

NEW TRIER SCOBOL SOLO 2011

ROUND 2

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1. This character throws pebbles at birds until she believes that she hit a little gray bird. Near the end of the novel this character appears in, she kisses her father shortly before he dies, though she had earlier washed his kiss off in a brook. This girl wonders why the sun does not love her mother, and she decorates herself like a mermaid and adds some eel-grass in the shape of a letter to make herself like her mother. Name this daughter of Arthur Dimmesdale and Hester Prynne in Nathaniel Hawthorne's *The Scarlet Letter*.

ANSWER: Pearl

2. This artist created many pastels starting around 1880, including works titled *Woman Combing her Hair*. Another pastel showing a young woman in white sitting on a bench next to an older woman in black is titled *Waiting*. He has been accused of anti-Semitism due in part to his work *Portraits at the Stock Exchange*. This artist spent a few months visiting his uncle in the United States in 1873, and a work showing his uncle's office is traditionally known as *The Cotton Exchange at New Orleans*. Name this French artist who often painted dance classes and ballet rehearsals.

ANSWER: (Hilaire-Germain-)Edgar Degas

3. Some historians claim that this war started when metal workers under Constantino Davidoff planted a flag, though he disagrees. At the beginning of this conflict, Rex Hunt was captured and replaced as Governor by General Mario Menendez. Secretary of State Haig tried at first to mediate this conflict, but the United States eventually sided with Britain. This began with Operation Rosario and ended with the capture of Port Stanley and the South Sandwich Islands, which added to the popularity of Margaret Thatcher. Name this 1982 invasion by Argentina.

ANSWER: Falklands (Island) War [accept crisis or conflict in place of War; accept (Islas) Malvinas in place of Falklands]

4. Gérard Desargues (deh-SAR-g') used this term to refer to the number of labeled points on a line segment. By a more common definition, this value is equal to two times the standard deviation for either/or situations such as coin tosses and greater than twice the standard deviation otherwise, and this is a non-robust dispersion statistic. By another definition, this term has a similar meaning to codomain, though it refers to only the set which the output values of a function take on rather than the set of possible values. Give this term which with respect to sets is the difference between the largest value and the smallest value, and which with respect to functions is to "output" as domain is to "input".

ANSWER: ranges

5. The tetrachloride of this element is sprayed by airplanes for skywriting, and its first use in living organisms was the construction of bone chambers for viewing blood flow in rabbits. The asterisms sometimes found in rubies and sapphires are inclusions of its main ore, rutile (ROO-tile). This metal is refined using magnesium in the Kroll process, and it is used to protect pilots in what is nicknamed a "bathtub" in some fighter jets. This element's oxide forms a brilliant white pigment, and this element together with cobalt chromium and stainless steel is used in replacement hips. Name this silver metallic element with atomic number 22.

ANSWER: titanium

6. This author wrote a novel whose protagonist spends a weekend with Milly and her daughter Winnie when he finds out that his wife wants to leave him. That protagonist of this author's novel is concerned about losing his estate Hetton to his wife, who marries Jock Grant-Menzies after falling in love with John Beaver, and he ends up reading Dickens novels to Mr. Todd in the South American jungle. Another novel by this author involves Lord Marchmain's children Sebastian and Julia Flyte. Name this author who wrote about Tony Last in *A Handful of Dust* and Charles Ryder in *Brideshead Revisited*.

ANSWER: Evelyn **Waugh**

7. One reason this bill was passed was as a reaction to Orders in Council, and another reason was an incident involving James Barron and Salusbury Pryce Humphreys. The second major attempt to repair this bill led to a false promise to repeal the Berlin and Milan Decrees made by Napoleon. Passed after the Chesapeake-Leopold Affair, attempts to repair this bill included Macon's Bill Number Two and the Non-Intercourse Act. This unpopular act harmed the economy and was satirized in a political cartoon featuring a turtle. Name this 1807 act signed by Thomas Jefferson which restricted ships involved in trade.

ANSWER: **Embargo** Act of 1807

8. The permanent house of this museum was originally designed by Philip Goodwin and Edward Durell Stone, and in 2004 that building was replaced by one by Yoshio Taniguchi. After the National Portrait Gallery removed the David Wojnarowicz (voy-NAH-roh-vitz) work *A Fire in My Belly*, this museum purchased it. Its collections include *I and the Village*, *Les Demoiselles d'Avignon*, and *The Persistence of Memory*, and it was started by a group known as "The Ladies" which included Abby Aldrich Rockefeller. Name this museum located about two miles from the Metropolitan Museum of Art in Manhattan.

ANSWER: **MoMA** [or The **Museum of Modern Art**]

9. According to the Rayleigh-Jeans (RAY-lee JEENS) law, spectral radiance varies inversely with the fourth power of this quantity. Radio telescopes must compensate for scintillation at high values of this quantity, and Planck's constant divided by momentum yields one of these quantities named for de Broglie [d' BROY]. In the double-slit experiment, differences of integer multiples of this quantity produced constructive interference. Symbolized by the Greek letter lambda and equal to velocity divided by frequency, the colors of visible light correspond to values between 400 and 700 nanometers. Name this quantity often measured as the distance between two consecutive crests.

ANSWER: **wavelength** [prompt on **lambda** before it is mentioned]

10. This instrument is featured in concerti (con-"CHAIR"-tee) nicknamed "La Tempesta di Mare" (MAH-ray) and "Il Gardellino" (gar-deh-LEE-no) by Antonio Vivaldi, and it is the focus of many works by Claude-Paul Taffanel. It is the solo instrument in Claude Debussy's (deh-BYOO-see's) *Syrinx*, which was premiered by Louis Fleury, and it is the first instrument heard in Bedrich Smetana's *Moldau*. Its development is due to the work of Theobald Böhm, and some modern versions of this instrument have a gizmo key. Used to represent the bird in Prokofiev's *Peter and the Wolf*, name this instrument which sounds an octave below the piccolo.

ANSWER: **flute**

11. Early in his career, this person headed the Free Officers Movement which successfully eliminated his country's monarchy. This person's popularity increased a few years later when he survived an assassination attempt by Mohammed Abdel Latif. This leader's policies led to the resignation of Anthony Eden and the establishment of the Eisenhower Doctrine. This came when, on the heels of a decision by the United States and United Kingdom to withdraw funding for the Aswan Dam, this person nationalized the Suez Canal. Name this first President of the United Arab Republic and second President of Egypt who ruled until his death in 1970.

ANSWER: Gamal Abdel **Nasser** Hussein

12. The narrator of one work by this poet believes she is held by death, but is actually held by love. Another work by this writer tells poets to sing with sorrow and seraphs to sing with glory. This writer created an epic novel in verse about Aurora Leigh and a narrative poem about the Battle of Marathon. Another work by this poet uses the phrase, "breath, smiles, tears, of all my life" and speaks of "the depth and breadth and height my soul can reach, when feeling out of sight for the ends of Being and ideal Grace". Name this poet who wrote *Sonnets from the Portuguese*, one of which asks "How do I love thee?"

ANSWER: Elizabeth Barrett Browning

13. This city includes a Buddhist temple on a pond called Benten-do (BEN-ten-doh), and its tallest building will soon be its Sky Tree. One of the tourist destinations in this city used to be called Big Egg City. One site in this city has had a hotel built on it three times, the second one being a Frank Lloyd Wright design in the shape of the letters I and H. This city also contains a slightly larger version of the Eiffel Tower. Name this city which contains an Imperial Palace built on the site of Edo Castle, the capital of Japan.

ANSWER: Tokyo [accept Edo before it is mentioned]

14. This man first explained the rainbow as an optical effect of water in the atmosphere in *Meteorology*. His extensive work in marine biology appears in *History of Animals*, which includes a description of the "lantern" mouth organ of sea urchins named for him. His system of taxonomy was based on characteristics, with his primary division between animals based on whether they had red blood. This man wrote that objects move toward their natural place and that natural speed varies directly with weight. He also made aether (EE-ther) the fifth element. Believing observation to be superior to experiment, name this Greek philosopher who wrote *Physics* and thought ultimate reality was in physical objects in opposition to his teacher Plato.

ANSWER: Aristotle

15. This person administered the oath on February 25, 1934, when about one million people around Germany swore allegiance to Hitler. He spoke after Hitler's closing speech in *Triumph of the Will*, leading the audience in several Sieg Heil salutes, and he claimed to have met Douglas Douglas-Hamilton at the Berlin Olympics. While imprisoned after the Beer Hall Putsch, this man took Hitler's dictation in the writing of *Mein Kampf*. In 1941, he flew his Messerschmitt 110 and parachuted into Scotland in a failed attempt to negotiate a peace with Britain. Name the Deputy Führer who was held at Spandau Prison until his suicide in 1987.

ANSWER: Walter Richard Rudolf Hess

16. Martha Nussbaum (NOOS-baum) wrote a book about the frontier of this concept, and Amartya Sen wrote a book defining the idea of this concept. Another book about a theory of this concept based it on the liberty principle and the difference principle, and the writer of that book called this concept, "The first virtue of social institutions." That writer was John Rawls, who described this concept as fairness. This concept is sometimes classified as distributive or retributive, the latter of which is similar to the restorative type, and this word names the US department that is part of the legal system. Give this term often represented by a blindfolded lady holding the scales of truth.

ANSWER: justice

17. The antioxidant properties of this molecule were only discovered in 1993, and it is unique in animals because at least four of its metabolites can also scavenge free radicals. The level of this molecule in the blood can determine a person's chronotype (KROH-noh-"type"), and in the brain its main function is to inhibit the production of gonadotropin-releasing (goh-NAA-doh-TROH-pin) hormone by the hypothalamus. Aaron Lerner found that this molecule can lighten the skin pigmentation of frogs, and when most animals are placed in the dark the level of this hormone increases, allowing it to control circadian (sir-CAY-dee-un) rhythms. Derived from serotonin (seh-ruh-TOH-nin) and secreted by the pineal (pih-NEE-ul) gland, name this hormone that regulates sleep cycles in humans.
ANSWER: **melatonin** [do not accept "melanin"]

18. One of these documents describing the locations of various metal items is known for its use of copper, while another is known as Community Rule. Their current condition is due to the work of Gerald Lankester Harding and Roland de Vaux, and they are compared to more recent works such as the Aleppo Codex. Associated with a sect known as the Essenes (ess-EENS), these documents contain many Biblical passages, including several Psalms. Muhammed edh-Dhib, a Bedouin shepherd, is generally credited with finding them. Name these documents found in the 1940s in caves in what is now the West Bank.
ANSWER: **Dead Sea Scrolls**

19. This shape is the simplest example of a nontrivial fiber bundle over the circle with each fiber equivalent to the unit interval. When a disk is sewed along this figure's edge, it becomes a projective plane. When two of their edges are glued together, the result is a Klein bottle. A primary example of a non-orientable surface, attempts to cut this shape lengthwise result in a shape twice as long. Name this shape with a one-sided surface often realized by a piece of paper taped together with a twist.
ANSWER: **Möbius** strip

20. One work by this writer is about a man whose wife chews betel (BEET-el) nuts and whose daughter Nina marries a prince named Dain. Another work by this writer features a man named Stein who describes the day he defeated his enemies and collected a butterfly. That work's main character is haunted by the time he abandoned the *Patna*. Another work by this writer, which includes a brickmaker who does not make bricks, is narrated on *The Nellie*, a ship on the Thames River. That work includes a character whose final words are "The horror! The horror!" Name this author of *Almayer's Folly* who wrote about Marlow in *Lord Jim* and *Heart of Darkness*.
ANSWER: Joseph **Conrad**

TB1. This principle can be derived under the Drude model by incorporating drift velocity, and it is analogous to Poiseuille's law of hydraulics. The apparatus originally used to determine this principle had to account for temperature change and wire length. In the magnetic counterpart of this principle, flux is inversely proportional to reluctance, and Kirchoff's statement of it includes a conductivity parameter. For AC circuits, the phase angle must be known before this principle can be used to calculate power, and Z replaces R in the equation that expresses this law. Discovered by the namesake of the SI unit of electrical impedance, name this law of circuits which says that potential difference across a conductor is equal to current times resistance.
ANSWER: **Ohm**'s law

TB2. This is the subject of the main fresco in Sant'Apollonia Convent in Florence, which was painted by Andrea del Castagno (ca-STAH-nyo). This subject was combined with an advertisement for Wise Potato Chips by Andy Warhol, and the version by Nicolas Poussin is known for accurately depicting a triclinium. A version painted in the 1590s shows servants in the bottom right, angels on the top, and the main subject at an angle with the canvas. That work is by Tintoretto, and a more famous version by a different artist is at the church Santa Maria delle Grazie in Milan. Name these works which generally show Jesus announcing that he will be betrayed, the most famous of which is by Leonardo da Vinci.

ANSWER: The Last Supper [or *Il Cenacolo* or *L'Ultima Cena*; accept logical equivalents; prompt on either or both parts of Jesus Christ]

TB3. Which animal...is represented by the clarinet in *Peter and the Wolf*; is the subject of an Andrew Lloyd Webber musical about Grizabella and Rum Tum Tugger; and is commonly said to have nine lives?

ANSWER: cat