

# Scobol Solo 2015

## Packet 14 (Round 14)



1. Kent Sorenson resigned from this state's senate in 2013 and later pled guilty to taking payments from Ron Paul's presidential campaign. A congressman from this state compared same-sex marriage to marrying a lawnmower and complained about immigrants with "calves the size of cantaloupes". This state is home to Steve King and the longest-serving governor in U.S. history, Terry Branstad. On February 1, 2016, each precinct in this state held a meeting to select county convention delegates as part of the presidential election process. Name this state whose presidential caucus is the first in the nation, before the New Hampshire primary.

Answer: Iowa

2. Membrane-bound protein channels allow a "facilitated" form of this process to occur. This process is driven by the gradient of chemical potential. A constant for this phenomenon is equal to the product of mobility, temperature, and Boltzmann's constant. Einstein's model of Brownian motion treats this phenomenon as occurring via a random walk. For gases, this process occurs at a rate proportional to the square root of molar mass. This process is described by Fick's law and Graham's law. When water undergoes this process through a semi-permeable membrane, it is called osmosis. Name this process where particles move from areas of high concentration to areas of low concentration.

Answer: diffusion [or diffusing; accept effusion or effusing]

3. This author's story about Emmet Monsen was written in 1939 but not published until 2015. In addition to "Temperature", this author wrote a story about a man who attends kindergarten with his grandson after aging backwards during his life. That story is "The Curious Case of Benjamin Button". In one of his novels, this author wrote about a billboard featuring the eyes of Dr. T.J. Eckleburg, which looks over George Wilson's garage and the valley of ashes between New York City and West Egg. That novel, whose title character is obsessed with Daisy Buchanan, is narrated by Nick Carraway. Name this Jazz Age author of *The Great Gatsby*.

Answer: F(rancis) Scott (Key) Fitzgerald

4. Part of this building was known as “Heka·tom·pedos neos” because it was 100 feet long. This building featured 92 metopes [meh-TOH-peeZ] along its frieze [“freeze”] that depicted the Amazonomachy [am-uh-ZAHN-uh-mah-kee], Gigantomachy [JIH-gant-AH-muh-kee], Centauromachy [“centaur”-AH-muh-kee], and the Sack of Troy. Designed by Ik·ti·nos and Kalli·kra·tes. This building was funded by the Delian League, and once housed a statue built by Phidias but now lost. This building’s name means “virgin”. It was one of several major projects, including the Propylaia [pro-puh-“LIE”-uh], the Erechtheion [uh-REK-thee-ahn], and the temple of Athena Nike, that were initiated by Pericles. Name this major building on the Athenian Acropolis.

Answer: Parthenon

5. There were two attempts to turn what is now this U.S. state into a colony called New Ireland. The investigation into steroid use in baseball was written by a former senator from this state, George Mitchell. The first woman nominated for president at a major party national convention was this state’s Margaret Chase Smith. A disagreement over this state’s border that led to the Webster-Ashburton Treaty was called the Aroostook War. It gained statehood due to the Missouri Compromise shortly after voting to separate from Massachusetts. Name this state bordering New Brunswick that is northeast of New Hampshire.

Answer: Maine

***Check the score.***

6. This type of person is “transformed into a truly independent consciousness” in a Hegel dialectic. Aristotle said in *Politics* that barbarians make no distinction between women and these people. Aristotle also said that people are naturally in this group if they can give effect to foresight with their bodies. John Locke said that this condition is the state of war continued. The Book of Genesis says that the descendants of Ham should have this relationship to the descendants of Shem. The 13<sup>th</sup> Amendment made it illegal to have a person with this status in the United States. Name these people treated as property.

Answer: slaves [accept slavery]

7. The reduced type of this quantity is used to solve the two-body problem. Lorand Eötvös [YUT-vush] attempted to measure differences in the two types of this quantity, which are now believed to be equal. To calculate a spring’s period, this quantity is divided by the spring constant inside a square root and multiplied by  $2\pi$  [“two pi”]. The Higgs mechanism is used to explain why gauge bosons have nonzero values for this quantity. This quantity is multiplied by the acceleration due to gravity to calculate weight, and it is multiplied by acceleration to find net force. Name this quantity measured on balances, whose SI base unit is the kilogram.

Answer: mass

8. In one novel by this author, Mr. Arrow mysteriously disappears after drinking too much and is replaced by Job Anderson. Anderson is later killed by Abraham Gray during a mutiny. A story by this writer begins with Richard Enfield telling Gabriel Utterson about a man paying money after hurting a girl. Utterson, a lawyer, eventually figures out that one of his clients is the same man that Enfield had described. This author describes how that character used a potion to change identities. Name this author who wrote about Ben Gunn helping Jim Hawkins and Long John Silver in *Treasure Island*, and who also wrote *Strange Case of Dr. Jekyll and Mr. Hyde*.

Answer: Robert Louis (Balfour) Stevenson

9. A protest in this country against Pass laws in 1960 led to police killing 69 people by firing on a crowd. Police were also blamed for the death of Steven Biko [BEE-koe], who founded this country's Black Consciousness Movement. Another group of activists in this country formed Um·khon-to we Siz-we, which was part of the African National Congress. Limited reforms in this country were made by Pieter Willem Botha [PYEH-tur VIL-em BOE-tuh] during the 1980s before major reforms were agreed to by Frederik Willem de Klerk during the 1990s. Name this country ruled by a racist system of apartheid ["apart-hate"] before the presidency of Nelson Mandela.

Answer: Republic of South Africa

10. In a Hugo Simberg painting, one of these creatures sits blindfolded while being carried by two boys. The top halves of two of these creatures, who are resting on their arms and looking upward, are at the bottom of Raphael's painting *Sistine Madonna*. Sandro Botticelli [boh-tee-CHEL-lee] painted the virgin and child with six saints and four of these creatures, and several other Botticelli paintings show Mary and Jesus with varying numbers of these creatures. One of these creatures is at the top of Caravaggio's [kar-ah-VAHD-joh'z] painting *The Inspiration of Saint Matthew*, and one offers a ram in Caravaggio's *Sacrifice of Isaac*. Name these creatures that often look like children with wings.

Answer: angels [or cherubim]

### ***Check the score.***

11. This structure is the location of emopamil [eh-MOH-puh-mil] binding protein, which impacts the ability of organisms to regulate calcium. A thin CCG region on this structure is the subject of the Sherman paradox. Mental retardation commonly results from mutations in its FMR1 region. When lyonized, these structures are converted to hetero-chromatin [HET-uh-roh-KROH-muh-tin] and form Barr bodies. Some people who have only one of this structure have Turner syndrome. Hemophilia and red-green colorblindness result from mutations on this sex chromosome. Name this chromosome of which women have two, while men have one and also have a Y chromosome.

Answer: X chromosome

12. In the Baha'i faith, the Cycle of Prophecy is sometimes named for this person. In the 15<sup>th</sup> sura in the Koran, Iblees—who corresponds to Satan—is expelled for refusing to bow down to this person. This man is told “Cursed is the ground because of you; in toil you shall eat of it all the days of your life.” To prevent this man from returning to his original home, it was guarded by cherubs [“CHAIR”-ubz] with a flaming sword. Before he became the grandfather of Enosh and father of Seth, this man tried to hide his nakedness from God after he and his wife sinned. After he named the animals, his wife was created from his rib. Name this man who ate a fruit from the tree of the knowledge of good and evil, and was the husband of Eve.

Answer: Adam [may be pronounced ah-DAHM]

13. After he died from wounds at this battle, Joseph Mansfield was posthumously promoted to major general. One of Mathew Brady's largest exhibitions showed the dead of this battle as photographed by Alexander Gardner. This battle began with a charge through the North Woods into the Miller Cornfield by Joseph Hooker, who injured his foot. This was the largest battle in a campaign that followed the Confederate victory at Second Bull Run. George McClellan was criticized for allowing Confederate troops under Robert E. Lee to retreat after this battle. After this victory, Abraham Lincoln issued the Emancipation Proclamation. Name this bloodiest single-day battle in American history, which took place in Maryland in 1862.

Answer: Battle of Antietam [an-TEE-tum] [or Sharpsburg]

14. This is the first and title poem in a collection that includes “Working Girls” and “To a Contemporary Bunkshooter”. This poem contains the line “Bragging and laughing that under his wrist is the pulse, and under his ribs the heart of the people.” After starting with some epithets, this poem states “They tell me you are wicked and I believe them.” After saying the subject of this poem is “fierce as a dog”, the poet describes its subject as, “Bareheaded, Shoveling, Wrecking, Planning, Building, breaking, rebuilding”. This poem's epithets include “Tool Maker, Stacker of Wheat, Player with Railroads”. Name this Carl Sandburg poem that uses the phrase “Hog Butcher for the World” to describe its title city.

Answer: Chicago

15. This composer's 21<sup>st</sup> piano concerto is sometimes referred to as the Elvira Madigan concerto because of the use of its Andante [ahn-DAHN-tay] second movement in that film. That piece in C major was finished soon after this composer's 20<sup>th</sup> piano concerto in D minor, which has a *Romanze* second movement. His 11<sup>th</sup> piano sonata ends with a Turkish March. This composer used 12 wind instruments and a double bass in “Gran Partita”, his tenth serenade, and he used a post horn in his ninth serenade. His 13<sup>th</sup> serenade is “Eine kleine Nachtmusik [”EYE“-nuh KLY-nuh NAKT-moo-zeek]”. Name this composer who also wrote the operas *Così fan tutte* [TOO-tay], *Don Giovanni*, and *The Magic Flute*.

Answer: Wolfgang Amadeus Mozart [or Johannes Chrysostomus Wolfgangus Theophilus Mozart]

*Check the score.*

16. An inequality between two types of this value can be proven using Jensen’s Inequality with logarithms. According to the law of large numbers, one type of this value approaches the expected value as an experiment is repeated. The sum of the reciprocals of a set of numbers is used to calculate the harmonic type of this quantity, and the  $n^{\text{th}}$  root of a product of  $n$  numbers gives the geometric type. The most commonly used type of this number, the arithmetic [air-ith-MET-ik] type, is found by adding up  $n$  numbers and dividing by  $n$ . Name this measure of central tendency, often contrasted with median and mode.

Answer: mean [accept more specific answers; prompt on average]

17. During World War II, Operation Faust was an attempt to end one of these events in the Netherlands. The failure of Robert the Bruce’s younger brother Edward to take over Ireland is blamed on one of the so-called “great” examples of this type of event. One of these events has been blamed on rapid industrialization and collectivization, though some people claim it was caused deliberately by Stalin; that event of this kind took place during the 1930s in Ukraine and is called the Holodomor. Another one of these events was caused by potato blight during the 1840s in Ireland. Name these events characterized by extreme and widespread food shortages.

Answer: famines [accept more specific answers; before “food”, accept descriptive answers like food shortages or hungers]

18. A woman with tuberculosis moved to this country’s capital in *Miss Sophia’s Diary*. Academics in this country were satirized in the 1750 novel *The Scholars*. Another novel set in this country tells the story of a young man who reads *Story of the Western Wing* and was born with a piece of stone in his mouth. In another novel from this country, a military leader is sent from heaven to Earth because he resembles a pig, and a very learned monkey is trapped under a mountain. Name this country whose four great classical novels include *Dream of the Red Chamber* and *Journey to the West*, and whose authors include Ding Ling and Wu Jingzi.

Answer: China [or People’s Republic of China or PRC; do not accept “Republic of China”]

19. This modern-day country is the site of the ancient Roman city Volu-bilis, which is near the modern city Meknes. This country’s Toubkal [“tube”-KAHL] Mountain is the highest of the Atlas Mountains, and is toward the west end of that range. This country’s University of al-Qarawiyyin [kah-rah-wee-yeen] has been in continual existence since 859 and is in Fez. This country controls most of Western Sahara, which is on its southern border. This country is northwest of Algeria. This country’s northern city Tangier is at the west end of the Strait of Gibraltar. Name this country whose capital is Rabat and whose most populous city is Casablanca.

Answer: (Kingdom of) Morocco [or al-Mamlakah al-Maghribiyah]

20. An “enhanced” scale to measure these events in the United States was implemented in 2007. These events often follow the appearance of hook echos, which represent rear flank downdrafts and surround a super-cell on a map. Dust-tube types of these events are also called land-spouts, while when they occur over water they are called waterspouts. The most common scale to measure these objects is Fujita. A so-called “alley” that experiences many of these events includes Oklahoma and Kansas. Name these storms that often appear as funnel clouds.

Answer: tornadoes [accept twisters; prompt on cyclones]

***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. Salts of this element can cause the skin condition chrysiasis [krih-SY-uh-sis] but they are still used as a treatment for rheumatoid arthritis. This metal’s color is caused by relativistic contraction of its 6s orbital. An alloy of this metal with silver is called electrum. This metal is the most malleable and is very ductile, which is why a foil of this metal was used in the experiment used to discover atomic nuclei. A mixture of three parts hydrochloric acid to one part nitric acid is known for being able to dissolve platinum and this metal and is called *aqua regia*. This metal is below silver on the periodic table. Name this precious metal whose symbol is Au.

Answer: gold [accept Au before the end]

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

- <sup>TB</sup>22. In one story by this writer, a man claiming to come from “The Throne” prays “Help us to tear their soldiers to bloody shreds.” In addition to “The War Prayer”, this author wrote a novel in which a stranger claims to have put a bullet hole in chain mail and then leaves a manuscript describing the time he took credit for a solar eclipse in medieval England. This author also wrote a novel in which two characters claim to be a duke and a king while running scams along the Mississippi River. That novel by this author is about a boy who travels with a slave named Jim. Name this author of *A Connecticut Yankee in King Arthur’s Court* and *The Adventures of Huckleberry Finn*.

Answer: Mark Twain [or Samuel Clemens]

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

- <sup>TB</sup>23. This state’s senators are Sherrod Brown and Rob Portman. This state’s governor is John Kasich [KAY-sik]. This state is northwest of West Virginia. Name this state whose cities include Canton, Cincinnati, and Cleveland.

Answer: Ohio

***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.***