

# Scobol Solo 2019

## Replacement Packet



1. The solubility constants in Henry's law are sometimes set equal to this quantity divided by pressure [pause] because this quantity, unlike similar quantities, is not affected by temperature. The ebullioscopic [eh-BYOO-lee-oh-SKAH-pik] constant, which can be expressed in terms of kelvins per this single quantity, is multiplied by this quantity to determine the boiling point elevation. For low concentrations in water, this quantity is nearly equal to molarity. Name this measure of concentration that equals moles of substance divided by *mass* of solvent.

Answer: molality or molal concentration [do not accept or prompt on "mole(s)" or "molar(ity)"; prompt on concentration]

2. One type of this particle was considered discovered when the upsilon particle was discovered in 1977 by a team headed by Leon Lederman. The CDF and D Zero experiments found another type of this particle in 1995. When these particles start to separate from each other, gluons ["GLUE"-ahnz] are created, which increases the binding force between these objects in a phenomenon called asymptotic [ay-sim-TAH-tik] freedom. Mesons [MAY-zahnz] have an even number of these particles, or one of these particles with its anti-particle. Baryons ["berry"-ahnz] such as protons are made of three of these particles. Name these subatomic particles that come in six flavors: up, down, top, bottom, strange, and charm.

Answer: quarks [accept bottom quark or b-quark before "1995"]

3. Some animals that have this type of symbiosis [sim-by-OH-siss] with other animals are called inquilines [IN-kwuh-"lines"], such as the animals that use the galls that gall wasps build in plants. The metabiosis [met-uh-by-OH-siss] form of this symbiosis occurs when hermit crabs inhabit shells that were made by sea snails. This type of symbiosis includes phoresy [FOR-uh-see], such as nematodes [NEE-muh-"toads"] being moved by bark beetles, flower mites being moved by bees from one flower to another, and remoras [reh-MOR-uhz] that ride sharks. Phoresy can develop into parasitism. Name this type of symbiosis in which one species benefits and the other is unaffected.

Answer: commensalism

4. The position of an orbiting object can be given by an anomaly named for this concept or the true or mean anomalies. When using polar coordinates to represent certain curves, this quantity is often multiplied by either the sine or cosine function and either added to or subtracted from 1 in the denominator, and it is multiplied by the distance from the pole to a fixed line in the numerator. This quantity is often defined by the ratio “ $c/a$ ” [“ $c$  over  $a$ ”], where  $c$  is the focal length and  $a$  is the length of the semi-major axis. Name this ratio between the distance to the focus and the distance to the directrix on any conic section, which is 1 for all parabolas and 0 for all circles.

Answer: eccentricity

5. This quality is often classified as “anastomosing” [uh-NASS-tuh-moh-zing] in sandstones and as stylolitic [“sty”-loh-LIT-ik] in limestones. Those are both the “spaced” type of this quality, which in turn is a disjunctive type of it. Mica [MY-kuh] crystals in metamorphic rocks typically have the “facile” type of this quality, which is often near rock with the slaty [“slate”-ee] type. Crenulation [kren-yoo-LAY-shun] is a type of this quality caused by foliations [foh-lee-AY-shunz] in rocks, and this term is sometimes defined as a secondary foliation. In minerals, this property is determined in large part by the structure of its crystal lattice. Name this tendency of minerals to break along flat planar surfaces.

Answer: cleavage

6. Violence in this state during the Civil War led to the case *Ex parte* [PAR-tee] *Merryman*. When this state was an English colony, it was the only colony to allow Catholicism. Its first governor was Leonard Calvert, the son of George Calvert. One of the first cities in this state was the site of a 1786 convention that led to Philadelphia, Pennsylvania hosting the constitutional convention; that city is now the site of the U.S. Naval Academy. “The Star-Spangled Banner” was written after the bombardment of Fort McHenry in this state. Name this state founded by Lord Baltimore.

Answer: Maryland

7. This law was signed shortly before the Peace of Vervins [ver-van], in which Philip II of Spain formally recognized this law’s signer. This law was prepared in Angers [ahn-zhay] shortly after the Duke of Mercoeur [mair-kur] lost Brittany to Spain. Fighting that had begun during the reigns of Catherine de Medici and Charles IX was significantly slowed by this law. This law was changed by the Peace of Alès [ah-less] and was revoked in 1685 by Louis XIV [14] in the Edict of Fontainebleau [fawn-ten-bloh]. Name this 1598 law signed by Henry IV of France, which to some extent ended the French Wars of Religion by giving rights to Calvinist Protestants, who were known as Huguenots [HYOO-guh-nawts].

Answer: Edict of Nantes or Édit De Nantes

8. This person used to lead a country that celebrates Loyalty Day on October 17, in remembrance of mass gatherings to cheer this person's release from imprisonment on Martín García Island. Upon his release, this person gave a speech to a massive crowd. Soon after that, this person won an election that had been called by Edelmiro Farrell [eh-del-MEE-roh fah-REL]. After a meeting at the Casa Rosada [KAH-sah roh-SAH-dah], supporters of this leader established a network that allowed Josef Mengele [YOH-seff MEN-geh-leh], Adolf Eichmann ["EYE"K-mun], and several other Nazis to move to his country after World War II. Name this husband of Eva Duarte [AY-vuh DWAR-tay] who ruled Argentina.

Answer: Juan (Domingo) Perón

9. Early in this person's career, he lost to Mariano Osorio at the Disaster of Rancagua. This person said "Lads! Live with honor, or die with glory! He who is brave, follow me!". This person said those words when taking control from José Miguel Carrera at the Battle of El Roble [el ROH-blay]. This person, Miguel Estanislao Soler [ess-TAH-neess-lao soh-LAIR], and José de San Martín crossed the Andes together and defeated the royalists at the Battle of Chacabuco [chah-kah-BOO-koh]. Name this person who became Supreme Director of Chile and had an Irish last name.

Answer: Bernardo O'Higgins (Riquelme)

10. The most recent novel by this writer involves falsified cash register receipts at the restaurant Muffins and Unicorns, which is owned by Vip Epperdew. In that novel, set in part during the 9/11 attacks, this author wrote about Maxine Tarnow. This author of *Bleeding Edge* wrote another novel partly about the fictional agencies ACHTUNG and PISCES ["PIE-sees"] during World War II. Some of the characters in that novel by this author are investigating the relationship between Tyrone Slothrop's sexual encounters and V-2 rocket strikes. Name this author of *Gravity's Rainbow*.

Answer: Thomas (Ruggles) Pynchon (Jr.)

11. One of the characters in this novel is a woman who lives on an estate in Toulouse who, when her brother dies, is officially put in charge of her niece. In this novel, that woman marries a man who is more interested in her estate than in her well-being. When that woman, Madame Cheron, passes away, her husband Montoni does not receive her wealth, which instead passes to this novel's protagonist, Emily St. Aubert. The black veil in this book is often referred to by Catherine Morland in Jane Austen's *Northanger Abbey*. Name this Gothic novel by Ann Radcliffe.

Answer: *The Mysteries of Udolpho*

12. One story by this writer features a character who had a hat factory that burned down and now wanders around begging for coins, a Jewish person named Moiseika [moy-SAY-kuh]. In that story, this writer described a doctor whose parents were against corporal punishment talking to a paranoid patient who asks “Have you any idea of suffering?”. A play by this writer is about a woman who moved to France after her son drowned, where she attempted suicide. That woman’s family is deeply in debt, forcing them to sell off their estate. At the end of that play by this author, the sound of trees being chopped down is heard. Name this Russian author of “Ward Number 6” and *The Cherry Orchard*.

Answer: Anton (Pavlovich) Chekhov

13. This poet made fun of one critic with the lines “Concluding all were desp’rate sots and fools, who durst depart from Aristotle’s rules.” This poet attacked a playwright and actor with the line “Great Cibber’s brazen, brainless brothers stand.” The line attacking Colley Cibber is in this poet’s *The Dunciad* [DUN-see-ad], while his attack on John Dennis is in *An Essay on Criticism*, which includes the line “A little learning is a dangerous thing.” In another poem by this writer, the Baron attacks Belinda by fighting off her guardian Sylphs and then cutting off some of her hair. Name this English satirist who wrote *The Rape of the Lock*.

Answer: Alexander Pope

14. The left side of one painting by this artist shows a dog looking up at a man who is casually holding a gun and leaning against a green bench. In that painting, this artist portrayed the man’s wife wearing a fancy blue dress and sitting on the bench, which is in front of an oak tree. There was a public outcry in Britain in 1921 when this painter’s most famous work was sold to an American. That work, painted around 1770, is a portrait of a young man wearing a very fancy outfit. Name this artist of *Mr. and Mrs. Andrews* who portrayed Jonathan Buttall in *The Blue Boy*.

Answer: Thomas Gainsborough

15. A one-act opera by this composer is about the unfaithful wife of a Spanish clockmaker. That opera was dedicated to Louise Cruppi, whose son was memorialized by one of the sections of this composer’s *Le tombeau de Couperin* [leh tohm-boh deh koo-per-an]. That piece memorialized soldiers who died during World War I, and an injury sustained in World War I by Paul Wittgenstein inspired this composer to write *Piano Concerto for the Left Hand*. Another piece by this composer famously passes around the snare drum’s rhythm and features a continuous crescendo. Name this French composer of *Boléro*.

Answer: (Joseph-)Maurice Ravel [rah-vel]

16. A character in this musical sings “I was born inside a jail, I was born with scum like you, I am from the gutter too!”. Another character in this musical jumps into a river after that song “The Confrontation”. Later in this musical, a character sings “I did not live until today; how can I live when we are parted?”. Flags are usually waved during that song, which anticipates an uprising. Another character in this musical becomes a prostitute and sings “I Dreamed a Dream”. Name this musical featuring the song “One Day More” that is set during the Paris Uprising of 1832 and is based on a novel by Victor Hugo.  
Answer: *Les Misérables* [accept *Les Miserables*]
17. In the United States, James Freeman promoted this religious movement. In England, this religious movement was promoted by Theophilus [thee-AH-fuh-luss] Lindsey with the support of Joseph Priestley. Adherents of this religion are divided in the same way the Polish Brethren were divided in the 17th century. Some members of this religion, following the ideas of Faustus Socinus [FOW-stuss soh-SY-nuss], deny the pre-existence of Jesus Christ. A major organization in this religion supports the idea of Six Sources, including direct experience, and Seven Principles, including the worth of every person. Name this Christian religion that rejects the idea of the Trinity.  
Answer: Unitarianism or Unitarian Universalism [accept UU]
18. George Santayana said that this quality is “pleasure objectified”, and he wrote a book titled for *The Sense of* this quality. Thomas Aquinas said this quality is achieved by integrity, proportion, and clarity. In Plato’s *Republic*, it is said that lovers of sounds and sights cannot see or love the “absolute” type of this concept. Edmund Burke wrote *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and* this concept. The study of art aesthetics is primarily concerned with the study of this quality and its appreciation. Name this quality of providing pleasure or satisfaction to people when it is perceived, particularly when it is seen.  
Answer: beauty or beautiful
19. When this person took on his current position, he retained Stephen Barclay from the previous administration. This person gained his current position shortly after defeating Jeremy Hunt in an intra-party election. This person’s sister Rachel criticized him in September 2019 after he said that the best way to honor murdered legislator Jo Cox was to support a program Cox had opposed. This person’s brother started out as this person’s Minister of State for Universities before resigning. This person’s attempt to shut down parliament was rejected by his country’s Supreme Court in September. Name this person who succeeded Theresa May to become the prime minister of the United Kingdom.  
Answer: (Alexander) Boris (de Pfeffel) Johnson

20. This city has an ellipsoid dome that Paul Andreu designed, made of titanium and glass, which is often called The Giant Egg and serves as the National Centre for the Performing Arts. Some of the buildings near that one are part of this city's Ten Great Buildings that were all constructed in 1959. The Giant Egg is across the street from this city's Great Hall of the People, which is in turn across the street from the large obelisk Monument to the People's Heroes. Those buildings are in or near this city's Tiananmen Square. Name this city that contains the mausoleum of Mao Zedong and is the capital of China.

Answer: Beijing, China [or Peking]

*This is the end of the packet.*