

# New Trier Scobol Solo 2014

## Round 5



1. One play by this writer is about a man named Chremylos who convinces a blind beggar to enter his house. That beggar turns out to be Plutus, who gains sight, causing a redistribution of wealth in the world. In another work by this writer, a son has a debate with his father over whether it is appropriate for them to beat each other. In that play, Strepsiades [strep-“SIGH”-uh-deez] studies at a school run by Socrates. In another work, the title character works with Lampito to end a war. In that work, the women of Sparta and Athens declare a ban on sexual contact. Name this Greek comedian who wrote *The Clouds* and *Lysistrata* [lih-sih-STRAH-tuh].

Answer: Aristophanes

2. Mary Clymer is included in a later painting similar to this one by the same artist, though excluded from this one. Two figures in this painting are standing in an orange entrance in the background. The artist's signature is on a table in this painting on which the central action of this painting is being performed. The only woman in this painting covers her face with her arm, while several young men lean in for a better view. The title figure lectures dressed in a black coat while his assistants work on a patient's femur. Name this painting by Thomas Eakins completed 14 years before he painted *The Agnew Clinic*.

Answer: *The Gross Clinic* [accept *The Agnew Clinic* before “excluded”]

3. In the Heck and Suzuki coupling, the palladium catalysts are regenerated with an elimination step that also is this type of reaction. One reaction of this type reacts a carbonyl [kar-buh-NEEL] with hydrazine [“HIGH”-druh-zeen] and a base, which results in the formation of nitrogen gas and removal of the carbonyl. Hydrogenation reactions are a special case of this type of reaction. This type of reaction shares its name with a quantity that is high for fluorine and low for lithium, and is defined as the change in voltage when this type of reaction occurs on that species. These reactions lower a target's oxidation state. Name this type of reaction that involves the gain of electrons and is the opposite of oxidation.

Answer: reduction reactions [accept word forms of reduce; prompt on redox reactions or oxidation-reduction reactions before “lower”]

4. The only remnant of the original railway in this region is a granite-and-red-brick clock tower at Tsim Sha Tsui. Its Wan Chai district houses most of this area's Filipino minority. A giant Buddha made of bronze lies on this region's Lantau Island. This region contains Victoria Peak and a revitalized housing development project on the Kowloon Peninsula. The Admiralty extension of this region's business district has been the site of protests in 2014. This region is flanked to the north by the Shenzhen, and is situated on the Pearl River Delta across from Macau [muh-"COW"]. Name this concession to the British in the Treaty of Nanking, which was returned to China in 1997.

Answer: Hong Kong (Special Administrative Region) [or Xianggang [shee-ahng gahng] (Tebie Xingzhengqu)]

5. This person authorized the nuclear explosion nicknamed "Smiling Buddha". The Shah Commission found that this person was responsible for an unjustified state of emergency that was officially ordered by Fakhruddin Ali Ahmed. That emergency ended after this person lost an election to Morarji Desai of the Janata Party in 1977. This leader was elected prime minister again in 1980 and eventually launched Operation Blue Star in Amritsar, Punjab. That raid on the Golden Temple complex angered Sikhs, and this person was killed by Sikh bodyguards. Name this daughter of Jawaharlal Nehru and mother of her successor Rajiv.

Answer: Indira Gandhi [prompt on Gandhi]

6. This writer's paper "Bare Phrase Structure" developed an attempt called X-bar theory to look for language commonalities. That attempt was developed further in this person's essay collection *The Minimalist Program*. "Context-sensitive" and "context-free" are categories in this person's hierarchy of grammars. This person also wrote *Necessary Illusions*, *Failed States*, and *Manufacturing Consent*, which explain how propaganda and media misinformation have endangered American citizens. Name this linguist who discussed a nonsensical but grammatical sentence, "Colorless green ideas sleep furiously", in his book *Syntactic Structures*.

Answer: (Avram) Noam Chomsky

7. Legend has it that this man made a bet with the 5<sup>th</sup> Earl of Lonsdale about Harry Bensley walking around the world. Some associates of this person blamed his death on stress brought on by the Pujo [poo-zhoh] Committee, including an interrogation by Samuel Untermyer. This person supported James J. Hill in his rivalry with Edward H. Harriman, and he offered to meet with Teddy Roosevelt to settle concerns with the Northern Securities Company. This person and his partner Anthony Drexel helped Thomson-Houston Electric merge with Edison General Electric. He and Elbert Gary bought Carnegie Steel to form U.S. Steel. Name this very wealthy banker of the late 19<sup>th</sup> and early 20<sup>th</sup> centuries.

Answer: J(ohn) P(ierpont) Morgan

8. A clamp-shaped protein complex increases the processivity of this event by preventing one enzyme from dissociating. In bacteria, this process is started at an ori site by a primer. The Meselson–Stahl experiment showed that this process was semiconservative. Because this process only occurs in the 5' ["five prime"]-to-3' ["three prime"] direction, the lagging strand in this process is handled in small bits as unwinding occurs, producing Okazaki fragments. This process occurs during the S phase of the cell cycle, and involves the action of DNA polymerase. Name this process that produces an additional copy of the genome.

Answer: DNA replication [accept answers mentioning DNA and the notion of synthesizing or copying or equivalents; prompt on replication or answers meeting the alternate description but not including “DNA”]

9. This person designed an octagonal wing for the house of George Divers that is now part of Farmington Country Club. He also designed a single-story white jail that is now the sheriff’s office in Nelson County, Virginia. He was considered a leader of American Palladianism, and he studied pictures of Palladio’s works before designing buildings such as Barboursville. He named his plantation house Poplar Forest. In his own house, which contains a dome room, he placed his bed between his bedroom and his office, and he placed a great clock he designed in the entrance hall. Name this architect of the University of Virginia and Monticello, the third U.S. president.

Answer: Thomas Jefferson

10. One of this author’s poems references a man “who loved the Medici” though he had “never seen one”. Another of his poems features a butcher who “stared at them and shook with grief and fright” when he finds out his wife is about to die. This author of “Mr. Flood’s Party” wrote about a man “who has come out of the grave” to tell the title character to “go to the Western Gate.” This poet described a man who “was rich — richer than a king” and “admirably schooled in every grace”. This creator of Tilbury Town, who wrote “Luke Havergal”, also wrote about a man who “went down town” and “went home and put a bullet through his head.” Name this poet of “Miniver Cheevy” and “Richard Cory”.

Answer: Edward Arlington Robinson

11. Phase slips allow this phenomenon to occur along with dissipation, and recent studies of this phenomenon have looked at twisted pockets of electrons in cuprate [KOOP-“rate”]. Following a discovery of the unconventional type of this phenomenon by Frank Steglich, research by Bednorz and Müller uncovered examples with higher critical temperatures. In the conventional types of the materials in which this phenomenon occurs, electrons interact with phonons [FOH-nahnz] to form Cooper pairs, whose behavior is explained by BCS theory. Materials that have this property expel their magnetic fields, which is a display of the Meissner effect. Name this phenomenon in which electrical current flows without resistance.

Answer: superconductivity [accept word forms]

12. This operation can be performed on complex functions by increasing the power in the denominator of Cauchy's integral formula. This operation is generalized to higher dimensions by the del operator, which in turn is used to express the directional type of this operation, or curl, or divergence. Under appropriate conditions, Rolle's theorem guarantees the existence of a point at which this operation gives zero; such points, which may be minima or maxima, are called critical points. This operation can be performed using the quotient rule or the chain rule. Name this operation used to find the slopes of tangent lines which, according to the fundamental theorem of calculus, is the reverse of integration.

Answer: differentiation [accept taking (or finding) the derivative; do not accept word forms of "derive"]

13. This character is told "Things that love night Love not such nights as these", and he responds "I am a man more sinned against than sinning." This character is then convinced to take shelter from the rain by a fool and a nobleman who had disguised himself as Caius. This person is eventually supported by the Duke of Albany, who states that Edgar and Kent should rule when this man dies. This character states "Nothing can come of nothing" before his daughter says "I cannot heave my heart into my mouth." Name this Shakespeare title character opposed by his daughters Regan and Goneril, but supported by his other daughter, Cordelia.

Answer: King Lear

14. There is historical disagreement as to whether the Order of the Garter was started before or after this battle. During this battle, the founder of that order is believed to have said "Let the boy win his spurs." During this battle, ineffective mercenary crossbowmen were killed by their French clients as they attempted to retreat. Philip VI's [6] cavalry was cut down by pre-dug pits and troops firing from the rear of the English formation. Calais [kuh-lay] was taken by Edward III soon after this English victory. Name this early battle of the Hundred Years' War that saw French forces decimated by the first large-scale use of the English longbow.

Answer: Battle of Crécy [kray-see]

15. One story by this writer is partly set at Friedheimer's store, where four-year-old Bibi and his father Bobint are shopping while Calixta is at home during a storm. In another story by this writer, Josephine tells her sister about a railroad disaster. This author also wrote about a Protestant woman from Kentucky who married a Catholic businessman who travels often. That woman, who develops a friendship with Adèle Ratignolle [a-del rah-teen-yohl], receives a lot of attention from Robert Lebrun while vacationing at the Grand Isle. Name this author of "The Story of an Hour" who wrote about Edna Pontellier in *The Awakening*.

Answer: (Katherine O'Flaherty) "Kate" Chopin

16. This composer was a distant relative of Arseny Golenishchev-Kutuzov, whose poetry formed the basis for this composer's *Songs and Dances of Death*. This composer used *Dream Vision of the Peasant Lad* in a few of his works, including his comic opera *The Fair at Sorochyntsi* [sor-oh-"chintzy"]. Another one of his pieces includes the section "Two Polish Jews, Rich and Poor", which was left out of an orchestration done by Maurice Ravel. That work was based on an Academy of Fine Arts display of the works of Viktor Hartmann. Name this composer who depicted a witches' sabbath on St. John's Eve in his *Night on Bald Mountain* and who also composed *Pictures at an Exhibition*.

Answer: Modest (Petrovich) Mussorgsky

17. During the Vietnam War, this person asked a Senate subcommittee "How do you ask a man to be the last man to die for a mistake?". Much more recently, after this person said that ISIS "did not represent Islam", ISIS spokesman Abu Mohammad al-Adnani referred to this person as an "uncircumcised old geezer". This person was accused of operating based upon "an unfathomable obsession and a messianic feeling" by Israeli Defense Minister Moshe Yaalon during peace talks with the Palestinians. Name this former senator from Massachusetts and 2004 presidential candidate, who in 2013 succeeded Hillary Clinton as U.S. Secretary of State.

Answer: John (Forbes) Kerry

18. This leader supported Section 28, which prevented local governments from teaching that homosexuality is acceptable. A protest near the end of this leader's time in power was nicknamed the Battle of Trafalgar Square. Garret FitzGerald and this leader signed the Anglo-Irish Agreement addressing the Troubles in Northern Ireland. This leader had been the Education Secretary until taking over the Conservative Party from Edward Heath. This prime minister resigned after instituting an unpopular flat poll tax called the Community Charge. Name this prime minister, succeeded by John Major, who won the Falklands War and was often called the "Iron Lady".

Answer: Margaret (Hilda Roberts) Thatcher [accept either underlined name]

19. Intrusions of air from a higher layer of the atmosphere into this layer can be located by calculating potential vorticity. Scattering in this layer is relied upon by microwave radio communications. The highest part of this atmospheric layer contains most of the jet stream, and the mixing of this layer with the layer above it was blamed for destabilizing the polar vortex. This atmospheric layer contains almost all of the water vapor in the atmosphere, and this layer contains most of the atmosphere's mass and weather. Name this layer below the stratosphere, the lowest layer of the atmosphere.

Answer: troposphere

20. Athenians claimed that this person was the son of Erechtheus [uh-REK-thee-uss], and he is credited with building the first dance floor and with various parts of ships. Athenians claimed that they forced this man into exile after he threw his nephew Perdix off a high roof. The daughters of Cocalus murdered a king in order to protect this person after he used an ant to thread a shell. Earlier, while in Knossos, this person built a wooden cow for Queen Pasiphaë [puh-SIH-fuh-ee]. That cow led to the birth of the Minotaur, for whom this person created the Labyrinth. Name this inventor who, after assisting Theseus, escaped the Labyrinth by building wings for himself and his son Icarus.

Answer: Daedalus

- <sup>TB</sup>21. This poem asks “for what were hop yards meant?” and “why was Burton built on Trent?”. Those questions are asked by a speaker trying to inspire somebody to “pipe a tune to dance to” after stating “Why, if ’tis dancing you would be, there’s brisker pipes than poetry.” A tale about a king who ate meat laced with arsenic and lived is included in this poem’s final stanza, which ends with the lines “Mithridates [MITH-rih-DAY-teez], he died old.” This poem’s first speaker mocks his friend’s poetry by invoking a dead cow, and complains about a belly-ache. Name this poem from the collection *A Shropshire Lad* by A. E. Housman.

Answer: “Terence, This is Stupid Stuff”

- <sup>TB</sup>22. One compound that contains three atoms of this element forms phosgene [FAHSS-“jean”] and a strong acid when in contact with oxygen. Compounds containing this element will have a  $M + 2$  peak appear at a 1-to-3 ratio to the  $M$  peak in mass spectrometry. A mixture of nitric acid and an acid containing this element is known for dissolving gold and is called aqua regia. This element has the highest electron affinity, and on the periodic table is found directly below the element with the highest electronegativity. Name this halogen, atomic number 17, that is used to clean swimming pools, and comprises table salt along with sodium.

Answer: chlorine [prompt on Cl; do not accept chloride]

- <sup>TB</sup>23. Identify the body part that abandons its owner in a story by Nikolai Gogol, may have been shot off the face of the Great Sphinx by Napoleon’s troops, and is the human organ of smell containing two nostrils.

Answer: nose