NEW TRIER SCOBOL SOLO 2012
ROUND 11
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1. This person used the alias Bertha Watson and fled to England after being indicted under the Comstock Law and for inciting murder and assassination. Her magazine, which used the slogan "No Gods, No Masters," was *The Woman Rebel*. After returning to America, she was arrested, but thanks in part to the support of her second husband James Noah H. Slee she was able to expand on the work she started at her Brooklyn clinic. Name this publisher of the pamphlet *Family Limitation* who started the American Birth Control League, the forerunner of Planned Parenthood.
ANSWER: Margaret **Higgins** **Sanger** (accept either last name)

2. This quantity is equal to the opposite of the dot product of the magnetic dipole moment with the magnetic field. It is subtracted in a Lagrangian [la-grahn-zhee-an] but added in a Hamiltonian. In a central inverse square field, it varies inversely with the distance from the center and is generally assigned a negative value. This quantity is only defined for conservative fields, in which it equals the opposite of the integral of force with respect to distance. Its existence is due to the ability of the system to change the work that has been done to it into another form of energy. In a spring, this value is equal to one-half times the spring constant times the displacement squared, and in a uniform gravitational field it is given as mass times gravitational field strength times height. Name this type of energy an object has by virtue of its position, often contrasted with kinetic energy.
ANSWER: **potential energy** [prompt on **potential** or **energy**; accept **U**; accept **gravitational potential energy** or **elastic potential energy**]

3. The protagonist of this movie meets one of his wives at a street corner while she suffers from toothache. The title character of this film is investigated by a reporter for *News on the March* named Jerry Thompson, who visits Jedediah Leland and failed opera star Susan Alexander. This film's final scene shows a "No Trespassing" sign in front of the title character's house, Xanadu, and follows a scene in which a fireplace burns through a sled named Rosebud. Name this movie based on the life of newspaper magnate William Randolph Hearst, and directed by Orson Welles.
ANSWER: *Citizen Kane*

4. The triangles created by the diagonals of this figure include one pair with equal areas, and the product of the areas of those triangles equals the product of the areas of the other two triangles. While these shapes' diagonals do not necessarily bisect each other, they must divide each other into segments of the same ratio. They must have two pairs of adjacent supplementary angles, and they are used for approximating integrals in a technique that is less accurate than Simpson's rule but more accurate than simple Riemann sums. The area of one of these can be calculated as height times median. Name these quadrilaterals that have at least one pair of parallel sides.
ANSWER: **trapezoid**s [or **trapezium**s]

5. The narrator of this novel wishes he could get a hundred jalopies and says that customers should be told that the car up on the platform just sold. One of the characters, who performs charitable acts ever since his refusal to get a doctor for his wife led to her death, is Uncle John. One of the protagonists served four years at McAlester State Penitentiary; his sister marries a man who wants to take correspondence courses and work in the radio business, Connie Rivers. Their family is helped by Ivy and Sairy Wilson as they travel Highway 66 towards California to escape the Dust Bowl. Name this novel about the Joad family, by John Steinbeck.
ANSWER: *The **Grapes of Wrath***

6. Ernest Bloch wrote two quintets for this instrument with a string quartet that have been performed by Piers Lane. This is the lead instrument in the only completed concerto by Edvard Grieg. All of the concerti written by Sergei Rachmaninoff are for this, and it is the lead instrument in his *Rhapsody on a Theme of Paganini*. Alexander Scriabin published ten sonatas for this instrument, several of which were performed by Vladimir Horowitz. This is also the lead instrument in Beethoven's Emperor Concerto, one of the many pieces famously played by Van Cliburn. Name this instrument that produces a sound when its strings are struck by a hammer following the pressing of one of its 88 keys.
ANSWER: **piano**(forte) [prompt on **keyboard**]

7. This person was forced into exile by Palla Strozzi and Rinaldo degli [DEL-yee] Albizzi but returned a year later and forced them into exile instead. A supporter of Antipope John XXIII [23], without holding office he built an alliance between his city and Milan that would oppose Venice and Naples. He became known as a major patron of the arts with his support of Michelozzo Michelozzi [mih-kehl-OH-tso mih-kehl-OH-tsee], Donatello, and Brunelleschi [broo-nuh-LESS-kee]. The success of this person's family continued with his son Piero "the Gouty" and grandson Lorenzo the Magnificent. Name this wealthy resident of Florence.
ANSWER: **C**òsimo (de Giovanni) de(gli) **Mèdici** [prompt on **Mèdici**; accept **Cosimo the Elder** or **Cosimo il Vecchio** or **Cosimo Pater Patriae**]

8. In a paper by Alan Deardorff on the general validity of the law of this concept, he demonstrates that it works when one takes an average across commodities, even though it falls apart for a small number of commodities. One measure of this is the autarky price, which is an attempt to calculate what prices would be if all economies were self-sufficient. Paul Krugman [KROOG-man] updated this idea to include economies of scale, explaining discrepancies between the Heckscher-Ohlin Model and actual practice. An early attempt to explain this appeared in *On the Principles of Political Economy and Taxation*, which looked at the production of wine and cloth in England and Portugal. Name this idea propounded by David Ricardo, which explains how different production efficiencies in different countries cause both countries to benefit from free trade.
ANSWER: **comparative advantage**

9. The surface type of this process can happen to encapsulated bacteria after they are attached to a blood vessel. In other cases of it, bacteria are covered with proteins, allowing other molecules to adhere to them. The granules of neutrophils can begin this process, which is completed by hydrogen peroxide and superoxide. Leukocytes, or white blood cells, also use this process to protect the body from bacterial infections. Name this process also carried out when protists use their cell membranes to ingest nutrients, a form of endocytosis [en-doh-sy-TOH-sis].
ANSWER: **phagocytosis** [FAY-goh-sy-TOH-sis] [prompt on **endocytosis**]

10. One of this author's characters is forced to sleep in a sheep's pen, where he is visited by an old woman who later turns into a beautiful girl. In addition to writing about Khoma in "Viy", he wrote a work in which a character believes that he hears dogs talking to each other and that he has found letters that the dogs wrote to each other. In another work, a barber is surprised to find one of the body parts of one of his customers. In a novel, the protagonist visits the country houses of Manilov and Sobakevitch to work out a deal that will allow him to get a large loan. Name this author who wrote about Poprishchin in "Diary of a Madman", about Kovalyov in "The Nose", and about Chichikov in *Dead Souls*.
ANSWER: Nikolai (Vasilievich) **Gogol**

11. This country's Ekuma River feeds the Etosha pan, an occasional lake that consists largely of salty land. It also contains Swakop River at the southern boundary of Skeleton Coast. It is named for one of its deserts, which lies west of the Naukluft Mountains. One of its ports, which contains a man-made Bird Island for collecting guano, is at Walvis Bay. Many people in its northern region are considered Ovambo, and the eastern part of this country—including the town of Gobabis—is in the Kalahari Desert. Because European settlers wanted to give it access to the Zambezi River, it includes the Caprivi Strip. Name this country that has been controlled by Germany and South Africa, a nation on the Atlantic Ocean south of Angola and with its capital at Windhoek [VINT-"hook"].
ANSWER: Republic of **Namibia** [or Republiek van **Namibië**]

12. Predictions of whether or not transmetalation will occur can be made based on these values for the metal elements. IUPAC ["eye you pack"] has recommended ordering groups or elements in chemical formulas based on this quantity, and a hydrogen bond must involve an element that has a high value of this. An attempt to measure this using spectroscopy is named after Allen, a formulation using arithmetic means was developed by Mulliken, and the most common scale was developed by Pauling. Differences in this quantity are used to determine the ionic character of a molecule. Name this tendency of an atom or molecule to attract electrons that is very high in fluorine.
ANSWER: **electronegativity** [accept word forms]

13. Before this battle, one commander told a king to be wary of the Egyptians, Cyprians, Cilicians, and Pamphylians in his service and advised him to wait until his enemies were scattered, which he ignored. Shortly after this battle, the losers successfully besieged Olynthus but were unable to finish their siege of Potidea [poh-tih-DEE-uh]. One of the commanders who died, Ariabignes, was the older brother of the king. Five ships were commanded by Artemisia the First of Caria, and the king she advised had a throne set up so he could watch his expected victory. The winning side ignored the plans of Eurybiades [yur-ih-BY-uh-deez] in favor of ones made by Themistocles [thuh-MIS-toh-kleez]. Name this defeat of Xerxes the First that took place soon after Thermopylae [ther-MOP-uh-lee].
ANSWER: Battle of **Salamis** [SAH-lah-miss]

14. This painter hid the head of the rescuer behind a scarf as a woman is pulled to safety in *The Life Line*. Many of his works show a single woman at work or deep in thought, such as his early watercolor showing a woman tending to a sick chicken and his portrait of a teacher titled *The Red School House*. He showed boys at play in *Snap-the-Whip*, and early in his career he painted pictures for *Harper's* portraying the Civil War. Many of his works were set near Gloucester [GLAO-stur], Massachusetts, such as his work showing a man seated in a sailboat surrounded by three boys, *Breezing Up*. Name this artist who showed a man in a rudderless and mastless sailboat surrounded by sharks in *The Gulf Stream*.
ANSWER: Winslow **Homer**

15. This text claims that "the people's hunger is due to the excess of their ruler's taxation". That is from its 75th section, and this work then states that softness is the way of life while hardness is the way of death, and nothing is softer or weaker than water. At its beginning, this work claims that people with desire sense its manifestations, while people without desire sense its essence. Its main subject is constant in non-action, so there is nothing that it does not do. This work was written in the sixth century BCE or soon thereafter, and its name can be translated as *Classic on the Way of Integrity*. Name this philosophical and religious work written in Chinese, probably by Lao Tzu.
ANSWER: **Tao Te Ching** [prompt on **Lao zi** or **Lao Tzu**]

16. This author's last novel probably was the inspiration for the Beatles song *Dr. Robert* and takes place when Will Farnaby is shipwrecked on Pala. Another work by this writer involves a relationship between Lucy Tantamount and Walter Bidlake, who is living with a married woman named Marjorie Carling. One novel by this author is about a love affair between Anne Wimbush and poet Denis Stone at the title country house. In addition to *Island*, *Point Counter Point*, and *Crome Yellow*, this author also wrote another novel including Mustapha Mond, the Resident World Controller of Western Europe. Name this author who wrote about Bernard Marx, an Alpha in a dystopian world that thinks highly of Henry Ford and alienates John the Savage, in his novel *Brave New World*.
ANSWER: Aldous **Huxley**

17. One of these stellar objects is called Trifid, and its different regions include emission, reflection, and dark types of these. The question as to whether or not all of them are located in the Milky Way was a main topic of the Shapley-Curtis debate. One called the Tarantula in the Large Magellanic Cloud contains Supernova 1987A and is 650 light-years across. The planetary type got their name because they appear similar to distant planets, and include the Eskimo and Dumbbell. Name these regions where star and planet formation takes place, a type of interstellar cloud.
ANSWER: **nebula**e [accept **nebulas**]

18. A building was erected in honor of this man and his wife after they protested a ceremony honoring Lord Willingdon. His call for a Direct Action Day led to massive riots that spread to Noakhali and Tippera. His August 11th speech called for religious freedom, and about a decade after Woodrow Wilson, this person presented Fourteen Points in an attempt to get more political power for Muslims. With the Indian National Congress, he negotiated the Lucknow Pact requesting less British intervention in India. He led a new nation for a year before dying of tuberculosis in 1948. Name this leader of the All-India Muslim League who became the first leader of Pakistan.
ANSWER: Muhammad Ali **Jinnah** [prompt on **Ali**; prompt on **Quaid-e-Azam**; prompt on **Baba-e-Qaum**]

19. In this poem, four times fifty men drop down one by one, and their souls fly from their bodies. Near the end of this work, the main character describes being approached by a Hermit, a Pilot, and the Pilot's son; and that character later states "He prayeth best, who loveth best". Another character, who for most of the poem fears the main character, is fascinated by the main character's glittering eye, and ends up a sadder and a wiser man. Much of this work is narrated to a Wedding-Guest by an old man who once used his crossbow to kill an albatross. Name this work by Samuel Taylor Coleridge.
ANSWER: "The **Rime of the Ancient Mariner**"

20. This man lends his name to the prime-generating polynomial *n* squared minus *n* plus 41. He names a function which gives how many positive integers less than *n* are relatively prime to *n*, his totient [TOH-shunt] function. He proved one task's impossibility by demonstrating that each vertex of a graph corresponding to it has odd degree; in doing so, he essentially invented graph theory. This solver of the Seven Bridges of Königsberg problem names an equation stating that vertices minus edges plus faces equals two, as well as an equation which relates five fundamental mathematical constants. Identify this Swiss mathematician who names the constant used as the base of the natural logarithm, *e*.
ANSWER: Leonhard (Paul) **Euler** [OY-lur]

TB1. This writer ended a poem "Lady, in all my battles fight as my comrade"; that poem is addressed to a goddess who is called a "deathless child of Zeus". Some historians claim that many of this poet's works were lost because they were in Aeolic Greek, which became archaic. One fragment that remains seems to say that "what you love" is lovelier than any type of army, and her only work remaining in its entirety is *Hymn to Aphrodite*. This poet is linked to Alcaeus of Mytilene, who used the type of stanza now named for her. Name this poet who was born in the seventh century BCE on the island of Lesbos.
ANSWER: **Sappho**

TB2. Some of the mineral types in which this element is found with oxygen include amphiboles, humites, and olivines. It combines with magnesium in serpentine minerals and with aluminum in many clay and mica minerals. This element also combines with aluminium and fluorine in topaz, and it combines with zirconium in zircon. It also is a central element in agate, amethyst, and other types of quartz. After oxygen, this is the second most abundant element in the earth's crust. Name this metalloid often found in sand and glass, a common semiconductor with chemical abbreviation Si.
ANSWER: **silicon**

TB3. This is the day of the week on which Microsoft releases patches. Catholics call one of these days Shrove. This is the day on which US elections occur. Name this day which follows Monday.
ANSWER: **Tuesday**