantage of the Cornwall tin deposits. Name this metal used in many civilizations before iron, created by combining copper with other metals such as tin.

Answer: bronze

13. In this religion, a symbol used to represent the one supreme reality looks like a nine followed by a B with a wave on top, and is called Ik Onkar. That symbol is used in this religion's most important prayer, Mul Mantar. While most members of this religion are not allowed to use alcohol or drugs, an order called the Nihang can use cannabis. Adherents of this religion are not supposed to cut their hair. This religion started around 1500 when its founder stated "There is neither Hindu nor Muslim." That founder, Nanak, was the first of the ten gurus. Name this religion based in the Punjab region in northern India.

Answer: Sikhism

14. One of the failings of the Bohr hydrogen model was the prediction that this quantity equaled \hbar in the ground state, though this quantity is actually zero. According to the Bohr model, this quantity always equals an integer multiple of \hbar . To calculate the magnetic moment of an electron orbit, this quantity is multiplied by charge divided by twice mass. This quantity is calculated by multiplying mass times the cross product of position and velocity, and its magnitude equals moment of inertia multiplied by radians per unit time. Spin is an intrinsic analogue of this quantity for particles. Name this quantity that, like energy and its linear analogue, is always conserved.

Answer: angular momentum [accept rotational momentum; prompt on azimuthal quantum number or spin; do not accept or prompt on "momentum"]

15. A painting by Pieter de Hooch [hohk] shows a woman in a red skirt working with these objects with the help of a small girl. A Raphael painting shows a young man in red holding one of these objects in his right hand, and his *Three Graces* shows each Grace holding one of these objects. One of Paul Cézanne's paintings shows a tilted overflowing basket of these objects next to a bottle of wine. A green one of these objects hovers in the air in front of the face of a man wearing a bowler hat in René Magritte's *The Son of Man*. Name this fruit often portrayed as the forbidden fruit in depictions of Adam and Eve.

Answer: apple [prompt on fruits]

Check the score.

16. One play by this writer opens with a watchman saying “I pray the gods to quit me of my toils”; later, a leader says “O I am sped — a deep, a mortal blow” when he is killed by his wife while taking a bath. In another play by this writer, attacks by the army of Argos are discussed by Eteocles [eh-TEE-oh-kleez], the king of Thebes [theebz]. This playwright portrayed the killing of Aegisthus [ee-JISS-thuss] and his wife Clytemnestra [kly-tem-NESS-truh] by her son. Name this ancient Greek playwright of *Seven Against Thebes* whose plays *Agamemnon*, *The Libation Bearers*, and *The Eumenides* [yoo-MEH-ni-dees] make up his *Oresteia* trilogy.

Answer: Aeschylus

17. This person argued that because we lack a common frame of reference and therefore lack empathy, “If a lion could speak, we couldn’t understand him.” This person and Friedrich Waismann [FREED-rik “VICE”-mahn] developed the idea of a portion of a language referred to as a language-game. This person asked “How do I use words to stand for my sensations?” in his private language argument, during which he introduced a thought experiment in which each person has a small container, but nobody can look into anybody else’s container. Name this person who made the beetle-in-the-box argument, and who wrote *Philosophical Investigations* and *Tractatus Logico-Philosophicus*.

Answer: Ludwig (Josef Johann) Wittgenstein

18. Henry Laurens helped negotiate several side agreements that made this treaty possible. David Hartley signed this treaty but refused to pose for a painting showing its negotiators. This document specified that a border should extend westward from the Lake of the Woods to the Mississippi River, which is geographically impossible. It also specified that the Congress of the Confederation would encourage the return of property to Loyalists and English citizens, and that the Mississippi River would remain free to citizens of the United States and Great Britain. John Jay, John Adams, and Benjamin Franklin signed it in 1783. Name this treaty that ended the Revolutionary War.

Answer: Treaty of Paris, 1783

19. The compound Tris [rhymes with “Chris”] is used in the TAE [“T-A-E”] and TBE types of these solutions used in electrophoresis [“ELECT”-roh-for-EE-siss]. RIPA is a solution of this type used to open cells during lysis [LIE-sis]. Though these solutions do not usually affect reaction rates, they do affect the rate of the bromination [broh-min-AY-shun] of ketones [“KEY-tones”]. The combination of carbonic [kar-BAH-nik] acid and bi-carbonate acts as one of these compounds in blood, and an analysis of how well these substances perform led to the development of the Henderson-Hasselbalch [HAH-sil-balk] equation. These compounds usually contain an acid and its conjugate base. Name these solutions that resist changes in pH [p-h].

Answer: buffer solutions or buffering agents

20. A trilogy by this author, whose main character is based on Charles Yerkes and is named Henry Cowperwood, ends with the posthumously published *The Stoic* and starts with *The Financier*. In another novel by this writer, the title character moves in with Charles Drouet in Chicago, but then has an affair with the manager of Fitzgerald and Moy's, George Hurstwood. This naturalist also wrote a novel in which Willard Sparger drives recklessly, killing a girl trying to cross the road, and the drowning of Roberta Alden is blamed on Clyde Griffiths. Name this author who wrote *Sister Carrie* and *An American Tragedy*.

Answer: Theodore Dreiser

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. The Supreme Court found that this statute could be enforced by private remedies in *Cannon v. University of Chicago* in 1979. Its application was widened in *Grove City College v. Bell* and widened again with the Civil Rights Restoration Act of 1987. In 2002, this statute was renamed after a senator who co-wrote it, Patsy Mink. This statute was part of the Education Amendments of 1972, and it originally only applied to colleges that receive federal funds. Name this statute that forbids schools from discriminating on the basis of gender.

Answer: Title IX [9] (of the Education Amendments of 1972) [accept Education Amendments of 1972 before "Education"; prompt on "Education Amendments"]

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

- ^{TB}22. Though Zaha Hadid was born in Iraq and lived in the U.S., she designed this country's Galaxy Soho office complex and double pebble opera house. In 1959, this country built what are known as the Ten Great Buildings in its capital, including the National Agriculture Exhibition Hall, Workers Stadium, and Great Hall of the People. A 21st-century stadium in this country uses a wild pattern of steel that blends into the steel supports for the retractable roof, giving it the nickname "Bird's Nest". Name this country where the Palace Museum is in its Forbidden City, and where the Terracotta Army was built to depict the army of its first emperor, Qin Shi Huang [cheen shee wahng].

Answer: (People's Republic of) China [accept PRC; do not accept or prompt on "Republic of China"]

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

- ^{TB}23. In one saying, this word precedes "work and no play makes Jack a dull boy". In another saying, this word precedes "roads lead to Rome". This word begins and ends the phrase that includes "for one and one for." Give this three-letter adverb that means "completely" and starts with the letter 'A.'

Answer: all

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.