

# Scobol Solo 2016

## Packet 3 (Round 3)



1. This adjective is used for a set of vectors in which one can be expressed as a linear combination of the others; such sets cannot be the basis for a vector space. If row-reducing a matrix for a system of equations results in a row consisting entirely of zeroes, the system is described by this term, and could involve one equation being a multiple of another. Systems of equations described by this word have infinitely many solutions. This adjective modifies “variable” when it refers to the quantity plotted on the vertical axis of a 2D graph. Give this word meaning that a quantity relies on other quantities.

Answer: dependent [accept dependence]

2. In a Robert Louis Stevenson poem, children take this action in Japan and Spain, and the “organ with the organ man” does this “in the rain”. A Langston Hughes poem that ends with the line “I, too, am America” states that the speaker does this action about America in the first line. In a Walt Whitman poem, this action is performed by the carpenter, the mason, the boatman, and several other people; that poem is titled “I Hear America” doing this. In a poem title, E. E. Cummings uses this verb for his depiction “of Olaf glad and big.” Name this action that is done by a “Caged Bird” in the title of Maya Angelou’s autobiography.

Answer: singing [or sings]

3. Hiro-michi Yahara wrote a book about this battle after being told not to commit suicide so that he could bear witness to it. That request came from Mit-suru Ushi-jima, a general who committed suicide near the end of this battle. The United States posthumously promoted Simon Buckner to four-star general after he was killed in this battle. The highest concentration of kamikaze attacks was during this battle, which came shortly after Iwo Jima. Over 100,000 people died in this battle, which likely impacted Harry Truman’s decision to use atomic bombs. Name this last and largest Pacific island battle in World War II, named for its location in the Ryukyu [ree-YOOK-yoo] Islands.

Answer: Battle of Okinawa

4. This composer altered his “Procession of the Nobles” from an earlier opera, adding Turkish music to create *The Capture of Kars*. After this composer was unable to get one of his compositions performed, he worked it into *The Fair at Sorochyntsi* [*SOR-oh-“chintzy”*], which was combined with Franz Schubert’s *Ave* [*AH-vay*] *Maria* in *Fantasia*. Another work by this composer was inspired by the works of Viktor Hartmann and includes five promenades and ten other movements, from “The Gnome” to “The Great Gate of Kiev”. Name this member of The Mighty Five who composed *Night on Bald Mountain* and *Pictures at an Exhibition*.

Answer: Modest (Petrovich) Mussorgsky

5. The southwest part of this state contains Fort Bridger, which was used by the Pony Express and southern detours of the Oregon Trail. The western part of this state includes many fish fossils at Fossil Butte [byoot] National Monument. Farther north in this state there is the Wind River Range, which contains the 13,000-foot-tall Gannett Peak. The western part of this state contains Mount Owen and Teewinot in the Cathedral Group of the Teton Range, which is near several geysers, including Old Faithful. Name this state that contains most of Yellowstone National Park.

Answer: Wyoming

**Check the score.**

6. Henry Petowe and George Chapman took different approaches to finishing this writer's *Hero and Leander*. In a play by this writer, Lodowick and Mathias kill each other in a duel, which leads Abigail to join a nunnery despite the wishes of her father and Ithamore. More than 100 years before Goethe's [GRR-tuh'z] version of the same legend, this person wrote *Doctor Faustus*. Walter Raleigh wrote a nymph's reply to a poem by this man, which begins "Come live with me and be my love" and is called "The Passionate Shepherd to His Love." Name this person who wrote about Barabas in *The Jew of Malta*.

Answer: Christopher Marlowe

7. Complexes with this geometry are exclusively high-spin, as their crystal field splitting is  $\frac{4}{9}$  of their corresponding octahedral counterparts. Intermediates with this geometry are typically formed upon nucleophilic [NOOK-lee-oh-FIL-ik] attack of a carbonyl [KAR-buh-nil]. The angles between bonds in this geometry is approximately 109.47 degrees. This is the geometry found in the non-hydrogen atoms of alkanes [AL-kaynz]. Carbons with  $sp^3$  ["s p 3"] hybridization will have this geometry, which corresponds to an atom with four bonds and no lone pairs in VSEPR [VES-pur] theory. Name this molecular geometry of methane.

Answer: tetrahedral geometry [accept tetrahedron]

8. According to the historian Terry Bisson, this person's wife Cherry was "beaten and tortured" so that she would turn over his papers. There is a controversy over whether this person had a sexual relationship with Margaret Whitehead, whom he admitted killing. This person claimed to see hieroglyphic characters on leaves and blood on corn, which he believed were messages from God. Shortly before being hanged, this person described his actions to attorney Thomas Ruffin Gray, inspiring a William Styron novel. Name this slave who led a rebellion which killed several white families in Southampton County, Virginia in 1831.

Answer: Nat Turner

9. The title character in one of this person's operas is named for both the object she was found near and the woman who found her. One of the lyrics this person wrote is "turn left and do the cake walk prance." The music he composed was in the same style as Joseph Lamb and James Scott, and interest in him grew when Marvin Hamlisch adapted his music for the movie *The Sting*. The score of this composer's opera about Booker T. Washington's dinner at the White House, *A Guest of Honor*, is lost. Name this composer of the opera *Treemonisha* and the songs "Maple Leaf Rag" and "The Entertainer".

Answer: Scott Joplin

10. The *Heimskringla* [haym-SKREEN-glah] describes how this figure founded the *Ynglings* [YEENG-leengz] at Uppsala [oop-SAH-lah]. This figure meets his wife at a grove named Barri after waiting for nine nights. This deity gives up his sword so his servant Skir·nir can help him woo the giantess Gerd, resulting in him having to wield an antler at Rag·na·rök. This deity owns a foldable boat named Skid·blad·nir, and rides a golden boar named Gull·in·bur·sti. This *vanir* was the son of Njord [nee-YORD], and his twin sister receives half of all men slain in battle. Name this Norse fertility god, the brother of Freya [FRAY-uh].

Answer: Freyr [do not accept or prompt on "Freya"]

### Check the score.

11. This compound's active form is a carbanion ylide ["car-BAN-eye-on ILL-id"] bound to a pair of phosphate groups. This compound contains a five-membered ring containing both nitrogen and sulfur hetero-atoms. This compound is a co-factor for pyruvate dehydrogenase ["PIE"-roo-vayt dee-"hi"-DRAH-juh-nayss] and pyruvate decarboxylase [dee-"car-box-uh-lace"], and is commonly deficient in alcoholics, causing a condition called Wernicke-Korsakoff [VAIR-nih-kuh KOR-sih-kawff] syndrome. A deficiency in this substance was common in areas where white rice was a large part of the diet. Name this compound whose deficiency causes beriberi ["berry-berry"], and which is also known as vitamin B1.

Answer: thiamine [accept thiamine pyrophosphate or TPP; before "B1", accept vitamin B1 and prompt on vitamin B]

12. This person's vice president, who was called "that freemason" after supporting policies against the Catholic Church, was Alberto Teisaire [tay-"SIGH"-ray]. During a coup against this leader, Admiral Isaac Rojas [ROH-hahss] led the navy and worked with Generals Eduardo Lonardi and Pedro Aramburu; that coup was called *la Revolución Libertadora* [lee-BAIR-tah-DOH-rah]. This person returned to power in 1973, but died a few months later. He was criticized for providing safe haven for former Nazis. This president was married to his successor Isabel Martínez and, before that, to Eva Duarte [AY-vah DWAR-tay], who was called "Evita". Name this dictator of Argentina.

Answer: Juan (Domingo) Perón

13. In one novel by this author, a character introduces himself by saying his name is spelled the same as the former manager of the Chu-ni-chi Dragons. That character, Hoshino, gives a ride to Nakata. In another novel by this author, a driver states that there “are emergency measures you can take if you have urgent business.” In that novel, Fuka-Eri tells Tengo that he can rewrite the transcript that Ko-mat-su gave him. In another novel by this author, Kumiko tells her husband Toru Okada that he should find their missing cat. Name this contemporary Japanese author of *Kafka on the Shore*, *The Wind-Up Bird Chronicle*, and *1Q84*.

Answer: Murakami Haruki [accept names in either order]

14. This man wrote “Freedom is the greatest fruit of self-sufficiency” in a collection of quotations named for where they were stored, the *Vatican Sayings*. Another of his collections, which states “The just man is most free from disturbance, while the unjust is full of the utmost disturbance”, is the *Principal Doctrines*. This writer promoted banishing fear and limiting desire so that a person could achieve the highest good, which is pleasure. This philosopher emphasized friendship, and his followers often met in his garden. Name this ancient Greek philosopher who started a school that rejected Platonic forms and eventually rivaled the Stoics.

Answer: Epicurus [do not accept “Epicurean”]

15. The OSSOS [spell out] looks for resonant objects in this region. This region is the location of Varuna, a rapidly rotating object discovered in 2000. David Jewitt and Jane Luu found an object in this region that still goes by the name 1992 QB1. In 2019, *New Horizons* will fly by one of the objects named for this region. This place is named after the Dutch-American astronomer who predicted that it would be a belt of comets, and it includes Ma-ke-ma-ke, Charon, and Pluto. Name this region a little less than 50 astronomical units from the Sun that overlaps the scattered disc and is beyond Neptune.

Answer: (Edgeworth-) Kuiper belt

**Check the score.**

16. A document issued before this meeting stated “The wild boar from the forest seeks to destroy it and every wild beast feeds upon it.” The document issued after this meeting criticized a person for heeding the words of the Pelagians and agreeing with the Waldensian and Wycliffite heresies. After it ended, Frederick III faked a highway attack on the person who was the focus of this meeting, and that person was then hid in Wartburg [VART-burg] Castle. This meeting followed the issuance of a papal bull by Leo X. Name this 1521 meeting that led Holy Roman Emperor Charles V to ban writings by Martin Luther.

Answer: Diet of Worms [vurmz]

17. There is disagreement as to whether this painting was inspired by a poem by Agnolo Poliziano [ahn-YOH-loh poh-LEET-see-AH-noh], Lucretius, or somebody else. There is also disagreement as to whether the central figure of this painting is the first fictional depiction based on Simonetta Vespucci. In this painting, pink flowers fall towards green water, which has many small white waves. On the left side of the painting, a nymph is carried by Zephyr. On the right side of this painting, Chloris [KLOR-iss] reaches towards the central figure in an attempt to clothe her. Name this Sandro Botticelli ["boat"-tee-CHEL-lee] painting showing a goddess who just emerged from the water standing on a half shell.

Answer: *The Birth of Venus* [or *Nascita di Venere*]

18. The beginning of this novel describes a woman who has worn black for the past 43 years, and speculates whether the black is for her sister, father, or “nothusband”. By “nothusband”, this novel means a man who would have married her if she bore him a son, and who had been married to Rosa Coldfield’s sister Ellen. Like *The Sound and the Fury*, part of this novel is narrated by the Harvard student Quentin Compson. In this novel, Judith is engaged to her half-brother, Charles Bon. Name this William Faulkner novel that ends with the burning of the plantation Sutpen’s Hundred, and whose title refers to the Biblical story of David.

Answer: *Absalom, Absalom!*

19. The Board Chair of the Global Alliance for Vaccines and Immunization is this country’s former Finance Minister Ngozi Ok-on-jo-I-wea-la. A hashtag started by this country’s former Education Minister O-bi-a-ge-li E-zek-we-si-li at a rally in Port Harcourt in 2014 spread throughout the world and was promoted by Michelle Obama. That speech was given to the All Progressives Congress Party, which gained control of this country in 2015 elections when Muhammadu Buhari defeated the incumbent Goodluck Jonathan. This country started the hashtag “Bring Back Our Girls” after the Chibok [chuh-BOK] kidnapping carried out by Boko Haram [huh-RAM]. Name this country whose capital is Abuja.

Answer: (Federal Republic of) Nigeria

20. The mutual form of this quantity can be detected using indium-tin oxide sensors that can be placed in touchscreens and proximity detectors. Work can be calculated by integrating charge divided by this quantity with respect to charge, which is equivalent to the formula that work equals half this quantity times the potential difference squared. This quantity is increased by using a di-electric. Name this quantity equal to charge divided by electric potential difference, often used to measure the ability of parallel plates to store electric charge.

Answer: capacitance

***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. This metal's chloride [KLOR-yde] forms a mineral that, when weathered, is called "horn *this metal*". Though the mineral galena [guh-LEE-nuh] is lead sulfide, it is often mined to obtain this other element. This element is combined with i-o-dide to seed clouds. Its ha·lide, which is made from its ni·trate, is used in photographic film. This metal has the highest thermal and electrical conductivity of any element. Though it is worse than aluminum at reflecting violet, this element is often used in mirrors because overall it is the best reflector. Name this precious metal whose Latin name is argentum [ar-JEN-tum].

Answer: silver [accept Ag before "argentum"]

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

<sup>TB</sup>22. Though Elena Poniatowska [pohn-yah-TAWFF-skah] was born in Paris, her works focus on this country, including her novel about the English-born artist Leonora Carrington. The English writer Malcolm Lowry set *Under the Volcano* in this country. One novel set in this country includes recipes used by Tita, whose mother does not allow her to marry Pedro. That novel by Laura Esquivel is *Like Water for Chocolate*. Another novel set in this country is about a dying former revolutionary who had married Catalina because of her father's money. Name this country that is the setting of *The Death of Artemio Cruz* by Carlos Fuentes.

Answer: Mexico [or United Mexican States or Estados Unidos Mexicanos]

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

<sup>TB</sup>23. In the movie *Singin' in the Rain*, Donald O'Connor sings the song "Make 'Em" do this. Tomorrowland at Disney World has a floor for this activity based on the movie *Monsters, Inc.* According to common sayings, the person who does this last does this best. If you do this the world does it with you, but if you cry you cry alone. Name this action that people take when hearing a funny joke or being tickled.

Answer: laughing [accept laughter; accept obvious synonyms]

***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.***