

# New Trier Scobol Solo 2014

## Round 7



1. One method of synthesizing these molecules is controlled by the redox equilibrium between halide salts of copper one and copper two. That reaction is considered “living” as it lacks a termination step, and is useful because it provides great control of the products made. The relative stereochemistry of chiral [KY-ru] centers in these molecules is called the tacticity [“tack”-TIH-sih-tee], and that can be visualized with a Natta projection. One compound of this type is formed by combining hexa-methyl-ene-di-amine and a-di-pic acid. PVC and rubber are made of these molecules, as is nylon. Name these large molecules containing repeated units called monomers.

Answer: polymers

2. This person’s work was popularized in the United States by Hansen and Samuelson, who developed fiscal multipliers. This person stated that if the interest rate is greater than the efficiency of capital, then using savings to dig holes in the ground will increase the amount of useful goods. This person wrote about the existence of situations in which the government is more efficient than the market in *The End of Laissez-Faire* [lay-say “fair”]. This economist criticized the Versailles [vair-“sigh”] Treaty in *The Economic Consequences of the Peace*. Name this economist who criticized classical economics in *The General Theory of Employment, Interest and Money*.

Answer: John Maynard Keynes [“canes”]

3. One theorem named for this person states that if a series converges but the absolute value of its terms diverge, then the series can be made to converge to any number. The reciprocal of the gamma function is multiplied by an integral in a function named for this person that was used to prove the prime number theorem; it is believed that all of the zeros of that function have real parts equal to one half. The complex plane together with a point at infinity are called the “sphere” of this person. Identify this mathematician whose name is given to a technique of using rectangles to approximate an integral.

Answer: (Georg Friedrich) Bernhard Riemann [REE-mahn]

4. In this novel, Khudoleyev is asked “Why do you tyrannize the boy?”. He is asked this question after he pulls Yusupka’s hair and beats him on the neck because he disapproves of the way the boy files a casting on a railway, and the action leads to a major strike. Before that strike in this novel, Komarovskiy advises Amalia to buy a dressmaking shop. Komarovskiy is blamed for the suicide of the title character’s father. The title character is raised by his uncle Kolya after his mother Marya dies. He marries Tonya but then falls in love with Amalia’s daughter, Lara. Name this novel depicting the October Revolution written by Boris Pasternak.

Answer: Doctor Zhivago

5. This performer's trio included guitarist Tiny Grimes and bassist Slam Stewart. In 1953, he recorded 124 tracks for Norman Granz, who then invited several other musicians to make the Pablo Group recordings with him, including a trio with this musician, Lionel Hampton, and Buddy Rich. He also formed a quartet with tenor saxophonist Ben Webster. When this person attended a Fats Waller performance, Waller supposedly said "I only play the piano, but tonight God is in the house." This musician was billed early in his career as Toledo's Blind Pianist. Name this pianist whose signature song was "Tea for Two".

Answer: (Arthur) "Art" Tatum, Jr.

6. This campaign was triggered by a raid ordered by Raynald of Châtillon [shah-tee-law], which in turn led to the siege of Tiberias. Hugh III of Burgundy helped lead troops to victory at the Battle of Arsuf, which started as an ambush while the Europeans were marching towards Jaffa. Saif ud-Din [sy-EEF ood DEEN] acted as a go-between to settle the treaty that secured Acre [AK-ruh] as a European stronghold while leaving Ascalon in Muslim hands. Identify this conflict in which Richard I got close enough to see Jerusalem but had too few troops to attack it, leaving that city under the control of Saladin.

Answer: Third Crusade [or King's Crusade; prompt on crusades]

7. This technique is often done with a "ladder" that is then used as a reference for the results. Restriction fragment length polymorphism analysis can be performed by this technique and Southern blotting. Ethidium bromide is used as a stain in this technique, which causes the results to fluoresce under ultraviolet light. This technique's results are a series of bands, in which the distance migrated is inversely proportional to the masses of the analytes [AAN-uh-"lights"]. When performing this technique, samples are placed in wells in a matrix typically made of agarose. Identify this technique that uses an electric field to separate DNA or proteins in the namesake medium.

Answer: gel electrophoresis

8. When this god was swallowed by his wife, they merged to form Jumadi, who defeated the demon Dhumasura. Another combination of this god and his wife is Ardhanarishvara. He is supposed to live on Mount Kailash, and worshipers of this god use a lingam that is supposed to represent the cosmic pillar of fire or a phallic symbol. One of his sons, who rides a peacock, is the war god Murugan. This god chopped off the head of his other son after that son came between him and his wife Parvati. This god wears Vasuki the snake around his neck and is often pictured with four arms. Name this destroyer god who is in the Trimurti with Brahma and Vishnu.

Answer: Shiva [or Siva]

9. In one story by this writer, travelers during a rainstorm find a cripple named Jim who had been sitting on a sofa for six years, where he was taken care of by Miggles. In another story by this writer, a group is stranded when Uncle Billy takes their horses during a snowstorm, which leads to the starvation of Mother Shipton. At the beginning of another story, men place bets on the outcome of the labor and delivery of Cherokee Sal, who dies while giving birth to Thomas Luck. Name this short story writer who included the character Oakhurst in both “The Outcasts of Poker Flat” and “The Luck of Roaring Camp”.

Answer: (Francis) Bret Harte

10. This river goes by the city of The Dalles [daalz], which is close to where Lake Umatilla was created with the construction of John Day Dam. The early part of this river includes dams called Mica and Revelstoke. The Bonneville Slide created a mudslide called the Bridge of the Gods which rested on this river. On this river lies the Franklin Delano Roosevelt Lake, a result of the construction of a dam that uses fish ladders to ease the climbing of migrating salmon, called the Grand Coulee Dam. This river’s largest tributary, which goes through Hells Canyon, is the Snake. Name this river that flows to the Pacific Ocean in the Northwest, setting most of the border between Oregon and Washington.

Answer: Columbia River

11. The last line of Stephen Vincent Benét’s [ben-nay’z] “American Names” references this event. This event took place the day before the Drexel Mission Fight, which featured Guy Henry leading Buffalo Soldiers. General Leonard Colby adopted a girl in its aftermath; she is known as the “Lost Bird” of this event. Some accounts claim that this event was sparked by an overreaction by forces under James W. Forsyth to a deaf man waving his rifle in the air. This event that took place on December 29, 1890 may have been a reaction to the Ghost Dance. Name this killing of several people, including Spotted Elk, on the Lakota Pine Ridge Indian Reservation.

Answer: Wounded Knee Massacre [accept similar words in place of “Massacre”]

12. A gouache [goo-ahsh] by this artist shows two blue nearly triangular shapes surrounded by purple wavy shapes. That work, which once hung at MOMA upside down for 47 days before the mistake was noticed, is *La Bateau* [bah-toh]. The bottom of another work by this artist shows a nude woman playing two wind instruments at the same time. This student of Gustave Moreau had a rivalry with André Derain [dair-aw]. He painted a portrait of his wife with her hair tied back while a colorful line bisects her face. That piece has been nicknamed *The Green Stripe*. This artist showed a circle of dancers in both *The Joy of Life* and *The Dance*. Name this leading Fauvist [FOH-vist].

Answer: Henri(-Émile-Benoît) Matisse [awn-ree ma-teess]

13. This poem's speaker is "haunted like a passion" by a "sounding cataract". The speaker of this poem describes certain "beauteous forms" as having brought to him "sensations sweet felt in the blood, and felt along the heart". The speaker looks on nature "not as in the hour of thoughtless youth" and hears "the still, sad music of humanity". The speaker of this poem remembers his "dearest Friend", who is his sister Dorothy, by the title location. This poem opens after "five summers, with the length of five long winters" have passed, and its full title contains the date July 13, 1798. Name these "lines" composed by William Wordsworth.

Answer: "Lines Composed a few miles above Tintern Abbey (on Revisiting the Banks of the Wye during a Tour. July 13, 1798)" [prompt on Lines]

14. Both tunneling and the shape type of this phenomenon have been used to explain alpha decay. An application of another type of this physical phenomenon uses a uniform magnetic field to align the hydrogen atoms in a person's body, and then measures spin-lattice and spin-spin relaxation times. Another type of this phenomenon occurs when the impedance of a circuit is minimized, and yet another type occurs when the orbital periods of objects is in a simple ratio. This phenomenon occurs when the driving frequency equals the natural frequency. Name this term also used to describe molecular structures with delocalized electrons such as in benzene.

Answer: resonance [accept word forms; accept longer answers]

15. This state eliminated small-business income taxes in 2012. Its Democratic gubernatorial candidate, who was criticized for going to a strip club in 1998, is Paul Davis. Its Secretary of State Kris Kobach was forced to remove the name of Chad Taylor from ballots for U.S. Senate when Taylor withdrew from the race after winning the Democratic nomination. That change leaves the independent Greg Orman as the top candidate, facing incumbent Pat Roberts. This state is now headed by governor Sam Brownback. Name this state in which fighting took place in the 1850s over whether it would be a free state or slave state, following its establishment as a territory at the same time as Nebraska.

Answer: Kansas

16. This civilization's Sarcophagus of the Spouses was built shortly after their victory at the Battle of Alalia, and their largest existing text is the Zagreb Mummy Wrapping. Hiero I of Syracuse won a victory over these people at the naval battle of Cumae [KYOO-may]. Faesulae and Volaterrae were two cities in this civilization, and this civilization built the Cloaca Maxima and the walls of Capitoline Hill. This civilization's city of Clusium was led by Lars Porsenna. This group referred to themselves as Rasenna, and they were called the Tyrrheni. One leader of this group was also the last king of Rome, Tarquinius Superbus. Name this pre-Roman culture that existed in what is now Tuscany in Italy.

Answer: Etruscans [accept Rasenna or Tyrrhenians before they are mentioned]

17. In order to make a magnetic field more nearly constant, this scientist added coils to a Helmholtz coil. Using symmetry arguments, he reached the same conclusion Ludwig Boltzmann did using degrees of freedom with statistical mechanics, finding the distribution of molecule speeds in a gas; the resulting statistics are named for both of them. This person added a displacement current to improve on Ampère's law, and he devised a thought experiment to question the limits of the second law of thermodynamics, which is called his "demon". Name this scientist who combined his revision of Ampère's law with Faraday's law and two of Gauss's laws to summarize electromagnetism through four namesake equations.

Answer: James Clerk ["Clark"] Maxwell

18. One story by this writer, about a teacher who decides to make some paintings on vacation in Crete, is "Not After Midnight". Another story by this writer focuses on Nat Hocken and his family in Cornwall at a time when a sudden weather change is used to explain a bird attack on England. A novel by this author features a narrator who is the second wife of Maxim. The second wife has trouble living up to the reputation of the first wife, who is the title character of the novel and is believed to have died in a boating accident. Name this author who used the line "Last night I dreamt I went to Manderley again" to begin her novel *Rebecca*.

Answer: Daphne du Maurier [mor-yay] [prompt on partial last name]

19. In the finale of his fourth symphony, this composer quoted from *Bethany*, which is the tune usually used for "Nearer, My God, to Thee". Johnny Reinhard included a lengthy *Life Pulse Prelude* at the beginning of this composer's unfinished work *Universe Symphony*. This composer's *Two Contemplations* are *Central Park in the Dark* and a piece in which the strings and sometimes a solo trumpet play offstage. That piece, in which a quartet of flutes are called the "fighting answerer", is *The Unanswered Question*. Name this composer who wrote *The Housatonic at Stockbridge* as the final part of his *Three Places in New England*.

Answer: Charles (Edward) Ives

20. Important historians of this dynasty include Fan Ye in addition to Ban Biao and his family. One ruler of this dynasty created the *Song of the Great Wind* after defeating a rebellion led by Ying Bu. Another ruler of this dynasty suppressed the Trung sisters' rebellion. *Romance of the Three Kingdoms* begins with a description of a Taoist uprising against this dynasty, the Yellow Turban Rebellion. This dynasty was interrupted by the Xin [sheen] dynasty, and Emperor Gao began its Western phase. Name this dynasty that preceded the Three Kingdoms, existing from the third century BCE to the third century CE.

Answer: Han Dynasty

<sup>TB</sup>21. This author wrote about a psychotherapist named Elhanan and his son who edits the obituary page of *The New York Times* in *The Forgotten*. In another novel, this author wrote about a man named Elisha who is ordered to kill a British officer. Like one of his protagonists, this writer was once struck by a New York City taxi. This writer also wrote a work that begins in the town of Sighet, where he has religious discussions with Moishe the Beadle. This author of *Dawn* and *Day* wrote about his experiences in the Buchenwald and Auschwitz concentration camps after being taken from Hungary. Name this author of *Night*.

Answer: Elie Wiesel

<sup>TB</sup>22. This writer said that barbarians do not distinguish between women and slaves, but nature distinguishes between them because women make each thing for a single use. Immanuel Kant criticized the way this person placed everything into ten categories. This person wrote that it is the role of one science to examine “being qua being” in his work *Metaphysics*. This person wrote about persuasion by using the concepts of *logos*, *ethos*, and *pathos* in his book *Rhetoric*. Name this ancient Greek philosopher who established the Lyceum in Athens and who studied under Plato.

Answer: Aristotle

<sup>TB</sup>23. Identify the body part that is used by mollusks like snails for movement, is a unit of length equal to 12 inches, and in humans consists of a heel, sole, and five toes.

Answer: foot [accept propodium before “inches”]