

# NEW TRIER SCOBOL SOLO 2011

## ROUND 6

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1. One novel by this author is about a woman who loses her money at roulette, Gwendolen Harleth, and the title character, who learns that he is Jewish. In another work by this author, the title character is a carpenter who is loved by Mary Burge but who loves Hetty Sorrel. In another novel by this author, the main character marries Edward Casaubon, who in his will removes her inheritance should she marry Will Ladislav. This author also wrote about Tom and Maggie Tulliver and a Weaver of Raveloe. Name this author of *Daniel Deronda*, *Adam Bede*, *Middlemarch*, *The Mill on the Floss*, and *Silas Marner*.

ANSWER: George Eliot [or Mary Anne Evans]

2. The Seifert–van Kampen theorem in the algebraic subset of this branch of mathematics describes a property of the unions of groups. One connection between this area of mathematics and number theory is Fürstenberg’s proof of the infinitude of primes. Closure under arbitrary union and finite intersection is a requirement of spaces in this branch. Properties of spaces in this field of study include metrizable, compactness, and connectedness, and pairs of objects cannot represent homeomorphisms if they have different numbers of holes. Name this branch in which a torus and a coffee cup are considered equivalent because it is not concerned with properties changed by deformations of objects.

ANSWER: topology

3. This character regretted killing Penthesilea because she was so beautiful. Grape pickers, a sheep farm, a city with a wedding, and a city under attack are among the many items displayed on this character’s shield. When this character led a victorious assault at Lyrnessus, he received Briseis as a prize, but he later became upset when she was given to someone else. This character then gave his armor to Patroclus, and he later avenged Patroclus’ death by killing Hector. According to one story, this son of Peleus and Thetis was dipped in the River Styx. Identify this Greek hero who died when an arrow from Paris struck him in the heel.

ANSWER: Achilles

4. This battle started with a charge by Major Marcus Reno which was quickly forced to retreat, eventually fleeing with troops under Frederick Benteen. Following Reno’s retreat, his commanding officer in this battle ordered troops to kill and stack their horses to form a defending wall, but he and his troops were all quickly killed. This was known as the Battle of the Greasy Grass by the side led by Chief Gall, Sitting Bull, and Crazy Horse. Identify this 7th Cavalry battle in the Black Hills War which became known as Custer’s Last Stand.

ANSWER: Battle of the Little Bighorn [accept Battle of the Greasy Grass before it is mentioned; prompt on Custer’s Last Stand]

5. Kappa organisms live in an environment of this substance, and the mysterious vault complexes found within it have been linked to chemotherapy resistance. Volutin granules store phosphate in this substance, while IP3 and cyclic AMP act as secondary messengers across it. Microtubules and actin filaments form a skeleton throughout this substance in eukaryotes (yoo-kair-ee-ohts), while in bacteria it contains the nucleoid. Extended by amoebas in the form of pseudopods, name this semifluid region of the cell located between the nucleus and cell membrane.

ANSWER: cytoplasm

6. One poem by this writer, about a man who laughed at the pity directed at him, is “Aaron Stark”. Another work by this poet advises, “Put off the cloak that hides the scar...And tell the ages what we are,” so we may “be Children of the Light.” Another work by this poet is about a man who “mourned romance” and “cursed the commonplace”; he is a heavy drinker described as a “child of scorn.” This poet was very poor until Teddy Roosevelt liked his poetry and found him a job. His best-known work is about “a gentleman from sole to crown” who “Went home and put a bullet through his head.” Name this author of “Miniver Cheevy” and “Richard Cory”.

ANSWER: Edwin Arlington **Robinson**

7. This person swore to marry Eunia if he ever became emperor even though she was married to Naevius Sutorius Macro. When this man did become emperor, he convinced both of them to commit suicide. Much of this man’s family was killed by Sejanus, and he was supposed to share the throne with Gemellus, the grandson of Tiberius. After several years on the Isle of Capri, this man announced that Tiberius was dead, perhaps prematurely, and assumed the throne. This emperor ordered a golden statue of himself for the Temple of Jerusalem, but that was delayed until his death made it unnecessary. He was killed by Cassius Chaerea and was succeeded by his nephew Claudius. Name this emperor who supposedly made Incitatus, his horse, a Senator.

ANSWER: **Caligula** [accept **Gaius Julius Caesar Augustus Germanicus**; prompt on answers mentioning **Gaius**]

8. The mine phenomenon known as firedamp consists mainly of this compound, and it is usually an unwanted product of the Fischer-Tropsch process. Clathrate deposits beneath the ocean floor are a significant biogenic reservoir of this compound, and it is a byproduct of archaeans (ar-KAY-unz) performing anaerobic digestion. As a pollutant, more than one-third of this compound is generated by livestock, and because it has no smell, odorants are added before it is used as a fuel. Over 20 times more effective than carbon dioxide at trapping heat in the atmosphere, name this compound, the chief component of natural gas, with formula CH<sub>4</sub> (“C H 4”).

ANSWER: **methane** [accept **CH<sub>4</sub>** early]

9. This artist painted a Caucasian face and a blue face seemingly drowning in hair in *Water Sprites*. His portrait of Mäda Primavesi shows her wearing a white dress with a purple background, and he is also known for portraits of Sonja Knips, Emilie Flöge, and Adele Bloch-Bauer. One of this artist’s best known works is painted directly onto the walls of the Secession building in Vienna and named after Beethoven. Name this artist who often attached gold leaf to his works such as his two *Judith* paintings and *The Kiss*.

ANSWER: Gustav **Klimt**

10. Edmond Malinvaud wrote a book reconsidering theories about this phenomenon, classifying it as Keynesian or classical. The US government measures this six different ways, the third of which is the most widely reported. This quantity is plotted on the *x*-axis in the Phillips curve, which puts wage rate changes on the *y*-axis, and many theories regarding it were adjusted after the existence of stagflation in the 1970s. When it lasts a long time it can be classified as structural, while short-term types can be classified as frictional or seasonal. When its rate is high, challengers tend to win elections over incumbents. Name this phenomenon defined as the inability of people to get jobs.

ANSWER: **unemployment**

11. A suite by this composer has tableaux about Duke Narimont of Lithuania and Karl Knutsson. Years before writing the symphonic poem *Nightride and Sunrise*, this composer wrote a symphonic poem for a rally for freedom of the press. One part of that work had words added forty-two years later, and different words have made that part into the Christian hymn *Be Still, My Soul* and the Biafran national anthem *Land of the Rising Sun*. In 1924, this composer completed his seventh and final symphony, which has only one movement. Name this composer of the *Karelia Suite* and *Finlandia*.

ANSWER: Jean **Sibelius**

12. John Conway has suggested the word “strombus” derived from the Greek word for a spinning top for this type of polygon. These shapes have a single reflective symmetry across one of their diagonals, and concave shapes with similar definitions are sometimes called darts or arrowheads. Not generally parallelograms, their area can be computed by taking one half the product of the diagonals, which are perpendicular to each other though only one is necessarily a bisector. Give the name of this type of quadrilateral that has two pairs of congruent adjacent sides.

ANSWER: kites

13. A series of five lectures by this person was published as *The Trumpet of Conscience*, and he also wrote the book *Why We Can't Wait*. The bombing of this person's house early in his career led to the filing of *Browder v. Gayle*, and this person worked on the Poor People's Campaign near the end of his life. He started his career at the Dexter Avenue Baptist Church and was the first President of the Southern Christian Leadership Conference, which was formed after his leadership during the Montgomery Bus Boycotts. Name this Civil Rights leader who was assassinated in Memphis in 1968 and who delivered the “I Have A Dream” speech.

ANSWER: Martin Luther King, Jr. [accept MLK Jr.; accept Michael King]

14. This country currently is having a dispute with Malawi over the status of diplomat Fergus Cochrane-Dyet, and it is working through an extradition case with the United States to deal with its hacker Gary McKinnon. Its outgoing defense minister, who resigned due to a controversial friendship with Adam Werrity, is Liam Fox. It was the home country of the newspaper *News of the World* until that paper ceased publication in the midst of the News Corp hacking scandal. Name this country currently headed by Prime Minister David Cameron and Queen Elizabeth II.

ANSWER: United Kingdom (of Great Britain and Northern Ireland) [prompt on Great Britain; prompt on England]

15. A water brake dynamometer (dai-nuh-MOM-i-ter) measures power output by changes in this quantity in an engine, and the components of this quantity appear on one side of the Euler (OY-lur) equations for rigid bodies. Epicyclic (ep-uh-SAI-klik) gearing is used to multiply this quantity, and a couple produces a net value of this quantity sometimes synonymous with moment of force. This is equal to the derivative of angular momentum with respect to time and can also be calculated as moment of inertia times angular acceleration. Equal to the lever arm length times the perpendicular component of force, name this quantity which causes objects to spin about an axis, the rotational analogue of force.

ANSWER: torque [accept moment of force before it is mentioned]

16. One character in this work used to dance the farandole, the fling, the brawl, the jig, the fandango and even the hornpipe, but he now dances the net. After he dances, another character from this work puts on that dancer's hat, and he delivers a long monologue beginning, “Given the existence as uttered forth in the public works of Puncher and Wattmann...” That dancer and thinker is kept on a rope by somebody who whips him. This work begins with one of the main characters trying to take off a boot, and its first spoken line is, “Nothing to be done.” This work has five characters, one of whom is a boy claiming to be a messenger. The dancer is named Lucky, and he is controlled by Pozzo. Name this absurdist play about Vladimir and Estragon by Samuel Beckett during which the character mentioned in the title never shows up.

ANSWER: Waiting for Godot

**17.** One of the characters in this novel was raised by his Aunt Clara in Auburn. Another character, a handyman who lost his hand in an accident, has his old dog shot in the back of the head, and many of the characters respect a mule driver named Slim. One of the characters often talks about some day having a house with a couple of acres, a cow, and some pigs, and several people wish to join him when that happens. This novel revolves around the relationship between two migrant workers, one of whom loves to pet soft animals and has mental disabilities. Name this novel about George Milton and Lennie Small written by John Steinbeck.

ANSWER: *Of Mice and Men*

**18.** This performer's fame increased when he played the Wind God Vayou in *Le Talisman*, though he courted controversy with his choreography of Stéphane Mallarmé and Claude Debussy's *Afternoon of a Faun*. Many of his performances were with Tamara Karsavina or Anna Pavlova, and he usually worked for Sergei Diaghilev. He portrayed the puppet Petrushka, and his choreography led to a 1913 riot at the premiere of Igor Stravinsky's *The Rite of Spring*. Name this performer for the Ballets Russes who was of Polish descent.

ANSWER: Vaslav Nijinsky

**19.** Many of this person's early works are in the collection *Twelve Years*, and one of his calls to action was his *April Theses*. This person was forced into exile after the July Days, but he soon returned to his native country and issued a *Decree on Peace* and *Decree on Land*, taking control of his country and negotiating the Treaty of Brest-Litovsk with Germany and the other Central Powers. After an attempted assassination of this person by Fanni Kaplan, the Red Terror was started. Name this Bolshevik leader of Russia whose 1924 death led to the rise of Joseph Stalin.

ANSWER: Vladimir Ilyich Lenin [or Vladimir Ilyich Ulyanov]

**20.** These engineered objects often utilize constant folding and register allocation to improve their output, and these analyze their input for control and data dependencies. One of these is called self-hosting if it can process itself as input. These programs can be classified as just-in-time, and its front-end tasks include lexing and parsing. Examples of this type of software include PathScale and Clang, the latter of which uses the LLVM infrastructure. Identify this type of software that typically converts code from a high-level language's source code to a lower-level executable program.

ANSWER: compilers

**TB1.** In this novel, Jenny Snow comments about some persons whose noses were not too flat to smell other people's limes, and she helps Mr. Davis discover pickled limes in another girl's desk. Earlier on, that girl is warned that she will grow up to become an affected little goose and states that she wants a box of Faber's drawing pencils. This novel includes the poor Hummel family and the wealthy Gardiner family. It begins just before Christmas during the Civil War. Name this novel about Meg, Jo, Beth, and Amy March written by Louisa May Alcott.

ANSWER: *Little Women*

**TB2.** Anatolii Karatsuba determined an efficient way to perform this operation on large numbers. Skew fields may not commute under this operation, but fields must. Though this operation is commutative for real numbers, it is not commutative for matrices. Using logarithms, this operation can be used to find powers, while logarithms allow addition to be used to perform this operation. The identity for this operation on real numbers is one, and the inverse for this operation on real numbers is the reciprocal. Name this operation used to find products.

ANSWER: multiplication [accept times; accept product before it is mentioned; accept word forms]

**TB3.** Which animal...names a type of walk in a novel by Gunter Grass; was sent by Hera to distract Hercules while he fought the Hydra, subsequently becoming a constellation between Gemini and Leo in the Zodiac; and has an Alaskan king variety caught by the fishermen of the Deadliest Catch?

ANSWER: crab