

# Scobol Solo 2017

## Packet 12 (Round 12)



1. This instrument is played by Cindy Blackman, the wife of rock guitarist Carlos Santana; she put together the album *Another Lifetime* in memory of another performer on this instrument, Tony Williams. Miles Davis's Second Great Quintet featured Williams, after his first had featured Jimmy Cobb and Philly Joe Jones on this instrument. When Davis formed a nonet [nah-NET], this instrument was played by Kenny Clarke and Max Roach. This instrument can be played with the palms facing up or down, using the French or American grip. Name this instrument that typically comes in a "set" that includes tom-toms and a snare.

Answer: drums [or drum kit or drum set; accept percussion instruments; accept trap set or trap kit or traps]

2. Catharine MacKinnon wrote that she seeks to understand gender as a form of this concept. Hannah Arendt [uh-RENT] stated that this concept corresponds to "the human ability not just to act but to act in concert". The "taking" of this concept by African-Americans inspired a slogan of Stokely Carmichael in the 1960s. Friedrich Nietzsche [FREED-rik NEET-shuh] wrote a book titled for *The Will to* [this concept], and Norman Vincent Peale wrote a book whose title connects this concept to positive thinking. The term "omnipotent" [ahm-NIP-oh-tent] refers to having a maximal amount of this entity. Identify this concept defined either as the ability to act or as the ability to control the actions of others.

Answer: power

3. The mass of this structure can be calculated using Weizsäcker's [VITES-zek-ur'z] formula, which has a term to subtract binding energy divided by the speed of light squared and is based on the liquid drop model for this structure. Dmitry Ivanenko proposed a modern model of this structure based on "shells". Scientists realized this structure exists based on an experiment conducted by Hans Geiger and Ernest Marsden, who shot alpha particles at gold foil in Ernest Rutherford's lab. Name this structure that contains most of an atom's mass because it consists of neutrons and protons.

Answer: (atomic) nucleus [or nuclei]

4. In 1762 this country’s leader died, causing it to abandon the Seven Years’ War and mend relations with Prussia. A 17th-century attempt to put a Swedish ruler in charge of this country led to the Ingrian War, at the end of which this country ceded land in the Treaty of Stolbovo. This country’s attempts to assert control of the Danubian Principalities in the 1850s led several European powers to join the Ottoman Empire in fighting against this country in the Crimean War. This country temporarily ceded its capital to France after losing the Battle of Borodino. Name this country from which Napoleon turned back due in part to its cold winters and large size.

Answer: Russia or Russian Empire [do not accept or prompt on “Soviet Union”]

5. This character asks “Whence is that knocking?—How is’t with me, when every noise appalls me?” after saying he is afraid to think what he has done, and his wife tells him to give her the daggers. This character’s first line is “So foul and fair a day I have not seen”; after he says that, he is hailed as the Thane of Glamis [glahmz] and Cawdor and told that he will be a king. This character is told his future by three witches while traveling with his ally Banquo. Name this title Shakespeare character who murders King Duncan and has Macduff discover the body so that he can become the King of Scotland.

Answer: Macbeth

**Check the score.**

6. One city in this country houses the Portuguese Fort Jesus [zhay-soos] and is centered on an island surrounded by Tudor Creek and Kilindini Creek. A one-and-a-half-million-year-old *Homo erectus* specimen was found in this country at the Nari-oko-to-me [NAR-ee-oh-koh-TOH-may] site near Lake Turkana. This country has 16 National Reserves, including the Kakamega [kah-kah-MAY-gah] rainforest and Maasai Mara [MAH-“sigh” MAR-ah]. The northern end of the Serengeti [seh-ren-GET-ee] reaches into this country from Tanzania [tan-zuh-NEE-uh]. This country is south of Somalia and Ethiopia. Name this east-central African country whose largest port, which is on the Indian Ocean, is Mombasa.

Answer: (Republic of) Kenya [or Jamhuri ya Kenya]

7. The production of too much of these cells is called polycythemia [puh-lee-“sigh”-THEE-me-uh] vera. Kell anti-gens on the surface of these cells can cause deadly auto-immune diseases. In fetuses and newborn infants, these cells usually have a nucleus, but in adults these cells mostly do not have nuclei. A hematocrit [hee-MAT-oh-krit] test measures what percentage of cells are of this type. These cells carry hemo-globin, so people with too few of them suffer from anemia [ay-NEE-mee-uh]. Identify these blood cells that are either named for their color or called erythrocytes [uh-RITH-roh-“sites”].

Answer: red blood cells or RBCs [accept erythrocytes before the end; prompt on blood cells; accept red after “blood” has been mentioned]

8. Louis Kaufman made a recording of these pieces in 1947 that is now in the Grammy Hall of Fame. The first of these pieces begins with four eighth notes, two sixteenth notes, and a dotted quarter note; that first of these pieces references a goat-herd sleeping beside his dog and then dancing nymphs and shepherds. These concerti [con-CHAIR-tee] were completed in the 1720s and were originally part of *The Contest Between Harmony and Invention*. Each of these pieces was published with a sonnet believed to be written by the composer, the last of which begins “To tremble from cold in the icy snow” Name these musical works by Antonio Vivaldi, the first of which is “Spring”.

Answer: *The Four Seasons* [or *Le quattro stagioni* [leh KWAHT-troh stah-JOH-nee]; accept *The Contest Between Harmony and Invention* or *Il cimento dell’armonia e dell’invenzione* [eel chee-MEN-toh del-la before “Contest”]

9. A rebellion in this country led Spain to execute the author and Propaganda Movement leader José Rizal [hoh-SAY ree-SAHL]. In 1983, a senator critical of this country’s president was shot in the head when he returned to this country after a three-year absence, which set off the People Power Revolution; three years later, that revolution in this country culminated with that senator’s widow becoming president, replacing Ferdinand Marcos with Corazon Aquino. In 2016, Aquino’s son Benigno stepped down from the presidency and was replaced by a person who likes to kill drug dealers without a trial, Rodrigo Duterte. Name this country in the Pacific Ocean whose capital, on Luzon, is Manila.

Answer: (Republic of the) Philippines [or (Republika ng) Pilipinas]

10. This character does not care for rats, but she likes chewing gum. She mistakenly tears a picture in an anatomy book, but she does not get in trouble because a boy takes the blame for it. This girl cries when—as soon as she becomes engaged—she learns that her boyfriend had previously been engaged to Amy Lawrence. This girl’s boyfriend presents her with a so-called wedding-cake when they are trapped in McDougal’s Cave just before they see Injun Joe. Her father and Widow Douglas share responsibility for Huckleberry Finn. Name this daughter of a judge, the love interest of Tom Sawyer.

Answer: Becky (“Bessie”) Thatcher [accept any]

**Check the score.**

11. A theory of this process by John Lennard-Jones and A.F. Devonshire was based on atomic disordering. According to the Lindemann criterion, this process occurs when the vibration amplitude in a crystal exceeds 10% of the distance between atoms. On a phase diagram, this process is represented by moving left to right while above the triple point. This process occurs when a substance takes in its enthalpy of fusion, which is also called latent heat of fusion. Name this phase transition that occurs when solids absorb too much energy to remain in their solid state and thus transform into liquids.

Answer: melting [prompt on fusion or phase transitions]

12. Many of the teachings of this person are given a name that means “three baskets”, the first basket of which calls for expulsion of any man engaging in sexual intercourse, stealing, causing death, or claiming a superior human state. This person taught that that expulsion would be from the *sangha*, a monastic order called the third jewel, whereas this person was the first jewel. This person taught that suffering is part of existence as his first of four noble truths, and he described how to escape suffering by following the eightfold path. Name this person who developed a belief system that has Mahayana [mah-HAH-yah-nah] and Theravada [ther-uh-VAH-duh] schools and which is widely practiced in Cambodia, Thailand, and many other countries.

Answer: (Gautama) Buddha [or Siddhartha Gautama [sid-HAR-tah GOH-tah-mah] or Shakyamuni Buddha; prompt on Siddhartha or Shakyamuni]

13. Marc Chagall made a cubist [“cube”-ist] early work of this type that has pictures of Paris and Vitebsk [vih-TEBSK] in the background, and which is named for an excess of fingers. John Ashbery wrote a poem about a painting of this type by Parmigianino [par-mee-jah-NEE-noh]. One of these works showing a monkey and black panther in the background is named for the inclusion of a thorn necklace and hummingbird, and is among the several works of this type that Frida Kahlo painted. Give this term for a painting that shows the artist.

Answer: self-portraits [prompt on portrait(s) or descriptive answers like portraits of the artist]

14. According to a Langston Hughes poem, this other poet “went finding and seeking”. The Langston Hughes line “So long, So far away Is Africa,” is viewed as a response to the work this poet used to conclude his collections, “So Long”. Hughes’ poem “I, Too” can be read as a response to this poet’s works “I Hear America Singing” and “I Sing the Body Electric”. Several of this poet’s works are about Abraham Lincoln, including “When lilacs last in the dooryard bloom’d” and “O Captain! My Captain!”. Name this 19th-century American poet who collected his works into *Leaves of Grass*.

Answer: Walt(er) Whitman

15. About a month after participating in this event, George Hewes got into an argument with John Malcolm that led to Malcolm being tarred and feathered. During this event, Hewes took orders from Leonard Pitt. A meeting before this event was moved from Faneuil [FAN-yul] Hall to the Old South Meeting House due to the crowd size. This event took place shortly after the British East India Company was given a monopoly in the colonies, and it led directly to passage of the Intolerable Acts. During this event, the *Beaver*, *Dartmouth*, and *Eleanor* were boarded by Americans dressed as Native Americans. Name this 1773 event in which Americans threw a commodity into a harbor.

Answer: Boston Tea Party

**Check the score.**

16. This property can be computed faster than a similarly-named function abbreviated “perm” which does not include alternating signs in its co-factor expansion. The absolute value of this property is the scaling factor for the area or volume change from a linear transformation. For a rotation, this property is 1, while for a reflection, it is  $-1$ . This property can be easily computed as the product along the main diagonal of a matrix in row-echelon form. A square matrix has an inverse if this property of it is *not* 0. Name this function that for a  $2 \times 2$  [“two-by-two”] matrix can be written as  $ad - bc$  [“a d minus b c”].

Answer: determinant [prompt on det]

17. In 2017, this federal agency controversially gave a multi-million dollar contract to Composite Analysis Group and denied that it had reviewed a contract with Whitefish Energy Holdings. The current head of this agency responded to criticism by saying “We filtered out the mayor a long time ago.” This agency was led by Craig Fugate [“few-GATE”] during the Obama Administration and is now led by Brock Long. This agency was put under control of the Department of Homeland Security in 2003, and two years later there was heavy criticism of its leader Michael Brown for a poor response to Hurricane Katrina. This agency has been very busy in late 2017, particularly in Texas, Florida, and Puerto Rico. Name this federal agency that handles disasters.

Answer: Federal Emergency Management Agency

18. This writer created a character who says “I am not a butcher, I am a hunter and this was just butchers’ work”, drawing the reply “It was a massacre of evil animals”; that character is Ned Land. This author wrote another novel in which a person misses the ship the *China* and so takes the *Henrietta* instead, but the *Henrietta* runs out of fuel. That novel by this author starts with a wager made at the Reform Club by Phileas Fogg. Name this French author of *Around the World in Eighty Days* who wrote about the *Nautilus* being commanded by Captain Nemo in *Twenty Thousand Leagues Under the Sea*.

Answer: Jules (Gabriel) Verne [zhool vurn]

19. Early in his reign, this king received a letter calling for “No national bankruptcy, no increase of taxes, no new loans, no bankruptcy, no increase of taxes, and no new loans” from Minister Turgot [toor-zhoh]. When this king wanted to raise taxes, he fired Turgot and replaced him with Jacques Necker [zhahk “neck-air”]. This king oversaw an attempt to reform taxation when Calonne [ka-lohn] convened an Assembly of Notables. When that attempt failed, this king called for an Estates General, another failed effort that led to the National Assembly taking the Tennis Court Oath. Name this husband of Marie Antoinette who was guillotined during the French Revolution.

Answer: Louis XVI [16] [or Louis Capet; prompt on Louis]

20. This biome [BY-ohm] often forms at the end of a Hadley cell furthest from the Equator. This biome exhibits extremely high diurnal temperature variation, meaning that there is a big difference between day and night temperatures. This biome is classified as BW in the Köppen climate classification, which puts it in the same broad category as steppes. Some climate classification systems allow for both hot and cold types of this biome. Plants in this biome tend to have a high proportion of photo-synthesis take place in their stems. Much of the ground in this biome is *not* covered by plants. Name this biome characterized by little precipitation, and that sometimes has ground covered by sand.

Answer: deserts

***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 number is the ratio of the variance to the mean in the Poisson [pwa-sawn] distribution. In a random permutation, this is the expected number of fixed points. When repeatedly flipping a coin, this number is the expected number of tails before the first head. The standard normal distribution has this value for its standard deviation. This number is the maximum value of a correlation coefficient. The probability of the *complement* of an event is found by subtracting the probability of the event from this number. Give this maximum probability of an event, representing that an event will certainly happen.

Answer: 1

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

- <sup>TB</sup>22. Early in the 21st century, this country enacted reforms known as the Hartz concept, which reformed its unemployment benefits as part of its Agenda 2010. Those policies were enacted by Gerhard Schröder, who lost power in this country when his Social Democratic Party formed a coalition with the Christian Democratic Union. Schröder succeeded Helmut Kohl, who reunified this country in 1990. This country had also been unified in 1871 when Kaiser Wilhelm I was named its leader by Otto von Bismarck, but it was split up following its defeat in World War II. Name this country that during World War II was led by the Nazi Party under Adolf Hitler.

Answer: Germany (or Federal Republic of Germany or Bundesrepublik Deutschland; or German Empire or German Reich or Deutsches Kaiserreich)

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

- <sup>TB</sup>23. This company has taken over the companies WaveGroup Sound, PrivateCore, and Spool. One of its cofounders is the CEO of Philo, Andrew McCollum. Another cofounder of this company, Eduardo Saverin, sued its CEO. That lawsuit was depicted in a movie about this company, *The Social Network*. Name this social networking company controlled by Mark Zuckerberg.

Answer: Facebook

***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.***