

# Scobol Solo 2015

## Packet 9 (Round 9)



1. In more than one dimension, the Ising [“EYE-sing”] model guarantees one of these phenomena. The order parameter is central to Ehrenfest’s [AIR-un-fest’s] classification scheme for these phenomena, and Lev Landau proposed a theory to explain second-order ones. When first order examples of these phenomena occur, temperature does not change despite the absorption or release of heat, and that heat is classified as latent heat. On a graph showing the behavior of a substance based on temperature and pressure, these phenomena are equivalent to crossing the lines. Name these processes that are changes in the state of matter, such as freezing.

Answer: phase transitions or phase changes [prompt on transitions]

2. This leader’s tourism minister swam with an American ambassador after an American bomber with four thermo-nuclear bombs crashed in his country. This leader allowed the Vertical Syndicate but not other trade unions. During the 1960s, his country experienced what was called an “economic miracle,” including the growth of the SEAT [SAY-ah-t] car company. This leader’s nationalist coalition combined the forces of the Carlists with the Falange [fah-LAHN-hay]. After World War II, this person was called the “last surviving fascist dictator.” Name this “Generalissimo” [HAY-nay-rah-LEE-see-moh] who banished languages other than Spanish after gaining power during the Spanish Civil War.

Answer: Francisco Franco (Bahamonde)

3. To show that this deity has been in some houses, footprints are painted from the door to the place of worship. This deity only lives in houses that are clean and have people who work hard. She is often watered by two elephants and rides an owl. This goddess is sometimes depicted massaging a blue foot while on the Shesha. Together with Sara-swati and Parvati, this deity is part of the Tridevi. After Indra threw flowers on the floor, this goddess entered the Milky Ocean, causing many of the gods to churn it. Often pictured on a lotus flower, she is the wife of Vishnu. Name this goddess of wealth and purity who is prayed to during Divali.

Answer: Lakshmi [or Maha-lakshmi or Shri]

4. A collection of 33 poems by this writer with lines such as “more Heaven than Earth was here, no winter and no night”, combining a love of nature and God, is called “Contemplations”. Adages by this writer such as “Authority without wisdom is like a heavy axe without an edge” were published as *Meditations Divine and Moral*. One poem by this writer ends “when we live no more, we may live ever”; another poem by her ends “my hope and treasure lie above.” Name this writer of “Verses upon the Burning of our House” and “To My Dear and Loving Husband”, whose early poems were collected in *The Tenth Muse Lately Sprung Up in America*.

Answer: Anne (Dudley) Bradstreet [accept either underlined name]

5. This concept is used to name particles that follow the relativistic Breit [brayt]-Wigner distribution and whose lifetimes are so short that they can travel at most across a proton before decaying. This concept applies to an energy transfer between chromophores [KROH-moh-forz], sometimes involving fluorescence, named for Theodor Forster. Optical cavities in lasers are sometimes named for this concept. When frequency equals the reciprocal of the square root of inductance times capacitance, this concept occurs in alternating current circuits. This phenomenon results in standing waves and large amplitudes. Name this phenomenon in which objects are vibrated at their natural frequency.  
Answer: resonance [or resonating; prompt on standing waves]

**Check the score.**

6. Though this musician usually did not work with vocalists, he recorded an album with Johnny Hartman that starts with Irving Berlin's "They Say It's Wonderful". Late in his career, this musician added Rashied Ali to his group to play alongside Elvin Jones. This musician honored Paul Chambers with the song "Mr. P.C." and his own wife with the song "Naima", both of which appeared on his *Giant Steps* album. This musician's fast note runs were called "sheets of sound." The section "Psalm" ends his album *A Love Supreme*. Name this musician who played tenor saxophone on Miles Davis's album *Kind of Blue*.  
Answer: John (William) Coltrane

7. Regulations on these institutions were loosened in a bill named for Congressman Saint Germain and Senator Garn. The son of a then-presidential candidate was on the board of directors of Silverado, which was one of these institutions. The largest failure of one of them was that of First Republic of Texas. William K. Black wrote a report on them that was critical of House Speaker Jim Wright and the Keating Five, a group of senators that included John McCain. The success of these institutions depended on real estate values because their revenue came from mortgages. Name these institutions whose failure cost taxpayers about 160 billion dollars during the late 1980s and early '90s.  
Answer: Savings and Loans [accept S&Ls or thrifts, prompt on bank before "Silverado"]

8. This body of water is just north of where the Tanqa Tanqa [TAN-kuh TAN-kuh] and Lupaca people lived, in what is now the Aymara ["eye"-MAR-ah] Lupaca Reserved Zone. This lake contains an island which, according to folklore, was a mountain until a bird spilled a water basin. That island, Taquile [tah-KEE-lay], is accessible by boat from the town of Puno. Some of the water from this lake goes through the De-sa-gua-der-o River to Poopó [poh-oh-POH] Lake, where it evaporates. The Uros people live on floating islands made of reed in this lake. This lake is west of La Paz and in the Andes Mountains. Name this large lake on the border between Bolivia and Peru.  
Answer: Lake Titicaca [tit-ee-KAH-kah]

9. This play ends with a queen saying “We two, methinks, can rule and order all things in our home.” The queen in this play makes that statement after she and her lover are warned by the chorus that her son will return home. Earlier in this play, the king and queen argue about whether the king should walk on purple robes. The king in this play, who has made Cassandra his lover, is killed by the queen, who claims that the killing avenges Iphigenia [if-uh-juh-NY-uh]. This Aeschylus [ESS-kuh-luss] play is followed by *The Libation Bearers* and *The Eumenides* [yoo-MEN-ih-deez] in the *Oresteia* [or-ess-TAY-uh]. Name this play whose title character, the king, is the husband of Cly·tem·nest·ra.

Answer: Agamemnon

10. At some points, this musical piece jumps slightly over an octave from a D sharp up to an E. The left hand on the piano alternates arpeggios [ar-PEJ-ee-ohz] between A minor and E major. In 2009, Klaus Martin Kopitz claimed that this piece was originally dedicated to an opera singer. The common name of this piece, based on research by Ludwig Nohl, has stirred controversy over whether or not he missed the letter ‘T’ when reading the composer’s handwriting. This piece begins in the high register with the notes E, then D sharp, then E, then D sharp, then E, then B, then D, then C, then A. Name this solo piano piece, also called Bagatelle Number 25 in A minor, by Ludwig van Beethoven.

Answer: Für Elise [or Bagatelle No. 25 before “Bagatelle”]

### **Check the score.**

11. A wildlife reserve named for Rachel Carson and this type of habitat is near Beaufort, North Carolina. The Guiana dolphin and cockabully have alternative names involving this type of habitat. It is home to oyster reefs and saltmarsh cordgrass, and it is often surrounded by mangrove swamps. Twenty-eight organizations to help these habitats were created as outgrowths of amendments to the Clean Water Act in 1987 and are based on efforts to improve Chesapeake Bay. Name these areas, similar to river deltas, caused by rising oceans or sinking coasts and containing brackish water with variable levels of salinity.

Answer: estuaries [or estuary]

12. In one of this writer’s works, the three characters ask him to solve their disputes, but he never wrote answers. That work is *The Dialogue Between a Philosopher, a Jew, and a Christian*. This writer’s belief that universals are “just words” is considered the birth of nominalist philosophy. “Must human faith be completed by reason, or not?” is the first of 158 questions he asks in one of his books, providing contradictory answers to them from theological authorities. His autobiographical work is *Historia Calami-tatum*, meaning *The Story of my Misfortunes*. His wife’s uncle Fulbert had this man castrated. Name this 12th-century writer of *Sic et Non* who had a famous love affair with Héloïse.

Answer: ‘Peter Abelard [or Pierre Abélard or Petrus Abaelardus]

13. In one novel by this author, a man walks into a basement and finds several naked people and a man on a mattress with no legs. In another novel by this author, the protagonist is shot by a Maltese boatswain [BOH-zun] in the back and then in the front, eventually causing him to leave New Orleans when he cannot pay the tavern-keeper's wife who cares for him. That novel by this author features a man with no ears named Louis Toadvine and a hairless man named Judge Holden. This author also wrote about Llewelyn Moss finding over two million dollars near the site of a drug deal. Name this author who, in addition to the *Border Trilogy*, wrote *The Road*, *Blood Meridian*, and *No Country for Old Men*.

Answer: Cormac McCarthy

14. This country signed the Treaty of Teusina [toy-SEE-nah] with Russia after the Treaty of Plussa [PLOOS-ah] did not hold following the Livonian War. This country's hopes of uniting with the Holy Roman Empire ended with its defeat at the Battle of Nord-ling-en. This country joined with France and some German states to form the Heilbronn League, which fought against the Habsburgs. Many of this country's nobility were killed during an invasion by Denmark in 1520, leading to the reign of Gustav Vasa. One of its generals, who died at the Battle of Lützen after winning the Battle of Breitenfeld during the Thirty Years' War, was Gustavus Adolphus. Name this country that often fought with its neighbors Finland and Norway.

Answer: Sweden [or Sverige]

15. One of these shapes is generated by the equation that the derivative of  $y$  with respect to  $x$  equals  $x$  divided by  $y$  if the constant of integration is nonzero. A shape of this type named for Kiepert goes through the vertices, ortho-center, and centroid of a triangle, solving Lemoine's [lum-wahn'z] problem. This shape is generated if the discriminant of a general two-variable quadratic equation is positive. If the points are closer to the directrix than the focus, which means that the eccentricity is more than one in a conic section, then the conic section is this shape. It is generated by the equation  $y = 1/x$  [" $y$  equals one over  $x$ "], and also by  $x^2 - y^2 = 1$  [" $x$  squared minus  $y$  squared equals one"]. Name this type of conic section with two branches.

Answer: hyperbola(s) [prompt on conic section before it is mentioned]

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

16. The governor of this state is engaged to marry a woman 28 years younger than he is. This state is the home of the current longest-serving U.S. Senator, who is the ranking Democrat on the Judiciary Committee. This home of Governor Peter Shumlin and Senator Patrick Leahy [LAY-hee] has another senator who started his political career as a Liberty Union candidate and has won several elections as this state's at-large U.S. Representative and then its senator, running as an Independent. Name this state home to Bernie Sanders, who used to be the mayor of Burlington.

Answer: Vermont

17. One character in this novel says that in certain marriages, the wife either “becomes terribly unfashionable, or wears very expensive hats that another woman’s husband has to pay for”. Those words are spoken after an actress in this novel performs poorly in *Romeo and Juliet*, has her brother James sail to Australia, and commits suicide; that actress’s name is Sibyl Vane. One character in this novel makes a wish after being told “There is nothing in the world as important as youth!”. This novel opens with Lord Henry Wotton talking about the title object with its creator, Basil Hallward. Name this Oscar Wilde novel about a painting that ages instead of its subject.

Answer: *The Picture of Dorian Gray*

18. One leader with this name was overthrown when he was a year old by Elizabeth of Russia, who was Peter the Great’s daughter. The Moscow Uprising of 1682 occurred after another person with this name, who was Peter’s half-brother, was strangled. Another ruler with this name, who strengthened Russian control over Tver and Nov-gorod, ruled during the last half of the 15th century. After that leader’s son Vasily III [3] died, another man with this name was declared the first tsar of Russia. That man’s son Feodor was blamed for the Time of Troubles. Give this name of several Russian rulers, including one known as “the Terrible”.

Answer: Ivan [accept more specific answers]

19. The wobble effect changes the binding patterns of a molecule in this process; that molecule has D and T arms that give it a cloverleaf structure. Diphtheria [dif-THEER-ee-uh] toxin functions by catalyzing ADP-ribosylation [A-D-P ry-BAH-sih-LAY-shun] of EF-2, a protein used in the elongation step of this process. The AUG sequence is recognized in the beginning of this process to use methionine [meh-“THIGH”-uh-neen], while later steps can use compounds like histidine [HIS-tuh-deen] or glycine [GLIE-seen]. During this process, tRNAs [T-R-N-A’s] match codons to their respective anti-codons. It follows transcription in forming proteins. Name this process in which ribosomes [RY-boh-sohmz] use an mRNA template to assemble amino acids into polypeptides.

Answer: translation [accept word forms]

20. This artist made several mezzo-tint landscapes for his *Liber Studiorum*. A bolt of lightning illuminates the Doge’s [DOH-juh’s] Palace in this painter’s *The Piazzetta* [pee-aht-ZET-tah], Venice. This artist showed the influence of Aelbert Cuyp [“Albert” KYPE] in his 1818 painting *Dort or Dordrecht: The Dort packet-boat from Rotterdam becalmed*. Two of his paintings are titled *Snow Storm*, one of which shows Hannibal leading his army across the Alps and the other of which shows a steamboat. One of this artist’s paintings is set on Maidenhead Railway Bridge and is subtitled *The Great Western Railway*. Name this painter who frequently depicted boats, as in *The Slave Ship*, and painted a train in *Rain, Steam and Speed*.

Answer: J(oseph) M(allord) W(illiam) “JMW” Turner

***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. Donald Fraser and this person chaired the Commission on Party Structure and Delegate Selection, which is largely responsible for our current presidential primary and caucus system. An appropriations amendment written by this person and Mark Hatfield called for an end to the Vietnam War in 1970. While running for president, this person proposed giving \$1,000 to each citizen. He initially selected Thomas Eagleton as his running mate, but replaced him due to Eagleton's psychiatric history, ending up with John Kennedy's brother-in-law, Sargent Shriver. Name this victim of the Watergate break-in, who lost a landslide election to President Nixon in 1972.

Answer: George (Stanley) McGovern

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

- <sup>TB</sup>22. One painting by this artist shows both a man in beige with half his face hidden by flowers and three women in white dresses, including one on the ground holding a parasol. This artist's summertime works include that painting, *Women in the Garden*, but he also painted snowscapes like *A Cart on the Snowy Road at Honfleur* [*awn-fluur*] and *The Magpie*. Much later in his career, some of this artist's paintings showed the London Houses of Parliament and a Japanese footbridge that crossed a pond in Giverny [*zhee-vair-nee*]. His painting of a sunrise led to the naming of the Impressionist movement. Name this French painter of a series of haystack paintings and many works showing water lilies.

Answer: (Oscar)-Claude Monet

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

- <sup>TB</sup>23. This state's governor is Bill Haslam. This state's senators are Bob Corker and Lamar Alexander. This state is south of Kentucky. Name this state whose cities include Mur·frees·boro, Nashville, and Memphis.

Answer: Tennessee

***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.***